

FINAL

**ENVIRONMENTAL ASSESSMENT
FOR CONSTRUCTION OF AN
ARMED FORCES RESERVE CENTER AND IMPLEMENTATION OF
BRAC 05 RECOMMENDATIONS AT
WHITE RIVER JUNCTION, VERMONT**



Prepared for:

U.S. Army Reserve 99th Regional Support Command

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DRAFT
FINDING OF NO SIGNIFICANT IMPACT (FNSI) FOR THE
CONSTRUCTION OF AN
ARMED FORCES RESERVE CENTER AND
IMPLEMENTATION OF BRAC 05 RECOMMENDATIONS AT
WHITE RIVER JUNCTION, VERMONT

Pursuant to the Council on Environmental Quality (CEQ) regulations (40 CFR 1400-1508) for implementing the procedural provisions of the *National Environmental Policy Act* (NEPA) (42 U.S.C. 4321 et. seq.) and the U.S. Department of Army Regulation 32 CFR Part 651 (*Environmental Analysis of Army Actions*; Final Rule), as well as policy and guidance provided by the *Base Realignment and Closure Manual for Compliance with the National Environmental Policy Act*, the U.S. Army conducted an environmental assessment (EA) of potential environmental effects associated with implementation of BRAC realignment actions.

Purpose and Need. On September 8, 2005, the Defense Base Closure and Realignment Commission (BRAC Commission) recommended certain realignment actions in the vicinity of White River Junction, Windsor County, Vermont. These recommendations were approved by the President on September 23, 2005 and were forwarded to Congress, and on November 9, 2005, the recommendations became law. The BRAC Commission recommendations must now be implemented as provided for in the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended. The BRAC Commission made the following recommendations concerning White River Junction, Windsor County, Vermont:

“Close Chester Memorial Army Reserve Center and Organizational Maintenance Shop, Chester, VT and Berlin Army Reserve Center, Berlin, VT and relocate all units to a new Armed Forces Reserve Center with an Organizational Maintenance Facility in the vicinity of White River Junction, VT if the Army is able to acquire land suitable for the construction of the facilities. The new AFRC and OMS shall have the capability to accommodate units from the following facilities: Vermont Army National Guard Armories in Ludlow, North Springfield and Windsor, VT, if the state decides to relocate those National Guard units.”

Description of the Proposed Action. To support the BRAC recommendations, the Proposed Action includes construction of an Armed Forces Reserve Center (AFRC) training building, Organizational Maintenance Shop (OMS), unheated storage building, and an open vehicle storage facility. Future site improvements are expected to require approximately 14 acres. The U.S. Army would acquire new land for construction of these facilities. The new AFRC would serve about 300 personnel on a rotating basis, mostly on weekends. The facility would employ approximately 10 permanent full-time personnel. The maximum expected use of the new facility would be about 104 members per weekend.

Alternatives Considered. Seven potential site locations for the AFRC and OMS were screened for inclusion in this EA. Based on the screening criteria, three alternatives were evaluated in this EA.

Alternative 1. Alternative 1 is to construct the AFRC and associated facilities at a site east of U.S. Route 5 (Hartland Road), approximately 2 miles south of White River Junction, Windsor County, Vermont.

Alternative 2. Alternative 2 is to construct the AFRC and associated facilities at a site east of U.S. Route 5 South (Hartland Road), off Drew Road, approximately 1.5 miles south of White River Junction, Windsor County, Vermont.

The No Action Alternative. CEQ regulations require analysis of the No Action Alternative in an EA, for it serves as the baseline against which the impacts of the Proposed Action and alternatives will be evaluated. Accordingly, the No Action Alternative is evaluated in this EA.

The U.S. Army has selected Alternative 1 as the Preferred Alternative.

Factors Considered in Determining that an Environmental Impact Statement is not Required. No significant environmental impacts were identified in the EA (attached). Impacts were analyzed for land use, aesthetics and visual resources, air quality, noise, geology and soils, water resources, biological resources, cultural resources, socioeconomics, transportation, utilities, and hazardous and toxic substances. In support of this EA, the U.S. Army conducted a Phase I cultural resource survey and a wetlands delineation at the Preferred Alternative site to ensure impacts to these resources would not be significant.

Vermont Class III wetlands occur in two areas on and near the Preferred Alternative site. A section of a utility right-of-way from the proposed groundwater well to the Preferred Alternative site would pass through the one wetland about 35 feet wide and 60 feet long. Impacts to this wetland are temporary, and considered not significant. Site-specific construction techniques to ensure impacts are minimized to the extent practicable and would not be significant are included in the EA. The second wetland occurs on the Preferred Alternative site near the AFRC footprint. This wetland has been avoided under the proposed site plan. There will be no permanent fill in Wetlands and Waters of the U.S. and no net loss of wetlands will occur from implementation of the Proposed Action.

Implementation of the proposed realignment actions would not have any significant adverse effects or impacts to any of the resource areas at White River Junction or on areas surrounding the property. Potential impacts associated with the Preferred Alternative are expected to be minor. These impacts would occur in the following areas: aesthetics and visual resources, water resources, biological resources, and cumulative effects. The U.S. Army has identified site-specific construction techniques that would be implemented to minimize unavoidable impacts in association with the proposed construction activities at the Preferred Alternative Site. The site-specific construction techniques are identified in Chapter 4.15 of the EA and include requirements for pre-construction planning; wetlands construction; spoil pile placement and control; sediment and erosion control; trench dewatering; and revegetation.

Conclusion. Based on the environmental impact analyses described in the EA, which is hereby incorporated into this FNSI, it has been determined that implementation of the Proposed Action would not have a significant impact on the quality of the natural or the human environment. Because no significant environmental impact would result from implementation of the Proposed Action, an environmental impact statement is not required and will not be prepared.

Public Comment. Persons wishing to comment may obtain a copy of the EA or inquire into this FNSI by calling Ms. Laura Dell'Olio at (609) 562-7661 or emailing her at laura.dellolio@usar.army.mil within 30 days of the publication of this notice. A copy of the EA will also be available for public review at the Hartford Library, 1587 Maple Street, in Hartford, Windsor County, Vermont and on the BRAC website at http://www.hqda.army.mil/acsim/brac/env_ea_review.htm.

Date: _____

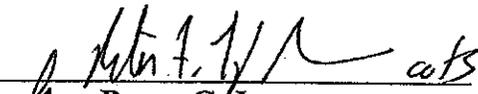
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ENVIRONMENTAL ASSESSMENT

**CONSTRUCTION OF AN ARMED FORCES RESERVE CENTER AND
IMPLEMENTATION OF BRAC 05 RECOMMENDATIONS AT
WHITE RIVER JUNCTION, VERMONT**

Prepared by:

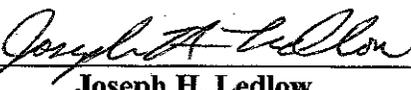
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Approved by:

99th REGIONAL SUPPORT COMMAND



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ENVIRONMENTAL ASSESSMENT

LEAD AGENCY: Mobile District, U.S. Army Corps of Engineers

TITLE OF PROPOSED ACTION: Environmental Assessment for the Construction of an Armed Forces Reserve Center and Implementation of BRAC 05 Recommendations at White River Junction, Vermont

AFFECTED JURISDICTIONS: White River Junction, Windsor County, Vermont

PREPARED BY: AGEISS Inc. and the U.S. Army Corps of Engineers

APPROVED BY: Approval by Joseph H. Ledlow, is pending.

ABSTRACT: The U.S. Army Corps of Engineers is preparing environmental documentation for the proposed Armed Forces Reserve Center (AFRC) at White River Junction, Vermont as part of the restructuring of military bases through the Defense Base Closure and Realignment Act. This environmental assessment (EA) addresses the potential environmental, socioeconomic, and cultural impacts of this proposal and its alternatives. To implement Base Realignment and Closure (BRAC) recommendations, the U.S. Army proposes to construct a new AFRC and related facilities at a site near White River Junction, Vermont, to support the changes in force structure.

Based on the environmental impact analyses described in this EA it has been determined that implementation of the Proposed Action would not have a significant impact on the quality of the natural or the human environment and would not require mitigation to offset impacts. Because no significant environmental impact would result from implementation of the Proposed Action, an environmental impact statement is not required and a Finding of No Significant Impact (FNSI) will be published in accordance with the *National Environmental Policy Act*.

REVIEW PERIOD: A Notice of Availability (NOA) will be published in *Valley News*, which will announce the beginning of the 30-day public review period. In the NOA, interested parties will be invited to review and comment on the EA and Draft FNSI, and will be informed that the EA and Draft FNSI will be available via the World Wide Web at http://www.hqda.army.mil/acsim/brac/env_ea_review.htm and at the Hartford Library, 1587 Maple Street, in Hartford, Vermont. Reviewers will be invited to submit comments on the EA and Draft FNSI during the 30-day public comment period via mail, fax, or e-mail to the following:

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EXECUTIVE SUMMARY

ES.1 Introduction

This environmental assessment (EA) analyzes the potential environmental impacts associated with the United States (U.S.) Army's Proposed Action near White River Junction, Vermont. This action is to support the U.S. Army Reserve 99th Regional Support Command (RSC). To enable implementation of Base Realignment and Closure (BRAC) recommendations, the Army proposes to provide necessary facilities to support the changes in force structure.

This EA was developed in accordance with the *National Environmental Policy Act* (NEPA) (42 U.S.C. § 4321 et seq.); implementing regulations issued by the President's Council on Environmental Quality (CEQ), 40 Code of Federal Regulations (CFR) Parts 1500-1508; and *Environmental Analysis of Army Actions*, 32 CFR Part 651.

ES.2 Background/Setting

White River Junction is located in eastern Vermont and is one of the five historic villages that make up the Town of Hartford, in Windsor County, Vermont. The Town of Hartford is located on the border of Vermont and New Hampshire at the intersection of I-89 and I-91 as well as U.S. Routes 4 and 5. This is also the location of the confluence of the White and Connecticut Rivers.

ES.3 Proposed Action

To support the BRAC recommendations, the Proposed Action includes the construction and operation of a new Armed Forces Reserve Center (AFRC) near White River Junction, Vermont that would realign the Army Reserve and Army National Guard units, resulting from the closure of the Chester Memorial Army Reserve Center and Organizational Maintenance Shop (OMS) and the Berlin Army Reserve Center, as directed by BRAC 05. The AFRC would provide administrative, educational, assembly, kitchen, library, learning center, heated storage, vault, weapons simulator, and physical fitness areas for two Army Reserve units and two Army National Guard units. The OMS would provide work bays and maintenance administrative support. There would also be an unheated storage building and a vehicle storage facility, which would be an open but covered facility, necessary due to the winter weather in the region. The Proposed Action would also provide parking space for military vehicles and privately-owned vehicles (POVs).

Approximately 140 vehicles are anticipated to be kept on-site as a result of the realignment of Army Reserve and Army National Guard units to the new AFRC. Vehicles would include high mobility multi-purpose wheeled vehicles (Humvees); semi tractors; dump trucks; full-tracked tractors; road graders; earth scrapers; fuel-dispensing semi-trailers (5,000 gallons); Heavy Expanded Mobility Tactical Truck 2,500-gallon fuel tanker; flat bed, cargo, and specialty trailers; and utility trucks.

The new AFRC would serve about 300 personnel on a rotating basis, mostly on weekends. The facility would employ approximately 10 permanent full-time personnel. The maximum expected use of the new facility would be about 104 members per weekend, and there would be parking for 94 POVs.

ES.4 Alternatives

Seven potential site locations for the AFRC and OMS were screened for inclusion in this EA. Screening criteria consisted of safety constraints, geographic and environmental constraints, and operational constraints. Based on the selection criteria, three alternatives, Alternative 1, Alternative 2, and the No Action Alternative, were developed for evaluation in this EA.

Alternative 1 is to construct the AFRC at the North Hartland Road Site which consists of a portion of a +/- 65.5-acre parcel owned by the Town of Hartford, Vermont. The Army would acquire about 17 acres in the southeastern corner of this parcel. The site is located between U.S. Route 5 and I-91. This site is already a disturbed site with relatively little wildlife value, except the surrounding area and limited wetlands. Additionally, the Town of Hartford already intends to develop the entire 65-acre parcel; thus, construction of the AFRC on the North Hartland Road Site would consolidate development at this site rather than using additional land that is not otherwise planned for development. Finally, this site has more acceptable geographic conditions, would require much less site preparation, and has fewer operational constraints than Alternative 2; therefore, this site is considered to be the Preferred Alternative.

Alternative 2 is to construct the AFRC at the Drew Road Site. This site is also located between U.S. Route 5 and I-91, just north of Alternative 1. The site comprises about 15 acres, with about 5 acres open field and about 10 acres heavily forested with steep terrain and rock formations at and above the land surface. Site preparation would involve clear-cutting, blasting, and cut-and-fill of about 10 acres, resulting in the loss of about 10 acres of forest, as well as general environmental concerns to nearby residences. For these reasons, this site is less desirable than the Preferred Alternative described above.

CEQ regulations require analysis of the No Action Alternative in an EA, for it serves as the baseline against which the impacts of the proposed action and alternatives are evaluated. Accordingly, the No Action Alternative is evaluated in this EA.

ES.5 Environmental Consequences

Twelve resource areas were characterized and evaluated for potential impacts from Alternative 1 (Preferred Alternative), Alternative 2, and the No Action Alternative. Significance criteria were developed for the affected resource categories, and for many resource categories, are necessarily qualitative in nature. No potential impacts were classified as significant. Potential impacts of the Proposed Action identified for each resource area are summarized below.

Impacts are the same for Alternative 1 and Alternative 2 unless otherwise noted.

Land Use. The Proposed Action would not conflict with land use plans or interfere with activities on adjacent properties. Land use would change from agriculture to light industrial/commercial, which is consistent with the Town of Hartford's planning for this area. Overall, impacts to land use would not be significant. However, construction of the AFRC at the Alternative 2 site would result in the conversion of 15 acres of farmland and woodland that might not otherwise be converted; whereas, the development of the North Hartland Road Site is already planned by the Town of Hartford.

Aesthetics and Visual Resources. The Proposed Action would cause short-term visual impacts from ground disturbance and the presence of workers, vehicles, and equipment and the generation of dust and vehicle exhaust associated with construction. Some long-term visual impacts would occur, most notably, the conversion of open, agricultural land to light industrial/commercial use at the Preferred Alternative site; however, aesthetics would be considered during development of the site plan. Long-term visual impacts at the Alternative 2 site would be greater. The extensive site preparation would result in the loss of about 10 acres of forest that would be replaced by the AFRC, an institutional-type building, in close proximity to rural residences. Operations at the AFRC would result in minor adverse aesthetic impacts, including increased traffic and nighttime light. Overall, impacts to aesthetics and visual resources would not be significant.

Air Quality. Short-term air quality impacts from the Proposed Action would occur from temporary and localized construction activities. Contaminants generated from construction would include particulate matter, vehicle emissions, and increased wind-borne dust (i.e. fugitive dust). Long-term air quality impacts would result from an increase in localized motor vehicle use by personnel traveling to the facility. The incremental increase in emissions would not increase ambient air pollution above the National Ambient Air Quality Standards.

Because the potential for radon gas exposure exists in Windsor County, a radon mitigation system would be installed during construction of the proposed AFRC. Following construction completion, the radon concentration would be measured, and if above acceptable levels, a fan system would be installed to vent radon from the facility. Additionally, radon concentrations would be monitored as an ongoing operational task. Overall, potential impacts to air quality would not be significant.

Noise. A minor increase in ambient noise levels would occur during construction from standard construction equipment and traffic. Noise from construction of Alternative 2 would be higher due to topography requiring extensive excavation, blasting, grading, and cut and fill. Effects of construction noise would be reduced by employing best management practices, such as confining construction activities to normal working hours and employing noise-controlled construction equipment to the extent possible. Long-term noise impacts would include facility operations and the vehicles associated with these facilities. Overall, the potential noise impacts from the Proposed Action would not be significant compared to existing ambient noise.

Geology and Soils. The Proposed Action would result in the long-term addition of about 5 acres of impervious surfaces. Erosion control during construction activities, as

specified in the required Construction General Permit, and new vegetation once the construction was completed would minimize erosion of topsoil. Due to the site's characteristics, construction of Alternative 2 would disturb the surface soil to a greater degree than for the Preferred Alternative.

Some of the land considered for the Preferred Alternative and Alternative 2 is considered farmland protected by the Farmland Protection Policy Act (FPPA) (7 CFR Parts 657 and 658). The Natural Resources Conservation Service (NRCS) was consulted regarding the prime farmland. The NRCS scored the value of the prime farmland as low, considering zoning, the size of the parcel, and other factors. Overall, potential impacts to geology and soils from the Proposed Action would not be significant.

Water Resources. There would be no measurable reduction in surface water quality or availability. The U.S. Army Reserve would obtain the appropriate stormwater discharge permits from the State of Vermont and the U.S. Environmental Protection Agency for construction and operation of the AFRC. The Proposed Action would result in a local increase of groundwater use as a well would be necessary to supply potable water to the proposed AFRC. The maximum anticipated use of groundwater would occur only during maximum use drill weekends, approximately one weekend per month. The U.S. Army Reserve intends to initiate the Vermont source permit process by submitting a public water source permit application to the State of Vermont Water Supply Division, followed by installation of a groundwater supply well at the North Hartland Road Site. The Army anticipates a deep groundwater supply well and two 62,500-gallon above ground water storage tanks will be necessary to meet State of Vermont groundwater enforcement standards, and satisfy potable water demands of the proposed AFRC.

Potential nonpoint stormwater impacts would not be significant with implementation of a Stormwater Pollution Prevention Plan (SWPPP) that would address site specific requirements and monitoring. Compliance with Vermont State law and the Clean Water Act (CWA) require the Army to obtain a State Stormwater Discharge Permit and a Construction General Stormwater Discharge Permit respectively. A Spill Prevention Control and Countermeasures (SPCC) plan would reduce potential impacts to surface water or groundwater from spills. Overall, potential impacts to water resources from the Proposed Action would not be significant.

Biological Resources. The AFRC and OMS would be built on land that has already been disturbed for agricultural use. Construction of the AFRC and OMS may affect on-site wildlife through the long-term direct loss of a relatively small amount of habitat and direct mortality of individuals occurring in construction zones. Post-construction impacts to wildlife from operation of the AFRC and OMS would not be significant.

The U.S. Fish and Wildlife Service and the Vermont Fish & Wildlife Department have reviewed this project and have concluded that the Proposed Action would not cause any impacts to rare, threatened or endangered species and that no natural communities of concern are known to occur in the vicinity of the proposed project areas. The Vermont Agency of Natural Resources has also reviewed this project and provided input.

About three acres of Class III wetlands have been identified in the central portion of the Preferred Alternative site. Approximately 1,980 square feet (0.045 acres) of wetlands would be temporarily impacted by construction of the utility easement. Construction through these wetlands to install underground utilities will require site-specific construction techniques, such as separation of the top 12 inches of wetlands soils and use of timber mats for the crossing. With the specified precautions, these wetlands would not be significantly impacted. If the potable water supply well is installed near the wetlands, care would be taken to ensure a 50-foot buffer remained, protecting the wetlands from construction and operation activities associated with the groundwater supply well.

Field investigations were conducted during April 2009 to determine the presence of wetlands at the southern end of the North Hartland Road Site. One wetland, about 1 acre in size, was delineated and classified as a Farmed Wetland which was previously excavated. The wetland occurs within the parcel the Army would acquire for the AFRC. The Army has developed their site plan to completely avoid this wetland. There would be no net loss of wetlands from implementation of the Proposed Action.

Field investigations conducted April 2009 at the Drew Road Site confirmed the absence of wetlands at this site. Overall, potential impacts to biological resources from the Proposed Action would not be significant.

Cultural Resources. Impacts to cultural resources are not expected since the proposed sites have already been disturbed. During October 2008, the Army conducted a Phase I archaeological survey at the Preferred Alternative site. No Native American or significant historic Euroamerican cultural material was identified, and the negative results of the Phase I survey work indicate that significant archaeological deposits are unlikely to be present in the project area. If, during construction, any potential historic or archaeological resource is uncovered or inadvertent discoveries are made of Native American human remains and associated funerary objects, sacred objects, or objects of cultural patrimony, the Cultural Resources Manager for the 99th RSC would be contacted, in accordance with typical standard operating procedure for the accidental discovery of archaeological resources or Native American artifacts.

Consultation and coordination has been conducted with the State Historic Preservation Office (SHPO) via the Vermont Division for Historic Preservation as required by Section 106 of the National Historic Preservation Act. The SHPO issued a determination of No Historic Properties Affected on April 21, 2009 for the Proposed Action at the Preferred Alternative Site. No Native American concerns regarding the Proposed Action have been identified. Overall, potential impacts to cultural resources from the Proposed Action would not be significant.

If the Army selects Alternative 2, Drew Road Site, for construction and operation of the AFRC, the Army would conduct a Phase I archeological survey at this site and consult with the SHPO regarding any potential findings.

Socioeconomics. The Proposed Action would cause a short-term minor beneficial increase in local socioeconomic resources as there would be creation of construction jobs

and increased use of hotels and businesses surrounding the site. Because incoming personnel under the Proposed Action would come only for weekend training, and the approximately 10 permanent administrative personnel from the 99th RSC and the National Guard already reside in the region of influence, there would be no influx of personnel on a permanent basis into the region of influence. Additionally, there would be no environmental justice impacts, as impacts from the Proposed Action identified in this EA would not be localized or placed primarily on minority and/or low-income populations. Overall, potential socioeconomic impacts from the Proposed Action would not be significant.

Transportation. Limited short-term and long-term impacts associated with increased vehicle traffic on U.S. Route 5 South would occur during construction and operation of the AFRC. The maximum number of reservists expected on any one weekend per month is 104. Military vehicles traveling off site would cause only a minimal temporary disturbance to the local traffic flow when traveling in convoy.

Current access to the Preferred Alternative is limited in width and provides poor visibility. The Town of Hartford has proposed two alternative points of entry to the site from U.S. Route 5 South and five options for access roads to the proposed AFRC. A temporary access road has been designated in the same location as the current access road. If construction vehicles use the temporary access road, the Army would require appropriate signage and traffic controls for safety. After use, the temporary access road would be restored to its original condition.

Access to Alternative 2 would likely be via a new point of access off of Drew Road causing increased traffic on Drew Road and disruption to residences both during construction and operation of the proposed AFRC.

Utilities. A hydrogeological investigation is scheduled to investigate the aquifer capacity and groundwater quality at the North Hartland Road Site prior to construction. Results of the U.S. Army Reserve hydrogeological study will determine the aquifer capacity at the North Hartland Road Site. The Army Reserve anticipates a deep groundwater supply well and two 62,500-gallon above ground water storage tanks will be necessary to meet the potable water demand of the proposed AFRC. If the line capacity of the sanitary sewer extension north of the Preferred Alternative is insufficient, an upgrade would be implemented. A permit to connect and an agreement reserving allocation of flow capacity would be required.

Impacts to stormwater collection would be minimal. Stormwater discharges from the facility would be managed in accordance with a SWPPP prepared by the 99th RSC. Compliance with Vermont State law and the CWA require the Army to obtain a State Stormwater Discharge Permit and a Construction General Stormwater Discharge Permit respectively. The Vermont Agency of Natural Resources issues State Stormwater Discharge Permits while the EPA administers Construction General Stormwater Discharge Permits for Federal facilities in Vermont. An extension of available utilities to the proposed AFRC would be necessary. Overall, potential impacts to utilities would not be significant as multiple commercial suppliers service the area. Additionally, all

facilities would be designed to meet the Leadership in Energy and Environmental Design Silver design standards in accordance with the Army sustainability policies

Hazardous and Toxic Substances. Quantities of hazardous materials appropriate for facility and vehicle maintenance would be stored and used at the property. Small quantities of hazardous wastes would be generated primarily from vehicle maintenance activities. Disposal would be by commercial vendor. An SPCC Plan would be prepared by the U.S. Army Reserve as the facility is constructed. Procedures in this plan would be followed to properly manage spills. Overall, potential impacts to hazardous and toxic substances management would not be significant.

Cumulative Impacts. Cumulative effects are those environmental impacts that result from the incremental effects of other past, present, or reasonably foreseeable future actions when combined with the Proposed Action. One present and two reasonably foreseeable actions within or adjacent to the proposed project areas have been identified.

- The Vermont Agency of Transportation is currently completing installation of an 8-inch gravity sewer line from the southbound I-91 rest area across the northern portion of the Preferred Alternative site to connect to a lift station along U.S. Route 5 South.
- The Town of Hartford is planning to develop the remainder of the +/- 65.5-acre parcel where the Preferred Alternative is located into a recreation/sports park known as the Maxfield Recreation Field.
- The Town of Hartford has initiated reclassification of contaminated groundwater below the former Hartford Landfill to Class IV with the Vermont Agency of Natural Resources.

Overall, cumulative impacts from implementing the Proposed Action under Alternative 1, when combined with the projects listed above, result in the following concerns: possible land use incompatibility, protection of children, and traffic congestion. With cooperative planning between the 99th RSC and the Town of Hartford and implementation of safety measures by the Town of Hartford as the development of the Maxfield Recreation Field progresses, cumulative impacts would not be significant. Cumulative impacts could be further reduced by utilizing the access road option that does not pass directly through the various facilities where people, and specifically children, would be playing and walking.

Cumulative impacts from implementing the Proposed Action under Alternative 2, when combined with the projects listed above, result in the following concerns: visual/aesthetic and noise impacts from construction and traffic congestion. Additionally, the Town of Hartford already intends to develop the entire 65-acre parcel at the Preferred Alternative Site; thus, construction of the AFRC at the Drew Road Site adds incremental impacts by using additional land that is not otherwise planned to be developed. These impacts would not be significant.

ES.6 Mitigation Responsibility

As part of the Proposed Action, the Army has identified a number of site-specific construction techniques that would be implemented to minimize unavoidable impacts in association with the proposed construction activities at the Preferred Alternative Site. The site-specific construction techniques include requirements for pre-construction planning; wetlands construction; spoil pile placement and control; sediment and erosion control; trench dewatering; and revegetation. Additionally, the Army would acquire all applicable permits, including but not limited to those discussed in this EA, and work with governmental agencies to comply with the respective regulations and avoid adverse impacts.

ES.7 Findings and Conclusions

Direct, indirect, and cumulative impacts of Alternative 1, Alternative 2, and the No Action Alternative have been considered. Alternative 1 is the 99th RSC's Preferred Alternative because it best allows the Army to efficiently provide safe training facilities for Army Reserve and Army National Guard units that would use the facilities. No significant adverse impacts were identified. Cumulative impacts analysis resulted in concerns regarding possible land use incompatibility, protection of children, and traffic congestion from the Proposed Action when combined with the Maxfield Recreation Field. With cooperative planning between the 99th RSC and the Town of Hartford and implementation of safety measures by the Town of Hartford as the development of the Maxfield Recreation Field progresses, cumulative impacts would not be significant. Therefore, the issuance of a Finding of No Significant Impact is warranted, and preparation of an environmental impact statement is not required. Implementation of the No Action Alternative is not feasible because the BRAC actions are required by law to be implemented, if the Army is able to acquire land suitable for the construction of the facilities.

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LIST OF ACRONYMS

| | |
|-------------------|--|
| µg/L | micrograms per liter |
| µg/m ³ | micrograms per cubic meter |
| AFRC | Armed Forces Reserve Center |
| AIRFA | American Indian Religious Freedom Act |
| APE | area of potential effect |
| AR | Army Regulation |
| ARPA | Archaeological Resources Protection Act |
| ATFP | Anti-terrorism/Force Protection |
| BMP | best management practice |
| BRAC | Base Realignment and Closure |
| CAA | Clean Air Act |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| CEQ | Council on Environmental Quality |
| CFR | Code of Federal Regulations |
| CO | carbon monoxide |
| CWA | Clean Water Act |
| dB | decibel(s) |
| dBA | A-weighted decibel(s) |
| DoD | U.S. Department of Defense |
| EA | environmental assessment |
| EIFS | Economic Impact Forecast System |
| EO | Executive Order |
| EPA | U.S. Environmental Protection Agency |
| ESA | Endangered Species Act |
| FEMA | Federal Emergency Management Agency |
| FNSI | Finding of No Significant Impact |
| FPPA | Farmland Protection Policy Act |
| GPS | global positioning system |
| HEMTT | Heavy Expanded Mobility Tactical Truck |
| HVAC | heating, ventilation, and air conditioning |
| IBC | International Building Code |
| LEED | Leadership in Energy and Environmental Design |
| MEP | military equipment parking |
| MGD | million gallons per day |
| MSL | mean sea level |
| NAAQS | National Ambient Air Quality Standards |
| NAGPRA | Native American Graves Protection and Repatriation Act |
| NEPA | National Environmental Policy Act |
| NHPA | National Historic Preservation Act |
| NO ₂ | nitrogen dioxide |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |

LIST OF ACRONYMS (continued)

| | |
|-------------------|---|
| O ₃ | ozone |
| OMS | Organizational Maintenance Shop |
| OTR | Ozone Transport Region |
| OWS | oil/water separator |
| Pb | lead |
| pCi/L | picocuries per liter |
| PM ₁₀ | particulate matter with an aerodynamic size less than or equal to 10 microns |
| PM _{2.5} | particulate matter with an aerodynamic size less than or equal to 2.5 microns |
| POV | privately-owned vehicle |
| ppm | parts per million |
| PSD | Prevention of Significant Deterioration |
| RCRA | Resource Conservation and Recovery Act |
| ROI | region of influence |
| RRC | Regional Readiness Command |
| RSC | Regional Support Command |
| RTV | rational threshold value |
| SARA | Superfund Amendments and Reauthorization Act |
| SO ₂ | sulfur dioxide |
| SPCC | Spill Prevention Control and Countermeasures |
| SWPPP | Stormwater Pollution Prevention Plan |
| TSCA | Toxic Substance Control Act |
| TSD | transport, storage, and disposal |
| U.S. | United States |
| USACE | U.S. Army Corps of Engineers |
| USAR | U.S. Army Reserve |
| VA | Veterans Administration |
| VANR | Vermont Agency of Natural Resources |
| VTARNG | Vermont Army National Guard |
| VTrans | Vermont Agency of Transportation |

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1.0 PURPOSE, NEED AND SCOPE

1.1 Introduction

On September 8, 2005, the Defense Base Closure and Realignment Commission (BRAC Commission) recommended that certain realignment actions occur in the vicinity of White River Junction, Vermont. These recommendations were approved by the President on September 23, 2005, and forwarded to Congress. The Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law. The BRAC Commission recommendations must now be implemented as provided for in the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended. This environmental assessment (EA) analyzes the potential environmental impacts associated with the United States (U.S.) Army's Proposed Action near White River Junction, Vermont.

The BRAC Commission made the following recommendations concerning White River Junction, Vermont:

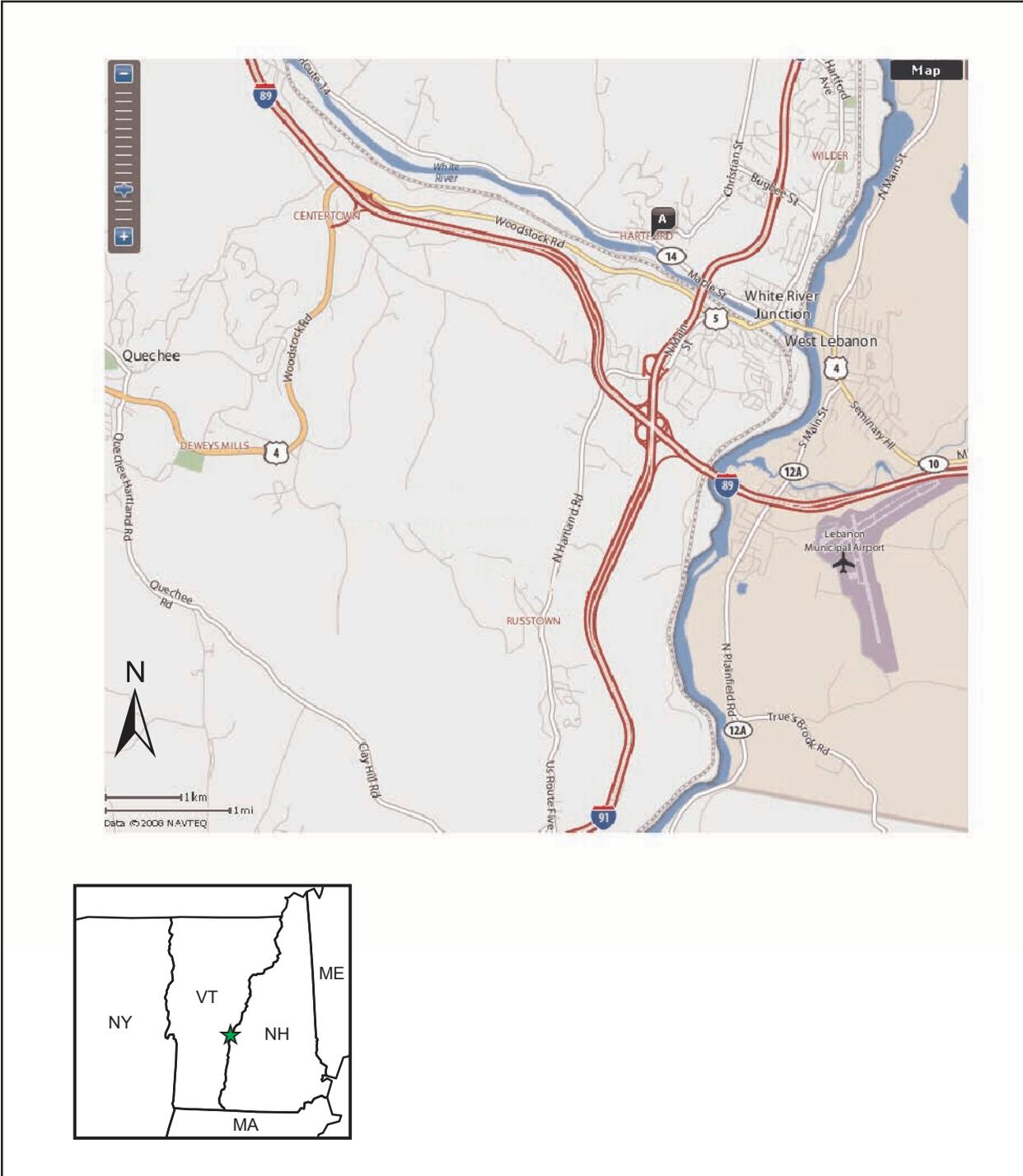
“Close Chester Memorial Army Reserve Center and Organizational Maintenance Shop, Chester, VT and Berlin Army Reserve Center, Berlin, VT and relocate all units to a new Armed Forces Reserve Center with an Organizational Maintenance Facility in the vicinity of White River Junction, VT if the Army is able to acquire land suitable for the construction of the facilities. The new AFRC and OMS shall have the capability to accommodate units from the following facilities: Vermont Army National Guard Armories in Ludlow, North Springfield and Windsor, VT, if the state decides to relocate those National Guard units.”

To implement these recommendations, the U.S. Army proposes to construct a new Armed Forces Reserve Center (AFRC) and related facilities at a site near White River Junction, Vermont, to support the changes in force structure. Figure 1-1 shows the location of White River Junction, Vermont. Details on the Proposed Action are provided in Section 2.0.

1.2 Purpose and Need

The purpose of the Proposed Action is to provide a new AFRC in the vicinity of White River Junction, Vermont as directed by the BRAC Commission's recommendations. The AFRC is needed to ensure that adequate training and administrative space is available to support U.S. Army Reserve (USAR) units realigned from area facilities and the addition of the Vermont Army National Guard (VTARNG) units from armories in Ludlow, North Springfield, and Windsor, Vermont, if needed.

The need for the Proposed Action is to improve the ability of the Nation to respond rapidly to challenges of the 21st century. The Army's mission is to defend the United States and its territories, support national policies and objectives, and defeat nations and other parties responsible for aggression that endangers the peace and security of the United States. To carry out these tasks, the Army must adapt to changing world conditions and must improve its capabilities to respond to a variety of circumstances across the full spectrum of military operations.



Prepared For:
 U.S. Army Corps of Engineers, Mobile District

Figure 1-1
 White River Junction, Vermont Location Map



The following paragraphs discuss the major initiatives that contribute to the Army's need for the Proposed Action near White River Junction, Vermont.

Base Realignment and Closure. In previous rounds of BRAC, the explicit goal was to save money and downsize the military in order to reap a "peace dividend." In the 2005 BRAC round, U.S. Department of Defense (DoD) sought to reorganize its installation infrastructure to most efficiently support its forces, increase operational readiness, and facilitate new ways of doing business. Thus, BRAC represents more than cost savings. It supports advancing the goals of transformation, improving military capabilities, and enhancing military value. The Army needs to carry out the BRAC recommendations near White River Junction, Vermont in order to achieve the objectives for which Congress established the BRAC process.

Installation Sustainability. On October 1, 2004, the Secretary of the Army and the Chief of Staff issued *The Army Strategy for the Environment*. The strategy focuses on the interrelationships of mission, environment, and community. A sustainable installation simultaneously meets current and future mission requirements, safeguards human health, improves quality of life, and enhances the natural environment. A sustained natural environment is necessary to allow the Army to train and maintain military readiness.

1.3 Scope

This EA was developed in accordance with the *National Environmental Policy Act* (NEPA) (42 U.S.C. § 4321 et seq.); implementing regulations issued by the President's Council on Environmental Quality (CEQ), 40 Code of Federal Regulations (CFR) Parts 1500-1508; and 32 CFR Part 651 [*Environmental Analysis of Army Actions*]. Its purpose is to inform decision makers and the public of the likely environmental consequences of the Proposed Action and alternatives. This EA does not include the closure of Chester Memorial Army Reserve Center and Organizational Maintenance Shop, Chester, Vermont and Berlin Army Reserve Center, Berlin, Vermont. Those actions are subject to separate NEPA consideration.

This EA identifies, documents, and evaluates environmental effects of the proposed realignment near White River Junction, Vermont. An interdisciplinary team of environmental scientists, biologists, planners, economists, engineers, archaeologists, historians, and military technicians analyzed the Proposed Action and alternatives in light of existing conditions and identified relevant beneficial and adverse effects associated with the actions. The Proposed Action is described in Section 2.0 and the alternatives are described in Section 3.0. Conditions considered the "environmental baseline" conditions are described in Section 4.0, Affected Environment and Consequences. The expected effects of the Proposed Action, also described in Section 4.0, are presented immediately following the description of the environmental baseline conditions for each resource addressed in the EA. Section 4.0 also addresses the potential for cumulative effects, and mitigation measures are identified where appropriate. Section 5.0 provides conclusions summarizing the magnitude of expected effects, and identifies the environmentally preferred alternative. The list of preparers of this EA is presented in Section 6.0, the

document distribution list is presented in Section 7.0, references cited in this document are provided in Section 8.0, and persons consulted are presented in Section 9.0.

The Defense Base Closure and Realignment Act of 1990 specifies that NEPA does not apply to actions of the President, the BRAC Commission, or the DoD, except “(i) during the process of property disposal, and (ii) during the process of relocating functions from a military installation being closed or realigned to another military installation after the receiving installation has been selected but before the functions are relocated (Sec. 2905(c)(2)(A), Public Law 101-510, as amended).” The law further specifies that in applying the provisions of NEPA to the process, the Secretary of Defense and the secretaries of the military departments concerned do not have to consider “(i) the need for closing or realigning the military installation which has been recommended for closure or realignment by the Commission, (ii) the need for transferring functions to any military installation which has been selected as the receiving installation, or (iii) military installations alternative to those recommended or selected (Sec. 2905(c)(2)(B)).” The Commission’s deliberation and decision, as well as the need for closing or realigning a military installation, are exempt from NEPA. Accordingly, this EA does not address the need for realignment.

The decision to be made is how the Army will implement the BRAC recommendations near White River Junction, Vermont, and, as appropriate, carry out mitigation measures that would reduce effects on resources. The decision on how to implement the realignment will be based on strategic, operational, environmental, and other considerations, including the results of this analysis.

1.4 Public Involvement

The Army invites public participation in the NEPA process. Consideration of the views and information of all interested persons promotes open communication and enables better decision-making. All agencies, organizations, and members of the public having a potential interest in the Proposed Action, including minority, low-income, disadvantaged, and Native American groups, are urged to participate in the decision-making process.

Public participation opportunities with respect to this EA and decision-making on the Proposed Action are guided by 32 CFR Part 651. Upon completion of this EA, the Notice of Availability will be published in a local newspaper, *Valley News*. At that point, the EA is made available to the public for 30 days, along with a draft Finding of No Significant Impact (FNSI) at the Hartford Library, 1587 Maple Street, in Hartford, Vermont and on the BRAC website at http://www.hqda.army.mil/acsim/brac/env_ea_review.htm. At the end of the 30-day public review period, the Army will consider all comments submitted by individuals, agencies, and organizations on the Proposed Action, the EA, and draft FNSI. As appropriate, the Army may then execute the FNSI and proceed with implementation of the Proposed Action. If it is determined prior to issuance of a final FNSI that implementation of the Proposed Action would result in significant impacts, the Army will publish in the *Federal Register* a notice of intent to prepare an environmental impact statement, commit to mitigation actions sufficient to reduce impacts below significance levels, or not take the action.

The public may obtain information on the status and progress of the Proposed Action and the EA through the 99th Regional Support Command (RSC) by contacting Ms. Laura Dell'Olio at (609) 562-7661 or emailing her at laura.dellolio@usar.army.mil.

1.5 Regulatory Framework

A decision on whether to proceed with the Proposed Action rests on numerous factors such as mission requirements, schedule, availability of funding, and environmental considerations. In addressing environmental considerations, the Army is guided by relevant statutes (and their implementing regulations) and Executive Orders (EOs) that establish standards and provide guidance on environmental and natural resources management and planning. These include the Clean Air Act (CAA), Clean Water Act (CWA), Noise Control Act, Endangered Species Act (ESA), National Historic Preservation Act (NHPA), Archaeological Resources Protection Act (ARPA), Native American Graves Protection and Repatriation Act (NAGPRA), American Indian Religious Freedom Act (AIRFA), Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Superfund Amendments and Reauthorization Act (SARA), and Toxic Substance Control Act (TSCA). EOs bearing on the Proposed Action include EO 11988 (*Floodplain Management*), EO 11990 (*Protection of Wetlands*), EO 12088 (*Federal Compliance with Pollution Control Standards*), EO 12580 (*Superfund Implementation*), EO 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*), EO 13045 (*Protection of Children from Environmental Health Risks and Safety Risks*), EO 13123 (*Greening the Government through Efficient Energy Management*), EO 13175 (*Consultation and Coordination with Indian Tribal Governments*), EO 13186 (*Responsibilities of Federal Agencies to Protect Migratory Birds*), and EO 13423 (*Strengthening Federal Environmental, Energy, and Transportation Management*). These authorities are addressed in various sections throughout this EA when relevant to particular environmental resources and conditions. The full texts of the laws, regulations, and EOs are available on the Defense Environmental Network & Information Exchange website at <https://www.denix.osd.mil>.

2.0 PROPOSED ACTION

2.1 Introduction

This section describes the Army's Proposed Action for carrying out the BRAC Commission's recommendations. The Proposed Action includes land acquisition, construction, and future use of an AFRC. The details of the facilities and operations, equipment, and personnel for the Proposed Action are described below.

2.2 Facilities and Operations

The Proposed Action includes the construction and operation of the following facilities:

- 50,977-square-foot AFRC training building
- 5,908-square-foot Organizational Maintenance Shop (OMS)
- 7,568-square-foot unheated storage building
- 14,850-square-foot open vehicle storage facility (open with canopy)

USAR units to be housed at this facility are Detachment 1, Company A, 405th Combat Support Hospital and Detachment 1, 220th Transportation Company. VTARNG units to be housed at this facility are Detachment 1, Company A, 186th Brigade Support Battalion and Detachment 1, 131st Engineer Company.

The Proposed Action requires approximately 14 acres. The Army would acquire new land for construction of these facilities. The AFRC would provide administrative, educational, assembly, kitchen, library, learning center, heated storage, vault, weapons simulator, and physical fitness areas for two USAR units and two VTARNG units. The OMS would provide work bays and maintenance administrative support. There would also be an unheated storage building and a vehicle storage facility, which would be an open but covered facility, necessary due to the winter weather in the region. One bay in the covered facility would be constructed specifically for housing a Heavy Expanded Mobility Tactical Truck (HEMTT) 2,500-gallon fuel tanker that would be used for fuel dispensing.

Activities at the AFRC would be training-related, with no live weapons firing. On training weekends, reservists would either commute to the AFRC or stay in local hotels. Activities at the OMS would include routine maintenance (e.g., oil change, tire rotation, etc.) or other vehicle repair as required. Occasionally, vehicles from neighboring Reserve Centers that do not have an OMS could be brought to the new OMS for maintenance and/or certain types of repair.

The facilities would be permanent construction with reinforced concrete foundations; concrete floor slabs; structural steel frames; masonry veneer walls; standing seam metal roofs; heating, ventilation, and air conditioning (HVAC) systems; and plumbing, mechanical, electrical, and security systems.

Supporting improvements are also proposed to complement the facilities, including approximately 3,240 square yards of pavement for privately-owned vehicles (POVs);

2,550 square yards of pavement for military equipment parking (MEP); 7,763 square yards of pavement for the access road; walkways; grading, clearing and landscaping; extension of utility services; drilling and installation of a water supply well; security fencing and gates; and general site improvements. Anti-terrorism/Force Protection (ATFP) safety and security regulations would be incorporated into the facility designs and siting.

2.3 Equipment

Approximately 140 vehicles are anticipated to be kept on-site as a result of the realignment of USAR and VTARNG units to the new AFRC. Vehicles would include high mobility multi-purpose wheeled vehicles (Humvees); semi tractors; dump trucks; full-tracked tractors; road graders; earth scrapers; fuel-dispensing semi-trailers (5,000 gallons); HEMTT 2,500-gallon fuel tanker; flat bed, cargo, and specialty trailers; and utility trucks. Any fuel-dispensing semi-trailers (5,000 gallons) would be stored on-site empty with the exception of the HEMTT 2,500-gallon fuel tanker that would be used as a fuel dispensing station. Occasionally, some of these vehicles could be staged and then moved as a convoy for off-site training. The number of vehicles assumed to be on site at the new AFRC has been determined by the guidance given in Army Regulation (AR) 140-483, wherein 60 percent of the USAR and VTARNG's vehicles would be stored at the new AFRC. The remainder would be placed into an Equipment Concentration Site at Devens Reserve Forces Training Area in Devens, Massachusetts for USAR vehicles and Westminster (Field Maintenance Shop #5) or Colchester (Camp Johnson), Vermont for VTARNG vehicles.

2.4 Personnel

The new facility would realign the USAR units resulting from the closure of the Chester Memorial Army Reserve Center and OMS and the Berlin Army Reserve Center and VTARNG units from armories in Ludlow, North Springfield, and Windsor, Vermont, if needed, as directed by BRAC 05. The facility would employ approximately 10 permanent full-time personnel from the 99th RSC and VTARNG, and would serve about 300 personnel on a rotating basis, mostly on weekends. The maximum expected use of the new facility would be about 104 members per weekend, and there would be parking for about 94 POVs.

3.0 ALTERNATIVES

3.1 Introduction

A bedrock principle of NEPA is that an agency should consider reasonable alternatives to a proposed action. Considering alternatives helps to avoid unnecessary impacts and allows analysis of reasonable ways to achieve the stated purpose. To warrant detailed evaluation, an alternative must be reasonable. To be considered reasonable, an alternative must be capable of implementation, and satisfactory with respect to meeting the purpose of and need for the action.

This section discusses all alternatives, including all site locations, facilities, and the No Action Alternative. To support and sustain its current and future mission, the 99th RSC has programmed the construction of new facilities, including structures, roads, and parking lots. The 99th RSC was activated October 1, 2008 to take over functional command from the 77th Regional Readiness Command (RRC), 94th RRC, and 99th RRC.

3.2 Development of Alternatives

Means to Accommodate Realigned Units. Relocation of units and establishment of new units involves ensuring that the Army has adequate physical accommodations for personnel and their operational requirements. BRAC recommendations direct the relocation of units to a new AFRC with an OMS in the vicinity of White River Junction, Vermont if the Army is able to acquire land suitable for the construction of the facilities.

Siting of New Construction. The Army considers both general and specific siting criteria for construction of new facilities. General siting criteria include consideration of compatibility between the functions to be performed and the land use designation for the site, adequacy of the site for the function required, proximity to related activities, distance from incompatible activities, availability and capacity of roads, efficient use of property, development density, potential future mission requirements, and special site characteristics, including environmental incompatibilities.

Specific siting criteria include consideration of location of the workforce and efficient, streamlined management of functions. Collocation of similar types of functions, as opposed to dispersion, permits more efficient use of equipment, vehicles, and other assets.

Schedule. Alternatives for scheduling of proposed realignment actions are principally affected by three factors: the availability of facilities to house realigned personnel and functions, efforts to minimize potential disruption of mission activities based on the number of personnel involved in the relocation or the amount of work to be performed, and early realization of benefits to be gained by completion of the realignments. In most cases, minor shifts in schedule would not produce different environmental results.

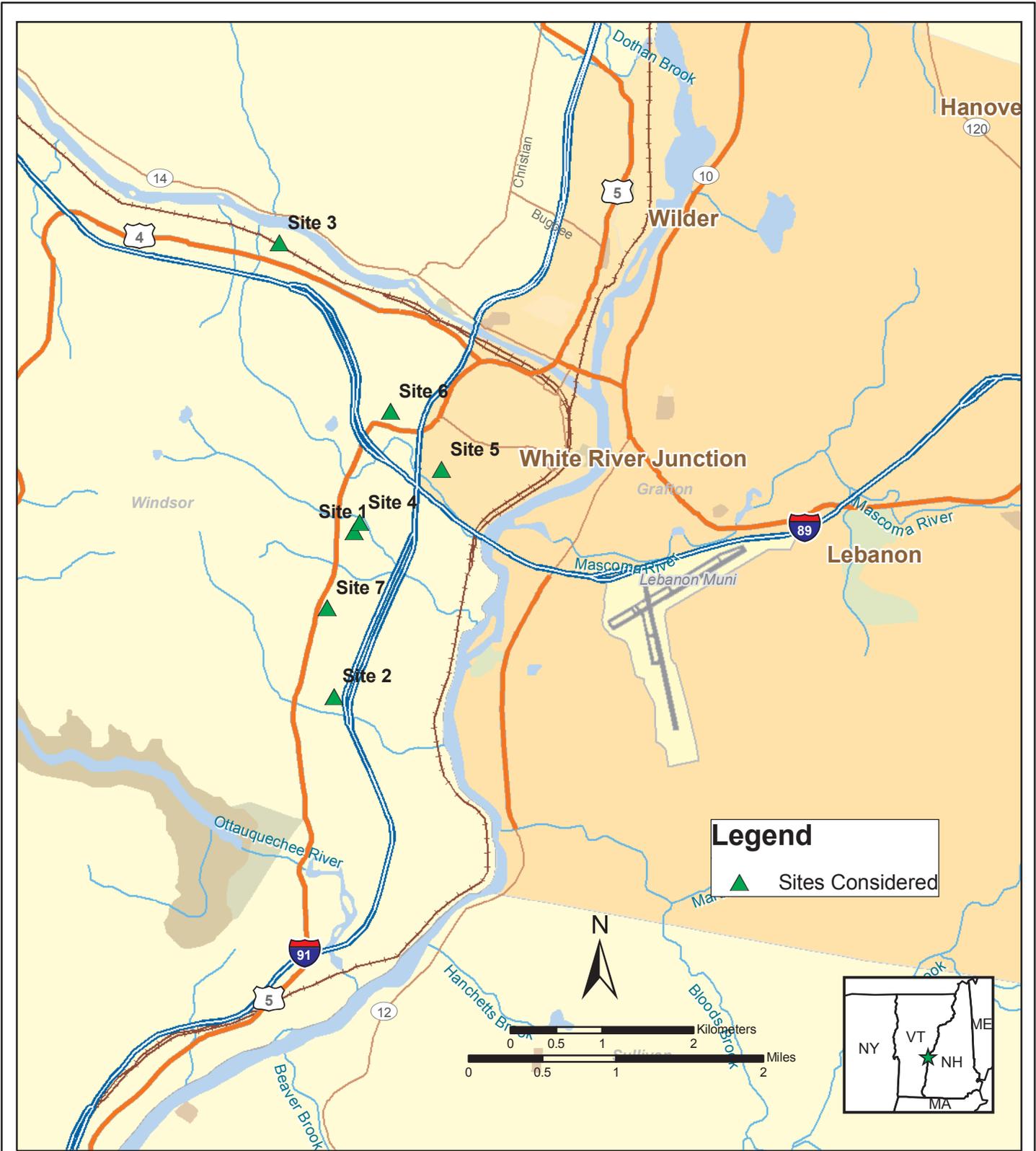
3.3 Alternatives Considered

Potential site locations for the AFRC and related facilities were screened for inclusion in this EA. Screening criteria consist of safety constraints, geographic and environmental constraints, and operational constraints.

The Army screened seven locations in the White River Junction, Vermont area shown on Figure 3-1. Initially, five locations were identified in the Available Site Identification and Validation Report, an internal real estate planning document prepared by the U.S. Army Corps of Engineers (USACE) that identifies potential properties that may fill the needs of the proposed Army facility. The Army's Site Survey Team identified two additional sites during the site visits. The following describes the constraints considered in the evaluation process for the seven locations.

- **Safety Constraints** – Engineering and operational safety, vehicle traffic and circulation patterns including access roads
- **Geographic and Environmental Constraints** – Availability of sufficient land area and configuration for anticipated footprint of at least 14 acres, access, security requirements, existence of environmentally sensitive areas within the anticipated footprint, minimum width of 500 linear feet required for ATRFP requirements
- **Operational Constraints** – Infrastructure demand (water, electricity, and other needs), compatibility with neighborhood, demolition costs (estimated costs to demolish any existing improvements)

Table 3-1 summarizes the site considerations and constraints as applied to each location considered. Based on the considerations, three alternatives, Alternative 1 (the Preferred Alternative), Alternative 2, and the No Action Alternative, were developed for evaluation in this EA. The No Action Alternative is required to be carried forward by CEQ. Details of these alternatives are described in Section 3.4. Section 3.5 discusses the sites that were eliminated from further consideration and the reasons for elimination.



Prepared For:
 U.S. Army Corps of Engineers, Mobile District

Figure 3-1
 Sites Screened for Inclusion in this Environmental Assessment



Table 3-1. Site Considerations and Constraints.

| Site | Location Description | Safety Constraints | Geographic and Environmental Constraints | Operational Constraints | Carried Forward to EA or Not Carried Forward |
|------|--|---|---|--|--|
| 1 | Kline Drive, Hartford, Vermont | <ul style="list-style-type: none"> Safety concerns for ingress/egress Poor visibility | <ul style="list-style-type: none"> Buildable area is irregular in shape, small and constrained on two sides by steep ravine drop off Less than 200 foot-wide level area Access shared with adjacent landowners and indoor tennis court | <ul style="list-style-type: none"> Utilities would need to be extended 1,500 linear feet Septic system required Retention pond for snow removal residue/storm runoff required | Not Carried Forward |
| 2 | North Hartland Road, Hartford, Vermont | Safety concerns for Army traffic through recreational areas | Delineated Class III wetlands occur near the center and in the southcentral part of the parcel | <ul style="list-style-type: none"> Installation of water supply well and water storage tanks required Extension and possible upgrade of sewer lines required | Carried Forward to EA |
| 3 | Old River Road, Hartford, Vermont | <ul style="list-style-type: none"> Access requires use of Old River Road which is narrow, crosses rail tracks twice, and includes steep hills Poor visibility | <ul style="list-style-type: none"> Land drops dramatically toward the White River to an area that is in the 100-year floodplain Site is long and narrow and too small to accommodate construction requirements Fully wooded Site abuts active railroad to the south | <ul style="list-style-type: none"> No existing utilities Evidence of debris on site | Not Carried Forward |
| 4 | Melisi Road, Hartford, Vermont | No visibility or access | <ul style="list-style-type: none"> Steep and undulating and surrounded by steep drop off/ravines on both sides Heavily wooded | <ul style="list-style-type: none"> Utilities would have to be brought to the site a distance of 1,500 feet Extensive site preparation cost due to extreme hills, extensive rock outcropping, and woods | Not Carried Forward |

| Site | Location Description | Safety Constraints | Geographic and Environmental Constraints | Operational Constraints | Carried Forward to EA or Not Carried Forward |
|------|--|--|---|--|--|
| 5 | Holiday Drive, White River Junction, Vermont | None | Underground propane and/or oil tanks | <ul style="list-style-type: none"> • Real estate issues involving foreclosure proceedings for existing hotel • Demolition of existing hotel required | Not Carried Forward |
| 6 | North Main Street, White River Junction, Vermont | Ingress/egress through the VA hospital parking lots for employees and patients via a rather narrow and steep roadway | <ul style="list-style-type: none"> • Extreme topographic features, land is steep and wooded • VA property with campus on National Register of Historic Places • ATRFP challenges | <ul style="list-style-type: none"> • Construction would require extensive blasting, switchback roadways, and removal of granite • Utilities would need to be brought to site, 1,500 to 2,000 feet | Not Carried Forward |
| 7 | Drew Road, White River Junction, Vermont | None | <ul style="list-style-type: none"> • Partially wooded and contains rock at land surface • Extensive site preparation would result in environmental concerns • Clear cutting of 10 acres of forest required | <ul style="list-style-type: none"> • Surrounded by rural residential areas • Installation of water supply well and water storage tanks required • Relocation of tenant required • Possible demolition of one small structure • Construction would require extensive blasting • Available acreage limits design flexibility | Carried Forward to EA |

ATFP Anti-terrorism/Force Protection
 EA environmental assessment
 VA Veterans Administration

3.4 Alternatives Carried Forward

3.4.1 ALTERNATIVE 1 - PREFERRED ALTERNATIVE

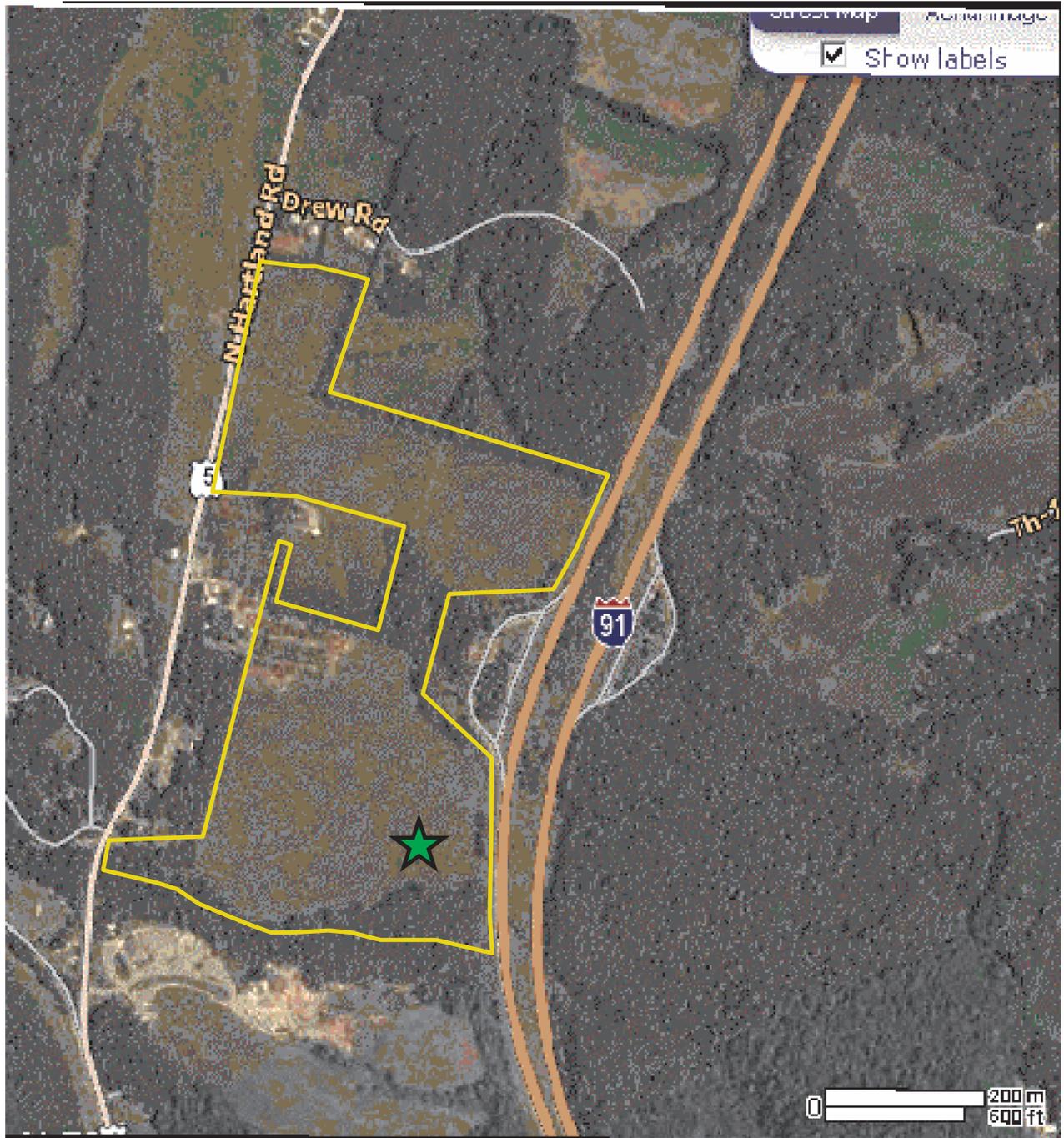
The Army's Preferred Alternative is to construct the AFRC and associated facilities at Site 2 as shown in Figure 3-1. This site, called the North Hartland Road Site in this EA, is described below along with the reasons for identifying it as the Preferred Alternative.

The North Hartland Road Site consists of a portion of a +/- 65.5-acre parcel owned by the Town of Hartford, Vermont. The Army would acquire about 17 acres in the southeastern corner of this parcel. The remaining acreage would be retained by the Town of Hartford for a planned recreation area/sports park. The site is located between U.S. Route 5 and I-91. The AFRC would be a two-story structure.

Access to the site is from U.S. Route 5 South (North Hartland Road), approximately 2 miles south of the intersection of I-89 and I-91. A portion of the site is plowed and presently leased for agricultural use. A commercial nursery and one residence are located along U.S. Route 5 South along the western boundary of the property. The southern boundary of the parcel abuts a ravine with an unnamed stream. Further south of the stream, there is a sanitary municipal solid waste landfill that was closed in 1992 and an operating transfer station and recycle center. A cellular telephone tower and a radio broadcast tower are located on the parcel, generally between the northern and southern portions of the parcel. A rest area off of I-91 is located adjacent to the eastern boundary of the parcel. Figure 3-2 shows an aerial photograph of the North Hartland Road Site, and Figure 3-3 shows the Army's proposed site plans.

The Town of Hartford would provide and own an access road to the AFRC for the Army's use. The access road is considered a connected action according to CEQ regulations Part 1508.25. A connected action can be defined as an action that cannot or will not proceed unless other actions are taken previously or simultaneously. Construction and operation of the AFRC is dependent on construction of an access road to the site; thus, construction and use of the access road is considered in this EA. Five access road options are being considered to access the Army's proposed AFRC at this site as shown in Figure 3-4. Additionally, a temporary access road (30 feet wide; 0.58 acres), may be used to access the property from U.S. Route 5 and would be restored to original condition following construction. The location of the temporary access road is shown on Figure 3-4. The temporary access road would be constructed and utilized only in the event that it became necessary, e.g., if the Town of Hartford doesn't have the primary, permanent access road constructed in a timely fashion or in a case where the Town's construction activities could cause a delay for the contractor constructing the AFRC.

The areas being considered for a proposed groundwater supply well and utility easement are shown on Figure 3-3. The proposed groundwater supply well would be located in a permanent easement, attached to the permanent utility easement (30 feet wide; 1.53 acres) that would allow for operation and maintenance of the well. Adjacent to the permanent utility easement, there would be a temporary construction easement (20 feet wide; 0.49 acres) that would facilitate access to the site for construction of the well.



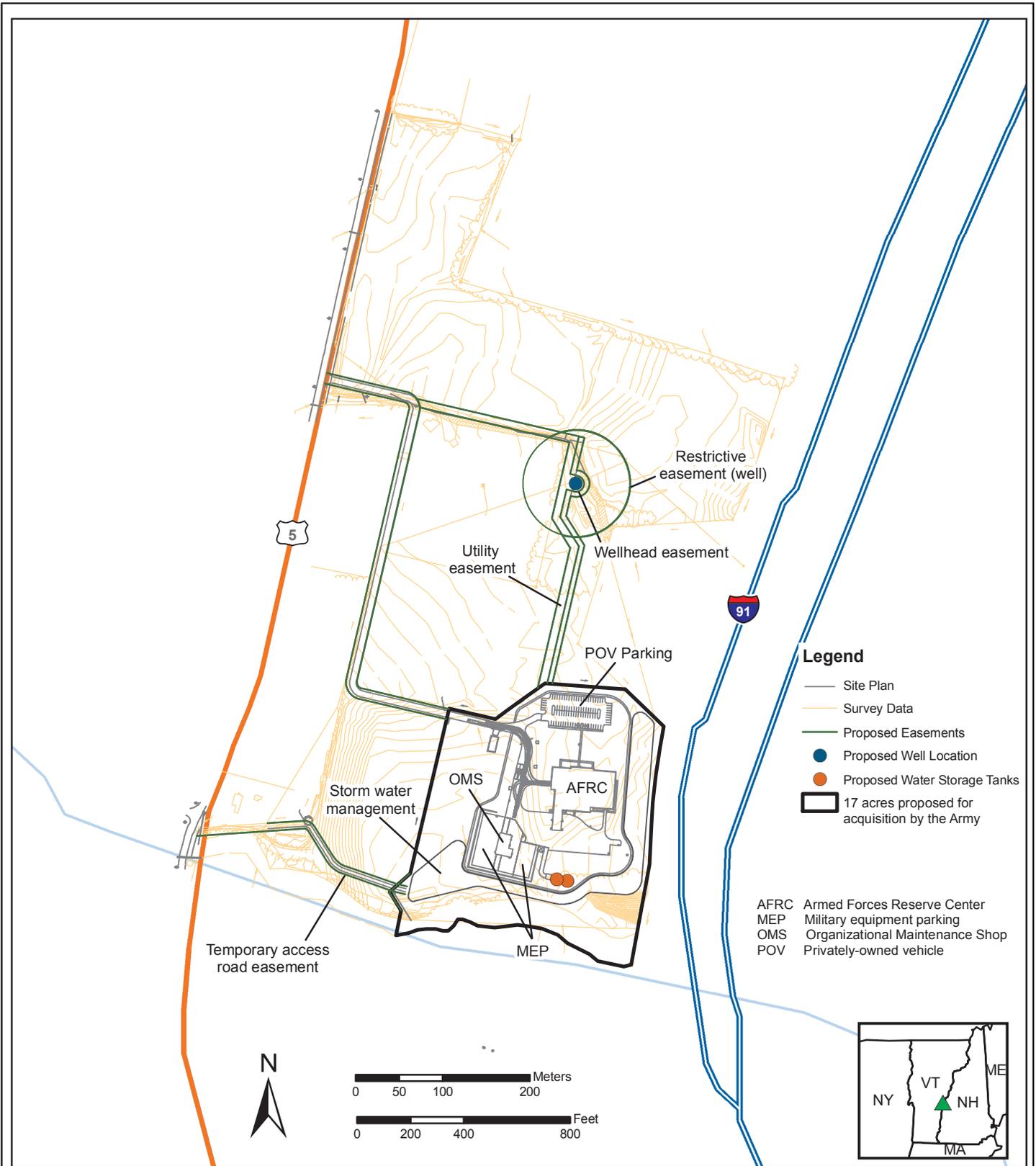
-  Area Considered for Proposed AFRC/OMS
-  Property Boundary
- AFRC Armed Forces Reserve Center
- OMS Organizational Maintenance Shop



Prepared For:
 U.S. Army Corps of Engineers, Mobile District

Figure 3-2
 Aerial Photograph of the North Hartland Road Site -- Preferred Alternative





Prepared For:

U.S. Army Corps of Engineers, Mobile District

Figure 3-3

Proposed Site Plan, Utility Easements, and Water Supply Well for the North Hartland Road Site -- Preferred Alternative



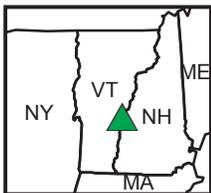
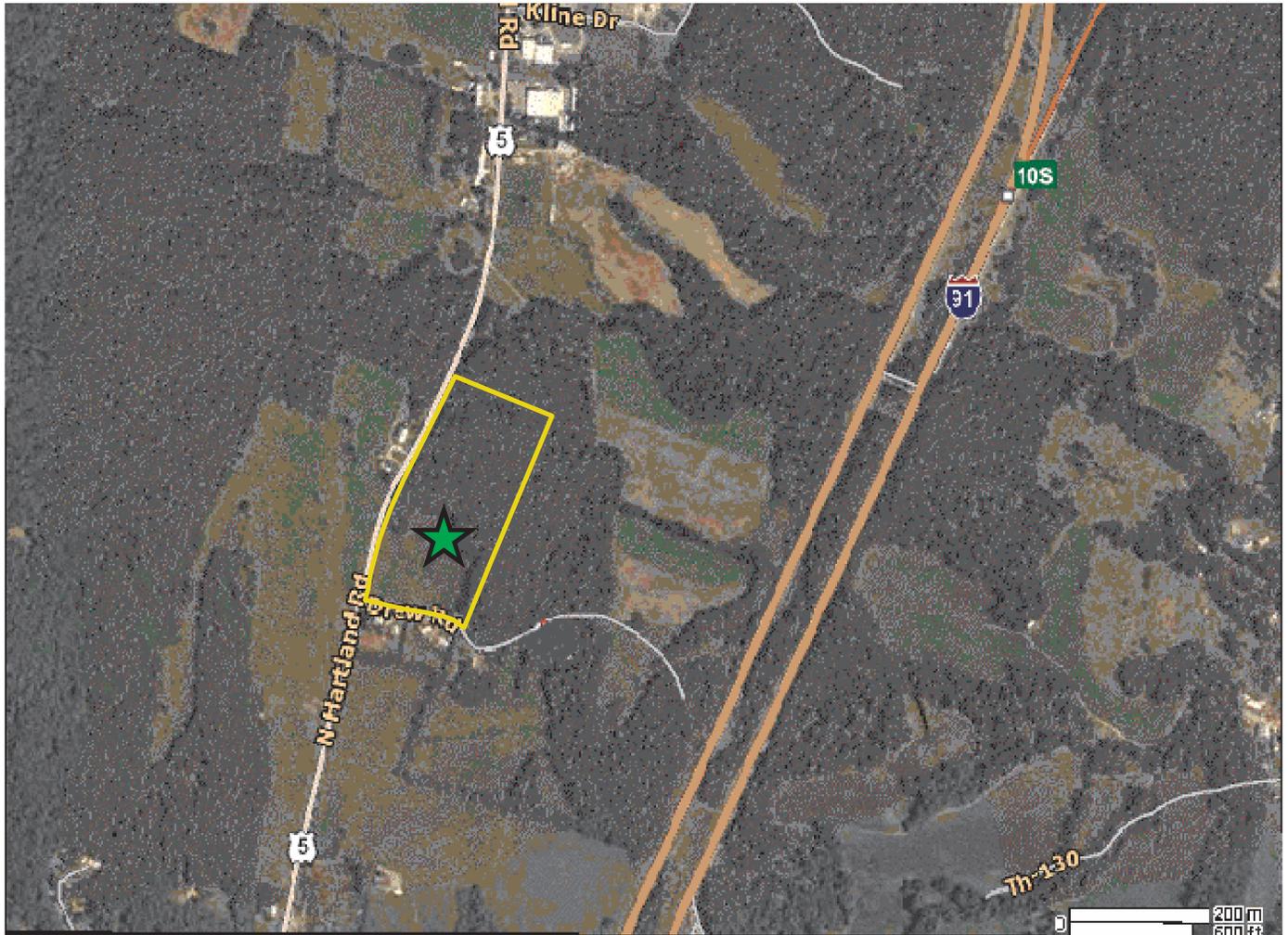
Due to the limited availability of water at the site, two water storage tanks, with a capacity of 62,500 gallons each, would be required for fire suppression and would be located at the south end of the facility. Water storage tanks of this capacity are generally about 7 feet high and 39 feet in diameter.

The North Hartland Road Site is already a disturbed site with relatively little wildlife value, except the surrounding area and limited wetlands. Further, the Town of Hartford already intends to develop the entire 65-acre parcel; thus, construction of the AFRC on the North Hartland Road Site would consolidate construction at this site rather than using additional land that would not otherwise be developed. Finally, this site has more acceptable geographic conditions, would require much less site preparation, and has fewer operational constraints than Alternative 2 (Site 7, see Table 3-1); therefore, this site is considered to be the Army's Preferred Alternative. At least seven potential site plans, including varying floor plans, were developed for this site. The site plan analyzed in this EA was selected based on the following criteria: avoiding slopes and low area, maximizing distance from creek and nearby residence, minimizing visibility of MEP, ensuring appropriate and safe site ingress and egress, considering viewshed from the proposed recreation area/sports park, and general approval by the Town of Hartford.

3.4.2 ALTERNATIVE 2

Alternative 2 is to construct the AFRC and associated facilities at Site 7 as shown in Figure 3-1. This site is called the Drew Road Site in this EA. The Drew Road Site is owned by a private development company and is available for purchase. The site has 1,200 feet of frontage on U.S. Route 5 South. It comprises about 15 acres, with about 5 acres being open field and about 10 acres being heavily forested with steep terrain and rock formations at and above the land surface. It has excellent access and visibility; however, the wooded portion of the site is undulating and rocky, with exposed rock in places.

Since the Army requires about 14 acres for construction, nearly all of the Drew Road Site would be utilized. This would involve clear-cutting, blasting, and cut-and-fill of about 10 acres to make the site usable. Thus, the extensive site preparation would result in the loss of about 10 acres of forest and general environmental concerns (noise, air quality, aesthetics of a wooded area being replaced by a building), especially considering the close proximity to rural residences. Site preparation costs would be greater as well. The acreage available would also limit the Army's flexibility in site design. For these reasons, this site is less desirable than the Preferred Alternative described above. Figure 3-5 shows an aerial photograph of the Drew Road Site.



-  Area Considered for Proposed AFRC/OMS
-  Property Boundary
- AFRC Armed Forces Reserve Center
- OMS Organizational Maintenance Shop



Prepared For:
 U.S. Army Corps of Engineers, Mobile District

Figure 3-5
 Aerial Photograph of the Drew Road Site -- Alternative 2



3.4.3 NO ACTION ALTERNATIVE

CEQ regulations require analysis of the No Action Alternative in an EA, for it serves as the baseline against which the impacts of the Proposed Action and alternatives will be evaluated. Accordingly, the No Action Alternative is evaluated in this EA.

Under the No Action Alternative, the Army would not implement the Proposed Action. USAR units as well as the VTARNG units would continue to train at and operate from their current locations which are over utilized and not properly configured to allow the most effective training of personnel to complete mission requirements. However, routine replacement or renovation actions could occur through normal military maintenance and construction procedures as circumstances independently warrant.

3.5 Alternatives Considered and Not Carried Forward

Five other alternative sites were considered in the White River Junction area for the construction of the proposed AFRC (see Figure 3-1). Sites 1, 3, 4, 5, and 6 were eliminated from further study during the screening process due to various constraints as summarized in Table 3-1 and as described in more detail below. All sites, except Site 5, were rejected by the Site Survey Team after their site visits. Site 5 was rejected later due to legal and real estate issues as discussed below. Therefore, these sites are not carried forward for analysis in this EA.

Site 1 is owned by a private individual and access is via a private road situated off of a two-lane road which causes safety concerns for ingress/egress. The site has poor visibility. Utilities would have to be extended for approximately 1,500 linear feet to the construction site as part of the site preparation costs. The buildable area is irregular in shape, small, and constrained on two sides by a steep ravine drop off of 30 or 40 feet depth with a fast-moving stream. The only level area is less than 200-feet wide. The site previously failed several “percolation tests” and a septic system would be required. There is no provision for stormwater/snow melt off or plowing/drainage and installation of a retention pond for snow removal residue/storm runoff would be required.

Site 3 is owned by the Town of Hartford, Vermont and abuts the White River to the north, an active railroad to the south, and an industrial park to the east. Access requires the use of Old River Road which is narrow, crosses rail tracks twice, and negotiates steep hills. Access to the site would require the removal of two sets of rail tracks and numerous trees. Visibility is poor and access is too difficult and would create a safety hazard due to the large equipment that would be used. The land drops dramatically toward the White River to an area that is in the 100-year floodplain and the site is long and narrow and too small to accommodate construction requirements. There is also evidence of debris on the site.

Site 4 is owned by the Valley Bible Church, a mile south of the church off of U.S. Route 5. The site is large but steep and undulating. The buildable area is 1,500 feet back on an unimproved road and would require extensive site development, including bringing utilities a distance of 1,500 feet. The site has virtually no visibility or access and is surrounded by steep drop off/ravines on both sides. Topography of the site is extreme

hills with extensive rock outcropping throughout and the site is heavily wooded. Extensive site preparation costs would be incurred.

Site 5 is owned by the Valley Land Corporation but is currently leased to The Regency Inn. This site was rejected due to legal and real estate issues that would prevent timely acquisition of the site. Construction on this site would require demolition of a hotel. The site has sufficient land area to accommodate the proposed facilities and the ATRP setback requirements. All utilities are available on site. The majority of the topography is level; however, it does drop off to a ravine in the rear. There are underground propane tanks on the west side of the building. The site has a large paved parking lot which could possibly be incorporated into the design to reduce cost of site preparation. The roadway network that serves this site provides excellent access for large pieces of equipment. The site has easy access to I-89, I-91, and U.S. Route 5. The Site Survey Team identified this site as the primary site to be pursued for acquisition. The property owner, however, has initiated foreclosure action against The Regency Inn lessee.

Site 6 is owned by the Veterans Administration (VA). The VA Hospital has been constructed on the only “fairly level” portion of the land. The remainder of the land is situated behind the hospital area on extensive granite outcroppings with extreme topographic features. Access would require ingress/egress through the VA parking lots for employees and patients via a rather narrow and steep roadway. The roadway would need to be modified to accommodate heavy equipment. Construction would require extensive blasting and removal of granite. Utilities would need to be brought to the site straight uphill, a distance of 1,500 to 2,000 feet.

4.0 AFFECTED ENVIRONMENT AND CONSEQUENCES

4.1 Introduction

This chapter describes the existing environmental and human resources that could potentially be affected by the Proposed Action and alternatives. The environment described in this chapter is the baseline for the consequences that are presented for each resource and each alternative. The geographic region of influence (ROI) of the Proposed Action has been determined by the Economic Impact Forecast System (EIFS) model to be the Town of Hartford, Windsor County, Vermont. Specific considerations related to the ROI are discussed in the individual resource category discussions. Most of the baseline information was taken from existing documentation.

This chapter also describes potential impacts for each environmental and human resource. An impact is defined as a consequence from modification to the existing environment due to a proposed action or alternative. Impacts can be beneficial or adverse, can be a primary result of an action (direct) or a secondary result (indirect), and can be permanent or long lasting (long term) or temporary and of short duration (short term). Impacts can vary in degree from a slightly noticeable change to a total change in the environment.

For this EA, short-term impacts are defined as those impacts resulting from construction, renovation, or demolition activities (e.g., those that are of temporary duration), whereas long-term impacts are those resulting from the presence of new facilities and operation of the proposed new facilities once they are constructed and commissioned for operation.

Significance criteria were developed for the affected resource categories, and for many resource categories, are necessarily qualitative in nature. Quantitative criteria can be established when there are specific numerical limits established by regulation or industry standard. These criteria are based on existing regulatory standards, scientific and environmental documentation, and/or professional judgment. Impacts are classified as significant or not significant based on the significance criteria. Significant impacts are those which would exceed the quantitative or qualitative limits of the established criteria, such as actions that would threaten a violation of Federal, state or local law or requirements imposed for the protection of the environment, or that would have adverse effects upon public health or safety. Impacts do not necessarily mean negative changes, and any detectable change is not, in and of itself, considered to be negative. In the following discussions, to highlight adverse impacts for the decision maker, the impacts are considered adverse unless identified as beneficial.

The affected environment and baseline conditions are described for each resource in general terms for the ROI and specifically for the North Hartland Road and Drew Road Sites. The affected environment description for each resource is followed by the potential impacts to the resource from Alternative 1 (the Preferred Alternative), Alternative 2, and the No Action Alternative.

4.2 Land Use

4.2.1 AFFECTED ENVIRONMENT

This section describes existing land use conditions on and surrounding the North Hartland Road and Drew Road sites. It considers natural land uses and land uses that reflect human modification. Natural land use classifications include wildlife areas, forests, and other open or undeveloped areas. Human land uses include residential, commercial, industrial, utilities, agricultural, recreational, and other developed uses. Management plans, policies, ordinances, and regulations determine the types of uses that are allowable, or protect specially designated or environmentally sensitive uses. The following sections discuss the regional geographic setting, location, and climate; land use; and current and future development.

4.2.1.1 Regional Geographic Setting, Location, and Climate

Both the North Hartland Road and Drew Road sites are located in White River Junction, Vermont, within a mile of each other. White River Junction is located in eastern Vermont and is one of the five historic villages that make up the Town of Hartford, in Windsor County, Vermont. The Town of Hartford is located on the border of Vermont and New Hampshire at the intersection of I-89 and I-91 as well as U.S. Routes 4 and 5. This is also the location of the confluence of the White and Connecticut Rivers.

The climate is mild during summer when temperatures tend to be in the 60's (degrees Fahrenheit) and extremely cold during winter when temperatures tend to be in the 10's (degrees Fahrenheit). The annual average precipitation at White River Junction is 36 inches.

4.2.1.2 Land Use

About 20 percent of Hartford's land area is "developed," meaning lands containing built structures or infrastructure such as roads, parking lots, railroads, and recreation facilities. All remaining land is categorized as "undeveloped." Undeveloped lands include forests and agricultural lands. Both sites being evaluated for the proposed facilities are defined as being in the Rural South section of Hartford. The area has been historically farmed but very few full-time farming operations remain (Hartford Planning Commission 2007).

North Hartland Road Site. The North Hartland Road Site property is currently owned by the Town of Hartford. The Town of Hartford Master Plan erroneously depicts the land use of the site as "conserved" (Rieseberg 2008). However, the land is zoned Industrial/Commercial, which includes uses such as warehouse, motor vehicle repair, contractor's yard, and contractor's shop. It is somewhat level with a gradual slope to the east, with the exception of a former borrow pit located in the southwest portion of the parcel. Currently, the North Hartland Road Site is plowed and leased for agricultural use. The Army would acquire about 17 acres of the 65.5 acre parcel. Of the 17 acres, approximately 5 acres or 27 percent of the proposed building site is farmland of statewide importance; about 7 acres or 40 percent is prime farmland if drained. See Section 4.6.1.3 for more information about prime farmland.

Adjacent parcels include several residences (southwest and north boundaries), a commercial nursery, a radio broadcast tower parcel, a cellular tower parcel, an interstate rest area, a transfer and recycling center, and a former municipal solid waste landfill.

Drew Road Site. The Drew Road Site is currently owned by a private development company. The land is zoned Industrial/Commercial. The southern portion of the Drew Road Site parcel is cleared for agricultural use but does not appear to be planted at this time. The northern portion of the Drew Road Site parcel is heavily forested with steep terrain and rock formations at and above the land surface.

There is one residence on the Drew Road Site parcel and residences located on adjacent parcels to the west, south, and east. Approximately 18 percent of the site is considered prime farmland, and approximately 19 percent is considered farmland of statewide importance. See Section 4.6.1.3 for more information about prime farmland.

4.2.1.3 Current and Future Development in the Region of Influence

The Town of Hartford adopted a Master Plan on June 5, 2007 that outlines recommendations and strategies for future development (Hartford Planning Commission 2007). Like other rural areas of Hartford, the Rural South area has experienced a trend of increased land subdivision and housing development. The Town plans to change the zoning of the proposed sites from Industrial/Commercial to RL-10 or rural land with 10-acre minimum lot size. RL-10 would be a new zoning category used in less developed areas where unfragmented forests, large agricultural lands, undeveloped lands, and other natural resources exist.

The Vermont Agency of Transportation (VTrans) is currently completing a sewer extension that includes installation of an 8-inch gravity sewer line from the southbound I-91 rest area across the northern portion of the North Hartland Road Site to connect to a lift station along U.S. Route 5 South and extension of the sanitary line to the north. The Town of Hartford is planning to build a sports/recreation area on the remaining acreage of the North Hartland Road Site, as explained in detail in Section 4.14. No other planned development within or adjacent to the North Hartland Road and Drew Road sites is known.

4.2.2 CONSEQUENCES

Considerations for impacts to land use include the land on and adjacent to the Proposed Action project areas, the physical features that influence current or proposed uses, pertinent land use plans and regulations, and land availability. Conformity with surrounding land use is of utmost importance.

Potential impacts to land use are considered significant if the Proposed Action would:

- Conflict with applicable ordinances and/or permit requirements;
- Cause nonconformance with the current general plans and land use plans, or preclude adjacent or nearby properties from being used for existing activities; or

- Conflict with established uses of an area requiring mitigation.

4.2.2.1 Alternative 1 – Preferred Alternative

Impacts to land use from the Preferred Alternative would not be significant. The North Hartland Road Site is currently zoned as Industrial/Commercial but is scheduled to become zoned as RL-10 or rural land with 10-acre minimum lot size. The Proposed Action would not conflict with this change in zoning, nor would it conflict with the Town of Hartford Master Plan. The Town’s Board of Selectmen supports the use of the North Hartland Road Site for the Proposed Action (Rieseberg 2008). The proposed facilities would not interfere with activities on adjacent properties.

Under the Preferred Alternative, there would be an irretrievable commitment of land resources required for construction and operation of new facilities; this commitment of land resources is irreversible because the land likely cannot be completely restored to its original condition and other uses would be precluded during the time the land is being used for the proposed use.

4.2.2.2 Alternative 2

Impacts to land use from Alternative 2 would not be significant. The Drew Road Site is currently zoned Industrial/Commercial but is scheduled to become zoned as RL-10 or rural land with 10-acre minimum lot size. The Proposed Action would not conflict with this change in zoning, nor would it conflict with the Town of Hartford Master Plan. The proposed facilities would not interfere with activities on adjacent properties. However, construction of the AFRC at the Drew Road Site would result in the conversion of 15 acres of farmland and woodland that might not otherwise be converted; whereas, the development of the North Hartland Road Site is already planned by the Town of Hartford.

As with the Preferred Alternative, under Alternative 2, there would be an irretrievable commitment of the land resources required for construction and operation of new facilities; this commitment of land resources is irreversible because the land likely cannot be completely restored to its original condition and other uses would be precluded during the time the land is being used for the proposed use.

4.2.2.3 No Action Alternative

Under the No Action Alternative, there would be no changes in land use at the North Hartland Road and Drew Road sites.

4.3 Aesthetics and Visual Resources

4.3.1 AFFECTED ENVIRONMENT

This section describes the existing aesthetic and visual resource conditions in the area of the North Hartland Road and Drew Road sites. Visual resources include natural and manmade physical features that provide the landscape its character and value as an environmental resource. Landscape features that form a viewer’s overall impression

about an area include landform, vegetation, water, color, adjacent scenery, scarcity, and constructed modifications to the natural setting.

Hartford has a mixture of densely settled villages surrounded by open countryside. The historic development of Hartford into five villages largely separated by countryside has enabled the Town to maintain much of its scenic beauty. In 1999, the States of Vermont and New Hampshire gave official approval to years of planning by designating a bi-state route for a Connecticut River Scenic Byway along New England's largest river. The Byway includes U.S. Route 5 through Hartford, and White River Junction is one of ten waypoint communities along the byway. The Hartford Master Plan identifies the scenic areas that the Hartford Conservation Commission has identified as important (Hartford Planning Commission 2007). These areas include the open lands south of White River Junction between U.S. Route 5 South and I-91, including both the North Hartland Road and Drew Road sites.

North Hartland Road Site. The North Hartland Road Site is in a rural area, located approximately 2 miles south of White River Junction between U.S. Route 5 South and I-91. It is plowed for agricultural use. A commercial nursery, a broadcast tower, a Interstate rest area, and a cellular tower are visible from the site. The cellular tower has been camouflaged as a tree.

Drew Road Site. The Drew Road Site is located approximately 1.5 miles south of White River Junction between U.S. Route 5 South and I-91. The northern half is heavily forested with steep terrain and rock outcroppings. The southern half is cleared of trees with rock visible at the land surface. At least two abandoned automobiles are located on the site as well as junk piles behind an existing residence. Residences located at the southern, eastern, and western boundaries are visible from the site.

4.3.2 CONSEQUENCES

Potential impacts to aesthetic and visual resources are considered significant if the Proposed Action would substantially degrade the viewshed or visual character in the area of the North Hartland Road and Drew Road sites. The magnitude of any impact would be primarily determined by the number of viewers affected, viewer sensitivity to changes, distance of viewing, and compatibility with existing land use.

4.3.2.1 Alternative 1 – Preferred Alternative

Impacts to aesthetics and visual resources from the Preferred Alternative would not be significant. The Preferred Alternative would cause minor short-term visual impacts resulting from ground disturbance and the presence of workers, vehicles, and equipment and the generation of dust and vehicle exhaust associated with construction of the proposed facilities. However, once construction is complete, the reclamation of disturbed areas would remove these visual impacts.

Construction of the AFRC and OMS on the North Hartland Road Site would result in some long-term visual impacts to the site, most notably, the conversion of open, agricultural land to light industrial/commercial use. However, aesthetic resources have

been considered in developing the site plan, including minimizing the visibility of MEP, considering the viewshed from the proposed recreation area/sports park, using masonry façade, and general input from and approval by the Town of Hartford. The AFRC would be set back from U.S. Route 5, resulting in a limited view of the entire facility from U.S. Route 5 with the exception of the sign that would be located close to the roadway. Additionally, ATFP measures would be incorporated as practicable into the design of the facility, such that aesthetically-unappealing bollards would be unnecessary. The AFRC would mostly be visible from I-91 and from the recreation area as discussed further in Section 4.14.2.2. Additionally, the two 62,500-gallon above ground water storage tanks would also be visible from I-91 and are expected to be about 7 feet high and 39 feet in diameter.

The use of the temporary access road by construction vehicles during construction would result in temporary adverse visual impacts to the adjacent resident. The Army would coordinate with the adjacent landowner to determine the necessary type of screening, such as landscaping and/or fencing, to minimize adverse visual impacts.

Although the North Hartland Road Site is included as an important scenic area in the Hartford Master Plan, the Town supports the use of the site for the Proposed Action (Rieseberg 2008).

Operations at the AFRC and OMS would result in minor adverse aesthetic impacts, including increased traffic and nighttime light on weekends when the facilities are in use. The maximum number of individuals reporting on any given weekend is expected to be approximately 104; only 10 full-time personnel would commute to the site daily.

4.3.2.2 Alternative 2

Impacts to aesthetics and visual resources from Alternative 2 would not be significant. Impacts from construction would be greater than those described for the Preferred Alternative. Since the Army requires about 14 acres for construction, nearly all of the Drew Road Site would be utilized. This would involve clear-cutting, blasting, and cut-and-fill of about 10 acres to make the site usable. Thus, the extensive site preparation would result in the loss of about 10 acres of forest that would be replaced by the AFRC, an institutional-type building, in close proximity to rural residences. Only a small beneficial impact would occur from cleanup of the abandoned automobiles and junk piles currently at the site.

The AFRC would be visible from U.S. Route 5 South and from residences at the boundaries of the site. Since most of the site would be utilized, the two 62,500-gallon above ground water storage tanks and MEP would likely be visible from U.S. Route 5.

Impacts from operations at the AFRC and OMS would be the same as for the Preferred Alternative.

4.3.2.3 No Action Alternative

Under the No Action Alternative, there would be no effects on the viewshed or on the aesthetic values of the region.

4.4 Air Quality

4.4.1 AFFECTED ENVIRONMENT

This section describes the existing air quality conditions at and surrounding the North Hartland Road and Drew Road sites. Ambient air quality conditions are discussed first followed by emission sources in the area of the considered sites.

The ambient air quality in an area can be characterized by whether it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS). The CAA (42 U.S.C. 7401 et seq.) requires the U.S. Environmental Protection Agency (EPA) to set NAAQS for pollutants considered harmful to public health and the environment. National primary ambient air quality standards define levels of air quality which the EPA has determined as necessary to provide an adequate margin of safety to protect public health, including the health of “sensitive” populations such as children and the elderly. National secondary ambient air quality standards define levels of air quality which are deemed necessary to protect the public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. These standards have been established for six criteria pollutants. The criteria pollutants are carbon monoxide, nitrogen dioxide, ozone, particulate matter, sulfur dioxide, and lead. The EPA designates an area as being in “attainment” for a particular pollutant if the concentration of that pollutant in ambient air is below the NAAQS. Conversely, an area in violation of one or more of the EPA standards is considered in “non-attainment.” Table 4-1 lists the NAAQS primary standards for each criteria pollutant.

Table 4-1. National Ambient Air Quality Standards.

| Pollutant | Standard Value |
|--|------------------------|
| Carbon monoxide (CO) | |
| 8-hour average | 9 ppm |
| 1-hour average | 35 ppm |
| Lead (Pb) | |
| Quarterly average | 1.5 µg/m ³ |
| Nitrogen dioxide (NO₂) | |
| Annual arithmetic mean | 0.053 ppm |
| Ozone (O₃) | |
| 8-hour average (2008 standard) | 0.075 ppm |
| Particulate matter less than 10 microns (PM₁₀) | |
| 24-hour average | 150 µg/m ³ |
| Particulate matter less than 2.5 microns (PM_{2.5}) | |
| Annual arithmetic mean | 15.0 µg/m ³ |
| 24-hour average | 35 µg/m ³ |

| Pollutant | Standard Value |
|--|----------------|
| Sulfur dioxide (SO₂) | |
| Annual arithmetic mean | 0.03 ppm |
| 24-hour average | 0.14 ppm |

Source: 40 CFR 50.4 through 50.13
 µg/m³ micrograms per cubic meter
 ppm parts per million

The primary regulatory authority for air quality in Vermont is the Vermont Air Pollution Control Division (APCD) of the Department of Environmental Conservation. The APCD implements state and Federal CAAs by monitoring air quality and air pollution sources, proposing regulations to improve existing air quality, ensuring compliance with regulations, and issuing permits to control pollution from sources of air contaminants across the state.

General air quality monitoring is conducted in areas of high population density and near major sources of air pollutant emissions. Rural areas are typically not considered in such monitoring. Regions that are in compliance with the NAAQS are designated as attainment areas. Areas for which no monitoring data is available are designated as unclassified and are considered to be in attainment of the NAAQS. A nonattainment status is designated for areas where the applicable NAAQS are not being met. A maintenance status is designated for areas that have had a history of nonattainment, but are now consistently meeting the NAAQS. Maintenance areas have been re-designated by the EPA from “nonattainment” to “attainment with a maintenance plan.”

Vermont’s air quality meets the NAAQS. Every county within the State of Vermont is classified as being in “attainment.” Monitoring sites within the state did not record exceedances in 2006 for carbon monoxide, nitrogen dioxide, ozone, particulate matter, or sulfur dioxide (EPA 2007). Vermont did not conduct ambient air monitoring for lead in 2006 because historical ambient air concentrations of lead have been extremely low and monitoring for this pollutant has not been warranted.

On March 12, 2008, the EPA revised the primary and secondary 8-hour ozone NAAQS from 0.08 parts per million (ppm) to 0.075 ppm, to be effective on May 27, 2008. To attain the standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentration must not exceed 0.075 ppm. For historical perspective, Vermont’s 2006 fourth highest 8-hour ozone concentrations did not exceed the 0.075 ppm standard and the state would have been in “attainment” even under the new, more stringent ozone standard.

Motor vehicles are the largest source of pollutants affecting air quality in both the entire State of Vermont and near the North Hartland Road and Drew Road sites. Motor vehicles emit carbon monoxide, carbon dioxide, nitrogen dioxide, and about 65 percent of the ozone-forming pollutants in Vermont. Motor vehicles also emit carcinogenic compounds like benzene, formaldehyde, and 1,3-butadiene.

Regional air pollutant emissions from reported sources are listed below in Table 4-2 for Windsor County, Vermont, for the year 2002, the most recent year available.

Table 4-2. Air Emissions Reported for Windsor County, Vermont, for Calendar Year 2002.

| Pollutant | 2002 Emissions (tpy) | | |
|---|--------------------------|---------------------------|--------|
| | Area Source ^a | Point Source ^b | Total |
| Particulate matter less than 2.5 microns (PM _{2.5}) | 1,102 | 0.01 | 1,102 |
| Particulate matter less than 10 microns (PM ₁₀) | 5,590 | 0.01 | 5,590 |
| Carbon monoxide (CO) | 38,705 | 0.010 | 38,705 |
| Nitrogen oxides (NO _x) | 3,485 | 0.06 | 3,485 |
| Sulfur dioxides (SO ₂) | 403 | 0 | 403 |

Source: EPA 2009b

tpy tons per year

- a. Nonpoint and mobile emission sources: Any source of air pollution that is released over a relatively small area but which cannot be classified as a point source, and which may include vehicles and other small engines, small businesses, and household activities that release hydrocarbons. The category includes nonpoint and mobile source emissions.
- b. A stationary location or fixed facility from which pollutants are discharged, such as a factory smokestack.

Section 176(c)(1) of the CAA requires Federal agencies to ensure that their actions conform to applicable implementation plans for the achievement and maintenance of the NAAQS. To achieve conformity, a Federal action must not contribute to new violations of NAAQS, increase the frequency or severity of existing violations, or delay timely attainment of NAAQS in the area of concern (for example, a state or a smaller air quality region). Federal agencies prepare written Conformity Determinations for Federal actions that are in or affect NAAQS nonattainment areas or maintenance areas when the total direct or indirect emissions of nonattainment pollutants (or their precursors in the case of ozone) exceed specified thresholds. A conformity analysis is not required in attainment areas. Because the Proposed Action in Windsor County, Vermont is located in an area that is attainment for all criteria pollutants, the Proposed Action will meet conformity rules.

The CAA set out specific requirements for a group of northeastern states that make up the Ozone Transport Region (OTR). Vermont is part of the OTR, as well as the states of Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and the Washington D.C. Metropolitan Statistical Area (including the northern Virginia suburbs). States that are part of the OTR are required to submit State Implementation Plans and install a certain level of control for the pollutants that form ozone, even if the state meets the ozone standards. On March 17, 2008, the EPA issued a finding that Vermont had missed the CAA deadline for submitting elements of its State Implementation Plan showing how the state would meet the 1997 ozone standards. The EPA is working with Vermont to ensure that it submits a revised, approvable plan as soon as possible.

The potential for radon gas exposure exists in Windsor County. Radon is a radioactive gas that results from the decay of radium and exists in varying amounts in most soils. Because radon is a gas, it can move through soil and into the atmosphere or into a

building structure. Prolonged exposure to high levels of radon can lead to lung cancer. The EPA Map of Radon Zones assigns each of the counties in the United States into one of three zones based on radon potential. Windsor County in Vermont is assigned to Zone 2, which has a “moderate potential” for radon, with a predicted average indoor radon screening level between 2 and 4 picocuries per liter (pCi/L) (EPA 2009a). Based on statistical information assessed in the Environmental Condition of Property Report (USACE 2008b), radon concentrations in Windsor County, Vermont average 2.25 pCi/L in the basement, 4.4 pCi/L in the first-level living area, and were not reported in the second-floor living area.

4.4.2 CONSEQUENCES

Potential impacts to air quality are considered significant if the Proposed Action would:

- Increase ambient air pollution above any NAAQS;
- Contribute to an existing violation of any NAAQS;
- Interfere with or delay timely attainment of NAAQS; or
- Impair visibility within any federally mandated Prevention of Significant Deterioration (PSD) Class I area.

4.4.2.1 Alternative 1 – Preferred Alternative

Impacts to air quality from the Preferred Alternative would not be significant. Short-term air quality impacts from the Preferred Alternative would occur from construction activities associated with the movement and use of construction equipment. Construction activities would be temporary and would occur in a localized area. Contaminants generated from construction would include particulate matter, vehicle exhaust emissions, and increased wind-borne dust (i.e. fugitive dust). The vehicle emissions from construction activities and workers traveling to and from the site would be minor compared to the total existing vehicular emissions in the area. Best management practices (BMPs) would be implemented to minimize generation of fugitive dust.

Long-term air quality impacts would result from an increase in localized motor vehicle use by personnel traveling to the facility. The vehicles of the approximately 104 personnel who would use the facility each weekend would add to the State of Vermont’s criteria pollutant emissions, making a very small incremental contribution to cumulative emissions. The incremental increase in emissions would not increase ambient air pollution above the NAAQS.

Approximately 140 vehicles, including fuel-dispensing semi-trailers, are anticipated to be kept on-site as a result of the realignment of USAR and VTARNG units to the new AFRC. The fuel-dispensing semi-trailers would generally be stored empty. Combustion of fuel during operation of these vehicles would add to the State of Vermont’s criteria pollutant emissions, but the impacts would not increase ambient air pollution above the NAAQS. A HEMTT with a capacity of 2,500 gallons of diesel fuel would also be on-site to serve as a fuel dispensing station. Evaporation from fuel dispensing has the potential to emit volatile organic compounds and hazardous air pollutants into the air. However,

the impacts from one fuel dispensing station would not create a significant increase in the regional ambient air pollution.

Based on regional information, the potential exists for radon gas to occur within the constructed AFRC at levels exceeding the EPA radon standard of 4.0 pCi/L. A radon mitigation system would be installed during construction of the proposed AFRC. Following construction completion, the radon concentration would be measured, and if above acceptable levels, a fan system would be installed to vent radon from the facility. Additionally, radon concentrations would be monitored as an ongoing operational task (Marshall 2009).

4.4.2.2 Alternative 2

Impacts to air quality from Alternative 2 would be similar to those for the Preferred Alternative. However, since the Army requires about 14 acres for construction, nearly all of the Drew Road Site would be utilized. This would involve clear-cutting, blasting, and cut-and-fill of about 10 acres to make the site usable. Thus, the extensive site preparation would result in the loss of about 10 acres of forest and a greater use of construction equipment, including the potential for blasting, which would increase the amount of short-term vehicle exhaust emissions, particulate matter, and wind-borne dust compared to the Preferred Alternative.

4.4.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to air quality.

4.5 Noise

4.5.1 AFFECTED ENVIRONMENT

This section describes the existing noise conditions in the area of the North Hartland Road and Drew Road sites. Noise measurement is discussed first, followed by noise sources in the area of the North Hartland Road and Drew Road sites.

4.5.1.1 Noise Measurement

Noise is generally defined as unwanted sound. Sound is all around us; it becomes noise when it interferes with normal activities such as speech, concentration, or sleep. Noise associated with military installations is a factor in land use planning both on- and off-post. Noise emanates from vehicular traffic associated with new facilities and from project sites during construction. Ambient noise (the existing background noise environment) can be generated by a number of noise sources, including mobile sources, such as automobiles and trucks, and stationary sources such as construction sites, machinery, or industrial operations. In addition, there is an existing and variable level of natural ambient noise from sources such as wind, streams and rivers, wildlife, and other sources.

Sound is measured with instruments that record instantaneous sound levels in decibels (dB). A-weighted sound level measurements (dBA) are used to characterize sound levels that can be sensed by the human ear. The typical measurement for quieter sounds, such

as rustling leaves or a quiet room, is from 20 to 30 dBA. Conversational speech is commonly 60 dBA, and a home lawn mower measures approximately 98 dBA. All sound levels discussed in this EA are A-weighted.

4.5.1.2 Noise Sources in the area of the North Hartland Road and Drew Road Sites

Sources of noise in the area of the North Hartland Road and Drew Road sites include road traffic along U.S. Route 5 South and I-91. Small towns and rural communities typically have background sound levels of 45 to 55 dBA. Existing noise 50 feet from an interstate highway is typically 75 dBA. Highway noise attenuates to about 60 dBA at 400 feet and to 50 dBA at a distance of 800 feet (Hanson et al. 2006).

4.5.2 CONSEQUENCES

Potential noise impacts resulting from the Proposed Action are evaluated with respect to the potential for:

- Annoyance – noise can impact the performance of various every day activities such as communication and watching television in residential areas. Sound levels that cause annoyance vary greatly by individual and background conditions.
- Hearing loss – one-time exposure to an intense “impulse” sound such as an explosion or by long or repeated exposure to sounds at or above 85 dBA can cause hearing loss (NIDCD 2007).
- Sleep interference

4.5.2.1 Alternative 1 – Preferred Alternative

Noise impacts from the Preferred Alternative would not be significant. Minor adverse short-term noise impacts related to the construction of the AFRC, OMS, and other associated facilities would occur. There are several residences at the southwestern and northern boundaries of the site that could be subject to minor, short-term adverse impacts from noise generated during the construction of the proposed facilities. Noise would be generated from large machinery such as bulldozers, graders, excavators, dump trucks, and cement trucks. This type of construction equipment generates noise levels of about 85 dBA at 50 feet (Hanson et al. 2006). Noise and sound levels would be typical of new construction activities and would be intermittent. Effects of construction noise would be reduced by employing BMPs, such as confining construction activities to normal working hours and employing noise-controlled construction equipment to the extent possible. Of specific concern is the use of the temporary access road by construction vehicles during construction. Use of this road would result in temporary adverse noise impacts to the adjacent resident. The Army would coordinate with the adjacent landowner to determine the necessary type of screening, such as landscaping and/or fencing to minimize adverse noise impacts.

Once the facilities become operational, adverse long-term noise effects would not be expected from their day-to-day use. Once facilities are constructed, noise would be generated by facility operations and the vehicles associated with these facilities. Aside from negligible HVAC-related noise, the facilities would not generate high levels of

noise themselves. During power outages, operation of emergency generators could cause minor, short-term noise impacts. Most noise is usually created by vehicles associated with these facilities, including organizational vehicles used for training and operations, government and private delivery vehicles, commuter shuttles or buses, and personal vehicles used for commuting purposes. The noise impact created by facility and vehicle operations would not be significant compared to existing traffic noise in the area.

Under the Proposed Action, approximately 300 personnel would use the AFRC complex at White River Junction. However, as a reserve center, the majority of these individuals would report to the site on weekends and not all would report on the same weekend. The maximum number of individuals reporting on any given weekend is expected to be approximately 104 and would only contribute negligible amounts of noise to the current environment. The estimated 10 full-time personnel commuting to the site daily would contribute negligible amounts of traffic noise to the current noise environment.

4.5.2.2 Alternative 2

Noise impacts from Alternative 2 would not be significant. Levels of noise generated during construction under Alternative 2 would be greater than for the Preferred Alternative due to the steep topography, heavily forested nature of a portion of the site, and the presence of rock outcroppings. Construction at the Drew Road Site would involve extensive excavation, blasting, grading, cut and fill, and movement of heavy equipment. Residences are located on the western, southern, and eastern boundaries of the site. These residences would be subject to minor, short-term adverse impacts from noise generated during the construction of the proposed facilities. Effects of construction noise would be reduced by employing BMPs, such as confining construction activities to normal working hours and employing noise-controlled construction equipment to the extent possible. Sources and levels of noise generated during operations under Alternative 2 would be the same as for the Preferred Alternative.

4.5.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to noise levels on or surrounding the North Hartland Road and Drew Road sites.

4.6 Geology and Soils

4.6.1 AFFECTED ENVIRONMENT

This section describes the existing geology and soil conditions in the area of the North Hartland Road and Drew Road sites. Geologic and topographic conditions are discussed first, followed by soils, and prime farmland.

4.6.1.1 Geologic and Topographic Conditions

North Hartland Road Site. The North Hartland Road Site is generally flat and slopes to the east. The elevation of the site ranges from 580 to 600 feet above mean sea level (MSL), with an average surface gradient of approximately 2 percent, sloping to the east. A former borrow pit is located in the southwest portion of the site. The lowest point of the pit is approximately 30 feet below the surrounding land (Major 2008). According to

the Geologic Map of Vermont, the North Hartland Road site has Silurian-Devonian age rocks at the surface (Doll 1970). The Silurian-Devonian rocks of Vermont are composed of slate, phyllite, limestone, quartzite, conglomerates, greenstone, schist, and amphibolite. These rocks are intruded by granite and syenite (Doll 1970).

Drew Road Site. The northern part of the Drew Road Site slopes relatively steeply towards the east with a gradient of approximately 20 percent. The southern portion of the site slopes towards the south also with a gradient of approximately 20 percent. The lowest point of the site is approximately 560 feet above MSL and the highest point is approximately 680 feet above MSL. The Drew Road Site also has Silurian-Devonian age rocks at the surface (Doll 1970).

Historical data of seismic activity in Vermont indicate that the North Hartland Road and Drew Road sites have felt the effects of seismic activities originating in New England (outside Vermont), the Atlantic Ocean, and Quebec, Canada. Two strong earthquakes were felt throughout Vermont in 1929 and 1935. The 1929 earthquake originated in the Atlantic Ocean and had a magnitude of 7.2 on the Richter Scale. The 1935 earthquake originated in Timiskaming, Quebec, Canada and had a magnitude of 6.25 (USGS 2006). The largest earthquakes that have originated in Vermont include earthquakes occurring in 1943 and 1962 that were centered around Swanton, Vermont and Middleberry Vermont, respectively. Both had a magnitude of 4.1 on the Richter Scale. Additionally, a 1953 earthquake that originated in Brandon, Vermont had a magnitude of 4.0 on the Richter Scale (Ebel et al. 1995).

4.6.1.2 Soils

North Hartland Road Site. The North Hartland Road Site is covered by soils represented by three mapping units. The Windsor loamy fine sand unit occurs along the northern edge, northeastern quarter, and southeastern corner of the property. This unit is characterized by very good drainage, low potential for surface runoff, and its susceptibility to wind erosion ranges from very high to moderate. The Grange very fine sandy loam unit occurs in the western quarter and east central part of the property. This unit is characterized by poor drainage, high potential for surface runoff, and moderate susceptibility to wind erosion. The Hinckly sandy loam unit separates the Windsor loamy fine sand on the north and east and the Grange very fine sandy loam on the west. This unit is characterized by very good drainage, low potential for surface runoff, and moderate susceptibility to wind erosion. The Windsor loamy fine sand, Grange very fine sandy loam, and Hinckley sandy loam units cover approximately 40, 40, and 20 percent of the North Hartland Road Site, respectively (USDA NRCS 2008).

A subsurface investigation of the area proposed for construction at the North Hartland Road Site was conducted during February 2009 to characterize subsurface conditions. Twelve test borings were completed, with monitoring wells being installed in three of the borings. Generally, the investigation determined that soils from test borings located in the areas that would be paved or within building footprints were similar in nature, having a fairly significant topsoil layer, ranging from 12 to 16 inches thick. The underlying soils to an average depth of 6 feet were medium dense to loose sands with some gravel and

silt. Beneath this layer soils were primarily loose silts and fine sand to the bottom of each boring. One test boring drilled in the area proposed for the stormwater management pond, was described as a foot of topsoil overlying loose sand and silty sand. The soil was found to be saturated below 4 feet (M&W Soils Engineering, Inc. 2009).

Drew Road Site. The Drew Road Site is covered by soils belonging to three mapping units (USDA NRCS 2008). The Glover-Vershire complex unit comprises approximately 79 percent of the site, occurring in the northern three-quarters of the site and a small area on the southeastern corner of the site. This unit is characterized by moderate drainage, moderate potential for surface runoff, moderately high susceptibility to wind erosion, and is rated as partially hydric. The Vershire-Dummerston complex unit comprises about 14 percent of the site and occurs in the central part of the southern quarter. This unit is characterized by very good drainage, moderate potential for surface runoff, and moderately high susceptibility to wind erosion, and is rated as partially hydric. The Buckland loam unit comprises about 7 percent of the site, occurring in the southwestern corner. This unit is characterized by moderate drainage, moderate potential for surface runoff, and moderately high susceptibility to wind erosion and is rated as partially hydric.

4.6.1.3 Prime Farmland

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. Prime farmland could be cultivated land, pasture land, forest land, or other land, but it is not urban or built-up land or water areas (USDA NRCS 2008). Of the 17 acres considered for the AFRC at the North Hartland Road Site, 5 acres are considered farmland of statewide importance and 7 acres are considered prime farmland if drained (USDA NRCS 2008). Similarly, at the Drew Road Site, 3 acres are considered prime farmland and 3 acres are considered farmland of statewide importance (USDA NRCS 2008). Prime farmland is protected by the Farmland Protection Policy Act (FPPA) (7 CFR Parts 657 and 658).

4.6.2 CONSEQUENCES

Potential impacts to geology or soils are considered significant if the Proposed Action would:

- Expose people or structures to major geologic hazards;
- Cause substantial erosion or siltation; or
- Cause substantial land sliding.

4.6.2.1 Alternative 1 – Preferred Alternative

Impacts to geology and soils from the Preferred Alternative would not be significant. The total site improvements including the AFRC training building, the OMS, the unheated storage building, the open vehicle storage facility, and associated facilities (parking area and walk ways) would occupy about 4.25 acres, resulting in about 4.25 acres of impervious surface. The effect of this on regional infiltration would not be significant.

There is risk from collapsing of buildings that are not engineered with earthquakes in mind (VGS 2008). The AFRC would be built in accordance with the International Building Code (IBC) of 2006, which ensures that the facility is constructed in such a way to minimize damage from seismic activities. A seismic site class determination was performed for the North Hartland Road Site during the subsurface investigation conducted during February 2009 and the site was determined to have a Seismic Site Class of E of the IBC of 2006. Seismic design for this class would be taken into account during foundation design to minimize damage from seismic activity (M&W Soils Engineering, Inc. 2009).

Construction of the AFRC would involve excavation, grading, and movement of heavy equipment in the North Hartland Road Site. These activities would disturb the surface soil, thereby increasing the potential for soil erosion by wind and runoff. The USAR construction contractor would be required to submit a Notice of Intent to the EPA in order to obtain a Construction General Permit (EPA 2009c). The Construction General Permit requires implementation of activities to control soil erosion during construction as well as topsoil management and revegetation. Erosion control during construction activities could include the use of hay bales and silt fencing, as appropriate, to prevent the movement of soils into low-lying areas, and could also include scheduling construction activities for periods of lowest precipitation. Once the facilities are operational and new vegetation is in place, additional erosion of topsoil would be minimal and would be limited or mitigated through adherence to a Stormwater Pollution Prevention Plan (SWPPP) as described in Section 4.7.2.1.

The Proposed Action would result in the direct long-term loss of about 17 acres of farmland. The Natural Resources Conservation Service (NRCS) was consulted regarding the prime farmland. The NRCS scored the value of the prime farmland as low, considering zoning, the size of the parcel, and other factors. The letter sent to the NRCS and the NRCS rating form are provided in Appendix A.

4.6.2.2 Alternative 2

The impacts to geology and soils for Alternative 2 would be similar to those for the Preferred Alternative. However, due to the steep topography, heavily forested nature of a portion of the site, and the presence of rock outcroppings, construction would involve extensive excavation, blasting, grading, cut and fill, and movement of heavy equipment in the Drew Road Site. These activities would disturb the surface soil to a greater degree than at the North Hartland Road Site, thereby increasing the potential for and degree of soil erosion by wind and runoff.

As for the Preferred Alternative, the NRCS scored the value of the prime farmland as low, considering zoning, the size of the parcel, and other factors. The letter sent to the NRCS and the NRCS rating form are provided in Appendix A.

4.6.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to geologic or soil resources.

4.7 Water Resources

4.7.1 AFFECTED ENVIRONMENT

This section describes existing water resources on and in the area of the North Hartland Road and Drew Road sites, including surface and groundwater resources. Surface water includes lakes, rivers, and streams and is important for a variety of reasons, including economic, ecological, recreational, and human health. Groundwater comprises the subsurface hydrogeologic resources of the physical environment. This section also discusses floodplains. Wetlands are discussed in Section 4.8.1.4.

4.7.1.1 Surface Water

Regionally, a number of rivers and lakes occur in the area. White River Junction is the site of the confluence of the White and Connecticut Rivers. From White River Junction, the Connecticut River flows south to Long Island Sound and the Atlantic Ocean. The Connecticut River has been designated a National Heritage River by the EPA to further natural resource and environmental protection, economic revitalization, and historic and cultural preservation. The USACE Federal flood control facility, North Hartland Lake, dams the Ottauquechee River, about 1 mile south of the project area. The Ottauquechee River is a tributary to the Connecticut River. The North Hartland Road and Drew Road sites are located in the Mill Brook Sub-basin of the Lower Connecticut River Basin.

North Hartland Road Site. Surface water features on the North Hartland Road Site include Class III wetlands near the center and southcentral portion of the 65-acre parcel and an unnamed creek along the southern boundary. The unnamed creek is located immediately south of the North Hartland Road Site and flows in an easterly direction for approximately 0.7 mile before reaching the Connecticut River. Discussion on the Class III wetlands is found in Section 4.8.1.4.

Drew Road Site. There are no surface water features on the Drew Road Site. Surface water features in the vicinity of the sites include Kilburn Brook. Kilburn Brook is located south of the Drew Road Site and flows in an easterly direction then north along I-91 and easterly again for approximately 0.7 mile before reaching the Connecticut River.

4.7.1.2 Hydrogeology/Groundwater

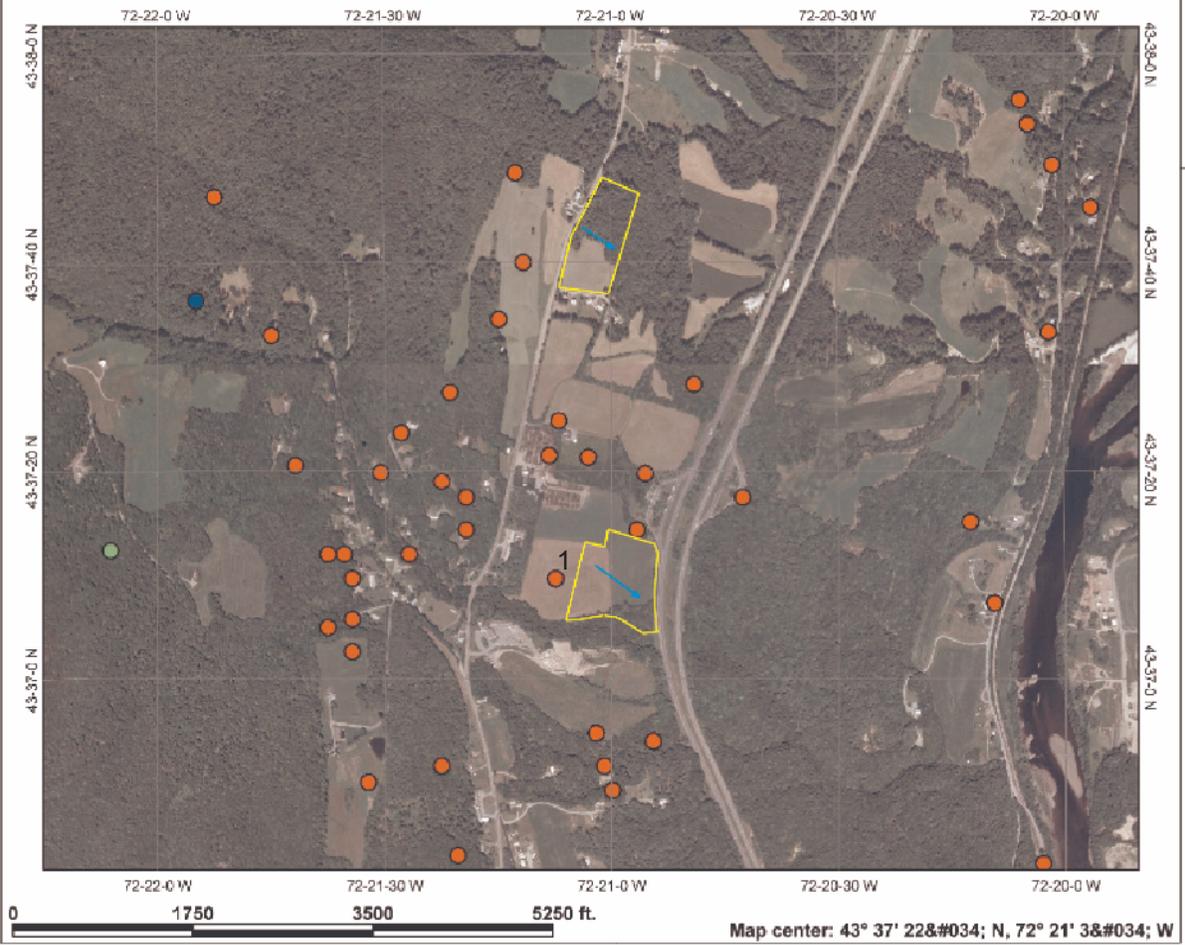
The Adirondack Crystalline-Rock aquifer underlies the North Hartland Road and Drew Road sites. The aquifer consists of igneous crystalline-rock (pegmatite, granite, granodiorite, diorite, and gabbro). Well yields typically range from 2 to 10 gallons per minute, with some reported yields exceeding 500 gallons per minute. The aquifer is a source of drinking water for much of the surrounding area.

North Hartland Road Site. Local groundwater flow direction is approximately southeast across the North Hartland Road Site. Several groundwater supply wells are present in the area surrounding the North Hartland Road Site. Figure 4-1 shows the groundwater flow direction and the groundwater supply wells at the North Hartland Road Site.



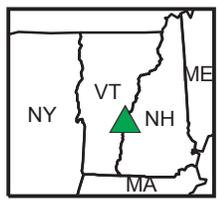
ANR Well Locator

Vermont Agency of Natural Resources (ANR)



VANR DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

Notes: Groundwater supply wells- locations are approximate
 URL: http://maps.vermont.gov/imf/sites/ANR_WSWelldriller/jsp/launch.jsp 12/3/08



- Private Wells
- GPS Location
 - Well Driller/Clarion
 - Screen Digitized

- Approximate site boundary
- Approximate groundwater flow direction
- 1 VANR Well Locator coordinate data is likely incorrect.



Prepared For:
 U.S. Army Corps of Engineers, Mobile District

Figure 4-1
 Local Groundwater Flow Direction and
 Groundwater Supply Wells



During the February 2009 subsurface investigation of the area proposed for construction at the North Hartland Road Site, monitoring wells were installed in three test borings. Stabilized water levels ranged from about 5 feet to 14 feet below the ground surface (M&W Soils Engineering, Inc. 2009).

Three groundwater monitoring wells are located on the North Hartland Road site to monitor for potential contamination resulting from the permitted land application of wastewater treatment plant biosolids by the Town of Hartford, Department of Public Works. The Vermont Agency of Natural Resources (VANR) authorized land application of biosolids to the North Hartland Road Site and established groundwater monitoring requirements. Sampling and analysis of groundwater from the three monitoring wells have been performed biannually since June 2005 for Primary, Secondary, and Indicator Parameters. Primary Parameters include arsenic, barium, cadmium, chromium, lead, mercury, molybdenum, nickel, silver, total polychlorinated biphenyls, nitrate-N, and total organic carbon. Secondary Parameters include chloride, copper, sulfate, total dissolved solids, and zinc. Indicator Parameters include total phosphorus, total potassium, selenium, ammonia, total Kjeldahl nitrogen, pH, temperature, and conductance. Only lead exceeded VANR enforcement standard criterion [15 micrograms per liter ($\mu\text{g/L}$)] since June 2005; with concentrations of 47 and 22 $\mu\text{g/L}$ at MW-21 and MW-23 respectively, on April 30, 2007.

Additionally, monitoring well MW-23 was sampled for volatile organic compounds from October 2005 to May 2007 as part of the groundwater reclassification effort discussed below. Analysis of groundwater samples collected from MW-23 did not reveal any volatile organic compounds above detection limits. Monitoring well MW-23 is located approximately 150 feet north of the southern boundary of the 65.5 acre parcel, approximately 40 feet west of the western most proposed optional property line.

Documented groundwater contamination (in the shallow aquifer) exists to the south of the North Hartland Road Site, at the former Hartford Landfill. The Hartford Landfill is located immediately south of and adjacent to the southern property boundary of the North Hartland Road Site. The landfill is crossgradient of the proposed site for the AFRC when considering the unconfined surficial aquifer. Operation of the Hartford Landfill has resulted in contamination of the groundwater underlying the landfill. The following parameters exceeded either VANR Preventative Action Limits or Enforcement Standards: acetone, arsenic, benzene, cadmium, 1,2-dichloroethane, iron, manganese, methylene chloride, tetrachloroethylene, trichloroethylene, 1,2,4-trimethylbenzene, and vinyl chloride.

A petition by the Town of Hartford for the reclassification of groundwater under the Hartford Landfill to Class IV was submitted to the VANR in 2006. Reclassification of groundwater to Class IV would result in the establishment of a minimum 200-foot buffer around the area of documented groundwater contamination. Class IV groundwater is defined as not suitable as a source of potable water but suitable for some agricultural, industrial, and commercial uses. This buffer would extend the Landfill/North Hartland Road Site common boundary (unnamed creek) onto the North Hartland Road Site, and likely onto the AFRC property.

Drew Road Site. Local groundwater flow direction across the Drew Road Site is expected to be similar to the North Hartland Road Site due to their proximity to each other. Several groundwater supply wells are present in the area surrounding the Drew Road Site. Figure 4-1 shows the groundwater flow direction and the groundwater supply wells at the Drew Road Site.

4.7.1.3 Floodplains

The North Hartland Road and Drew Road sites are not located within the 100-year floodplain. EO 11988, *Flood Plain Management*, requires that development in floodplains be avoided if practicable. Both the North Hartland Road and Drew Road sites are in an area determined by the Federal Emergency Management Agency (FEMA) to be outside the 0.2 percent annual chance floodplain (Zone X) as shown on the FEMA issued Flood Insurance Rate Map (FEMA 2008); VANR Environmental Interest Locator (VANR 2008); and Hartford Master Plan (Hartford Planning Commission 2007).

4.7.2 CONSEQUENCES

Potential impacts to water resources, including surface water and groundwater are considered significant if the Proposed Action would:

- Irreversibly diminish water resource availability, quality, and beneficial uses;
- Reduce water availability or interfere with a potable supply or water habitat;
- Create or contribute to overdraft of groundwater or exceed a safe annual yield of water supply sources;
- Result in an adverse effect on water quality or an endangerment to public health by creating or worsening adverse health hazard conditions;
- Result in a threat or damage to unique hydrological characteristics; or
- Violate an established law or regulation that has been adopted to protect or manage water resources of an area.
- Degrade fisheries habitat

Potential impacts that would be considered significant related to floodplain management include:

- Potential damage to structures located in the floodplain; and
- Changes to the extent, elevation, or other features of the floodplain as a result of flood protection measures or other structures being silted in or removed from the floodplain.

4.7.2.1 Alternative 1 – Preferred Alternative

Impacts to water resources from the Preferred Alternative would not be significant. There would be no measurable reduction in surface water quality or availability.

Additional runoff to surface water would occur as a result of an increase in impermeable surfaces associated with buildings, roads, and parking lots. Stormwater collection

measures incorporated in the design of the proposed AFRC would direct runoff to a stormwater management area for temporary storage and eventual discharge to surface water.

The AFRC would be located about 140 feet from the unnamed creek to the south of the facility. Impacts to the creek from stormwater runoff would not be significant as the Army would be required to obtain and comply with State and Federal permits. For construction and operation of the AFRC, the USAR would obtain both a State Stormwater Discharge Permit and a Construction General Stormwater Discharge Permit, in order to comply with Vermont law (10 V.S.A. 1264) and the CWA respectively. The VANR issues State Stormwater Discharge Permits while the EPA administers Construction General Permits for Federal facilities in Vermont. The Construction Stormwater Permit Program addresses stormwater runoff from construction activity that disturbs one or more acres of land. Additionally, for operations, the USAR would obtain a State Stormwater Permit (sometimes referred to as the “operational,” “post-construction” or “stormwater” permit) to address runoff from impervious surfaces (rooftops, paved and non-paved parking/roads etc.). The Vermont Stormwater Discharge Permit program has specific jurisdictional thresholds based on the amount of impervious surface.

Local groundwater recharge would be slightly reduced due to the addition of impervious surfaces and subsequent reduction of infiltrating precipitation. Approximately 25 percent of the 17-acre site would be capped by impermeable surfaces. However, the reduction in groundwater recharge would not have a significant impact on the regional groundwater supply.

The Preferred Alternative would result in a local increase of groundwater use (from the deep aquifer) as a well would be necessary to supply potable water to the proposed AFRC. The maximum anticipated use of groundwater would occur only during maximum use drill weekends, approximately one weekend per month. The USAR intends to initiate the Vermont source permit process by submitting a public water source permit application to the State of Vermont Water Supply Division, followed by installation of a groundwater supply well at the North Hartland Road Site. The USAR anticipates a deep groundwater supply well, along with two 62,500-gallon above ground water storage tanks, will be necessary to meet State of Vermont groundwater enforcement standards, and satisfy potable water demands of the proposed AFRC (Marshall 2009). The proposed locations of the well and storage tanks are shown on Figure 3-3.

Activities at the proposed AFRC would not impact surface water or groundwater quality beneath or in the area surrounding the proposed AFRC. In addition to the stormwater permits described above, the USAR would be required to obtain a Multi-Sector General Permit issued under the National Pollutant Discharge Elimination System (NPDES). The State of Vermont does not have NPDES permitting authority for federally owned and operated facilities. EPA Region 1 is responsible for stormwater permitting for Federal facilities in Vermont. On September 29, 2008, the EPA issued a Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity that lists the

requirements for 29 industrial sectors that discharge stormwater to waters of the United States. This permit applies to vehicle maintenance activities that would be conducted at the AFRC.

As a requirement of its permit, the Army would prepare and implement a SWPPP. Potential nonpoint stormwater impacts would not be significant with implementation of BMPs identified in the SWPPP. BMPs would be selected, designed, installed, implemented and maintained in accordance with good engineering practices to eliminate or reduce all pollutants in the stormwater discharge, as well as any more stringent measures necessary to meet Vermont water quality standards provisions.

Spills would be managed using procedures identified in a Spill Prevention Control and Countermeasures (SPCC) plan which the 99th RSC would prepare to reduce potential impacts to surface water or groundwater. Fuel-dispensing semi-trailers would be located on-site, normally empty and parked in the MEP area with secondary containment equipment deployed under the trailer to capture any released fuel. One bay in the covered facility would be constructed specifically for housing a HEMTT 2,500-gallon fuel tanker that would be used for fuel dispensing. This bay would be equipped with appropriate containment and spill prevention equipment.

Removal of the three existing groundwater monitoring wells (if they were removed) would be in accordance with Vermont Department of Environmental Conservation regulations and the Vermont Environmental Protection Rules. For groundwater quality protection, a permanent easement with a radius of 50-feet and a restrictive area easement (isolation zone) with a radius of 200-feet are required by the State Source Permit. These easements would restrict various activities within various distances of the wellhead for groundwater source protection.

Because the Proposed Action does not entail construction within the 100-year floodplain, there would be no impacts to floodplains.

4.7.2.2 Alternative 2

The water resources impacts for Alternative 2 would be the same as those for the Preferred Alternative.

4.7.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to water resources.

4.8 Biological Resources

4.8.1 AFFECTED ENVIRONMENT

This section describes existing biological resources at the North Hartland Road and Drew Road sites. It focuses on plant and animal species or habitat types that are typical or are an important element of the ecosystem, are of special category importance (of special interest due to societal concerns), or are protected under state or Federal law or statute regulatory requirement. Vegetation is discussed first, followed by wildlife, sensitive species, and wetlands.

4.8.1.1 Vegetation

North Hartland Road Site. At the North Hartland Road Site, the AFRC and OMS would be built on agricultural land. The south end of the parcel abuts a ravine with a stream. Stands of white birch (*Betula papyrifera*), maple (*Acer* sp.), eastern red oak (*Quercus maxima*), and hemlock (*Tsuga* sp.) occur around the perimeter of the property and in the center, essentially dividing the 65-acre parcel in half.

Drew Road Site. The Drew Road Site is approximately one-third open field and two-thirds woods, with dense stands of oak, maple, and hemlock. Very little understory occurs in the dense forested portion of the Drew Road Site. The terrain of the open field is gently sloping while the forested area is steep with rocky outcroppings.

4.8.1.2 Wildlife

Each alternative site has similar habitat that is typical of rural areas of this region, with a mixture of wooded areas and open fields. Wildlife that would be present at these sites include white-tailed deer (*Odocoileus virginianus*), coyotes (*Canis latrans*), groundhogs (*Marmota monax*), red (*Vulpes vulpes*) or gray foxes (*Urocyon cinereoargenteus*), opossums (*Didelphis virginiana*), Eastern cottontail rabbits (*Sylvilagus floridanus*), squirrels (*Sciurus* spp.), turkey (*Meleagris gallopavo*) and various raptors and passerine birds species. The more heavily-wooded Drew Road Site would attract a slightly more diverse assemblage of wildlife than would be expected in the cultivated field of the North Hartland Road Site.

4.8.1.3 Sensitive Species

Under Section 7 of the ESA, the Army is mandated to use its authority to ensure actions are approved, funded, or carried out to protect both flora and fauna that are considered threatened and endangered species or proposed for listing as threatened or endangered species on the White River Junction sites. In compliance with the ESA, informal consultation has been conducted with the U.S. Fish and Wildlife Service. A copy of the consultation letter sent by the 99th RSC to the U.S. Fish and Wildlife Service, along with copies of scoping letters sent to the Vermont Fish & Wildlife Department and the Vermont Department of Environmental Conservation, are included in Appendix A.

The U.S. Fish and Wildlife Service, New England Field Office website was accessed to determine if any federally-listed species occur in the vicinity of the project location. The three-step process provided on the website was followed, including reviewing the information on Vermont's Nongame and Natural Heritage Program website. No rare, threatened, or endangered species or natural communities of concern are known to occur in the vicinity of the project location. A letter from the U.S. Fish and Wildlife Service documenting this process is provided in Appendix A.

4.8.1.4 Wetlands

Wetlands are defined by the USACE and the EPA based on the presence of hydrophytic vegetation, wetland hydrology, and hydric soils with certain land area considerations. Wetlands and other surface water features, which may include intermittent and perennial

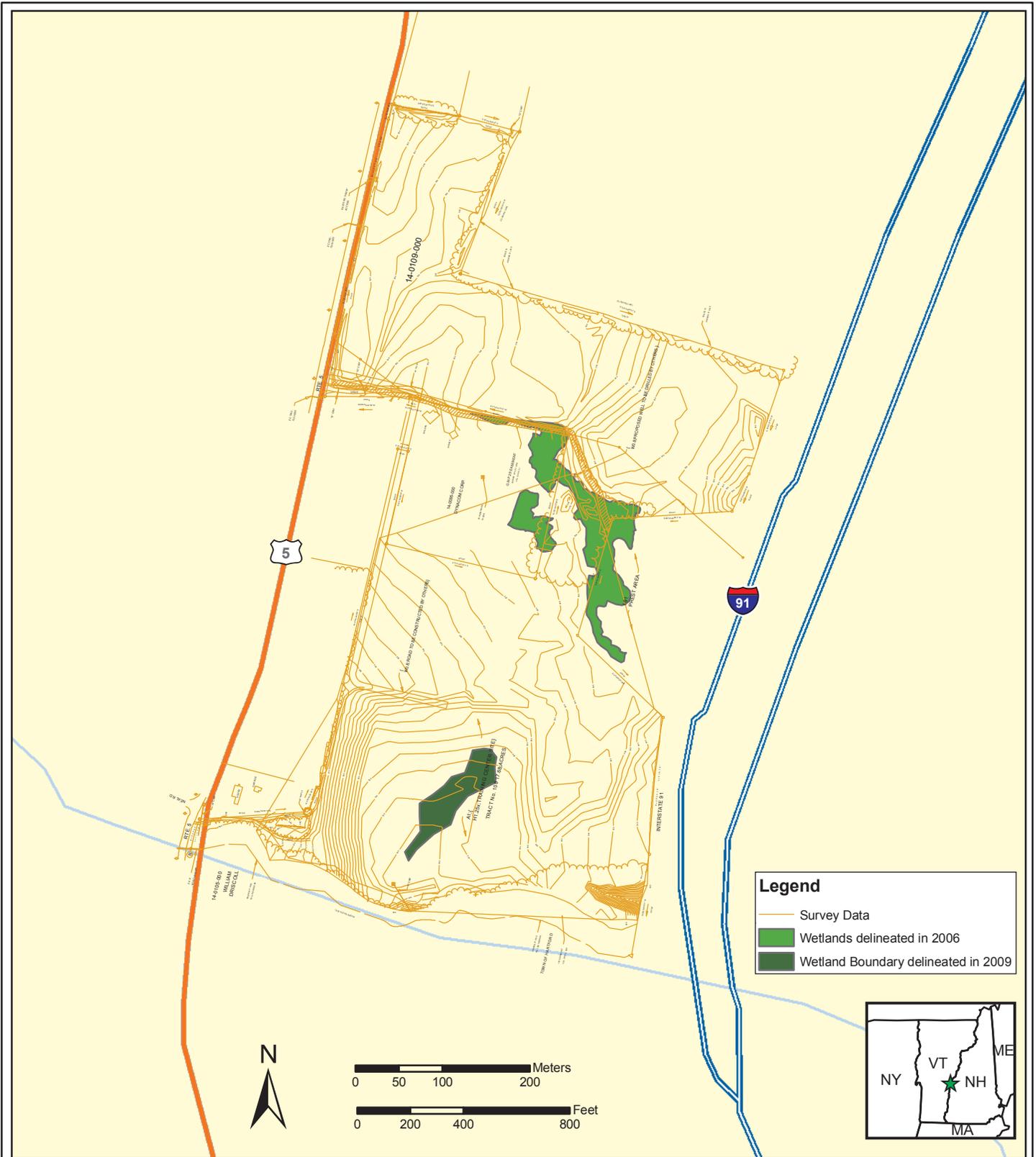
streams, are generally considered “waters of the United States” by the USACE, and under their definition of “jurisdictional waters/features,” are protected under Section 404 of the CWA. Activities in wetlands are also regulated under 10 Vermont Statutes Annotated, Chapter 37, Section 905(a)(7-9) (Vermont Wetland Rules) and EO 11990.

North Hartland Road Site. At the North Hartland Road Site, a wetland delineation performed in April 2006 identified a Class III wetland for which boundaries were flagged and recorded with a global positioning system (GPS). Figure 4-2 shows the location of the delineated wetlands which cover approximately 3 acres on the entire 65.5 acre parcel (Dubois and King 2006). Class III means that the wetland is subject to the USACE 404 Wetland Regulations, but not to the Vermont Wetland Rules. The National Wetlands Inventory map does not identify wetlands in the vicinity of the North Hartland Road Site (USDI-USFWS 1995).

Field investigations were conducted in April 2009 to determine the presence of wetlands at the southern end of the North Hartland Road Site. The wetland delineation was based on the presence of hydrophytic vegetation, wetland hydrology, and hydric soils, as outlined in the USACE’s Wetland Delineation Manual (USACE 1987) and the Northcentral and Northeast Supplement (USACE 2008a). A copy of the Wetlands Investigation Report is provided in Appendix B.

One wetland, covering about 1 acre, was delineated at the North Hartland Road Site during the April 2009 investigation. This wetland community with ponded water is of sufficient size to support several wildlife species. During the field investigation, mallards (*Anas Platyrhynchos*) and killdeer (*Charadrius vociferous*) were observed using the area. Characterization of the wetland is somewhat difficult due to its origin and present use. Excavation for construction of I-91 resulted in the removal of surface soils and creation of a borrow pit in what would otherwise likely have been forested or scrub shrub system. Agricultural activities in the former borrow pit further complicate classification of the North Hartland Road Community 1 wetland. The wetland, also Class III, is classified as a Farmed Wetland which was previously excavated.

Drew Road Site. At the Drew Road Site, no wetlands were identified during a recent site visit, and no jurisdictional wetlands on the property are recorded in the National Wetlands Inventory (USDI-USFWS 1995). Field investigations conducted in April 2009 at the Drew Road Site confirmed the absence of wetlands (see Appendix B).



Prepared For:
 U.S. Army Corps of Engineers, Mobile District

Figure 4-2
 Delineated Wetlands at the North Hartland Road Site -- Preferred Alternative



4.8.2 CONSEQUENCES

Potential impacts to biological resources are considered significant if the Proposed Action would:

- Affect a threatened or endangered species;
- Substantially diminish habitat for a plant or animal species;
- Substantially diminish a regionally or locally important plant or animal species;
- Interfere substantially with wildlife movement or reproductive behavior;
- Result in a substantial infusion of exotic plant or animal species; or
- Destroy, lose, or degrade jurisdictional wetlands (as defined by Section 404 of the CWA).

EO 11990, *Protection of Wetlands*, requires Federal agencies to avoid actions, to the extent practicable, which would result in the location of facilities in wetlands.

4.8.2.1 Alternative 1 – Preferred Alternative

Impacts to biological resources from the Preferred Alternative would not be significant. The Preferred Alternative would have no overall effect on biodiversity or regional plant and animal populations. Under the Preferred Alternative, the direct adverse impacts to biological resources would be very minor since the AFRC and OMS will be built on land that already has been disturbed for agricultural use and that the Town of Hartford plans to develop further.

Construction of the AFRC and OMS may affect on-site wildlife through the long-term direct loss of a relatively small amount of habitat and direct mortality of individuals occurring in construction zones. These facilities would result in the direct long-term loss of about 17 acres of farmland which may provide forage for various wildlife species depending upon the crop, or very low productivity habitat for ground-dwelling or nesting species when the ground is fallow. However, no area that currently supports native plant communities would be lost. During construction activities, any exposed soil would be quickly stabilized using erosion control measures as discussed in Section 4.6.2.1. Stands of white birch, maple, eastern red oak, and hemlock that occur around the perimeter of the property and in the center would be largely left intact. After construction is complete, cleared areas would be landscaped and replanted with grasses, as well as native and non-native (ornamental) plant species. The Army would take measures to restore the temporary access road to its original condition, especially to minimize erosion and enhance revegetation in the affected area.

Minor short- and long-term direct adverse impacts to wildlife would occur due to displacement of wildlife and habitat removal. Game species affected may include white-tailed deer and wild turkey. Non-game species that could be affected include ground-dwelling or nesting species that may inhabit the crops or tilled soil. Generally, species inhabiting this area are transient, so they would move to other areas of similar habitat. This project should have little or no effect on migratory bird species.

Post-construction impacts to wildlife from operation of the AFRC and OMS would not be significant. With the operation of the facility, there would be a slight increase in pollutants of oil and grit from the increased vehicle numbers. Potential for indirect impacts to biological resources, such as the degradation of aquatic habitat off site from nonpoint source pollution (e.g., uncontrolled stormwater runoff and soil erosion), would be reduced through implementation of a SWPPP.

The Preferred Alternative would not cause adverse impacts to any federally-listed threatened or endangered species, for no such species are known to occur on the North Hartland Road Site. The U.S. Fish and Wildlife Service and the Vermont Fish and Wildlife Department have reviewed the proposed project and concluded that the Proposed Action would not cause any impacts to rare, threatened and endangered species and significant natural communities (Appendix A).

Temporary impacts to wetlands would occur from implementation of the Preferred Alternative. The 3 acres of Class III wetlands identified in the central area of the North Hartland Road Site are located outside the 17-acre parcel the Army would acquire, but are in the vicinity of Access Road Option D, the proposed utility easement, and a potential location for the groundwater supply well as shown on Figures 3-3, 3-4, and 4-2. The Army does not anticipate permanent impacts to these Class III wetlands. One of the other access roads, either A, B, C, or E, would be considered for access to the proposed AFRC, thereby avoiding road construction through the wetlands. The utility easement would be constructed through the wetlands and would require site-specific construction techniques, such as separation of the top 12 inches of wetlands soils during installation of the utilities in the trench and use of timber mats for the crossing. Approximately 1,980 square feet (0.045 acres) of wetlands would be temporarily impacted by construction of the utility easement. If the potable water supply well is installed near the wetlands, care would be taken to ensure a 50-foot buffer remained, protecting the wetlands from construction and operation activities associated with the groundwater supply well. With these precautions, impacts to wetlands would not be significant.

Since these wetlands are Class III wetlands, the USACE has jurisdiction over them under Section 404 of the CWA. Under the CWA the provisions of the Vermont General Permit would apply, as follows: disruption of 3,000 square feet to 1 acre of Class III wetlands are covered as Category 2 and require an application to and written authorization from the USACE; and impacts to less than 3,000 square feet of Class III wetlands are covered under Category 1 which do not require reporting.

Work in the utility easement would temporarily impact about 1,980 square feet (0.045 acres) of Class III wetlands. Thus, the project would be considered a Category 1 project and would not require reporting. There would be no net loss of wetlands from implementation of the Proposed Action.

The other wetland occurs in the south-central portion of the North Hartland Road Site, within the 17 acres the Army would acquire for the AFRC (Figure 4-2). The Army has developed its site plan to completely avoid this wetland (Figure 3-3).

Although there are no required buffer zones for Class III wetlands, the Army would implement site-specific construction techniques to ensure construction close to the wetland boundaries will not impact the wetlands. The site-specific construction techniques are identified in Chapter 4.15 of this EA and include requirements for pre-construction planning; wetlands construction; spoil pile placement and control; sediment and erosion control; trench dewatering; and revegetation.

4.8.2.2 Alternative 2

Impacts to biological resources from Alternative 2 would not be significant. Alternative 2 would have no overall effect on biodiversity or regional plant and animal populations.

Under Alternative 2, direct long-term loss of about 5 acres of farmland and about 10 acres of woodland, consisting of a dense stand of trees that include oak, birch, maple, and hemlock, would occur. During construction activities, any exposed soil would be quickly stabilized using erosion control measures as discussed in Section 4.6.2.1. After construction is complete, cleared areas would be landscaped and replanted with grasses, as well as native and non-native (ornamental) plant species.

There would be minor short- and long-term direct adverse impacts to wildlife under Alternative 2 due to displacement of wildlife and habitat removal. Direct mortality of individuals occurring in construction zones could occur. Due to the removal of the woodland-type habitat as well as farmland, a greater variety of species may be affected than for the Preferred Alternative. The game species affected may include white-tailed deer, wild turkey, ruffed grouse, and woodcock. A variety of non-game species would be affected including various passerine type birds, foxes, coyotes, as well as the ground-dwelling or nesting species that may inhabit the crops or tilled soil. Most of the species inhabiting this area are transient, so they would move to other areas of similar habitat. This project should have little or no effect on migratory bird species.

Post-construction impacts to wildlife from operation of the AFRC and OMS would not be significant. The presence of houses adjacent to the site means wildlife is already exposed to a degree of human activity, and would return to the area after construction activity is complete. With the operation of the facility, there would be a slight increase in pollutants of oil and grit from the increased vehicle numbers. Potential for impacts from these pollutants would be reduced through implementation of a SWPPP.

Alternative 2 would not cause adverse impacts to any federally-listed threatened or endangered species, for no such species are known to occur on the Drew Road Site. The U.S. Fish and Wildlife Service and the Vermont Fish and Wildlife Department have reviewed the proposed project and concluded that the Proposed Action would not cause any impacts to rare, threatened and endangered species and significant natural communities (Appendix A).

There would be no impacts to wetlands as no wetlands occur at the Drew Road Site.

4.8.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to biological resources.

4.9 Cultural Resources

4.9.1 AFFECTED ENVIRONMENT

This section describes the existing cultural resource conditions in the area of the North Hartland Road and Drew Road sites. The area of potential effect (APE) for cultural resources includes the property within and immediately adjacent to the proposed project areas that will be affected by the action, either during construction only or permanently. Cultural resources are defined as historic properties as defined by the National Historic Preservation Act (NHPA), cultural items as defined by the Native American Graves and Repatriation Act (NAGPRA), archeological resources as defined by Archaeological Resources Protection Act (ARPA), sacred sites as defined in EO 13007 to which access is afforded under American Indian Religious Freedom Act (AIRFA), and collections and associated records as defined in 36 CFR 79. The prehistoric and historic background of the area is summarized first, followed by the status of cultural resource inventories and Section 106 consultations, and Native American resources.

4.9.1.1 Prehistoric and Historic Background

The regional prehistoric and historic background are summarized here from the Archeological Phase I Survey of the Proposed Armed Forces Reserve Center, Hartford, Windsor County, Vermont (Brigham and Cowie 2009).

The suspected first arrival of Native Americans to the region occurred during the Paleoindian period, ca. 11,500-10,900 B.C. (or later). Although still relatively rare archaeological sites of the Paleoindian period are recognized in both Vermont and New Hampshire, and Paleoindian occupation of the Connecticut River drainage in New Hampshire is well documented. Sites of the subsequent Archaic period, ca. 8,000-1,000 B.C., become increasingly more numerous with time, although well investigated sites of the Early Archaic and Middle Archaic sub periods remain rare in Vermont, and has been interpreted as representing a period of gradually increasing sedentism and population growth. The perceived trend toward population growth and increased sedentism continues through the Woodland period, ca. 1,000 B.C.-A.D. 1600, and culminates in the Late Woodland period with the adoption of horticulture. The arrival of Europeans during the Contact period, ca. A.D. 1550-1750, precipitated a disastrous collapse of Native American populations, resulting in their near abandonment of some areas of Vermont.

Permanent Euroamerican settlement of the region in Hartford, Vermont did not begin until after the end of the French and Indian wars in 1760. On July 4, 1761 Governor Benning Wentworth of New Hampshire granted a charter for the township of Hartford to 64 proprietors, most of whom were from Windham and Lebanon, Connecticut. The township contained abundant agricultural land and numerous opportunities for mills and population grew accordingly. By 1771, Hartford had a population of 190, and by 1880 the town population had increased to 2,955 and was divided into fourteen school districts.

An 1856 map of Windsor County depicts houses belonging to A. T. Barron, J. Kilburn, J. Dewey (a prominent family name in 19th century Hartford history) and a school house along the road that would become Route 5 in the general vicinity of the North Hartland Road and Drew Road Sites.

The villages of White River Junction and Hartford themselves are listed on the National Register of Historic Places (NRHP); however, neither site being considered is located within or adjacent to either Historical District. In addition, a literature review of the Master Site Files shows no known historical properties within the APE.

4.9.1.2 Status of Cultural Resource Inventories and Section 106 Consultations

Section 110 of the NHPA requires Federal agencies to locate, inventory, and nominate to the NRHP all resources that are recommended eligible for inclusion on the NRHP. The Army conducted a Phase I archeological survey at the North Hartland Road Site during October 2008. The survey included excavation of 120 test pits along 14 sampling transects. No Native American or significant historic Euroamerican cultural material was identified, and the negative results of the Phase I survey work indicate that significant archaeological deposits are unlikely to be present in the project area (Brigham and Cowie 2009).

Section 106 of the NHPA requires Federal agencies to take into account the effects of their undertakings on historic properties, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. Section 106 consultation and coordination was conducted with the State Historic Preservation Office via the Vermont Division for Historic Preservation. A copy of the letter the 99th RSC sent to the Vermont Division for Historic Preservation and their response are included in Appendix A. The SHPO issued a determination of No Historic Properties Affected on April 21, 2009. This letter is also included in Appendix A.

4.9.1.3 Native American Graves Protection and Repatriation Act (NAGPRA)

No Native American concerns regarding the Proposed Action have been identified. A notification letter was sent by the 99th RSC to the federally recognized tribe, Stockbridge Munsee Community of Wisconsin. Their response indicated no potential concern at either site. Copies of these letters are included in Appendix A.

4.9.2 CONSEQUENCES

Potential impacts to historic properties and/or archaeological resources are considered significant if the Proposed Action would:

- Physically destroy, damage, or alter all or part of the property;
- Physically destroy, damage, alter or remove items from archaeological contexts without a proper mitigation plan;

- Isolate the property from or alter the character of the property's setting when that character contributes to the property's qualification for the NRHP;
- Introduce visual, audible, or atmospheric elements that are out of character with the property or alter its setting;
- Neglect a property resulting in its deterioration or destruction; or
- Transfer, lease, or sell the property (36 CFR 800.9[b]) without a proper preservation plan.

4.9.2.1 Alternative 1 – Preferred Alternative

As discussed in Section 4.9.1.2, it has been determined that significant archaeological deposits are unlikely to be present in the project area at the North Hartland Road Site (Brigham and Cowie 2009), and the SHPO has issued a determination of No Historic Properties Affected for the North Hartland Road Site.

If, during construction, any potential historic or archaeological resource is uncovered or inadvertent discoveries are made of Native American human remains and associated funerary objects, sacred objects, or objects of cultural patrimony, the Cultural Resources Manager for the 99th RSC would be contacted, in accordance with typical standard operating procedure for the accidental discovery of archaeological resources or Native American artifacts.

4.9.2.2 Alternative 2

If the Army selects Alternative 2, Drew Road Site, for construction and operation of the AFRC, the Army would conduct a Phase I archeological survey at this site and consult with the SHPO regarding any potential findings.

If, during construction, any potential historic or archaeological resource is uncovered or inadvertent discoveries are made of Native American human remains and associated funerary objects, sacred objects, or objects of cultural patrimony, the Cultural Resources Manager for the 99th RSC would be contacted, in accordance with typical standard operating procedure for the accidental discovery of archaeological resources or Native American artifacts.

4.9.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to cultural and archaeological resources.

4.10 Socioeconomics

4.10.1 AFFECTED ENVIRONMENT

This section describes the existing socioeconomic conditions for the Town of Hartford, as well as an ROI that encompasses Windsor County, Vermont. The Town of Hartford is composed of the villages of Hartford, Quechee, West Hartford, White River Junction, and Wilder. The Town of Hartford, located in Windsor County, Vermont, would provide

necessary goods and services for AFRC personnel, including food, gasoline, and miscellaneous supplies. Socioeconomic factors include economic development, demographics, housing, quality of life, environmental justice, and protection of children.

4.10.1.1 Economic Development

In 2000, the workforce of Windsor County totaled nearly 46,000 people. The top three industries in Windsor County were services (26 percent), manufacturing (13 percent), and retail trade (11 percent) (U.S. Census Bureau 2000). Together these three industries account for 50 percent of regional employment. Regional unemployment is fairly low as a result of economic stability of local businesses and private sectors. Windsor County's annual average unemployment rate for 2007 was 3.2 percent (City-Data 2007). Within the ROI, Weathersfield had the highest unemployment rate at 3.7 percent.

In 2000, Hartford's workforce totaled over 5,500 people. In 2000, the top three industries in Hartford were educational, health, and social services (32 percent); retail trade (14 percent); and arts, entertainment, recreation, accommodations, and food services (9 percent) (U.S. Census Bureau 2000). The annual unemployment rate for the Town of Hartford in 2007 was 2.2 percent, which was 2.4 percent less than the U.S. average for the same year (City-Data 2007).

In 2007, the median income for a household in the county was a \$49,701. The per capita income for the county was \$38,611 (City-Data 2007). The cost of living within the ROI in 2007 was 91.8 percent, which is over 8 percent lower than the U.S. average cost of living based on the cost of living composite index (City-Data 2007).

The 2007 median income for a household in Hartford was \$50,000. While the per capita income for Hartford was not available, the cost of living was 93.4 percent, which is over 6 percent lower than the U.S. average cost of living based on the cost of living composite index (City-Data 2007).

4.10.1.2 Demographics

As of the year 2007, the estimated population of Windsor County was 56,875 people. The racial makeup of the county was about 98 percent White with other races comprising the remainder of the population. About 88 percent of the population graduated from high school and 30 percent were college graduates (U.S. Census Bureau 2000). Hartford has a population of approximately 10,700 people, including approximately 2,500 people who reside in White River Junction (U.S. Census Bureau 2007).

4.10.1.3 Housing

The U.S. Census for the year 2000 identifies Windsor County as having a total of about 32,000 housing units; approximately 24,200 of the units were occupied. Approximately 6,900 housing units were renter occupied and approximately 17,300 units were owner occupied; the remaining units were vacant. The median value of houses in Windsor County was \$108,500, and the median monthly rent was about \$500 (U.S. Census Bureau 2000).

In 2000, Hartford had a total of nearly 5,500 housing units. Approximately 4,500 units were occupied. Of the occupied units, approximately 1,500 units were renter occupied and approximately 3,000 were owner occupied; the remaining units were vacant (U.S. Census Bureau 2000). The median value of houses in Hartford for 2007 increased from \$120,600 in 2000 to \$205,800 in 2007 (City-Data 2007). The median monthly rent in Hartford was \$707 in 2007.

4.10.1.4 Quality of Life

Quality of life is discussed in terms of public safety and medical services, schools, and recreation.

Public safety and medical services. The Town of Hartford operates one fire station located on VA Cutoff Road, White River Junction. The Bureau of Fire employs 20 full-time firefighters and 10 on call. During a shift there is one captain, one lieutenant, one paramedic, and at least one firefighter (Town of Hartford 2008).

The Hartford Police Department consists of 35 employees providing law enforcement, emergency communication services, and civilian support services. The Hartford Police Department headquarters is located on 812 VA Cutoff Road, White River Junction. The Hartford Police Department serves five villages within the Town of Hartford which encompasses approximately 45 square miles, and two major interstate highways along the Connecticut River (Town of Hartford 2008).

The closest emergency medical service, Dartmouth-Hitchcock Medical Center, is located in Hanover, New Hampshire and sends emergency vehicles when 911 is dialed.

Schools. In Hartford, there are three elementary schools (grades K-5), one middle school (grades 6-8), and two high schools (grades 9-12, one is a technical school) within the Hartford School District. Hartford has one college, Middlebury College.

Recreation. Department of Parks & Recreation Public Parks and Facilities has several parks, pools, indoor ice skating rings, athletic fields, conservation areas, and youth events (Town of Hartford 2008).

4.10.1.5 Environmental Justice

Environmental justice is the fair treatment for people of all races, cultures, and incomes, regarding the development and implementation (or lack thereof) of environmental laws, regulations, and policies. EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, directs Federal agencies to address environmental and human health conditions in minority and low-income communities. A memorandum from former President Clinton concerning EO 12898 stated that Federal agencies would collect and analyze information concerning a project's effects on minorities or low-income groups when required by NEPA. If such investigations find that minority or low-income groups experience a disproportionate adverse effect, then avoidance or mitigation measures are necessary.

The population of Windsor County in 2007 was about 2 percent minority, while the population of Hartford was about 3 percent minority (U.S. Census Bureau 2007). The national average for the same year was 24.4 percent minority (U.S. Census Bureau 2007).

In Windsor County, about 5 percent of families and 8 percent of the population were below the poverty level in 2000, including 8 percent of those under age 18 and 8 percent of those aged 65 or over (U.S. Census Bureau 2000). About 10 percent of families and 13 percent of individuals in Hartford were below the poverty level in 2000. Approximately 18 percent of those under age 18 and 10 percent of those aged 65 or over were below the poverty level. In 2000, the poverty guideline for a family of four was an annual income of \$17,050 in the 48 contiguous states and Washington, D.C.; for a family of three, it was \$14,150 (U.S. Department of Health and Human Services 2005). The national rate for people living in poverty was 11.3 percent in 2000 (U.S. Census Bureau 2000).

4.10.1.6 Protection of Children

Executive Order 13045, *Protection of Children from Environmental Health and Safety Risks*, requires Federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that might disproportionately affect children. The Army takes special precautions for the safety of children, including the use of fencing and signage.

4.10.2 CONSEQUENCES

Potential socioeconomic impacts are considered significant if the Proposed Action would cause:

- Substantial gains or losses in population and/or employment; or
- Disequilibrium in the housing market, such as severe housing shortages or surpluses, resulting in substantial property value changes.

Potential environmental justice impacts are considered significant if the Proposed Action would cause disproportionate effects on low-income and/or minority populations.

Potential impacts to protection of children are considered significant if the Proposed Action would cause disproportionate effects on children.

4.10.2.1 Alternative 1 – Preferred Alternative

Socioeconomic impacts from the Preferred Alternative would not be significant. The economic effects of the construction phase of the Proposed Action were estimated using the EIFS model, a computer-based economic tool that calculates multipliers to estimate the direct and indirect effects resulting from a given action. Changes in spending and employment associated with the construction represent the direct effects of the action. Based on the input data and calculated multipliers, the model estimates changes in sales volume, income, employment, and population in the ROI, accounting for the direct and indirect effects of the action. For purposes of this analysis, a change is considered significant if it falls outside the historical range of ROI economic variation. To determine the historical range of economic variation, the EIFS model calculates a rational

threshold value (RTV) profile for the ROI. This analytical process uses historical data for the ROI and calculates fluctuations in sales volume, income, employment, and population patterns. The historical extremes for the ROI become the thresholds of significance (i.e., the RTVs) for social and economic change. If the estimated effect of an action falls above the positive RTV or below the negative RTV, the effect is considered to be significant. For this analysis, the ROI is Windsor County, Vermont and the change in local expenditures refers to the estimated construction spending of \$28,000,000 for the new AFRC.

Based on the EIFS model, the Proposed Action would generate about 164 direct and 256 indirect jobs in the economic ROI during construction activities. This increase in employment would represent a 1.29 percent increase in the region's employment levels and would fall short of the positive RTV of 5.25 percent to make any significant positive difference. It should be noted that the increased employment and any other economic benefits associated with construction would only be short-term and would be spread out over the lifespan of the project construction. The Proposed Action would also generate positive changes in the other economic indicators estimated by the EIFS model, including a 4.54 percent increase in sales volume, and a 1.09 percent increase in regional personal income. However, these increases do not exceed the positive RTVs for their respective categories, and are therefore not significant. Appendix B contains the EIFS model output for the proposed BRAC actions near White River Junction.

Because incoming personnel under the Proposed Action would come only for weekend training, and the approximately 10 permanent administrative personnel from the 99th RSC and VTARNG already reside in the ROI, there would be no influx of personnel on a permanent basis into the ROI. The AFRC would serve about 300 personnel on a rotating basis, mostly on weekends. The maximum use of the facility would be about 104 members per weekend. No significant economic impact in the ROI would be expected during the operations phase of the Proposed Action. The new facility would realign USAR units, resulting from the closure of the Chester Memorial Army Reserve Center and OMS and the Berlin Army Reserve Center, and VTARNG units from armories in Ludlow, North Springfield, and Windsor, Vermont, if needed, as directed by BRAC 05.

There would be no environmental justice impacts, as impacts from the Proposed Action identified in this EA would not be localized or placed primarily on minority and/or low-income populations.

The surrounding properties are used for residential purposes, a commercial nursery, a rest area, a transfer area, a landfill, and to host a broadcast tower. The nearest schools are over 3 miles from the North Hartland Road Site. The nearest existing parks and recreational centers are at least 5 miles from the site. In the current setting, there would be no environmental health and safety risks that might disproportionately affect children, because children would be restricted from the areas proposed for construction and operation of the AFRC.

4.10.2.2 Alternative 2

Socioeconomic impacts for Alternative 2 would be the same as for Alternative 1. Several residences are located in the vicinity of the Drew Road Site on adjacent parcels. The nearest schools are over 3 miles and existing parks and recreational centers are at least 5 miles from the site. There would be no environmental health and safety risks that might disproportionately affect children, because children would be restricted from the areas proposed for construction and operation of the AFRC.

4.10.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to socioeconomics.

4.11 Transportation

4.11.1 AFFECTED ENVIRONMENT

This section describes the existing transportation conditions at and surrounding the North Hartland Road and Drew Road sites. Roadways and traffic are discussed first, followed by public transportation.

4.11.1.1 Roadways and Traffic

The North Hartland Road and Drew Road sites are located south of White River Junction, Vermont on U.S. Route 5 South (North Hartland Road) approximately 2 and 1.5 miles respectively. The sites are located in the southwest quadrant of the intersection of I-89 and I-91. U.S. Route 5 South is a paved two-lane highway running approximately north-south. Actual measured traffic volume on U.S. Route 5 South in the vicinity of the North Hartland Road and Drew Road sites was approximately 4,400 vehicles per day in 2006 (VTrans 2007).

North Hartland Road Site. Access to the North Hartland Road Site from U.S. Route 5 South is along a narrow dirt road approximately 0.5 mile south of Drew Road (Figure 3-4). The dirt access road is located on a curve in U.S. Route 5 South. Vehicles northbound on U.S. Route 5 South have poor visibility of the dirt access road when approaching from the south. Southbound vehicles on U.S. Route 5 South have poor visibility of northbound traffic when turning left onto the dirt access road. Visibility to the south along U.S. Route 5 South is poor when entering U.S. Route 5 South from the dirt access road. Additionally, the narrow dirt access road is immediately adjacent to a steep bank associated with the unnamed creek some 30 to 50 feet below, at the southern property boundary.

Drew Road Site. Access to the Drew Road Site from U.S. Route 5 South would be directly from U.S. Route 5 South or from Drew Road off of U.S. Route 5 South. Visibility along U.S. Route 5 South at Drew Road is good.

4.11.1.2 Public Transportation

The nearest airport to White River Junction is the Lebanon Municipal Airport in Lebanon, New Hampshire (5 miles). The nearest international airport is in Manchester, New Hampshire (80 miles). Commercial bus transportation to White River Junction is

provided by Greyhound Lines, Inc. Passenger rail transportation to White River Junction is provided by Amtrak. Several commercial taxicab companies serve White River Junction.

4.11.2 CONSEQUENCES

Potential impacts to transportation are evaluated with respect to the potential for the Proposed Action to:

- Disrupt or improve current transportation patterns and systems;
- Deteriorate or improve existing levels of service; and
- Change existing levels of safety.

4.11.2.1 Alternative 1 – Preferred Alternative

Impacts to transportation from the Preferred Alternative would not be significant. Limited short-term impacts associated with construction of the proposed AFRC would be likely due to increased construction vehicle traffic on U.S. Route 5 South. Potential long-term impacts associated with operation of the proposed AFRC would include increased vehicular traffic on U.S. Route 5 South. However, this increase in vehicular traffic would be limited to weekends when local traffic is less than normal weekday averages. The maximum number of reservists expected on any one weekend per month is 104. This would result in a vehicular traffic increase of approximately 2 percent by POVs on U.S. Route 5 South. Approximately 140 military vehicles are expected to be kept on site at the proposed AFRC. If all military vehicles anticipated to be kept at the proposed AFRC were put on the road during any one day, the resulting increase would amount to approximately 3 percent on U.S. Route 5 South. Military vehicles traveling off site would cause only a minimal temporary disturbance to the local traffic flow when traveling in convoy.

Current access to the North Hartland Road Site is limited in width and provides poor visibility for ingress and egress; and as a result is an operational and safety concern. A temporary access road has been designated in the same location as the current access road (Figure 3-4). If construction vehicles use the temporary access road, the Army would require appropriate signage and traffic controls for safety. After use, the temporary access road would be restored to its original condition.

For permanent site access, the Town of Hartford has proposed two alternative points of entry to the North Hartland Road Site from U.S. Route 5 South. The first (south) potential point of entry to the North Hartland Road site is approximately 550 feet north of the current access road as shown on Figure 3-4. The Town of Hartford proposes to purchase the property and construct the road to provide access. From this point of entry two alternative access routes to the proposed AFRC have been proposed as shown on Figure 3-4 (Options A and B). Ingress and egress to U.S. Route 5 South from this point of entry would cause little disruption to traffic and afford drivers clear vision in all directions.

The second (north) potential point of entry to the North Hartland Road Site is via Lesle Drive, an established point of access approximately 3,400 feet north of the current access road as shown on Figure 3-4. Lesle Drive extends east off U.S. Route 5 South approximately 1,900 feet. From Lesle Drive, three alternative access routes to the proposed AFRC have been proposed as shown on Figure 3-4 (Options C, D, and E). Ingress and egress to U.S. Route 5 South from this point of entry would cause little disruption to traffic and afford drivers clear vision in all directions.

4.11.2.2 Alternative 2

Impacts to transportation from Alternative 2 would not be significant. Limited short-term impacts associated with construction of the proposed AFRC would be likely due to increased construction vehicle traffic on U.S. Route 5 South. Potential long-term impacts associated with operation of the proposed AFRC would include increased vehicular traffic on U.S. Route 5 South as described for the Preferred Alternative.

Access to the Drew Road Site would likely be via a new point of access off of Drew Road. Potential impacts associated with construction and use of the new point of access would be increased traffic on Drew Road, damage to Drew Road from construction and military vehicles, and disruption to residences located along Drew Road; both during construction and operation of the proposed AFRC.

4.11.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to transportation.

4.12 Utilities

4.12.1 AFFECTED ENVIRONMENT

This section describes existing utilities at the North Hartland Road and Drew Road sites. In general, the utility systems are classified as distribution and collection systems including water, sanitary sewer, storm drainage, electrical, natural gas, and industrial wastewater. Communication systems and solid waste disposal are also discussed in this section.

4.12.1.1 Potable Water Supply

Potable water can be defined as water fit for drinking, being free from contamination and not containing a sufficient quantity of saline material to be regarded as a mineral water. Potable water in the immediate area of the North Hartland Road and Drew Road sites is supplied by groundwater wells as no municipal source exists proximate to the area. The closest municipal water hookup is located at the intersection of U.S. Route 5 South and Kline Drive, approximately 1 mile north of the North Hartland Road Site (Menge 2008). Section 4.7.1.2 describes the aquifer underlying the North Hartland Road and Drew Road sites and average yields.

A nursery operates in the vicinity of the North Hartland Road Site, which would suggest the aquifer is capable of producing groundwater sufficient for irrigation. Furthermore, two rest areas are located along I-91 immediately east of the North Hartland Road Site.

Several residences in the vicinity of the Drew Road Site rely on wells to provide potable water. The aquifer capacity at the Drew Road Site is expected to be similar to the North Hartland Road Site.

4.12.1.2 Wastewater System

A wastewater collection system conveys wastewater via sewer lines to a wastewater treatment system. Wastewater collected in White River Junction is conveyed to the White River Junction wastewater treatment system via sanitary sewer line. The White River Junction wastewater treatment system is operated by the Town of Hartford Department of Public Works Wastewater Division, with a capacity of 1.24 million gallons per day (MGD) with current system flows averaging approximately 0.94 MGD. The system consists of seven pump stations and gravity collection mains with direct discharge to an extended aeration treatment system.

VTrans is extending a sanitary sewer line south along U.S. Route 5 South and east to the VTrans rest areas on I-91 east of the North Hartland Road Site. Sanitary sewer lines exist along U.S. Route 5 South at the Drew Road Site.

4.12.1.3 Stormwater System

A stormwater system collects and conveys runoff to surface water features. One catch basin is located on the southern edge of the North Hartland Road Site; which directs accumulated runoff via an underground pipe to the unnamed creek south of the site. There is no stormwater system at the Drew Road Site.

4.12.1.4 Energy Sources

Electricity is available to both the North Hartland Road and Drew Road sites and is provided by the Green Mountain Power Corporation of Colchester, Vermont via transmission lines provided by Vermont Transco, LLC. Electric service is available to the North Hartland Road Site to the north of the site along Lesle Drive or along U.S. Route 5 South. Electric service is available to the Drew Road Site along U.S. Route 5 South. Natural gas service is not available to either the North Hartland Road or Drew Road site. Commercial heating oil and propane services are available for White River Junction from multiple providers.

4.12.1.5 Communication

The Vermont Department of Public Services Board has authorized over 100 companies to provide local telephone service, and hundreds more to provide long-distance service throughout the state. Fairpoint is the telephone service provider for the White River Junction area. Comcast is the internet service provider for the White River Junction area. High speed internet cable is available along U.S. Route 5 South for both the North Hartland Road and Drew Road sites.

4.12.1.6 Solid Waste

Solid waste collection and disposal service for the White River Junction area is provided by several private haulers with Casella Waste Systems being the largest. Casella Waste Systems offers collection, recycling, and disposal services for White River Junction. Casella Waste Systems transports solid waste to two solid waste landfills in Vermont; East Montpelier, Vermont (CV Landfill) and Newport, Vermont (New England Waste Services of Vermont). The fact that Casella is actively marketing its services for major accounts in their service area indicates landfill capacity is available for current and future customers.

4.12.2 CONSEQUENCES

Effects on infrastructure are considered in terms of increases in demands on systems and the ability of existing systems to meet those demands. Potential effects to the environment could occur if the existing systems are insufficient to handle the increased demands requiring construction and operation of a new system. Utility demands include both construction and operations usage. Utility demands during the operations of the Proposed Action are based on the additional facility square footage and personnel requirements. Individual segments that comprise the totality of the infrastructure are discussed below.

Potential impacts to the potable water system are considered significant if the Proposed Action would:

- Reduce potable water availability;
- Disrupt potable water distribution systems;
- Change water demands that affect regional potable supplies; or
- Generate contaminants that cause negative effects on water quality.

Potential impacts to the wastewater system are considered significant if the Proposed Action would:

- Cause additional inflow and infiltration and increased loads on the wastewater treatment that cannot be adequately treated; or
- Change wastewater composition that would alter wastewater treatment processes or consistently cause upsets of the wastewater treatment system.

Potential impacts to stormwater conveyance systems are considered significant if the Proposed Action would:

- Cause flow obstructions and increases to the stormwater drainage system;
- Accelerate deterioration of the stormwater drainage system; or
- Cause long-term interruptions of stormwater drainage system components.

Potential impacts to the electrical systems are considered significant if the Proposed Action would:

- Change regional electricity demands requiring major new components such as transmission lines, transformers, and substations; or
- Cause long-term disruptions in available electrical services.

Potential impacts to liquid fuel systems are considered significant if the Proposed Action would:

- Cause unsafe, inadequate, or noncompliant temporary or long-term storage or distribution systems; or
- Cause unreliable distribution of liquid fuels that cannot meet the mission and support requirements.

Potential impacts to solid waste are considered significant if the Proposed Action would increase solid waste such that it overwhelms local landfills.

4.12.2.1 Alternative 1 – Preferred Alternative

Impacts to utilities from the Preferred Alternative would not be significant. An extension of available utilities to the proposed AFRC would be necessary. Figure 3-3 illustrates a potential utility easement for the North Hartland Road Site. The proposed groundwater supply well's permanent easement would be attached to the permanent utility easement that would allow for operation and maintenance of the well. Adjacent to the permanent utility easement, there would be a temporary construction easement that would facilitate access to the site for construction of the well. Impacts to soils, vegetation, and wetlands from these easements are discussed under the applicable resource areas.

A new on-site groundwater supply well would be installed to meet the potable water demand of the proposed AFRC. Due to aquifer capacity, two 62,500-gallon above ground water storage tanks are also required to meet fire flow requirements. With such a system, groundwater withdrawal would occur at a lower flow over longer periods of time until storage requirements for potable use and fire flow are met. The USAR anticipates a deep groundwater supply well will be necessary to meet the potable water demand of the proposed AFRC (Marshall 2009). The proposed location of the groundwater supply well is shown in Figure 3-3.

For groundwater quality protection, a permanent easement with a radius of 50 feet and a restrictive area easement (isolation zone) with a radius of 200 feet are required by the State Source Permit. These easements would restrict various activities within various distances of the wellhead for groundwater source protection. The following minimum horizontal separation distances from the wellhead would be observed per the Vermont Water Supply Rules:

- Roadways and parking lots – 25 feet
- Sewage system disposal fields – 150-220 feet
- Subsurface wastewater piping and related tanks – 50 feet

- Application of chemical or organic fertilizers – 50 feet
- Application of pesticides or herbicides – 200 feet
- Surface water or stormwater drainage ditches, detention ponds, and stormwater management facilities – 10 feet
- Buildings – 10 feet
- Concentrated livestock holding areas or manure storage facilities – 200 feet

In addition, hazardous or solid waste disposal sites are not to be located in an area which would increase the concentration of any contaminant in the proposed well to a level which exceeds the Maximum Contaminant Level listed in the Drinking Water Standards under Chapter 21-6 of the Rules. Likewise, non-sewage wastewater disposal fields, including stormwater control facilities utilizing infiltration to groundwater as a means of discharge, are not to be located in an area which would increase the concentration of any contaminant in the proposed well to a level which exceeds the Maximum Contaminant Level listed in the Drinking Water Standards under Chapter 21-6 of the Rules.

There would be no significant impact to the wastewater collection system as the existing White River Junction waste treatment system has sufficient capacity to meet the demands of the proposed AFRC. The capacity of the sanitary sewer line extension north of the North Hartland Road Site requires evaluation to determine if it is sufficient to meet the proposed AFRC demands. If the line capacity is insufficient, an upgrade would be implemented. A permit to connect and an agreement reserving allocation of flow capacity are required for all new construction requiring services of the wastewater treatment system. A sewage lift station would be required due to the elevation of the AFRC.

Impacts from stormwater generated from the Preferred Alternative would be minimal. Stormwater discharges from the facility would be managed in accordance with a SWPPP prepared by the 99th RSC. Stormwater management would be included in the design of the proposed AFRC and the appropriate permits would be obtained as described in Section 4.7.2.1.

The Preferred Alternative would have no impact to the existing electric transmission system as capacity is expected to be sufficient to meet proposed AFRC requirements at the North Hartland Road Site. However, all facilities would be designed to meet the Leadership in Energy and Environmental Design (LEED) Silver design standards in accordance with the Army sustainability policies. The Army's decision to meet LEED Silver design standards will provide a more sustainable facility and will serve as a model for other new construction projects in the area that may be inspired to consider "green" building features.

Impacts to utilities from the Preferred Alternative would not be significant, as multiple commercial suppliers service the area.

4.12.2.2 Alternative 2

The utilities impacts for Alternative 2 would be similar to those for the Preferred Alternative with the exception of points of connection to existing wastewater collection and electrical transmission systems.

4.12.2.3 No Action Alternative

Under the No Action Alternative, no changes or impacts would occur to utility systems.

4.13 Hazardous and Toxic Substances

4.13.1 AFFECTED ENVIRONMENT

This section describes the existing conditions of hazardous and toxic substances at the North Hartland Road and Drew Road sites. Management of hazardous materials and hazardous wastes are discussed also.

4.13.1.1 Hazardous Materials

Hazardous materials are those useable corrosive, toxic, flammable, and reactive materials that, when spilled or released, are dangerous to public health or the environment. Hazardous materials are required to be handled managed, treated, or stored properly by trained personnel under the following regulations: Department of Transportation Hazardous Materials, 49 CFR 172.101; EPA, 40 CFR 260 et seq.; and Occupational Safety and Health Administration Hazardous Communication, 29 CFR 1900.1200 and 29 CFR 1926.59.

4.13.1.2 Hazardous Waste Disposal

Hazardous wastes are generated when substances, usually originating as hazardous materials, are disposed of and are no longer useable or recyclable and exhibit hazardous characteristics as define by the EPA.

The VANR Environmental Interest Locator does not indicate any brownfield, ACT250 permit, hazardous waste site, hazardous waste site generator, or underground storage tank located on either the North Hartland Road or Drew Road sites (VANR 2008). No environmental sites were identified within the minimum search distance during the Federal and state environmental database review conducted as part of the Environmental Condition of Property (Terraine-EnSafe 8(a) Joint Venture 2008).

4.13.2 CONSEQUENCES

Potential impacts to hazardous materials management are considered significant if the Proposed Action would:

- Result in noncompliance with applicable Federal and state regulations; or
- Increase the amounts of generated or procured hazardous materials beyond current permitted capacities or management capabilities.

4.13.2.1 Alternative 1 – Preferred Alternative

Impacts to hazardous and toxic substances from the Preferred Alternative would not be significant. Construction activities would pose minimal adverse impacts due to the potential for spills and leaks from construction equipment. Potential adverse impacts associated with construction would be mitigated by contractor spill management plans and response equipment.

The proposed AFRC would consist primarily of administrative and office areas and associated OMS with maintenance administrative support, service bays, and controlled waste storage area. Use and storage of hazardous materials for routine facilities maintenance would be minimal and would likely be limited to cleaning products, paints, and adhesives. Use and storage of hazardous materials for routine military vehicle maintenance would be minimal and would likely be limited to military vehicle maintenance liquids (e.g. motor oil, transmission fluid, brake fluid, hydraulic oil, general purpose grease, gasoline, diesel fuel, kerosene, and engine coolant) as well as acid for lead-acid batteries and cooling system refrigerant. General purpose detergents would be used in the tandem wash racks. Handling and storage of any hazardous materials would follow applicable regulations and label precautions. Facility plans include floor drains for the OMS maintenance bays that will convey flow through oil/water separators (OWS). The tandem vehicle wash racks would likely also flow through an OWS. An emergency standby generator and associated fuel source (diesel or liquid propane) supply would likely be used to ensure continued operation of the proposed AFRC while operating on emergency power.

Fuel-dispensing semi-trailers, 5,000 gallon capacity, would be located on-site as part of the USAR equipment. These fuel-dispensing trailers would normally be empty and parked in the MEP area. Should a partially-full or full fuel-dispensing trailer be parked at the proposed AFRC, secondary containment equipment would be deployed under the trailer to collect any released fuel. One bay in the covered facility would be constructed specifically to house a HEMTT 2,500-gallon fuel tanker that would be used for fuel dispensing. This bay would be equipped with appropriate containment and spill prevention equipment.

Minor amounts of hazardous wastes would be generated and would be temporarily stored on site and collected by a contracted commercial transport, storage, and disposal (TSD) operator for transportation to permitted disposal sites which may include special industrial landfills, hazardous waste facilities, and licensed recyclers. Hazardous waste management and disposal would be performed in accordance with the 99th RSC management plans.

The Preferred Alternative would likely result in negligible short- and long-term adverse impacts, based on the potential for small spills and the overall use of hazardous materials and disposal of hazardous waste from the proposed AFRC and associated OMS. The 99th RSC SPCC Plan (to be developed during construction of the proposed AFRC) would be implemented to reduce the potential impacts associated with hazardous materials resulting from construction and operation of the proposed AFRC.

4.13.2.2 Alternative 2

Impacts to hazardous and toxic substances from Alternative 2 would be the same as those for the Preferred Alternative.

4.13.2.3 No Action Alternative

Under the No Action Alternative, no impacts would occur to hazardous and toxic substances.

4.14 Cumulative Effects

Cumulative effects are those environmental impacts that result from the incremental effects of other past, present, or reasonably foreseeable future actions when combined with the Proposed Action. CEQ regulations stipulate that the cumulative effects analysis within an EA consider the potential environmental impacts resulting from the “incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions” (40 CFR 1508.7). Cumulative effects can result from individually minor, but collectively substantial, actions undertaken over a period of time by various agencies (Federal, state, and local) or individuals.

The scope of the cumulative effects analysis involves evaluating impacts to environmental resources by geographic extent of the effects and the time frame in which the effects are expected to occur. Past, present, and reasonably foreseeable actions are identified first, followed by the cumulative effects that could result from these actions when combined with the Proposed Action.

4.14.1 PAST, PRESENT, AND REASONABLY FORESEEABLE ACTIONS

The geographic area analyzed for cumulative effects includes both the proposed North Hartland Road and Drew Road sites and approximately 1 mile surrounding the sites. One current and two reasonably foreseeable actions were identified within the 1-mile area surrounding the sites, and no applicable past projects were identified. The identified projects are summarized here:

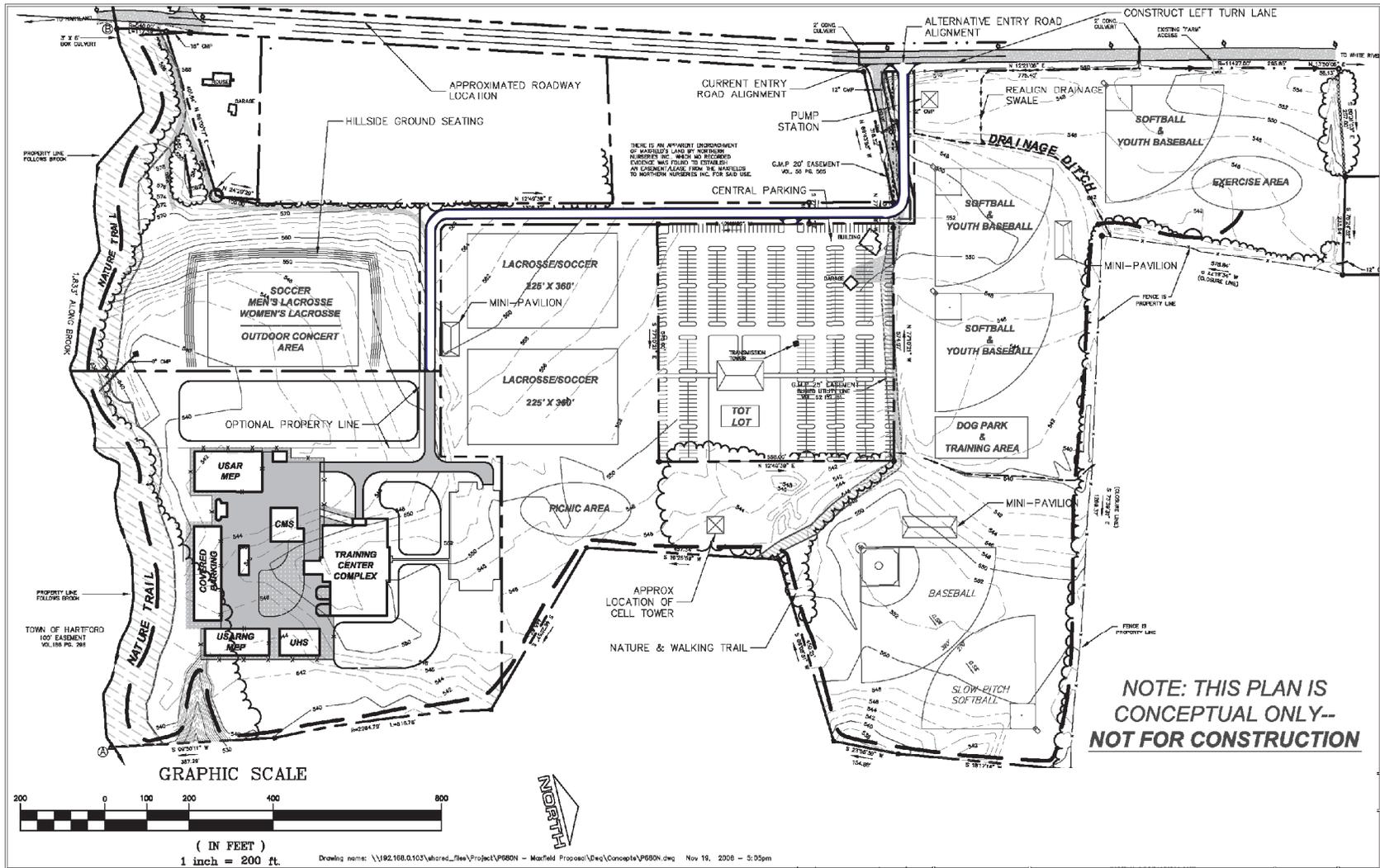
- Town of Hartford sewer expansion. VTrans is currently completing installation of an 8-inch gravity sewer line from the southbound I-91 rest area (directly east of and adjacent to the North Hartland Road Site) across the northern portion of the North Hartland Road Site, along Lesle Drive to connect to a lift station along U.S. Route 5 South.
- Development of Maxfield Recreation Field by the Town of Hartford. The Town of Hartford is planning to develop the remainder of the 65.5-acre North Hartland Road Site into a recreation/sports park known as the Maxfield Recreation Field. The project is currently in the conceptual planning stage. The complex would likely include a nature trail directly south of the AFRC, lacrosse/soccer fields, softball and baseball fields, dog park, picnic area, and outdoor concert area as

shown in Figure 4-3. Development of the field would proceed according to funding availability. Currently, the Town of Hartford anticipates the baseball diamonds to the north and a portion of the parking to be developed first, within the next couple of years. The other facilities, such as the lacrosse/soccer fields and outdoor concert areas would likely be developed within a 5- to 10-year timeframe, funding dependent. Depending on the final plans for the project, the complex could accommodate between 500 to 1,500 people during spring, summer, and fall weekends, when peak use would be expected.

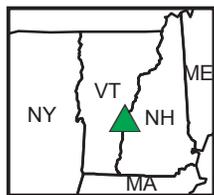
- Reclassification of groundwater under Hartford Landfill to Class IV and resulting buffer extending on to Maxfield property. The Town of Hartford submitted a petition and supporting hydrological report to VANR in January 2006 to initiate reclassification of contaminated groundwater below the former Hartford Landfill to Class IV. Class IV groundwater is groundwater that has been classified by the state as not suitable as a source of potable water but suitable for some agricultural, industrial, and commercial uses. Reclassification to Class IV would require groundwater management and monitoring, implementation of restrictions to maintain Class III or better groundwater quality at the boundary of the Class IV groundwater, and implementation of a buffer around the Class IV groundwater restricting placement of wells to ensure contaminated groundwater is not pulled across the landfill boundary.

4.14.2 CUMULATIVE EFFECTS SUMMARY

Environmental effects to all resources potentially affected by the Proposed Action when combined with the current and reasonably foreseeable projects in the area are discussed below for the Preferred Alternative and for Alternative 2.



Source of information: SVE Associates, 2008



Prepared For:
U.S. Army Corps of Engineers, Mobile District

Figure 4-3
Future Development of Maxfield Recreation Field



4.14.2.1 Land Use

Alternative 1 – Preferred Alternative. The Proposed Action would cause incremental impacts to land use when combined with the future project of the Maxfield Recreation Field, because these projects would occur on land geographically adjacent to each other. The land use would change from agricultural to commercial/light industrial and recreational with the new facilities.

There would be no conflicts with zoning or the Town of Hartford Master Plan. The Town's Board of Selectmen supports the use of the North Hartland Road Site for the Proposed Action and for the Maxfield Recreation Field (Rieseberg 2008). Figure 4-3 shows a preliminary layout of the Maxfield Recreation Field. Development of the Maxfield Recreation Field by the Town of Hartford adjacent to the proposed AFRC could create potential incompatible uses of adjacent properties, with specific concerns related to increased vehicle traffic (especially military convoys) in areas of pedestrian traffic over the same high-use time periods. These potential impacts are discussed in more detail in Sections 4.1.2.9 and 4.1.2.10.

No cumulative impacts to land use would occur from the sewer expansion or the reclassification of groundwater.

Alternative 2. The Proposed Action, if implemented at the Drew Road Site, would cause incremental impacts to land use when combined with the future project of the Maxfield Recreation Field, because these projects occur on land that is located within 0.5 mile of each other. Both projects would involve land use changes, one from agricultural to commercial/light industrial (Proposed Action) and one from agricultural to recreational (Maxfield Recreation Field). Implementation of Alternative 2 would result in land use change and development in two locations in close proximity of each other along U.S. Route 5, rather than being consolidated in one area. However, there would be no conflicts with zoning or the Town of Hartford Master Plan. These impacts would not be significant.

4.14.2.2 Aesthetics and Visual Resources

Alternative 1 – Preferred Alternative. The Proposed Action would cause incremental impacts to aesthetics and visual resources when combined with the future development of the Maxfield Recreation Field. Short-term impacts could result if the construction of the AFRC overlapped temporally with construction at the recreation field and the sewer expansion, because major construction projects would be taking place almost adjacent to each other. These impacts would be temporary and would not be significant.

The institutional characteristics of the AFRC could create an aesthetic impact to the overall atmosphere and nature of the recreation field. The 99th RSC would work with the Town of Hartford and take into account consideration of the viewshed of the future recreation field such that the AFRC and associated grounds would be oriented in an aesthetically-pleasing manner to users of the recreation field. For example, MEP and the water storage tanks would be located such that they are not in the direct line-of-site from the recreation complex. Fencing and no trespassing signs surrounding the AFRC as well

as large military vehicles moving through the recreation complex on the access road (specifically Access Road Options B, C, D, and E as shown on Figure 3-4) would result in incremental aesthetic impact of the overall area. Some users of the recreation field may be more sensitive to these aesthetic impacts of the AFRC than others especially on training weekends when the facilities are in use. These impacts would not be significant and could be reduced by utilizing Access Road Option A (Figure 3-4) for military access to the AFRC.

The impact of nighttime lighting at the AFRC could also result in a cumulative visual/aesthetic impact when combined with the lighting required for the Maxfield Recreation Field.

Alternative 2. The Proposed Action, if implemented at the Drew Road Site, would cause incremental impacts to aesthetics and visual resources when combined with the future development of the Maxfield Recreation Field. Short-term impacts could result if the construction of the AFRC overlapped temporally with construction at the recreation field and the sewer expansion, because major construction projects would be taking place almost adjacent to each other. These impacts would be temporary and would not be significant.

Long-term cumulative visual impact would result from the conversion of farmland and forest to other uses along U.S. Route 5. Two separate areas in close proximity would be developed. Additionally, the impact of nighttime lighting at the AFRC if constructed at the Drew Road Site could result in a cumulative visual/aesthetic impact when combined with the lighting required for the Maxfield Recreation Field 0.5 mile to the south. These impacts would be would not be significant.

4.14.2.3 Air Quality

Alternative 1 – Preferred Alternative. If the construction periods overlapped, the Proposed Action would cause short-term incremental impacts to air quality when combined with the construction aspects of the future projects listed in Section 4.14.1. Construction may cause increased short-term external combustion in air emissions from heavy equipment usage. These would be temporary impacts and would not be significant. Intermittent impacts associated with military vehicle exhaust could potentially cause short-term impacts to those using the Maxfield Recreation Field, especially when military vehicles travel in convoy. These impacts would not be significant and could be reduced by utilizing Access Road Option A (Figure 3-4) for military access to the AFRC.

Alternative 2. The Proposed Action, if implemented at the Drew Road Site, would cause incremental impacts to air quality when combined with the construction aspects of the future projects listed in Section 4.14.1. Construction may cause increased short-term external combustion in air emissions from heavy equipment usage. These would be temporary impacts and would not be significant. Impacts associated with military vehicle exhaust could potentially cause short-term impacts to those using the Maxfield

Recreation Field, especially when military vehicles travel in convoy. However, these impacts would be intermittent, short-term, and would not be significant.

4.14.2.4 Noise

Alternative 1 – Preferred Alternative. The Proposed Action would cause short-term incremental impacts to noise when combined with the construction of the future projects listed in Section 4.14.1 if the construction overlapped temporally. Overall, the Proposed Action would cause incremental impacts to noise generated from traffic and activities at the Maxfield Recreation Field. Noise in the area is expected to increase. Noise would be greatest on weekends when use of the Field overlaps with use of the AFRC. These impacts would be intermittent and of limited duration, and cumulative effects to noise would not be significant.

Alternative 2. Construction of the AFRC and OMS under the Proposed Action, if implemented at the Drew Road Site, would cause incremental noise impacts when combined with the future development of the Maxfield Recreation Field. Short-term impacts could result if the construction of the AFRC overlapped temporally with construction at the recreation field and the sewer expansion, because major construction projects would be taking place almost adjacent to each other. These impacts would be temporary and would not be significant.

4.14.2.5 Geology and Soils

Alternative 1 – Preferred Alternative. The Proposed Action would cause long-term incremental impacts to geology and soils when combined with the future projects listed in Section 4.14.1 through the addition of impervious surfaces to the general vicinity of the AFRC and conversion of additional prime farmland to other uses. Incremental impacts would result in the reduction of infiltration of precipitation into the soil; however, the cumulative effects to geology and soils would not be significant.

Alternative 2. There are no past, present, or reasonably foreseeable actions which would cause incremental impacts to geology and soils when combined with implementation of Alternative 2.

4.14.2.6 Water Resources

Alternative 1 – Preferred Alternative. The Proposed Action would cause long-term incremental impacts to water resources when combined with the future projects listed in Section 4.14.1 through the addition of impervious surfaces to the general vicinity of the AFRC and the increased use of groundwater. Incremental impacts would result in the reduction of groundwater recharge via soil infiltration and could impact groundwater supply considering potential installation of irrigation and/or groundwater supply wells for the Maxfield Recreation Field. Water use is expected to be the highest on weekends when groundwater supply wells would be in peak use at the adjacent rest areas, at the AFRC, and at the recreation field. Additionally, increased groundwater withdrawals associated with the proposed AFRC and development of the Maxfield Recreation Field and associated groundwater supply wells could influence local groundwater flow

direction and influence the flow of contaminated groundwater associated with the former Hartford Landfill.

Construction of parking lots by the town as well as associated stormwater control facilities near the Army's proposed groundwater supply well would have to take into account the easements required by the Army's source permit for the groundwater well, which would be protective of groundwater quality.

Reclassification of the groundwater under the former Hartford Landfill to Class IV would require a minimum buffer of 200 feet, extending from the southern boundary of the North Hartland Road Site. This buffer is intended to restrict installation of groundwater supply wells which would be likely to influence migration of contaminated groundwater into areas otherwise not impacted. The USAR anticipates a deep groundwater supply well will be necessary to meet the potable water demand of the proposed AFRC (Marshall 2009). A deep groundwater supply well would not likely influence the migration of contaminated groundwater below the former Hartland Landfill into areas otherwise not impacted.

Alternative 2. There are no past, present, or reasonably foreseeable actions which would cause incremental impacts to water resources when combined with implementation of Alternative 2.

4.14.2.7 Biological Resources

Alternative 1 – Preferred Alternative. The Proposed Action would cause long-term incremental impacts to biological resources when combined with the future projects listed in Section 4.14.1 by removing vegetation and causing the direct loss of plant and wildlife habitats in the general vicinity of the AFRC. However, these projects together would not substantially diminish the quality or quantity of habitat for plants or animals, nor would they substantially diminish regional or local populations of plant or animal species. Cumulative effects to biological resources would therefore not be significant.

Incremental temporary impacts to wetlands could be expected along the access road for the Maxfield Recreation Field. However, no net loss of wetlands is expected.

Alternative 2. The Proposed Action, if implemented at the Drew Road Site, would cause incremental impacts to biological resources when combined with the Maxfield Recreation Field, by removing vegetation and causing the direct loss of plant and wildlife habitats in the same general vicinity. However, these projects together would not substantially diminish the quality or quantity of habitat for plants or animals, nor would they substantially diminish regional or local populations of plant or animal species. Cumulative effects to biological resources would therefore not be significant.

4.14.2.8 Cultural Resources

Alternative 1 – Preferred Alternative. The Proposed Action may cause long-term incremental impacts to cultural resources when combined with the future projects listed in Section 4.14.1. Ground disturbance due to the Proposed Action and the future projects

would involve the potential for discovery of or impact to previously unrecorded cultural artifacts. Strict adherence to a standard operating procedure regarding the inadvertent discovery of archaeological resources would minimize the possibility of adverse impacts. Cumulative effects to cultural resources would therefore not be significant.

Alternative 2. The cumulative effects to cultural resources under Alternative 2 would be similar to those under Alternative 1 and would not be significant.

4.14.2.9 Socioeconomics

Alternative 1 – Preferred Alternative. The Proposed Action may cause short-term incremental impacts to socioeconomics when combined with the future projects listed in Section 4.14.1. Beneficial short-term impacts would result from construction activities from an increase in employment and economic development. Under the Proposed Action, there would be no substantial changes in personnel or to socioeconomic factors. Therefore, the Proposed Action when combined with projects listed in Section 4.14.1 would not result in long-term cumulative impacts to employment or economic development.

The Proposed Action may cause long-term incremental impacts to children when combined with the Maxfield Recreation Field. Potential impacts to protection of children are considered significant if the Proposed Action would cause disproportionate effects on children. Executive Order 13045, *Protection of Children from Environmental Health and Safety Risks*, requires Federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that might disproportionately affect children. If a portion of the recreational/sports complex is functional during construction of the AFRC, safety measures would be implemented to avoid potential short-term safety issues associated with construction at the site. Safety measures may include but not be limited to alternate access routes (existing access route or temporary access route), barriers, fencing, “no trespassing” signs, and securing construction vehicles and equipment when not in use.

In the future, as the Maxfield Recreation Field becomes built-out and functional, children will be in the area of the new AFRC. Five options for an access road to the AFRC are identified on Figure 3-4. All of the options, except Option A, pass directly through the various facilities where people, and specifically children, would be playing and walking. Heavy use for the recreation field would be expected on weekends, similar to that of the AFRC. People who are unable to walk to observe sports could be expected to park along the access road to view activities. Children are less likely to be seen walking between parked cars along the access road.

To avoid potential long-term safety issues associated with vehicular traffic from weekend training activities when children would be most likely to be in the vicinity of the AFRC, safety measures would need to be implemented. If the recreation field is fully developed as shown in Figure 4-3, use of Road Option A for the Army to access the AFRC, especially when activating military convoys, is the most protective of children and would require the fewest safety measures. If one of the other access road options (B, C, D, or E) is chosen for access to the AFRC, the Town would have to consider safety measures in

conjunction with the phased development of the recreation field. Safety measures could include signage, pedestrian crossing areas, and construction of pedestrian bridges in areas where pedestrian traffic is anticipated (e.g., between the lacrosse fields and outdoor concert center). Overall, with proper planning and safety measures, impacts to children would not be significant and could be reduced by utilizing Access Road Option A for military access to the AFRC (Figure 3-4).

Alternative 2. The Proposed Action, if implemented at the Drew Road Site, may cause short-term incremental impacts to socioeconomics when combined with the future projects listed in Section 4.14.1. Beneficial short-term impacts would result from construction activities from an increase in employment and economic development. Under the Proposed Action, there would be no substantial changes in personnel or to socioeconomic factors. Therefore, the Proposed Action when combined with projects listed in Section 4.14.1 would not result in long-term cumulative impacts to employment or economic development.

4.14.2.10 Transportation

Alternative 1 – Preferred Alternative. The Proposed Action may cause short-term incremental impacts to transportation when combined with the future projects listed in Section 4.14.1. Incremental impacts would result from construction activities from short-term increases in vehicular traffic if construction of the AFRC and Maxfield Recreation Field overlapped temporally. The increase in vehicular traffic would be caused by an increase in worker and construction vehicles accessing the property throughout the day. These impacts would subside once construction is complete.

The Proposed Action would cause long-term incremental impacts to transportation when combined with the future projects listed in Section 4.14.1, because the additional traffic resulting from the Proposed Action would occur on the weekends, as would peak traffic from the Maxfield Recreation Field. The maximum number of reservists expected on any one weekend per month is 104; during the spring, summer, and fall, the number of vehicles expected at the Maxfield Recreation Field during the weekends ranges from 250 to 750 (Nunez 2008). Increased traffic congestion at the access point to the area would be expected.

In addition, approximately 140 military vehicles are expected to be kept on site at the proposed AFRC. If all military vehicles anticipated to be kept at the proposed AFRC were put on the road during any one day, the resulting increase would add substantially to the traffic congestion.

Overall, cumulative impacts to transportation would be an inconvenience for short periods of time but would not be considered significant.

Alternative 2. The Proposed Action may cause short-term incremental impacts to transportation when combined with the future projects listed in Section 4.14.1. Since the Drew Road Site is only 0.5 mile to the north of the proposed Maxfield Recreation Field, incremental impacts could result from construction activities from short-term increases in

vehicular traffic if construction of the AFRC and Maxfield Recreation Field overlapped temporally. The increase in vehicular traffic would be caused by an increase in worker and construction vehicles accessing the property throughout the day. These impacts would subside once construction is complete.

Similarly, the Proposed Action would cause long-term incremental impacts to transportation when combined with the future projects listed in Section 4.14.1, because the additional traffic resulting from the Proposed Action would occur on the weekends, as would peak traffic from the Maxfield Recreation Field. The maximum number of reservists expected on any one weekend per month is 104; during the spring, summer, and fall, the number of vehicles expected at the Maxfield Recreation Field during the weekends ranges from 250 to 750 (Nunez 2008). Increased traffic congestion along U.S. Route 5 to the access points to both the AFRC and the Maxfield Recreation Field would be expected.

In addition, approximately 140 military vehicles are expected to be kept on site at the proposed AFRC. If all military vehicles anticipated to be kept at the proposed AFRC were put on the road during any one day, the resulting increase would add substantially to the traffic congestion.

Overall, cumulative impacts to transportation would be an inconvenience for short periods of time but would not be considered significant.

4.14.2.11 Utilities

Alternative 1 – Preferred Alternative. The Proposed Action may cause short-term incremental impacts to utilities when combined with the future projects listed in Section 4.14.1. Incremental impacts would result from increased stormwater flow from parking lots at the Maxfield Recreation Center; however the Town of Hartford would have to construct stormwater control facilities. Incremental impacts would result from construction solid waste. Solid waste produced by these projects would be transported to a municipal landfill and would not be expected to cause adverse impacts to the landfill. Additional flow to the sanitary sewer resulting from implementation of the Proposed Action and the Maxfield Recreation Field could exceed the capacity of the existing sanitary line and lift station. Upgrading the newly installed sanitary line diameter and lift station pump capacity downstream of the Proposed AFRC and Maxfield Recreation Field connection would mitigate short-term impacts. Long-term increase in utility usage would not be significant. Overall, cumulative impacts to utilities would not be significant.

Alternative 2. The Proposed Action may cause short-term incremental impacts to utilities when combined with the future projects listed in Section 4.14.1. Incremental impacts would result from construction solid waste. Solid waste produced by these projects would be transported to a municipal landfill and would not be expected to cause adverse impacts to the landfill. Additional flow to the sanitary sewer resulting from implementation of the Proposed Action and the Maxfield Recreation Field could exceed the capacity of the existing sanitary line and lift station. Upgrading the newly installed sanitary line diameter and lift station pump capacity downstream of the Proposed AFRC and Maxfield Recreation Field connection would minimize short-term impacts. Long-

term increase in utility usage would not be significant. Overall, cumulative impacts to utilities would not be significant.

4.14.2.12 Hazardous and Toxic Substances

Alternative 1 – Preferred Alternative. The Proposed Action may cause short-term incremental impacts from the use of hazardous and toxic substances during construction when combined with the future projects listed in Section 4.14.1. There would be increased potential for spills and leaks from construction equipment. However, potential adverse impacts associated with construction would be mitigated by contractor spill management plans and response equipment.

The Proposed Action would not cause long-term incremental impacts to management of hazardous and toxic substances when combined with the operational aspects of the other projects listed in Section 4.14.1. Overall cumulative impacts from hazardous and toxic substances would not be significant.

Alternative 2. There are no past, present, or reasonably foreseeable actions which would cause incremental impacts to hazardous and toxic substances when combined with implementation of Alternative 2.

4.14.2.13 Summary of Cumulative Impacts

Alternative 1 – Preferred Alternative. Overall, cumulative impacts from the Preferred Alternative when combined with the Maxfield Recreation Field result in the following concerns:

- Possible land use incompatibility
- Protection of children
- Traffic congestion

With cooperative planning between the 99th RSC and the Town of Hartford and implementation of safety measures by the Town of Hartford as the development of the Maxfield Recreation Field progresses, cumulative impacts would not be significant. Cumulative impacts could be reduced by utilizing Access Road Option A.

Alternative 2. Overall, cumulative impacts from Alternative 2 when combined with the Maxfield Recreation Field result in the following concerns:

- Visual/aesthetic and noise impacts from construction
- Quality of life impacts
- Traffic congestion

Additionally, the Town of Hartford already intends to develop the entire 65-acre parcel at the Preferred Alternative Site; thus, construction of the AFRC at the Drew Road Site (Alternative 2) adds incremental impacts by using additional land that is not otherwise planned to be developed.

4.15 Mitigation Summary

Mitigation measures are actions required for the specific purpose of reducing the significant environmental impacts of implementing a proposed or alternative action. An EA may specify mitigation measures that, if implemented, would prevent significant impacts that would otherwise require an environmental impact statement. No mitigation measures are required for the Proposed Action discussed in this EA because resulting impacts would not meet the significance criteria described for each resource in Section 4.0; that is, the impacts would not be significant.

However, as part of the Proposed Action, the Army has identified a number of actions that would be implemented in association with the proposed construction activities at the Preferred Alternative Site. The actions that the Army would take to minimize unavoidable impacts are provided in Table 4-3. Additionally, the Army would acquire all applicable permits, including but not limited to those discussed in this EA, and work with governmental agencies to comply with the respective regulations and avoid adverse impacts.

Table 4-3. Site-Specific Construction Techniques to Minimize Unavoidable Impacts at the Preferred Alternative Site.

| Resource Area | Action to be Taken |
|-----------------------------------|---|
| Aesthetics and Visual | The Army would coordinate with the adjacent resident to determine the necessary type of screening, such as landscaping and/or fencing, to minimize adverse visual impacts from use of the temporary access road. |
| Air Quality | A radon mitigation system would be installed during construction of the proposed AFRC. Following construction completion, the radon concentration would be measured, and if above acceptable EPA levels, a fan system would be installed to vent radon from the facility. Additionally, radon concentrations would be monitored as an ongoing operational task. |
| Noise | The Army would coordinate with the adjacent resident to determine the necessary type of screening, such as landscaping and/or fencing, to minimize adverse noise impacts from use of the temporary access road. |
| Biological Resources (Vegetation) | The Army would take measures to restore the temporary access road to its original condition, especially to minimize erosion and enhance revegetation in the affected area. |
| Biological Resources (Wetlands) | Pre-Construction Planning |
| | If the potable water supply well is installed near the wetlands, care would be taken to ensure a 50-foot buffer remained, protecting the wetlands from construction and operation activities associated with the groundwater supply well. The drill rig should not enter the delineated wetlands. |
| | A SWPPP would be prepared for compliance with EPA's National Stormwater Program General Permit requirements and it would be available in the field at the construction site. The SWPPP would contain Spill Prevention and Response Procedures that meet the requirements of state and Federal agencies. |

| Resource Area | Action to be Taken |
|--|---|
| Biological Resources (Wetlands) continued | Site-specific construction plans for the wetlands construction would be filed with the Contracting Officer's Technical Representative for review and written approval by beginning of construction in the wetland and would include extra precautions for work that would occur within 50 feet of the wetland. |
| | One environmental inspector or individual approved by the Contracting Officer's Technical Representative having knowledge of the wetland and waterbody conditions of the project area and these wetland crossing procedures would be identified for the construction activities. The individual should have stop work authority. |
| | All equipment would be parked overnight and/or fueled at least 100 feet from a waterbody or in an upland area at least 100 feet from a wetland boundary. These activities can occur closer only if the Environmental Inspector or designated environmental compliance personnel finds, in advance, no reasonable alternative and the project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill. |
| | Hazardous materials, including chemicals, fuels, and lubricating oils would not be stored within 100 feet of a wetland, waterbody, or designated municipal watershed area, unless the location is designated for such use by an appropriate governmental authority. This applies to storage of these materials and does not apply to normal operation or use of equipment in these areas. |
| | Wetland boundaries and buffers would be clearly marked in the field with highly visible flagging until construction-related ground disturbing activities are complete. |
| | All extra work areas (such as staging areas and additional spoil storage areas) would be located at least 50 feet away from wetland boundaries, except where the adjacent upland consists of actively cultivated or rotated cropland or other disturbed land. |
| | The construction right-of-way may be used for access when the wetland soil is firm enough to avoid rutting or the construction right-of-way has been appropriately stabilized to avoid rutting (e.g., with timber riprap, prefabricated equipment mats, or terra mats). In wetlands that cannot be appropriately stabilized, all construction equipment other than that needed to install the wetland crossing shall use access roads located in upland areas. Where access roads in upland areas do not provide reasonable access, limit all other construction equipment to one pass through the wetland using the construction right-of-way. |
| | Wetlands Construction |
| | Vegetation would be cut just aboveground level, leaving existing root systems in place, and remove it from the wetland for disposal. |
| | The top 1 foot of topsoil would be segregated from the area disturbed by trenching, except in areas where standing water is present or soils are saturated or frozen. Immediately after backfilling is complete, restore the segregated topsoil to its original location. |
| | The length of time that topsoil is segregated and the trench is open would be minimized. |

| Resource Area | Action to be Taken |
|--|--|
| Biological Resources (Wetlands) continued | If assembly of utility lines are required, assembly would occur in an upland area unless the wetland is dry enough to adequately support utility lines being installed. |
| | Construction equipment operating in wetland areas would be limited to that needed to clear the construction right-of-way, dig the trench, fabricate and install the pipeline, backfill the trench, and restore the construction right-of- way. |
| | Rock, soil imported from outside the wetland, tree stumps, or brush riprap would not be used to support equipment on the construction right-of-way. |
| | If standing water or saturated soils are present, or if construction equipment causes ruts or mixing of the topsoil and subsoil in wetlands, low-ground-weight construction equipment would be used, or normal equipment would be operated on timber riprap, prefabricated equipment mats, or terra mats. |
| | Trees outside of the approved construction work area would not be cut to obtain timber for riprap or equipment mats. |
| | The Army would attempt to use no more than two layers of timber riprap to support equipment on the construction right-of-way. |
| | All project-related material used to support equipment on the construction right-of-way would be removed upon completion of construction. |
| | Spoil Pile Placement and Control |
| | All spoil would be placed in the construction right-of-way at least 10 feet from the wetland edge or in additional extra work areas as prior identified. |
| | Sediment and Erosion Control |
| | Sediment barriers would be installed immediately after initial disturbance of the wetland or adjacent upland. Sediment barriers would be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench). |
| | Sediment barriers would be installed along the edge of the construction right-of-way as necessary to contain spoil and sediment within the construction right-of-way through wetlands. |
| | Sediment barriers would be installed across the entire construction right-of-way at all wetland crossings where necessary to prevent sediment flow into the wetland. In the travel lane, these may consist of removable sediment barriers (haybales) or driveable berms. Do not break up haybales and scatter within th wetland. Removable sediment barriers can be removed during the construction day, but must be re-installed after construction has stopped for the day and/or when heavy precipitation is imminent |
| | Sediment barriers would be removed during right-of-way cleanup. |
| | Trench Dewatering, if necessary |
| | The Army would dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in heavily silt laden water flowing into any wetland. Dewatering structures would be removed as soon as possible after the completion of dewatering activities. |

| Resource Area | Action to be Taken |
|--|--|
| Biological Resources (Wetlands) continued | For each wetland crossed, a trench breaker would be installed at the base of slopes near the boundary between the wetland and adjacent upland areas (if a slope exists). |
| | Restoration |
| | The Army would not use fertilizer, lime, or mulch unless required in writing by the appropriate land management or state agency. |
| | The Army would consult with the VTANR or appropriate land management or state agency to develop a project-specific wetland restoration and/or revegetation plan. The restoration plan should include measures for re-establishing herbaceous and/or woody species, controlling the invasion and spread of undesirable exotic species (e.g., purple loosestrife and phragmites), and monitoring the success of the revegetation and weed control efforts. |
| | The Army would ensure that all disturbed areas successfully revegetate with wetland herbaceous and/or woody plant species. |
| | Herbicides or pesticides would not be used in or within 100 feet of a wetland, except as allowed by the appropriate land management agency or state agency. |
| | The Army would notify appropriate state authorities at least 48 hours before beginning trenching or blasting within the waterbody, or as specified in state permits. |
| Transportation | If construction vehicles use the temporary access road, the Army would require appropriate signage and traffic controls for safety. |

5.0 FINDINGS AND CONCLUSIONS

Direct, indirect, and cumulative impacts of Alternative 1 (North Hartland Road Site), Alternative 2 (Drew Road Site), and the No Action Alternative have been considered. Alternative 1 is the 99th RSC's Preferred Alternative because it best allows the Army to efficiently provide safe training facilities for USAR and VTARNG units that would use the facilities. No significant adverse impacts were identified. Cumulative impacts analysis resulted in concerns regarding possible land use incompatibility, protection of children, and traffic congestion from the Proposed Action when combined with the Maxfield Recreation Field. With cooperative planning between the 99th RSC and the Town of Hartford and implementation of safety measures by the Town of Hartford as the development of the Maxfield Recreation Field progresses, cumulative impacts would not be significant. Cumulative impacts could be reduced by utilizing Access Road Option A. Therefore, the issuance of a FNSI is warranted, and preparation of an environmental impact statement is not required. Implementation of the No Action Alternative is not feasible because the BRAC actions are required by law to be implemented if the Army is able to acquire land suitable for the construction of the facilities.

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8.0 REFERENCES

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*Environmental Assessment for Construction of an
Armed Forces Reserve Center and
Implementation of BRAC 05 Recommendations at
White River Junction, Vermont*

APPENDIX A

CONSULTATION AND COORDINATION

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APPENDIX A. CONSULTATION AND COORDINATION

This appendix contains the following consultation and coordination documents:

- Letter sent to the Vermont Division for Historic Preservation, State Historic Preservation Office dated December 19, 2008
- Letter sent to the Stockbridge Munsee Community of Wisconsin dated December 19, 2008
- Letter sent to the U.S. Department of Agriculture, Natural Resources Conservation Service dated December 19, 2008
- Letter sent to the U.S. Fish and Wildlife Service dated December 19, 2008
- Letter sent to the Vermont Department of Environmental Conservation dated January 14, 2009
- Letter sent to the Vermont Fish and Wildlife Department dated December 19, 2008
- Emails received from the U.S. Department of Agriculture, Natural Resources Conservation Service dated January 9 and January 5, 2009 and the completed Farmland Conversion Impact Rating Form
- Letter received from the U.S. Fish and Wildlife Service dated January 2, 2009
- Letter received from the Stockbridge-Munsee Tribal Historic Preservation Office dated January 7, 2009
- Letter received from the Vermont Agency of Natural Resources dated February 13, 2009
- Email received from the Vermont Fish and Wildlife Department dated February 19, 2009
- Letters received from the Vermont Division for Historic Preservation dated February 23, 2009 and April 21, 2009

The letters sent to the Vermont Division for Historic Preservation and to the Stockbridge Munsee Community of Wisconsin contained the same attachments. These attachments are shown in this appendix following the letter sent to the Vermont Division for Historic Preservation. The letters sent to the U.S. Fish and Wildlife Service, Vermont Department of Environmental Conservation, and Vermont Fish and Wildlife Department all contained the same attachments. These attachments are shown in this appendix following the letter sent to the U.S. Fish and Wildlife Service.

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REPLY TO
ATTENTION OF

December 19, 2008

Directorate of Public Works

Mr. Devin Colman
Director of Operations and Project Review
Vermont Division for Historic Preservation
National Life Building
2nd Floor
Montpelier, Vermont 05620

Dear Mr. Colman,

Changes have occurred to the Army's Proposed Action in White River Junction, Vermont; therefore, this letter supersedes our previous letter dated October 24, 2008. We apologize for any inconvenience this may cause.

The Department of the Army is preparing an environmental assessment (EA) for the proposed construction of an Armed Forces Reserve Center (AFRC) in White River Junction, Windsor County, Vermont as part of the restructuring of military bases recommended by the Defense Base Closure and Realignment Act (BRAC). To enable implementation of these recommendations, the U.S. Army, in partnership with the 99th U.S. Army Reserve Regional Support Command, proposes to provide the necessary facilities at a site in White River Junction, Vermont to support the changes in force structure. The EA is being prepared in strict accordance with the National Environmental Policy Act of 1969, as amended (42 USC 4321 et seq.); National Historic Preservation Act of 1966, as amended (PL 89-6650), its implementing authority, Section 106 of 36 CFR 800; Native American Graves Protection and Repatriation Act (43 CFR 10.13); American Indian Religious Freedom Act of 1978, portion as amended (Public Law 95-341, 42 U.S.C. 1996 and 1996a) in order to "protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise traditional religions . . . including but not limited to access to sites."; Council on Environmental Quality Regulations (40 CFR 1500-1508); and Environmental Analysis of Army Actions (32 CFR Part 651). The purpose of this letter is to request your early input on the proposed federal action.

The Proposed Action includes the construction and operation of a new AFRC building with an Organizational Maintenance Shop and an unheated storage building, for which the Army would acquire new land for construction of these facilities. The facilities would be permanent construction with reinforced concrete structures, with about 8,400 square yards of pavement needed for privately-owned vehicles and military equipment parking. Future site improvements are expected to occupy about 14 acres. Two alternative sites for the Proposed Action are being evaluated. Enclosure 1 shows the general location of this undertaking, and Enclosure 2 shows the location of the proposed sites.

Under Alternative 1, the Army would acquire approximately 17 acres of land from the Town of Hartford on which to construct and operate the AFRC. The site is part of a larger 65.5 acre parcel owned by the Town of Hartford, Vermont. The remainder of the acreage would be retained by the Town of Hartford for a planned recreation area/sports park. The site has been leased for agricultural purposes, and the southern portion of the site was previously utilized as a borrow pit for earthen work to support activities in the 1960s during the construction of interstate highways. The site is located between Route 5 and I-91, south of the City of White River Junction. Access to the site is from Route 5 South (North Hartland Road), approximately 2 miles south of the intersection of I-89 and I-91. Enclosure 3 is an aerial photo of the Alternative 1 site.

Under Alternative 2, the Army would acquire about 15 acres of available land located in White River Junction, Vermont. The site is located between Route 5 and I-91, just north of Drew Road and the Alternative 1 site. The site has 1,200 feet of frontage on Route 5 and is approximately 50 percent open field and 50 percent wooded. Greater site preparation costs and proximity to rural residential areas make this site less desirable than Alternative 1 described above. Enclosure 4 is an aerial photo of the Alternative 2 site.

The Villages of White River Junction and Hartford themselves are listed on the National Register of Historic Places; however, neither site being considered is located within or adjacent to either Historical District. In addition, a literature review of the Master Site Files shows no known historical properties within the proposed site boundaries. A Phase I archaeological survey will be conducted to confirm the absence of any undiscovered cultural resources before the property is acquired by the Army. You will be provided with review copies of the Archaeological Survey and the EA.

As this is an accelerated project, your prompt response and comments will be appreciated. I would also like to thank you in advance for your cooperation in this matter. If you have any questions concerning this request, please do not hesitate to contact Mr. Craig Kelley at the following:

Craig Kelley
BRAC Environment Coordinator
99th Regional Support Command (East)
11 Saratoga Boulevard
Devens, MA 01432
(978)796-2512
Craig.A.Kelley@NAE02.USACE.Army.mil

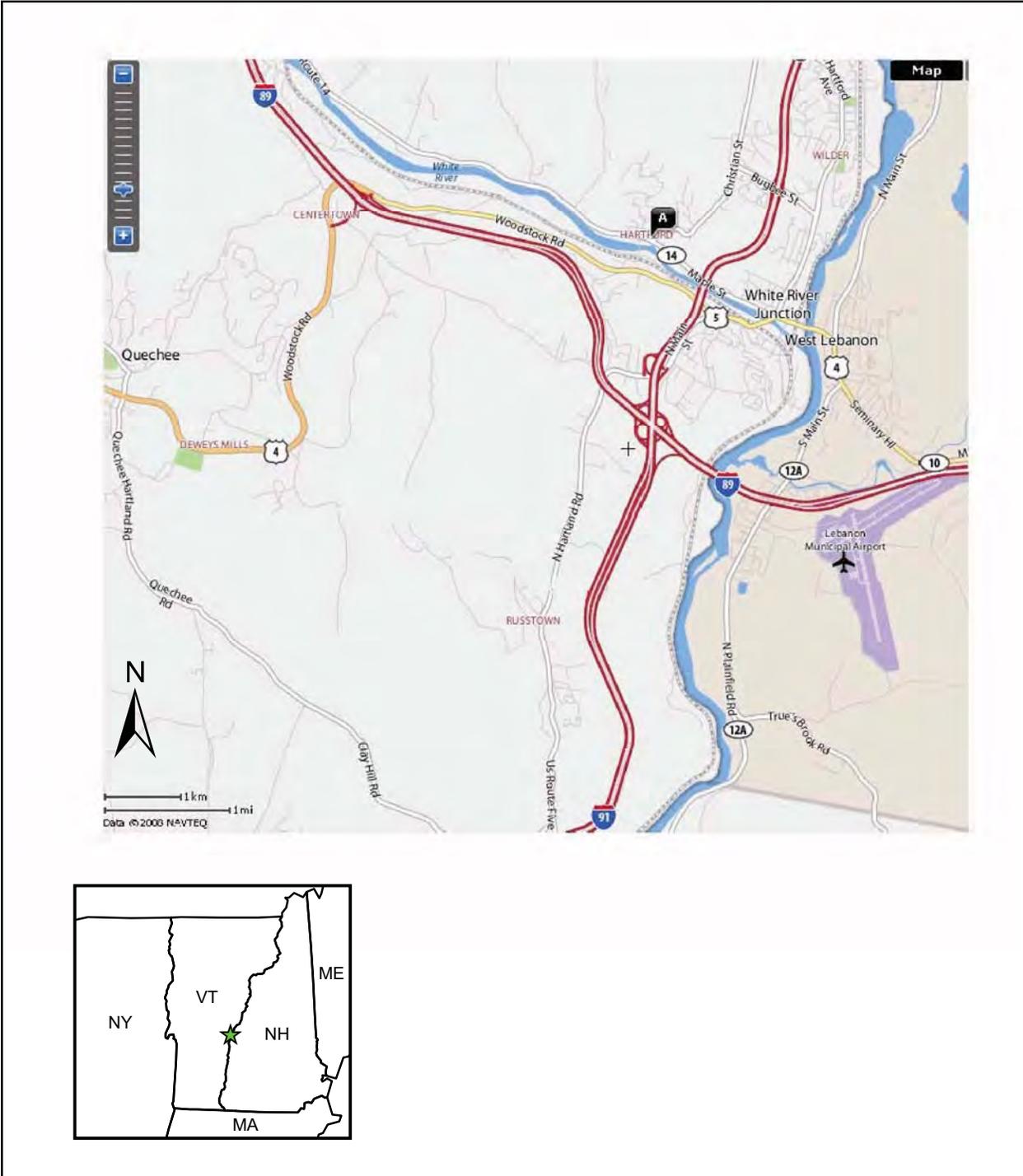
Sincerely,



JOSEPH H. LEDLOW
Colonel, US Army Reserve
Regional Engineer

Encls:

- 1 – White River Junction, Vermont Location Map
- 2 – Location of Proposed Sites
- 3 – Aerial Photograph of the North Hartland Road Site - Alternative 1
- 4 – Aerial Photograph of the Drew Road Site – Alternative 2



Prepared For:

U.S Army Corps of Engineers, Mobile District

Attachment 1

White River Junction, Vermont Location Map

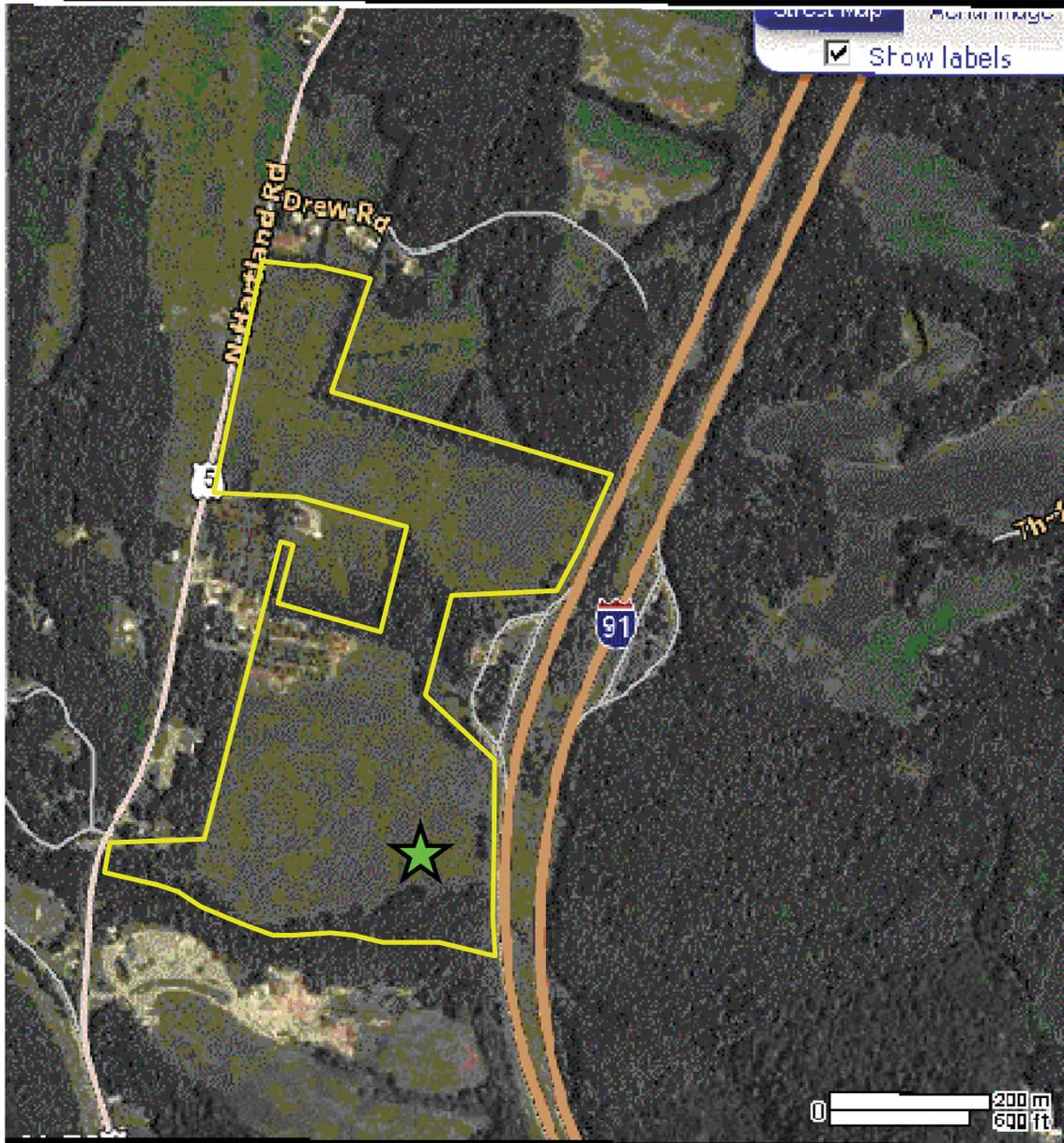




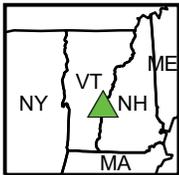
Prepared For:
 U.S Army Corps of Engineers, Mobile District

Attachment 2
 White River Junction Sites





Alternative 1 Aerial View



 Area Considered for Proposed AFRC/OMS

 Property Boundary

AFRC Armed Forces Reserve Center
 OMS Organizational Maintenance Shop



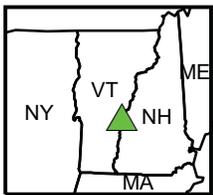
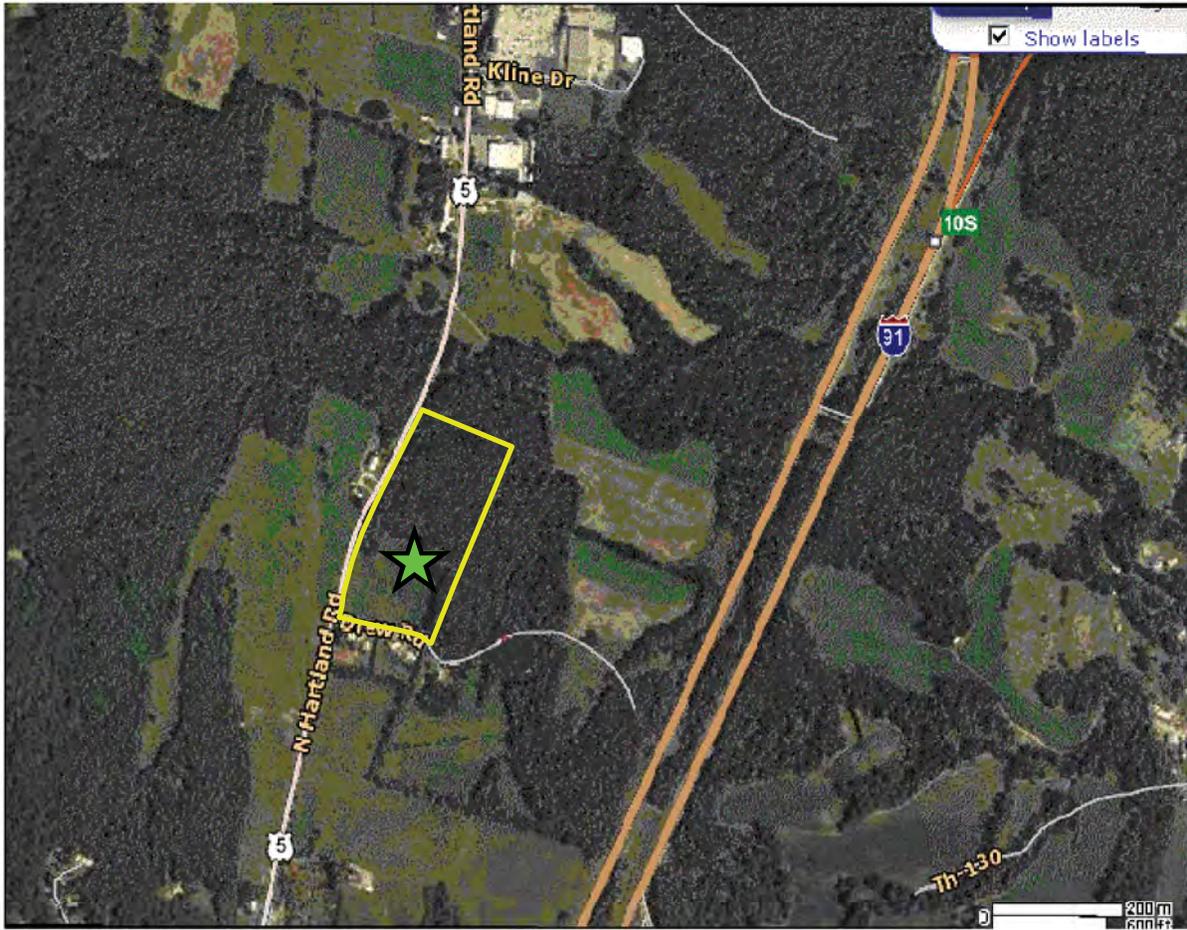
Prepared For:

U.S Army Corps of Engineers, Mobile District

Attachment 3

Aerial Photograph of the North Hartland Road Site --
 Alternative 1





 Area Considered for Proposed AFRC/OMS

 Property Boundary

AFRC Armed Forces Reserve Center
 OMS Organizational Maintenance Shop



Prepared For:

U.S Army Corps of Engineers, Mobile District

Attachment 4

Aerial Photograph of the Drew Road Site -- Alternative 2





DEPARTMENT OF THE ARMY
HEADQUARTERS, 99TH REGIONAL SUPPORT COMMAND
5522 NASHVILLE STREET
FORT DIX, NEW JERSEY 08640-5000



REPLY TO
ATTENTION OF

December 19, 2008

Directorate of Public Works

Robert Chicks, President
Stockbridge Munsee Community of Wisconsin
N8476 Mo He Co Nuck Road
Bowler, WI 54416

Dear Mr. Chicks:

Changes have occurred to the Army's Proposed Action in White River Junction, Vermont; therefore, this letter supersedes our previous letter dated October 24, 2008. We apologize for any inconvenience this may cause.

The Department of the Army is preparing an environmental assessment (EA) for the proposed construction of an Armed Forces Reserve Center (AFRC) in White River Junction, Windsor County, Vermont as part of the restructuring of military bases recommended by the Defense Base Closure and Realignment Act (BRAC). To enable implementation of these recommendations, the U.S. Army, in partnership with the 99th U.S. Army Reserve Regional Support Command, proposes to provide the necessary facilities at a site in White River Junction, Vermont to support the changes in force structure. The EA is being prepared in strict accordance with the National Environmental Policy Act of 1969, as amended (42 USC 4321 et seq.); National Historic Preservation Act of 1966, as amended (PL 89-6650), its implementing authority, Section 106 of 36 CFR 800; Native American Graves Protection and Repatriation Act (43 CFR 13.10); American Indian Religious Freedom Act of 1978, portion as amended (Public Law 95-341, 42 U.S.C. 1996 and 1996a) in order to "protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise traditional religions . . . including but not limited to access to sites."; Council on Environmental Quality Regulations (40 CFR 1500-1508); and Environmental Analysis of Army Actions (32 CFR Part 651). The purpose of this letter is to request your early input on the proposed federal action.

The Proposed Action includes the construction and operation of a new AFRC building, with an Organizational Maintenance Shop and an unheated storage building for which the Army would acquire new land for construction of these facilities. The facilities would be permanent construction with reinforced concrete structures, with about 8,400 square yards of pavement needed for privately-owned vehicles and military equipment parking. Future site improvements are expected to occupy approximately 14 acres. Two alternative sites for the Proposed Action are being evaluated. Enclosure 1 shows the general location of this undertaking, and Enclosure 2 shows the location of the proposed sites.

Under Alternative 1, the Army would acquire approximately 17 acres of land from the Town of Hartford on which to construct and operate the AFRC. The site is part of a larger 65.5 acre parcel owned by the Town of Hartford, Vermont. The remainder of the acreage would be retained by the Town of Hartford for a planned recreation area/sports park. The site has been leased for agricultural purposes, and the southern portion of the site was previously utilized as a borrow pit for earthen work to support activities in the 1960s during the construction of interstate highways. The site is located between Route 5 and I-91, south of the City of White River Junction. Access to the site is from Route 5 South (North Hartland Road), approximately 2 miles south of the intersection of I-89 and I-91. Enclosure 3 is an aerial photo of the Alternative 1 site.

Under Alternative 2, the Army would acquire about 15 acres of available land located in White River Junction, Vermont. The site is located between Route 5 and I-91, just north of Drew Road and the Alternative 1 site. The site has 1,200 feet of frontage on Route 5 and is approximately 50 percent open field and 50 percent wooded. Greater site preparation costs and proximity to rural residential areas make this site less desirable than Alternative 1 described above. Enclosure 4 is an aerial photo of the Alternative 2 site.

The Villages of White River Junction and Hartford themselves are listed on the National Register of Historic Places; however, neither site being considered is located within or adjacent to either Historical District. In addition, a literature review of the Master Site Files shows no known cultural or tribal resources within the proposed site boundaries. However, a Phase I archaeological survey will be conducted to confirm the absence of any undiscovered cultural resources before the property is acquired by the Army. You will be provided with a review copy of the EA, and the opportunity to comment.

As this is an accelerated project, your prompt response and comments will be appreciated. I would also like to thank you in advance for your cooperation in this matter. If you have any questions concerning this request, please do not hesitate to contact Mr. Craig Kelley at the following:

Craig Kelley
BRAC Environment Coordinator
99th Regional Support Command (East)
11 Saratoga Boulevard
Devens, MA 01432
(978) 796-2512
Craig.A.Kelley@NAE02.USACE.Army.mil

Sincerely,



JOSEPH H. LEDLOW
Colonel, US Army Reserve
Regional Engineer

Encls:

- 1 – White River Junction, Vermont Location Map
- 2 – Location of Proposed Sites
- 3 – Aerial Photograph of the North Hartland Road Site - Alternative 1
- 4 – Aerial Photograph of the Drew Road Site – Alternative 2



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
HEADQUARTERS, 99TH REGIONAL SUPPORT COMMAND
5522 NASHVILLE STREET
FORT DIX, NEW JERSEY 08640-5000



December 19, 2008

Directorate of Public Works

Ms. Judy Doerner, State Conservationist
USDA-NRCS
356 Mountain View Drive
Suite 105
Colchester, Vermont 05446

Dear Ms. Doerner:

The U.S. Army Reserve (USAR), 99th Regional Support Command (RSC) is proposing to construct a new Armed Forces Reserve Center (AFRC) in the vicinity of White River Junction, Vermont as part of the restructuring of military bases as required by the Defense Base Closure and Realignment Act that became law in November 2005. The Army will provide the necessary facilities to implement the recommendations, and is preparing an environmental assessment (EA) to analyze and document the environmental effects. The purpose of this letter and attached evaluation form is to request input and/or concurrence from the Natural Resources Conservation Service on the proposed federal action. A location map is enclosed that indicates the area of the proposed project.

The Army has selected two sites to analyze in the EA. These two alternatives that are being evaluated for construction of the AFRC are comprised of prime farmland, prime farmland if drained, or farmland of state importance. The total construction improvements are expected to occupy about 14 acres. Enclosure 1 shows the locations of the two alternatives.

The following realignment actions are to occur in the vicinity of White River Junction, Vermont:

"Close Chester Memorial Army Reserve Center and Organizational Maintenance Shop, Chester, VT and Berlin Army Reserve Center, Berlin, VT and relocate all units to a new Armed Forces Reserve Center with an Organizational Maintenance Facility in the vicinity of White River Junction, VT if the Army is able to acquire land suitable for the construction of the facilities. The new AFRC and OMS shall have the capability to accommodate units from the following facilities: Vermont Army National Guard Armories in Ludlow, North Springfield and Windsor, VT, if the state decides to relocate those National Guard units."

The Proposed Action includes the construction of a new 300-member AFRC, Organizational Maintenance Shop (OMS) and unheated storage building. The maximum expected use of the new facility would be about 104 members per weekend, and there would be parking for about 94 privately-owned vehicles (taking into account those who would carpool or use public transportation). The facility would employ 10 permanent full-time personnel from the 99th RSC and Vermont Army National Guard.

Alternative 1 – North Hartland Road Alternative

The North Hartland Road Site is located between Route 5 and I-91 and consists of a portion of about 65.5 acre parcel owned by the Town of Hartford, Vermont. The Army plans to acquire about 17 acres of this site; the rest of the acreage would be retained by the Town of Hartford.

The site is currently zoned as industrial/commercial with plans to become RL-10, rural lands with a minimum lot size of 10 acres. The acreage the Army is interested in is currently being leased by a nursery; elsewhere, the site is plowed and presently leased for agricultural use. The northernmost portion of the property is intended for construction of a recreational area/sports park by the Town of Hartford. A cellular telephone tower and a radio broadcast tower are located north of the construction site being considered. The south side of the parcel abuts a ravine with a stream. Further south of the stream, there is a sanitary municipal solid waste landfill that was closed in 1992 and an operating transfer station and recycle center. Enclosure 2 shows an aerial photograph of the North Hartland Road Site – Alternative 1.

Summary of Alternative 1 Potential Effects on Prime Farmland.

At the North Hartland Road Site, our assessment indicates that the planned facilities would result in the direct long-term loss of 0.1 acre of prime farmland, about 5 acres of farmland of statewide importance, and about 7 acres of prime farmland if drained. Enclosure 3 shows the results of the custom soil report, from the NRCS Web Soil Survey database, for the North Hartland Road Site.

Alternative 2 – Drew Road Alternative

Alternative 2 is to construct the AFRC and associated facilities at the location shown in Enclosure 1. This site, called the Drew Road Site, currently zoned as industrial/commercial with plans to become RL-10, rural lands with a minimum lot size of 10 acres. The site has 1,200 feet of frontage on Route 5 and consists of about 15 acres. The site is an estimated 50 percent open field and 50 percent wooded. The wooded portion of the site is undulating and rocky, with outcrops of bedrock in places. Enclosure 4 shows an aerial photograph of the Alternative 2 site.

Summary of Alternative 2 Potential Effects on Prime Farmland.

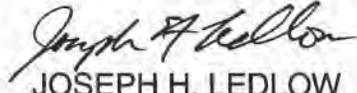
Our assessment indicates the planned facilities would result in the direct long-term loss of about 2.4 acres of prime farmland and about 2.4 acres of farmland of statewide importance. Enclosure 5 shows the results of the custom soil report for Alternative 2.

Although the Farmland Protection Policy Act (7 CFR Parts 657 and 658) exempts urban lands and lands that are used for national defense purposes [7 CFR 658.3(b)] from the provisions of the Farmland Protection Policy Act, we are including a Farmland Conversion Impact Rating Form (Enclosure 6), with Parts I, III, and VI completed, for your consideration.

We feel the conversion of about 12 acres of prime farmland and farmland of statewide importance at the Alternative 1 site or about 5 acres of prime farmland and farmland of statewide importance at the Alternative 2 site is consistent with the Farmland Protection Policy Act and look forward to your assessment. If you have questions or require further information, please contact Mr. Craig Kelley at the following:

Craig Kelley
BRAC Environment Coordinator
99th Regional Support Command (East)
11 Saratoga Boulevard
Devens, MA 01432
(978) 796-2512
Craig.A.Kelley@NAE02.USACE.Army.mil

Sincerely,



JOSEPH H. LEDLOW
Colonel, US Army Reserve
Regional Engineer

Encls:

- 1 – Site Location Map
- 2 – Aerial Photograph of North Hartland Road Site
- 3 – Custom Soil Report for North Hartland Road Site
- 4 – Aerial Photograph of Drew Road Site
- 5 – Custom Soil Report for Drew Road Site
- 6 – Farmland Conversion Impact Rating Form

CF

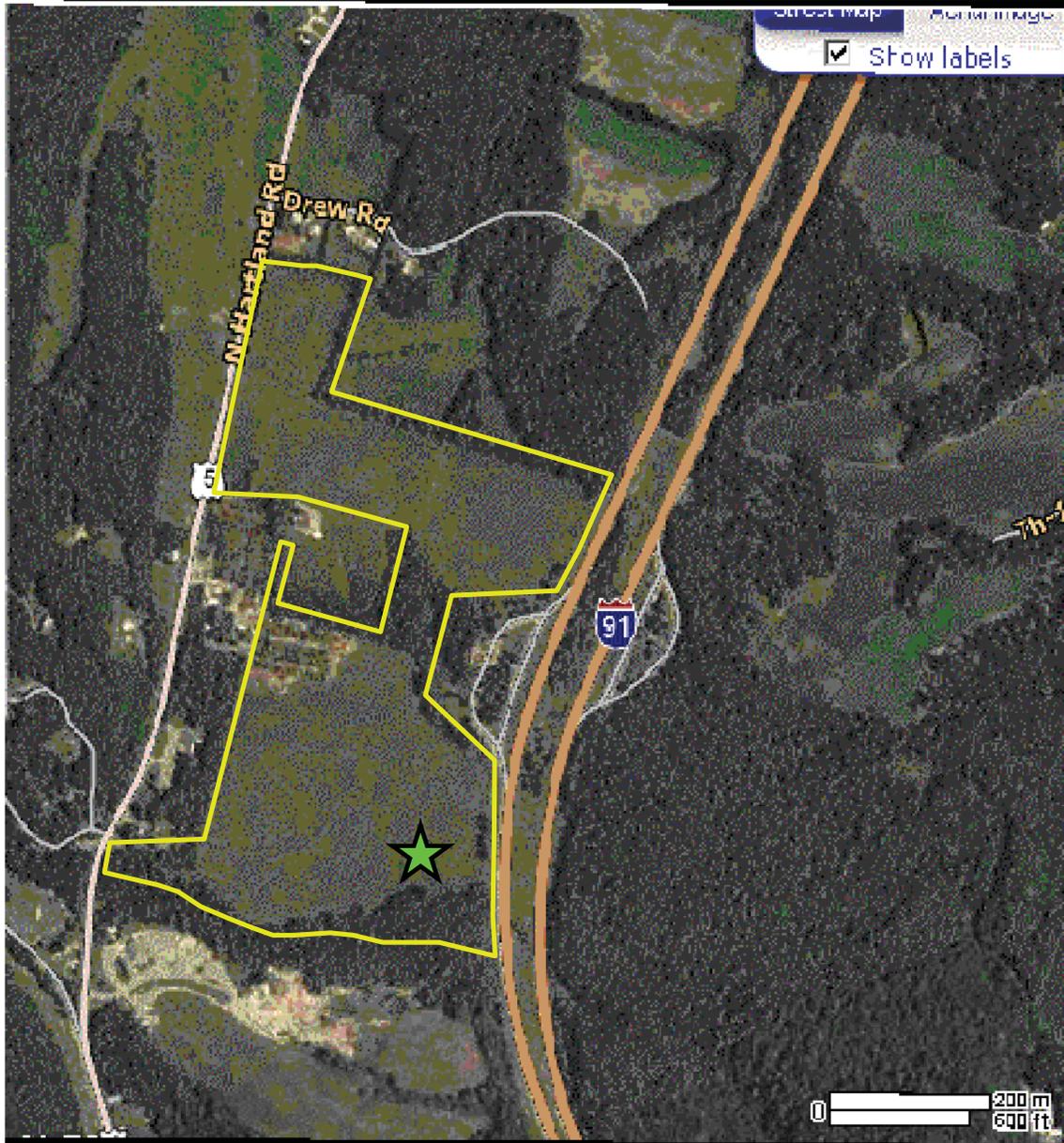
Ms. Martha H. Stuart, Soil Scientist/FPPA Contact
USDA-Natural Resources Conservation Service
28 FarmVu Drive
White River Junction, VT 05001



Prepared For:
 U.S Army Corps of Engineers, Mobile District

Attachment 1
 White River Junction Sites





Alternative 1 Aerial View



 Area Considered for Proposed AFRC/OMS

 Property Boundary

AFRC Armed Forces Reserve Center
 OMS Organizational Maintenance Shop



Prepared For:

U.S Army Corps of Engineers, Mobile District

Attachment 2

Aerial Photograph of the North Hartland Road Site --
 Alternative 1



Farmland Classification—Windsor County, Vermont
(North Hartland Road Site)



Farmland Classification—Windsor County, Vermont
(North Hartland Road Site)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Soil Ratings

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available

Political Features

 Cities

Water Features

-  Oceans
-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways

-  US Routes
-  Major Roads
-  Local Roads

MAP INFORMATION

Map Scale: 1:2,330 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 18N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Windsor County, Vermont
Survey Area Data: Version 13, Sep 5, 2008

Date(s) aerial images were photographed: 8/24/2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

| Farmland Classification— Summary by Map Unit — Windsor County, Vermont | | | | |
|--|--|----------------------------------|--------------|----------------|
| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
| 2A | Belgrade silt loam, 0 to 3 percent slopes | All areas are prime farmland | 0.1 | 0.7% |
| 5B | Windsor loamy fine sand, 0 to 8 percent slopes | Farmland of statewide importance | 4.6 | 27.0% |
| 5E | Windsor loamy fine sand, 25 to 60 percent slopes | Not prime farmland | 2.3 | 13.3% |
| 9B | Ninigret fine sandy loam, 0 to 8 percent slopes | All areas are prime farmland | 0.0 | 0.1% |
| 14C | Hinckley sandy loam, 8 to 15 percent slopes | Not prime farmland | 3.3 | 19.4% |
| 29A | Grange very fine sandy loam, 0 to 3 percent slopes | Prime farmland if drained | 6.8 | 39.5% |
| Totals for Area of Interest | | | 17.1 | 100.0% |

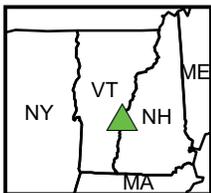
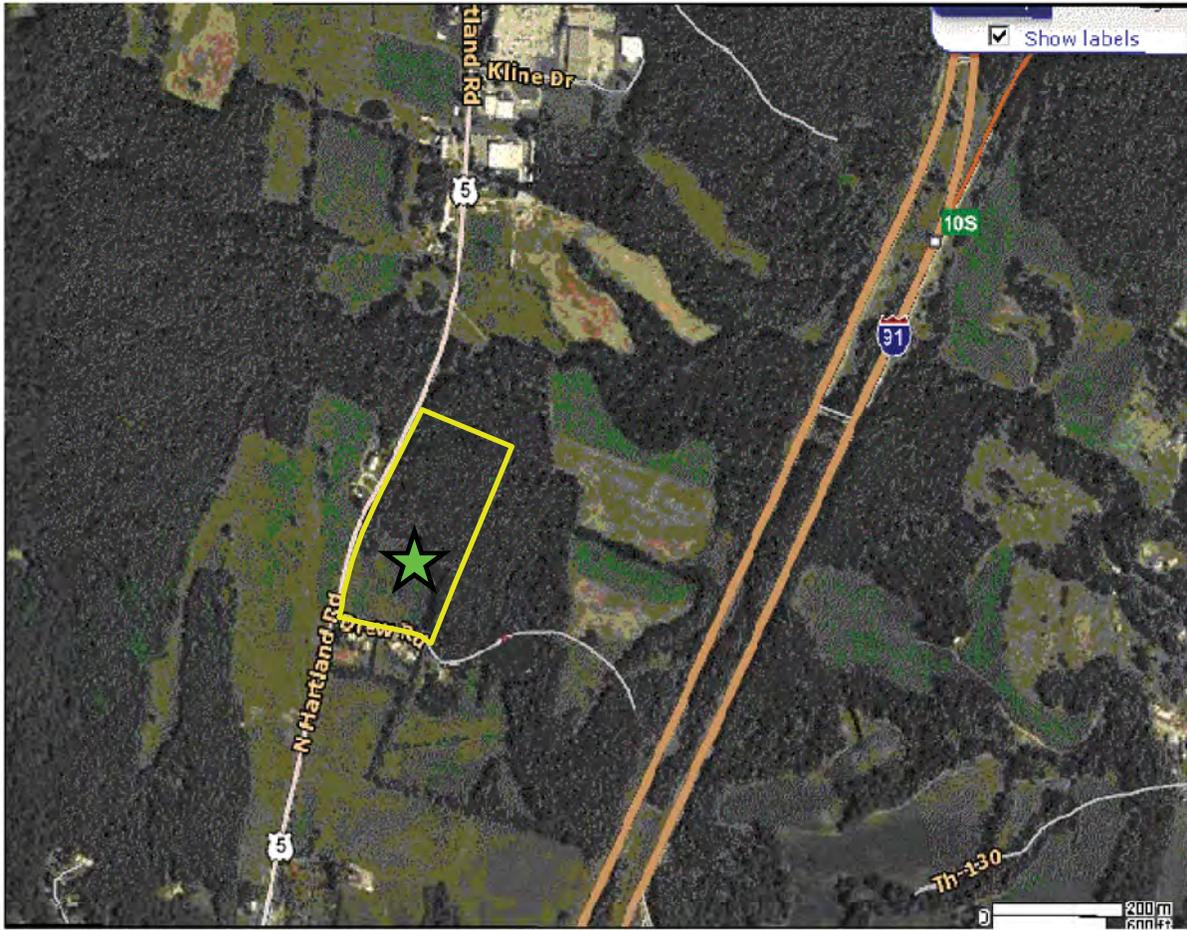
Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower



 Area Considered for Proposed AFRC/OMS

 Property Boundary

AFRC Armed Forces Reserve Center
 OMS Organizational Maintenance Shop



Prepared For:

U.S Army Corps of Engineers, Mobile District

Attachment 4

Aerial Photograph of the Drew Road Site -- Alternative 2



Farmland Classification—Windsor County, Vermont
(Drew Road Site)



Farmland Classification—Windsor County, Vermont
(Drew Road Site)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Soil Ratings

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available

Political Features

Municipalities

-  Cities
-  Urban Areas

Water Features

-  Oceans
-  Streams and Canals

Transportation

-  Rails
- Roads**
-  Interstate Highways
-  US Routes
-  State Highways
-  Local Roads
-  Other Roads

MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 18N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Windsor County, Vermont
Survey Area Data: Version 13, Sep 5, 2008

Date(s) aerial images were photographed: 5/12/1992

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

| Farmland Classification— Summary by Map Unit — Windsor County, Vermont | | | | |
|--|--|----------------------------------|--------------|----------------|
| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
| 4A | Raynham silt loam, 0 to 3 percent slopes | Prime farmland if drained | 0.0 | 0.0% |
| 19C | Vershire-Dummerston complex, 8 to 15 percent slopes, rocky | Farmland of statewide importance | 2.6 | 19.2% |
| 20C | Glover-Vershire complex, 3 to 15 percent slopes, very rocky | Not prime farmland | 6.7 | 48.5% |
| 20D | Glover-Vershire complex, 15 to 35 percent slopes, very rocky | Not prime farmland | 2.0 | 14.8% |
| 25B | Buckland loam, 3 to 8 percent slopes | All areas are prime farmland | 2.4 | 17.5% |
| Totals for Area of Interest (AOI) | | | 13.8 | 100.0% |

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

FARMLAND CONVERSION IMPACT RATING

| | |
|---|--|
| PART I (To be completed by Federal Agency) | Date Of Land Evaluation Request 12/5/08 |
| Name Of Project Armed Forces Reserve Center | Federal Agency Involved U.S. Army Corps of Engineers |
| Proposed Land Use Armed Forces Training Facility | County And State Town of Hartford, Windsor County, Vermont |

| | | | |
|---|---|---|-----------------------------|
| PART II (To be completed by NRCS) | | Date Request Received By NRCS | |
| Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form). | | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| | | Acres Irrigated | Average Farm Size |
| Major Crop(s) | Farmable Land In Govt. Jurisdiction Acres: % | Amount Of Farmland As Defined in FPPA Acres: % | |
| Name Of Land Evaluation System Used | Name Of Local Site Assessment System | Date Land Evaluation Returned By NRCS | |

| | | | | |
|---|-------------------------|--------|--------|--------|
| PART III (To be completed by Federal Agency) | Alternative Site Rating | | | |
| | Site A | Site B | Site C | Site D |
| A. Total Acres To Be Converted Directly | 12.1 | 4.8 | | |
| B. Total Acres To Be Converted Indirectly | 0.0 | 0.0 | | |
| C. Total Acres In Site | 12.1 | 4.8 | 0.0 | 0.0 |

| | | | | |
|--|--|--|--|--|
| PART IV (To be completed by NRCS) Land Evaluation Information | | | | |
| A. Total Acres Prime And Unique Farmland | | | | |
| B. Total Acres Statewide And Local Important Farmland | | | | |
| C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted | | | | |
| D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value | | | | |

| | | | | |
|--|---|---|---|---|
| PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points) | 0 | 0 | 0 | 0 |
|--|---|---|---|---|

| | | | | | |
|---|-------------------|-----------|-----------|----------|----------|
| PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b)) | Maximum Points | | | | |
| 1. Area In Nonurban Use | 15 | 12 | 12 | | |
| 2. Perimeter In Nonurban Use | 10 | 8 | 9 | | |
| 3. Percent Of Site Being Farmed | 20 | 0 | 0 | | |
| 4. Protection Provided By State And Local Government | 20 | 0 | 0 | | |
| 5. Distance From Urban Builtup Area | 15 | 5 | 10 | | |
| 6. Distance To Urban Support Services | 15 | 0 | 0 | | |
| 7. Size Of Present Farm Unit Compared To Average | 10 | 0 | 0 | | |
| 8. Creation Of Nonfarmable Farmland | 10 | 0 | 0 | | |
| 9. Availability Of Farm Support Services | 5 | 5 | 5 | | |
| 10. On-Farm Investments | 20 | 0 | 0 | | |
| 11. Effects Of Conversion On Farm Support Services | 10 | 0 | 0 | | |
| 12. Compatibility With Existing Agricultural Use | 10 | 0 | 0 | | |
| TOTAL SITE ASSESSMENT POINTS | 160 | 30 | 36 | 0 | 0 |

| | | | | | |
|---|------------|-----------|-----------|----------|----------|
| PART VII (To be completed by Federal Agency) | | | | | |
| Relative Value Of Farmland (From Part V) | 100 | 0 | 0 | 0 | 0 |
| Total Site Assessment (From Part VI above or a local site assessment) | 160 | 30 | 36 | 0 | 0 |
| TOTAL POINTS (Total of above 2 lines) | 260 | 30 | 36 | 0 | 0 |

| | | |
|----------------|-------------------|--|
| Site Selected: | Date Of Selection | Was A Local Site Assessment Used? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|----------------|-------------------|--|

Reason For Selection:

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 – Federal agencies involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form.

Step 2 – Originator will send copies A, B and C together with maps indicating locations of site(s), to the Natural Resources Conservation Service (NRCS) local field office and retain copy D for their files. (Note: NRCS has a field office in most counties in the U.S. The field office is usually located in the county seat. A list of field office locations are available from the NRCS State Conservationist in each state).

Step 3 – NRCS will, within 45 calendar days after receipt of form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland.

Step 4 – In cases where farmland covered by the FPPA will be converted by the proposed project, NRCS field offices will complete Parts II, IV and V of the form.

Step 5 – NRCS will return copy A and B of the form to the Federal agency involved in the project. (Copy C will be retained for NRCS records).

Step 6 – The Federal agency involved in the proposed project will complete Parts VI and VII of the form.

Step 7 – The Federal agency involved in the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA and the agency's internal policies.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

Part I: In completing the "County And State" questions list all the local governments that are responsible for local land controls where site(s) are to be evaluated.

Part III: In completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities) that will cause a direct conversion.

Part VI: Do not complete Part VI if a local site assessment is used.

Assign the maximum points for each site assessment criterion as shown in § 658.5 (b) of CFR. In cases of corridor-type projects such as transportation, powerline and flood control, criteria #5 and #6 will not apply and will, be weighed zero, however, criterion #8 will be weighed a maximum of 25 points, and criterion #11 a maximum of 25 points.

Individual Federal agencies at the national level, may assign relative weights among the 12 site assessment criteria other than those shown in the FPPA rule. In all cases where other weights are assigned relative adjustments must be made to maintain the maximum total weight points at 160.

In rating alternative sites, Federal agencies shall consider each of the criteria and assign points within the limits established in the FPPA rule. Sites most suitable for protection under these criteria will receive the highest total scores, and sites least suitable, the lowest scores.

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, adjust the site assessment points to a base of 160. Example: if the Site Assessment maximum is 200 points, and alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site "A."}$$

Maximum points possible 200

Site Assessment Scoring for the Twelve Factors Used in FPPA

The Site Assessment criteria used in the Farmland Protection Policy Act (FPPA) rule are designed to assess important factors other than the agricultural value of the land when determining which alternative sites should receive the highest level of protection from conversion to non agricultural uses.

Twelve factors are used for Site Assessment and ten factors for corridor-type sites. Each factor is listed in an outline form, without detailed definitions or guidelines to follow in the rating process. The purpose of this document is to expand the definitions of use of each of the twelve Site Assessment factors so that all persons can have a clear understanding as to what each factor is intended to evaluate and how points are assigned for given conditions.

In each of the 12 factors a number rating system is used to determine which sites deserve the most protection from conversion to non-farm uses. The higher the number value given to a proposed site, the more protection it will receive. The maximum scores are 10, 15 and 20 points, depending upon the relative importance of each particular question. If a question significantly relates to why a parcel of land should not be converted, the question has a maximum possible protection value of 20, whereas a question which does not have such a significant impact upon whether a site would be converted, would have fewer maximum points possible, for example 10.

The following guidelines should be used in rating the twelve Site Assessment criteria:

1. How much land is in non-urban use within a radius of 1.0 mile from where the project is intended?

| | |
|-----------------------|----------------|
| More than 90 percent: | 15 points |
| 90-20 percent: | 14 to 1 points |
| Less than 20 percent: | 0 points |

This factor is designed to evaluate the extent to which the area within one mile of the proposed site is non-urban area. For purposes of this rule, "non-urban" should include:

- Agricultural land (crop-fruit trees, nuts, oilseed)
- Range land
- Forest land
- Golf Courses
- Non paved parks and recreational areas
- Mining sites
- Farm Storage
- Lakes, ponds and other water bodies
- Rural roads, and through roads without houses or buildings
- Open space
- Wetlands
- Fish production
- Pasture or hayland

Urban uses include:

- Houses (other than farm houses)
- Apartment buildings
- Commercial buildings
- Industrial buildings
- Paved recreational areas (i.e. tennis courts)
- Streets in areas with 30 structures per 40 acres
- Gas stations

- Equipment, supply stores
- Off-farm storage
- Processing plants
- Shopping malls
- Utilities/Services
- Medical buildings

In rating this factor, an area one-mile from the outer edge of the proposed site should be outlined on a current photo; the areas that are urban should be outlined. For rural houses and other buildings with unknown sizes, use 1 and 1/3 acres per structure. For roads with houses on only one side, use one half of road for urban and one half for non-urban.

The purpose of this rating process is to insure that the most valuable and viable farmlands are protected from development projects sponsored by the Federal Government. With this goal in mind, factor S1 suggests that the more agricultural lands surrounding the parcel boundary in question, the more protection from development this site should receive. Accordingly, a site with a large quantity of non-urban land surrounding it will receive a greater number of points for protection from development. Thus, where more than 90 percent of the area around the proposed site (do not include the proposed site in this assessment) is non-urban, assign 15 points. Where 20 percent or less is non-urban, assign 0 points. Where the area lies between 20 and 90 percent non-urban, assign appropriate points from 14 to 1, as noted below.

| Percent Non-Urban Land within 1 mile | Points |
|---|---------------|
| 90 percent or greater | 15 |
| 85 to 89 percent | 14 |
| 80 to 84 percent | 13 |
| 75 to 79 percent | 12 |
| 70 to 74 percent | 11 |
| 65 to 69 percent | 10 |
| 60 to 64 percent | 9 |
| 55 to 59 percent | 8 |
| 50 to 54 percent | 7 |
| 45 to 49 percent | 6 |
| 40 to 44 percent | 5 |
| 35 to 39 percent | 4 |
| 30 to 24 percent | 3 |
| 25 to 29 percent | 2 |
| 21 to 24 percent | 1 |
| 20 percent or less | 0 |

2. How much of the perimeter of the site borders on land in non-urban use?

| | |
|-----------------------|-----------------|
| More than 90 percent: | 10 points |
| 90 to 20 percent: | 9 to 1 point(s) |
| Less than 20 percent: | 0 points |

This factor is designed to evaluate the extent to which the land adjacent to the proposed site is non-urban use. Where factor #1 evaluates the general location of the proposed site, this factor evaluates the immediate perimeter of the site. The definition of urban and non-urban uses in factor #1 should be used for this factor.

In rating the second factor, measure the perimeter of the site that is in non-urban and urban use. Where more than 90 percent of the perimeter is in non-urban use, score this factor 10 points. Where less than 20 percent, assign 0 points. If a road is next to the perimeter, class the area according to the

use on the other side of the road for that area. Use 1 and 1/3 acre per structure if not otherwise known. Where 20 to 90 percent of the perimeter is non-urban, assign points as noted below:

| Percentage of Perimeter Bordering Land | Points |
|---|---------------|
| 90 percent or greater | 10 |
| 82 to 89 percent | 9 |
| 74 to 81 percent | 8 |
| 65 to 73 percent | 7 |
| 58 to 65 percent | 6 |
| 50 to 57 percent | 5 |
| 42 to 49 percent | 4 |
| 34 to 41 percent | 3 |
| 27 to 33 percent | 2 |
| 21 to 26 percent | 1 |
| 20 percent or Less | 0 |

3. How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last ten years?

| | |
|-----------------------|------------------|
| More than 90 percent: | 20 points |
| 90 to 20 percent: | 19 to 1 point(s) |
| Less than 20 percent: | 0 points |

This factor is designed to evaluate the extent to which the proposed conversion site has been used or managed for agricultural purposes in the past 10 years.

Land is being farmed when it is used or managed for food or fiber, to include timber products, fruit, nuts, grapes, grain, forage, oil seed, fish and meat, poultry and dairy products.

Land that has been left to grow up to native vegetation without management or harvest will be considered as abandoned and therefore not farmed. The proposed conversion site should be evaluated and rated according to the percent, of the site farmed.

If more than 90 percent of the site has been farmed 5 of the last 10 years score the site as follows:

| Percentage of Site Farmed | Points |
|----------------------------------|---------------|
| 90 percent or greater | 20 |
| 86 to 89 percent | 19 |
| 82 to 85 percent | 18 |
| 78 to 81 percent | 17 |
| 74 to 77 percent | 16 |
| 70 to 73 percent | 15 |
| 66 to 69 percent | 14 |
| 62 to 65 percent | 13 |
| 58 to 61 percent | 12 |
| 54 to 57 percent | 11 |
| 50 to 53 percent | 10 |
| 46 to 49 percent | 9 |
| 42 to 45 percent | 8 |
| 38 to 41 percent | 7 |
| 35 to 37 percent | 6 |
| 32 to 34 percent | 5 |
| 29 to 31 percent | 4 |
| 26 to 28 percent | 3 |

| | |
|----------------------------------|---|
| 23 to 25 percent | 2 |
| 20 to 22 percent percent or Less | 1 |
| Less than 20 percent | 0 |

4. Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

| | |
|------------------------|-----------|
| Site is protected: | 20 points |
| Site is not protected: | 0 points |

This factor is designed to evaluate the extent to which state and local government and private programs have made efforts to protect this site from conversion.

State and local policies and programs to protect farmland include:

State Policies and Programs to Protect Farmland

1. Tax Relief:

A. Differential Assessment: Agricultural lands are taxed on their agricultural use value, rather than at market value. As a result, farmers pay fewer taxes on their land, which helps keep them in business, and therefore helps to insure that the farmland will not be converted to nonagricultural uses.

1. Preferential Assessment for Property Tax: Landowners with parcels of land used for agriculture are given the privilege of differential assessment.
2. Deferred Taxation for Property Tax: Landowners are deterred from converting their land to nonfarm uses, because if they do so, they must pay back taxes at market value.
3. Restrictive Agreement for Property Tax: Landowners who want to receive Differential Assessment must agree to keep their land in - eligible use.

B. Income Tax Credits

Circuit Breaker Tax Credits: Authorize an eligible owner of farmland to apply some or all of the property taxes on his or her farmland and farm structures as a tax credit against the owner's state income tax.

C. Estate and Inheritance Tax Benefits

Farm Use Valuation for Death Tax: Exemption of state tax liability to eligible farm estates.

2. "Right to farm" laws:

Prohibits local governments from enacting laws which will place restrictions upon normally accepted farming practices, for example, the generation of noise, odor or dust.

3. Agricultural Districting:

Wherein farmers voluntarily organize districts of agricultural land to be legally recognized geographic areas. These farmers receive benefits, such as protection from annexation, in exchange for keeping land within the district for a given number of years.

4. Land Use Controls: Agricultural Zoning.

Types of Agricultural Zoning Ordinances include:

- A. Exclusive: In which the agricultural zone is restricted to only farm-related dwellings, with, for example, a minimum of 40 acres per dwelling unit.
- B. Non-Exclusive: In which non-farm dwellings are allowed, but the density remains low, such as 20 acres per dwelling unit.

Additional Zoning techniques include:

- A. Sliding Scale: This method looks at zoning according to the total size of the parcel owned. For example, the number of dwelling units per a given number of acres may change from county to county according to the existing land acreage to dwelling unit ratio of surrounding parcels of land within the specific area.
- B. Point System or Numerical Approach: Approaches land use permits on a case by case basis.

LESA: The LESA system (Land Evaluation-Site Assessment) is used as a tool to help assess options for land use on an evaluation of productivity weighed against commitment to urban development.
- C. Conditional Use: Based upon the evaluation on a case by case basis by the Board of Zoning Adjustment. Also may include the method of using special land use permits.

5. Development Rights:

- A. Purchase of Development Rights (PDR): Where development rights are purchased by Government action.

Buffer Zoning Districts: Buffer Zoning Districts are an example of land purchased by Government action. This land is included in zoning ordinances in order to preserve and protect agricultural lands from non-farm land uses encroaching upon them.

- B. Transfer of Development Rights (TDR): Development rights are transferable for use in other locations designated as receiving areas. TDR is considered a locally based action (not state), because it requires a voluntary decision on the part of the individual landowners.

6. Governor's Executive Order: Policy made by the Governor, stating the importance of agriculture, and the preservation of agricultural lands. The Governor orders the state agencies to avoid the unnecessary conversion of important farmland to nonagricultural uses.

7. Voluntary State Programs:

- A. California's Program of Restrictive Agreements and Differential Assessments: The California Land Conservation Act of 1965, commonly known as the Williamson Act, allows cities, counties and individual landowners to form agricultural preserves and enter into contracts for 10 or more years to insure that these parcels of land remain strictly for agricultural use. Since 1972 the Act has extended eligibility to recreational and open space lands such as scenic highway corridors, salt ponds and wildlife preserves. These contractually restricted lands may be taxed differentially for their real value. One hundred-acre districts constitute the minimum land size eligible.

Suggestion: An improved version of the Act would state that if the land is converted after the contract expires, the landowner must pay the difference in the taxes between market value for the land and the agricultural tax value which he or she had been

paying under the Act. This measure would help to insure that farmland would not be converted after the 10 year period ends.

- B. Maryland Agricultural Land Preservation Program: Agricultural landowners within agricultural districts have the opportunity to sell their development rights to the Maryland Land Preservation Foundation under the agreement that these landowners will not subdivide or develop their land for an initial period of five years. After five years the landowner may terminate the agreement with one year notice.

As is stated above under the California Williamson Act, the landowner should pay the back taxes on the property if he or she decides to convert the land after the contract expires, in order to discourage such conversions.

- C. Wisconsin Income Tax Incentive Program: The Wisconsin Farmland Preservation Program of December 1977 encourages local jurisdictions in Wisconsin to adopt agricultural preservation plans or exclusive agricultural district zoning ordinances in exchange for credit against state income tax and exemption from special utility assessment. Eligible candidates include local governments and landowners with at least 35 acres of land per dwelling unit in agricultural use and gross farm profits of at least \$6,000 per year, or \$18,000 over three years.

8. Mandatory State Programs:

- A. The Environmental Control Act in the state of Vermont was adopted in 1970 by the Vermont State Legislature. The Act established an environmental board with 9 members (appointed by the Governor) to implement a planning process and a permit system to screen most subdivisions and development proposals according to specific criteria stated in the law. The planning process consists of an interim and a final Land Capability and Development Plan, the latter of which acts as a policy plan to control development. The policies are written in order to:
- prevent air and water pollution;
 - protect scenic or natural beauty, historic sites and rare and irreplaceable natural areas; and
 - consider the impacts of growth and reduction of development on areas of primary agricultural soils.
- B. The California State Coastal Commission: In 1976 the Coastal Act was passed to establish a permanent Coastal Commission with permit and planning authority. The purpose of the Coastal Commission was and is to protect the sensitive coastal zone environment and its resources, while accommodating the social and economic needs of the state. The Commission has the power to regulate development in the coastal zones by issuing permits on a case by case basis until local agencies can develop their own coastal plans, which must be certified by the Coastal Commission.
- C. Hawaii's Program of State Zoning: In 1961, the Hawaii State Legislature established Act 187, the Land Use Law, to protect the farmland and the welfare of the local people of Hawaii by planning to avoid "unnecessary urbanization". The Law made all state lands into four districts: agricultural, conservation, rural and urban. The Governor appointed members to a State Land Use Commission, whose duties were to uphold the Law and form the boundaries of the four districts. In addition to state zoning, the Land Use Law introduced a program of Differential Assessment, wherein agricultural landowners paid taxes on their land for its agricultural use value, rather than its market value.
- D. The Oregon Land Use Act of 1973: This act established the Land Conservation and Development Commission (LCDC) to provide statewide planning goals and guidelines.

Under this Act, Oregon cities and counties are each required to draw up a comprehensive plan, consistent with statewide planning goals. Agricultural land preservation is high on the list of state goals to be followed locally.

If the proposed site is subject to or has used one or more of the above farmland protection programs or policies, score the site 20 points. If none of the above policies or programs apply to this site, score 0 points.

5. How close is the site to an urban built-up area?

| | |
|--|-----------|
| The site is 2 miles or more from an urban built-up area | 15 points |
| The site is more than 1 mile but less than 2 miles from an urban built-up area | 10 points |
| The site is less than 1 mile from, but is not adjacent to an urban built-up area | 5 points |
| The site is adjacent to an urban built-up area | 0 points |

This factor is designed to evaluate the extent to which the proposed site is located next to an existing urban area. The urban built-up area must be 2500 population. The measurement from the built-up area should be made from the point at which the density is 30 structures per 40 acres and with no open or non-urban land existing between the major built-up areas and this point. Suburbs adjacent to cities or urban built-up areas should be considered as part of that urban area.

For greater accuracy, use the following chart to determine how much protection the site should receive according to its distance from an urban area. See chart below:

| Distance From Perimeter of Site to Urban Area | Points |
|--|---------------|
| More than 10,560 feet | 15 |
| 9,860 to 10,559 feet | 14 |
| 9,160 to 9,859 feet | 13 |
| 8,460 to 9,159 feet | 12 |
| 7,760 to 8,459 feet | 11 |
| 7,060 to 7,759 feet | 10 |
| 6,360 to 7,059 feet | 9 |
| 5,660 to 6,359 feet | 8 |
| 4,960 to 5,659 feet | 7 |
| 4,260 to 4,959 feet | 6 |
| 3,560 to 4,259 feet | 5 |
| 2,860 to 3,559 feet | 4 |
| 2,160 to 2,859 feet | 3 |
| 1,460 to 2,159 feet | 2 |
| 760 to 1,459 feet | 1 |
| Less than 760 feet (adjacent) | 0 |

6. How close is the site to water lines, sewer lines and/or other local facilities and services whose capacities and design would promote nonagricultural use?

| | |
|--|-----------|
| None of the services exist nearer than 3 miles from the site | 15 points |
| Some of the services exist more than one but less than 3 miles from the site | 10 points |
| All of the services exist within 1/2 mile of the site | 0 points |

This question determines how much infrastructure (water, sewer, etc.) is in place which could facilitate nonagricultural development. The fewer facilities in place, the more difficult it is to develop an area. Thus, if a proposed site is further away from these services (more than 3 miles distance away), the site should be awarded the highest number of points (15). As the distance of the parcel of land to services decreases, the number of points awarded declines as well. So, when the site is equal to or further than 1 mile but less than 3 miles away from services, it should be given 10 points. Accordingly, if this distance is 1/2 mile to less than 1 mile, award 5 points; and if the distance from land to services is less than 1/2 mile, award 0 points.

Distance to public facilities should be measured from the perimeter of the parcel in question to the nearest site(s) where necessary facilities are located. If there is more than one distance (i.e. from site to water and from site to sewer), use the average distance (add all distances and then divide by the number of different distances to get the average).

Facilities which could promote nonagricultural use include:

- Water lines
- Sewer lines
- Power lines
- Gas lines
- Circulation (roads)
- Fire and police protection
- Schools

7. Is the farm unit(s) containing the site (before the project) as large as the average-size farming unit in the county? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage of Farm Units in Operation with \$1,000 or more in sales.)

| | |
|---|---------------|
| As large or larger: | 10 points |
| Below average: Deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more is below average | 9 to 0 points |

This factor is designed to determine how much protection the site should receive, according to its size in relation to the average size of farming units within the county. The larger the parcel of land, the more agricultural use value the land possesses, and vice versa. Thus, if the farm unit is as large or larger than the county average, it receives the maximum number of points (10). The smaller the parcel of land compared to the county average, the fewer number of points given. Please see below:

| Parcel Size in Relation to Average County Size | Points |
|---|---------------|
| Same size or larger than average (100 percent) | 10 |
| 95 percent of average | 9 |
| 90 percent of average | 8 |
| 85 percent of average | 7 |
| 80 percent of average | 6 |
| 75 percent of average | 5 |
| 70 percent of average | 4 |
| 65 percent of average | 3 |
| 60 percent of average | 2 |
| 55 percent of average | 1 |
| 50 percent or below county average | 0 |

State and local Natural Resources Conservation Service offices will have the average farm size information, provided by the latest available Census of Agriculture data

8. If this site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

| | |
|--|-----------------|
| Acreage equal to more than 25 percent of acres directly converted by the project | 10 points |
| Acreage equal to between 25 and 5 percent of the acres directly converted by the project | 9 to 1 point(s) |
| Acreage equal to less than 5 percent of the acres directly converted by the project | 0 points |

This factor tackles the question of how the proposed development will affect the rest of the land on the farm. The site which deserves the most protection from conversion will receive the greatest number of points, and vice versa. For example, if the project is small, such as an extension on a house, the rest of the agricultural land would remain farmable, and thus a lower number of points is given to the site. Whereas if a large-scale highway is planned, a greater portion of the land (not including the site) will become non-farmable, since access to the farmland will be blocked; and thus, the site should receive the highest number of points (10) as protection from conversion.

Conversion uses of the Site Which Would Make the Rest of the Land Non-Farmable by Interfering with Land Patterns

Conversions which make the rest of the property nonfarmable include any development which blocks accessibility to the rest of the site. Examples are highways, railroads, dams or development along the front of a site restricting access to the rest of the property.

The point scoring is as follows:

| Amount of Land Not Including the Site Which Will Become Non-Farmable | Points |
|---|---------------|
| 25 percent or greater | 10 |
| 23 - 24 percent | 9 |
| 21 - 22 percent | 8 |
| 19 - 20 percent | 7 |
| 17 - 18 percent | 6 |
| 15 - 16 percent | 5 |
| 13 - 14 percent | 4 |
| 11 - 12 percent | 3 |
| 9 - 11 percent | 2 |
| 6 - 8 percent | 1 |
| 5 percent or less | 0 |

9. Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

| | |
|--------------------------------------|-----------------|
| All required services are available | 5 points |
| Some required services are available | 4 to 1 point(s) |
| No required services are available | 0 points |

This factor is used to assess whether there are adequate support facilities, activities and industry to keep the farming business in business. The more support facilities available to the agricultural

landowner, the more feasible it is for him or her to stay in production. In addition, agricultural support facilities are compatible with farmland. This fact is important, because some land uses are not compatible; for example, development next to farmland can be dangerous to the welfare of the agricultural land, as a result of pressure from the neighbors who often do not appreciate the noise, smells and dust intrinsic to farmland. Thus, when all required agricultural support services are available, the maximum number of points (5) are awarded. When some services are available, 4 to 1 point(s) are awarded; and consequently, when no services are available, no points are given. See below:

| Percent of Services Available | Points |
|--------------------------------------|---------------|
| 100 percent | 5 |
| 75 to 99 percent | 4 |
| 50 to 74 percent | 3 |
| 25 to 49 percent | 2 |
| 1 to 24 percent | 1 |
| No services | 0 |

10. Does the site have substantial and well-maintained on farm investments such as barns, other storage buildings, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

| | |
|--|------------------|
| High amount of on-farm investment | 20 points |
| Moderate amount of non-farm investment | 19 to 1 point(s) |
| No on-farm investments | 0 points |

This factor assesses the quantity of agricultural facilities in place on the proposed site. If a significant agricultural infrastructure exists, the site should continue to be used for farming, and thus the parcel will receive the highest amount of points towards protection from conversion or development. If there is little on farm investment, the site will receive comparatively less protection. See-below:

| Amount of On-farm Investment | Points |
|---|---------------|
| As much or more than necessary to maintain production (100 percent) | 20 |
| 95 to 99 percent | 19 |
| 90 to 94 percent | 18 |
| 85 to 89 percent | 17 |
| 80 to 84 percent | 16 |
| 75 to 79 percent | 15 |
| 70 to 74 percent | 14 |
| 65 to 69 percent | 13 |
| 60 to 64 percent | 12 |
| 55 to 59 percent | 11 |
| 50 to 54 percent | 10 |
| 45 to 49 percent | 9 |
| 40 to 44 percent | 8 |
| 35 to 39 percent | 7 |
| 30 to 34 percent | 6 |
| 25 to 29 percent | 5 |
| 20 to 24 percent | 4 |
| 15 to 19 percent | 3 |
| 10 to 14 percent | 2 |
| 5 to 9 percent | 1 |
| 0 to 4 percent | 0 |

11. Would the project at this site, by converting farmland to nonagricultural use, reduce the support for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

| | |
|--|-----------------|
| Substantial reduction in demand for support services if the site is converted | 10 points |
| Some reduction in demand for support services if the site is converted | 9 to 1 point(s) |
| No significant reduction in demand for support services if the site is converted | 0 points |

This factor determines whether there are other agriculturally related activities, businesses or jobs dependent upon the working of the pre-converted site in order for the others to remain in production. The more people and farming activities relying upon this land, the more protection it should receive from conversion. Thus, if a substantial reduction in demand for support services were to occur as a result of conversions, the proposed site would receive a high score of 10; some reduction in demand would receive 9 to 1 point(s), and no significant reduction in demand would receive no points.

Specific points are outlined as follows:

| Amount of Reduction in Support Services if Site is Converted to Nonagricultural Use | Points |
|--|---------------|
| Substantial reduction (100 percent) | 10 |
| 90 to 99 percent | 9 |
| 80 to 89 percent | 8 |
| 70 to 79 percent | 7 |
| 60 to 69 percent | 6 |
| 50 to 59 percent | 5 |
| 40 to 49 percent | 4 |
| 30 to 39 percent | 3 |
| 20 to 29 percent | 2 |
| 10 to 19 percent | 1 |
| No significant reduction (0 to 9 percent) | 0 |

12. Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of the surrounding farmland to nonagricultural use?

| | |
|---|-----------------|
| Proposed project is incompatible with existing agricultural use of surrounding farmland | 10 points |
| Proposed project is tolerable of existing agricultural use of surrounding farmland | 9 to 1 point(s) |
| Proposed project is fully compatible with existing agricultural use of surrounding farmland | 0 points |

Factor 12 determines whether conversion of the proposed agricultural site will eventually cause the conversion of neighboring farmland as a result of incompatibility of use of the first with the latter. The more incompatible the proposed conversion is with agriculture, the more protection this site receives from conversion. Therefore, if the proposed conversion is incompatible with agriculture, the site receives 10 points. If the project is tolerable with agriculture, it receives 9 to 1 points; and if the proposed conversion is compatible with agriculture, it receives 0 points.

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor-type site or design alternative for protection as farmland along with the land evaluation information.

For Water and Waste Programs, corridor analyses are not applicable for distribution or collection networks. Analyses are applicable for transmission or trunk lines where placement of the lines are flexible.

(1) How much land is in nonurban use within a radius of 1.0 mile form where the project is intended?

- | | |
|--------------------------|-----------------------|
| (2) More than 90 percent | (3) 15 points |
| (4) 90 to 20 percent | (5) 14 to 1 point(s). |
| (6) Less than 20 percent | (7) 0 points |

(2) How much of the perimeter of the site borders on land in nonurban use?

- | | |
|--------------------------|-------------------|
| (3) More than 90 percent | (4) 10 point(s) |
| (5) 90 to 20 percent | (6) 9 to 1 points |
| (7) less than 20 percent | (8) 0 points |

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

- | | |
|--------------------------|----------------------|
| (4) More than 90 percent | (5) 20 points |
| (6) 90 to 20 percent | (7) 19 to 1 point(s) |
| (8) Less than 20 percent | (9) 0 points |

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

- | | |
|-----------------------|-----------|
| Site is protected | 20 points |
| Site is not protected | 0 points |

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage of Farm Units in Operation with \$1,000 or more in sales.)

- | | |
|---|---------------|
| As large or larger | 10 points |
| Below average deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average | 9 to 0 points |

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

- | | |
|--|------------------|
| Acreage equal to more than 25 percent of acres directly converted by the project | 25 points |
| Acreage equal to between 25 and 5 percent of the acres directly converted by the project | 1 to 24 point(s) |
| Acreage equal to less than 5 percent of the acres directly converted by the project | 0 points |

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

| | |
|--------------------------------------|-----------------|
| All required services are available | 5 points |
| Some required services are available | 4 to 1 point(s) |
| No required services are available | 0 points |

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

| | |
|---------------------------------------|------------------|
| High amount of on-farm investment | 20 points |
| Moderate amount of on-farm investment | 19 to 1 point(s) |
| No on-farm investment | 0 points |

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

| | |
|--|------------------|
| Substantial reduction in demand for support services if the site is converted | 25 points |
| Some reduction in demand for support services if the site is converted | 1 to 24 point(s) |
| No significant reduction in demand for support services if the site is converted | 0 points |

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

| | |
|---|-----------------|
| Proposed project is incompatible to existing agricultural use of surrounding farmland | 10 points |
| Proposed project is tolerable to existing agricultural use of surrounding farmland | 9 to 1 point(s) |
| Proposed project is fully compatible with existing agricultural use of surrounding farmland | 0 points |



DEPARTMENT OF THE ARMY
HEADQUARTERS, 99TH REGIONAL SUPPORT COMMAND
5522 NASHVILLE STREET
FORT DIX, NEW JERSEY 08640-5000



REPLY TO
ATTENTION OF

December 19, 2008

Directorate of Public Works

Mr. Tom Chapman, Supervisor
U.S. Fish and Wildlife Service
New England Field Office
70 Commercial St., Suite 300
Concord, NH 03301

Dear Mr. Chapman:

The U.S. Army Reserve (USAR), 99th Regional Support Command (RSC) is proposing to construct a new Armed Forces Reserve Center (AFRC) in the vicinity of White River Junction, Vermont as part of the restructuring of military bases as required by the Defense Base Closure and Realignment Act that became law in November 2005. The Army will provide the necessary facilities to implement the recommendations, and is preparing an environmental assessment (EA) to analyze and document the environmental effects. The purpose of this letter is to obtain your Department's comments on this project pursuant to the Fish and Wildlife Coordination Act, as amended. A location map is enclosed that indicates the area of the proposed project. A brief description of the proposed project is presented below.

The following realignment actions are to occur in the vicinity of White River Junction, Vermont:

"Close Chester Memorial Army Reserve Center and Organizational Maintenance Shop, Chester, VT and Berlin Army Reserve Center, Berlin, VT and relocate all units to a new Armed Forces Reserve Center with an Organizational Maintenance Facility in the vicinity of White River Junction, VT if the Army is able to acquire land suitable for the construction of the facilities. The new AFRC and OMS shall have the capability to accommodate units from the following facilities: Vermont Army National Guard Armories in Ludlow, North Springfield and Windsor, VT, if the state decides to relocate those National Guard units."

The Proposed Action includes the construction of a new 300-member AFRC, Organizational Maintenance Shop (OMS) and an unheated storage building, and there would be parking for about 94 privately-owned vehicles (taking into account carpooling). The expected maximum use of the facility would be about 104 members per weekend. The facility would employ about 10 permanent full-time personnel from the 99th RSC and Vermont Army National Guard. Site improvements are expected to occupy about 14 acres. Enclosure 1 provides further details of the Proposed Action.

The Army has selected two sites to analyze in the EA. Enclosure 2 shows the locations of these alternatives.

Alternative 1 - North Hartland Road Site

The North Hartland Road Site is located between Route 5 and I-91 and consists of a portion of a +/- 65.5 acre parcel currently owned by the Town of Hartford, Vermont. The Army plans to acquire about 17 acres of this site; the rest of the parcel would be retained by the Town of Hartford.

A portion of the site is plowed and presently leased for agricultural use. A commercial nursery and one residence are located along Route 5 South in the southern half of the property. The south side of the parcel abuts a ravine with a stream. Further south of the stream, there is a sanitary municipal solid waste landfill that was closed in 1992 and an operating transfer station and recycle center. The northernmost portion of the property is intended for construction of a recreational area/sports park by the Town of Hartford. A cellular telephone tower and a radio broadcast tower are located on the parcel, generally between the northern and southern portions of the parcel. Enclosure 3 shows an aerial photograph of the North Hartland Road Site. Enclosure 4 shows photographs of the site.

This site has more acceptable geographic conditions and fewer operational constraints than those of Alternative 2. At least seven potential site plans, including varying floor plans, were developed for this site. The site plan to be analyzed in the EA was selected based on the following criteria: avoiding slopes and low area; maximizing distance from creek and nearby residence; minimizing visibility of MEP; ensuring appropriate and safe site ingress and egress; considering viewshed from the proposed recreation area/sports park; and general approval by the Town of Hartford.

Summary of Alternative 1 Potential Effects on Protected Species and Habitats

Protected Species: The 99th RSC is not aware of any resident protected species at the North Hartland Road Site. The U.S. Fish and Wildlife Service (USFWS) New England Field Office website was accessed to determine if any federally-listed species occur in the vicinity of the project location. The three-step process provided on the website was followed, including reviewing the information Vermont's Nongame and Natural Heritage Program website. No rare, threatened, or endangered species or natural communities of concern are known to occur in the vicinity of the project location. No impacts to any Federal or State protected species are expected to occur as a result of the Proposed Action.

Habitat: The AFRC and OMS would be built on land that is open and plowed and presently leased for agricultural use. Additionally, the Town of Hartford uses the site for land application of wastewater treatment biosolids under State permit. Animal waste is also applied to the non-planted areas. The south side of the parcel abuts a ravine with a stream. Stands of white birch, maple, eastern red oak, and hemlock occur around the perimeter of the property and in the center, essentially dividing the property in half. These stands would be largely left in tact.

Our initial assessment indicates that the planned facilities would result in the direct long-term loss of less than one percent of prime farmland, approximately 5 acres of farmland of statewide importance, and approximately 7 acres of prime farmland if drained. The RSC is subject to the Farmland Protection Policy Act, and is coordinating with the Natural Resources Conservation Service in White River Junction, concerning loss of prime farmland.

Our initial assessment indicates the planned facilities would result in the direct long-term loss of approximately 14 acres of very low productivity habitat for ground-dwelling or nesting species and that post-construction impacts to wildlife from operation of the AFRC and OMS would not be significant.

Wetlands: A wetlands delineation will be conducted to determine if an isolated wetland feature near the southeast corner of the site is considered to be a jurisdictional wetland under Section 404 of the CWA. If this wetland constitutes a jurisdictional wetland, and if the final construction footprint cannot be changed to avoid the wetland, appropriate mitigation would be coordinated and developed through USACE. If it is not a regulatory wetland, special consideration would still have to be made during the design, construction, and operational phases of the AFRC to account for the presence of this feature.

Alternative 2 – Drew Road Site Alternative

The Drew Road Site is located on Route 5 just north of Drew Road in White River Junction, Vermont (see Enclosure 2). The site has 1,200 feet of frontage on Route 5, consists of approximately 15 acres, and is about 50 percent open field and 50 percent forested. The forested area is undulating and rocky, with exposed bedrock in several places. The site is owned by a private development company and is available for purchase.

Greater site preparation costs and proximity to rural residential areas make this site less desirable than the North Hartland Road Site Alternative. Enclosure 5 shows an aerial photograph of the Alternative 2 site. Enclosure 6 shows photographs of the site.

Summary of Alternative 2 Potential Effects on Protected Species and Habitats

Protected Species: The 99th RSC is not aware of any resident protected species at the Alternative 2 site. The USFWS New England Field Office website was accessed to determine if any federally-listed species occur in the vicinity of the project location. The three-step process provided on the website was followed, including reviewing the information Vermont's Nongame and Natural Heritage Program website. No rare, threatened, or endangered species or natural communities of concern are known to occur in the vicinity of the project location. No impacts to any Federal or State protected species are expected to occur as a result of the Proposed Action.

Habitat: The Alternative 2 site is approximately 50 percent open field and 50 percent wooded, with dense stands of oak, maple, and hemlock on the northern half. The terrain of the open field is gently sloping while the forested area is steep with rocky outcroppings. There is one residence on this parcel and residences located on adjacent parcels to the west, south and east.

Our initial assessment indicates the planned facilities would result in the direct long-term loss of approximately 2.4 acres of prime farmland, approximately 2.4 acres of farmland of statewide importance, and approximately 10 acres of habitat for ground-dwelling or nesting species and/or woodland species. The post-construction impacts to wildlife from operation of the AFRC and OMS are not expected to result in a significant change.

Wetlands: No wetlands were observed during the site visit, and no jurisdictional wetlands on the property are recorded in the National Wetlands Inventory (USDI-USFWS 1995).

Your office will be provided with a copy of the Draft EA when it is complete; however, we would appreciate any initial input you may have on the proposed action and the sites being considered. The Army does not anticipate any impacts to any Federal or State protected species as a result of the Proposed Action. If you have questions or require further information, please contact Mr. Craig Kelley at the following:

Craig Kelley
BRAC Environment Coordinator
99th Regional Support Command (East)
11 Saratoga Boulevard
Devens, MA 01432
(978) 796-2512
Craig.A.Kelley@NAE02.USACE.Army.mil

Sincerely,



JOSEPH H. LEDLOW
Colonel, US Army Reserve
Regional Engineer

Encls:

- 1 – Description of the Proposed Action
- 2 – Location of Alternative 1 and Alternative 2 Sites
- 3 – Aerial Photograph of North Hartland Road Site, Alternative 1
- 4 – Photographs of North Hartland Road Site, Alternative 1
- 5 – Aerial Photograph of Alternative 2
- 6 – Photographs of Drew Road Site, Alternative 2

CF:

Mr. Anthony Tur
Endangered Species Specialist
U.S. Fish and Wildlife Service
70 Commercial Street, Suite 300
Concord, NH 03301-5087

ATTACHMENT 1
Description of the Proposed Action at a site in the vicinity
of White River Junction, VT

The Proposed Action includes land acquisition and construction of a new 300-member AFRC, OMS, unheated storage building, and open vehicle storage facility on a site in the vicinity of White River Junction, Vermont (see Attachment 2 and Attachment 5). The new facility is to realign the Army Reserve and Army National Guard units, resulting from the closure of the Chester Memorial Army Reserve Center and OMS and the Berlin Army Reserve Center, as directed by BRAC 05. The new AFRC would provide administrative, educational, assembly, kitchen, library, learning center, heated storage, vault, weapons simulator, and physical fitness areas for two Army Reserve units and two Army National Guard units. The OMS would provide work bays and maintenance administrative support. There would also be an unheated storage building and a vehicle storage facility, which would be an open but covered facility, necessary due to the winter weather in the region. Site improvements are expected to occupy approximately 14 acres. The Army would acquire new land for construction of these facilities.

The proposed AFRC and OMS facilities would be permanent construction with reinforced concrete foundations; concrete floor slabs; structural steel frames; masonry veneer walls; standing seam metal roofs; heating, ventilation, and air conditioning (HVAC) systems; and plumbing, mechanical, electrical, and security systems.

The AFRC/OMS/unheated storage complex would consist of the following:

- 50,705-square-foot AFRC training building
- 4,530-square-foot OMS
- 7,434-square-foot unheated storage building
- 14,500-square-foot open vehicle storage facility (open with canopy)

Supporting improvements are also proposed to compliment the facilities, including approximately 8,400 square yards of pavement for privately-owned vehicles and for military equipment parking (MEP); walkways; grading, clearing and landscaping; extension of utility services; drilling and installation of a water supply well; security fencing and gates; and general site improvements. Anti-terrorism/Force Protection (ATFP) safety and security regulations would be incorporated into the facility designs and siting.

The new AFRC would employ approximately ten permanent full-time personnel, and would serve about 300 personnel on a rotating basis, mostly on weekends. The maximum expected use of the new facility would be about 104 members per weekend, and there would be parking for about 94 privately-owned vehicles (taking into account those who would carpool or use public transportation).

Activities at the AFRC would be training-related, with no weapons firing. On training weekends, reservists would either commute to the AFRC or stay in local hotels.

Activities at the OMS would include routine maintenance (e.g., oil change, tire rotation, etc.) or other vehicle repair as required. Occasionally, vehicles from neighboring Reserve Centers that do not have an OMS could be brought to the new OMS for maintenance and/or certain types of repair.

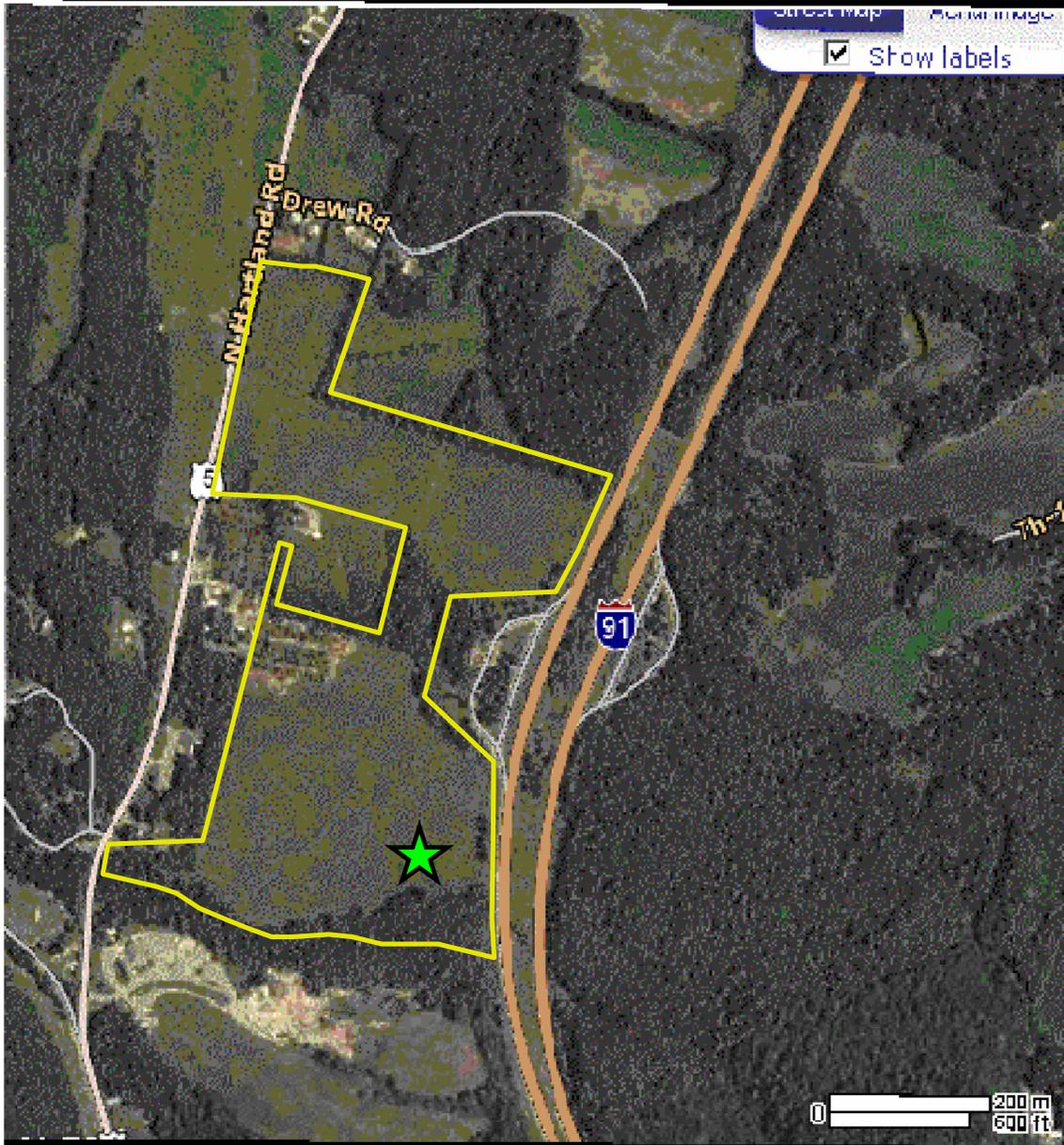
Approximately 140 vehicles are anticipated to be kept on-site as a result of the realignment of Army Reserve and Army National Guard units to the new AFRC. Vehicles would include high mobility multi-purpose wheeled vehicles (HMMWVs or Humvees); semi tractors; dump trucks; full-tracked tractors; road graders; earth scrapers; fuel-dispensing semi-trailers (5,000 gallons); flat bed, cargo, and specialty trailers; and utility trucks. The military vehicles and equipment kept on-site would generally be parked empty or loaded with equipment relevant for training. Occasionally, some of these vehicles could be staged and then moved as a convoy for off-site training.



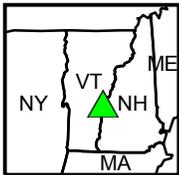
Prepared For:
 U.S Army Corps of Engineers, Mobile District

Attachment 2
 White River Junction Sites





Alternative 1 Aerial View



 Area Considered for Proposed AFRC/OMS

 Property Boundary

AFRC Armed Forces Reserve Center
 OMS Organizational Maintenance Shop



Prepared For:

U.S Army Corps of Engineers, Mobile District

Attachment 3

Aerial Photograph of the North Hartland Road Site --
 Alternative 1



ATTACHMENT 4

Site Photos

North Hartland Road Site –Alternative 1

**PHOTO LOG – Alternative 1 Site (North Hartland Road Site Parcel)
White River Junction, Vermont**

| | | |
|---|----------------------|---|
|  | Photo: | 003 |
| | Location: | North Hartland Road Site, White River Junction, VT |
| | Direction of view: | East |
| | Description/Comment: | View from just East of South access looking east toward rest areas and I-91. Note borrow pit in foreground. |

| | | |
|--|----------------------|---|
|  | Photo: | 025 |
| | Location: | North Hartland Road Site, White River Junction, VT |
| | Direction of view: | Northwest |
| | Description/Comment: | View from Eastern boundary looking Northwest. Note nursery on far side. |

**PHOTO LOG – Alternative 1 Site (North Hartland Road Site Parcel)
White River Junction, Vermont**

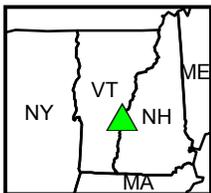
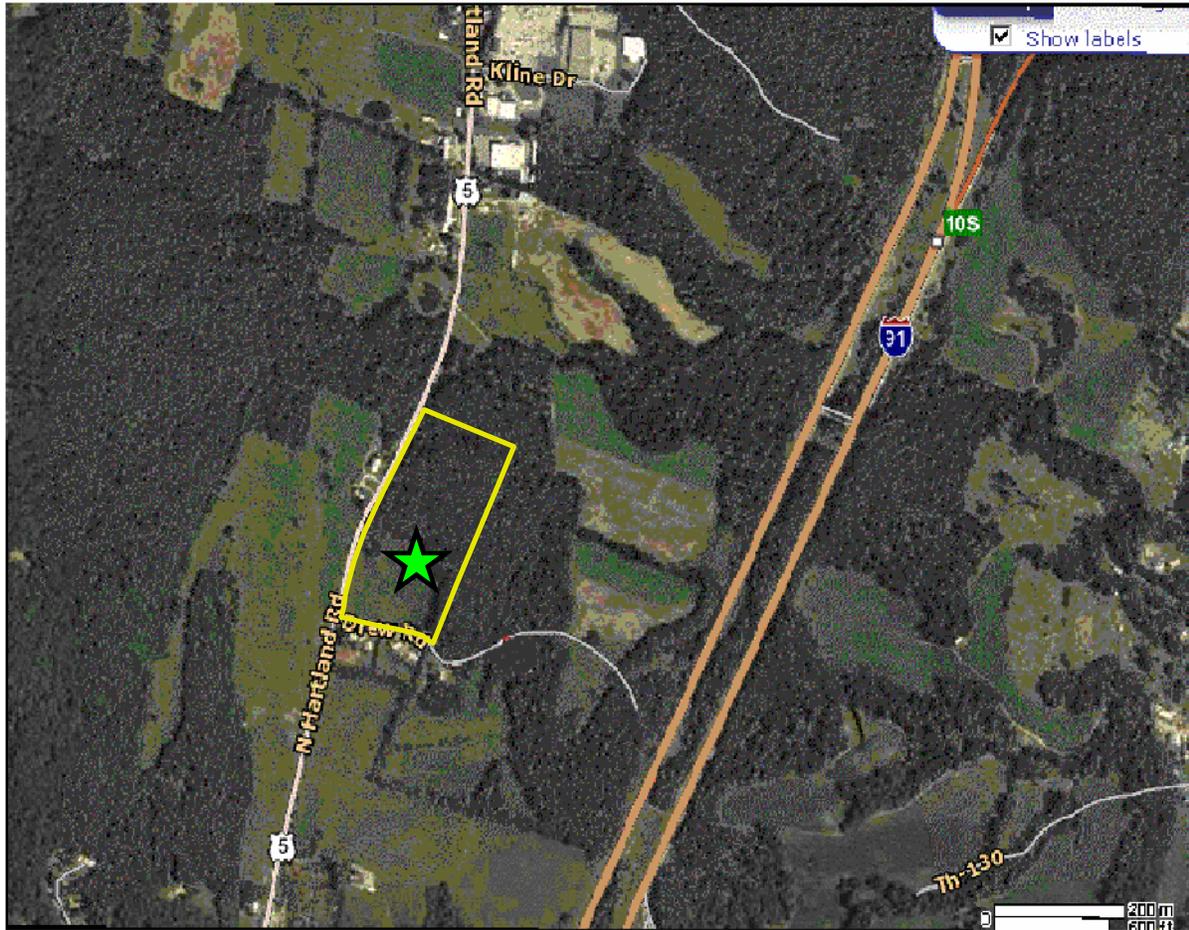
| | | |
|--|-----------------------|--|
|  | Photo: | 032 |
| | Location: | North Hartland Road Site, White River Junction, VT |
| | Direction of view: | South |
| | Description/ Comment: | Southbound I-91 rest area to left (not shown). Cornfield is location of proposed AFRC. |

| | | |
|--|-----------------------|---|
|  | Photo: | 042 |
| | Location: | North Hartland Road Site, White River Junction, VT |
| | Direction of view: | South |
| | Description/ Comment: | Access road through woods. Identified wetlands on both sides of road. Cellular tower access road to left (not shown). |

**PHOTO LOG – Alternative 1 Site (North Hartland Road Site Parcel)
White River Junction, Vermont**

| | | |
|--|----------------------|---|
|  | Photo: | 047 |
| | Location: | North Hartland Road Site, White River Junction, VT |
| | Direction of view: | South |
| | Description/Comment: | North to South view across proposed site. Note nursery on right. This is portion of leased property nursery occupies. |

| | | |
|--|----------------------|---|
|  | Photo: | 048 |
| | Location: | North Hartland Road Site, White River Junction, VT |
| | Direction of view: | Southeast |
| | Description/Comment: | View across proposed site with nursery in rear and rest area parcel on left side. Center-right treeline is Southern boundary. |



 Area Considered for Proposed AFRC/OMS

 Property Boundary

AFRC Armed Forces Reserve Center
 OMS Organizational Maintenance Shop



Prepared For:

U.S Army Corps of Engineers, Mobile District

Attachment 5

Aerial Photograph of the Drew Road Site -- Alternative 2



ATTACHMENT 6

Site Photos

Drew Road Site –Alternative 2

**PHOTO LOG – Alternative 2 (Drew Road Site Parcel)
White River Junction, Vermont**

| | | |
|--|--------------------------|--|
|  | Photo: | 107 |
| | Location: | Drew Road Site, White River Junction, VT |
| | Direction of view: | North |
| | Description/ Comment: | Looking North from Southern boundary along Drew Road. Note residence on right side. US Route 5 South along left side (not shown). |

| | | |
|--|--------------------------|---|
|  | Photo: | 112 |
| | Location: | Drew Road Site, White River Junction, VT |
| | Direction of view: | Southwest |
| | Description/ Comment: | Adjacent residential property. US Route 5 South follows utility pole line running left to right in center. |

**PHOTO LOG – Alternative 2 (Drew Road Site Parcel)
White River Junction, Vermont**



| | |
|--------------------------|--|
| Photo: | 119 |
| Location: | Drew Road Site, White River Junction, VT |
| Direction of view: | East |
| Description/ Comment: | Note steep incline and rock at surface. |



| | |
|--------------------------|---|
| Photo: | 125 |
| Location: | Drew Road Site, White River Junction, VT |
| Direction of view: | Northwest |
| Description/ Comment: | Note abandoned automobiles on land surface. |

PHOTO LOG – Alternative 2 (Drew Road Site Parcel)
White River Junction, Vermont

| | | |
|--|--------------------------|--|
|  | Photo: | 140 |
| | Location: | Drew Road Site, White River Junction, VT |
| | Direction of view: | South |
| | Description/ Comment: | Rock wall on parcel boundary |

| | | |
|--|--------------------------|--|
|  | Photo: | 156 |
| | Location: | Drew Road Site, White River Junction, VT |
| | Direction of view: | East |
| | Description/ Comment: | Suspected building foundation. |



DEPARTMENT OF THE ARMY
HEADQUARTERS, 99TH REGIONAL SUPPORT COMMAND
5522 NASHVILLE STREET
FORT DIX, NEW JERSEY 08640-5000



REPLY TO
ATTENTION OF

January 14, 2009

Laura Q. Pelosi
Commissioner
Vermont Department of Environmental Conservation
Commissioner's Office
103 South Main Street, 1 South Building
Waterbury, Vermont 05671-0401

Dear Ms. Pelosi,

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A portion of the site is plowed and presently leased for agricultural use. A commercial nursery and one residence are located along Route 5 South in the southern half of the property. The south side of the parcel abuts a ravine with a stream. Further south of the stream, there is a sanitary municipal solid waste landfill that was closed in 1992 and an operating transfer station and recycle center. The northernmost portion of the property is intended for construction of a recreational area/sports park by the Town of Hartford. A cellular telephone tower and a radio broadcast tower are located on the parcel, generally between the northern and southern portions of the parcel. Attachment 3 shows an aerial photograph of the North Hartland Road Site. Attachment 4 shows photographs of the site.

This site has more acceptable geographic conditions and fewer operational constraints than those of Alternative 2. At least seven potential site plans, including varying floor plans, were developed for this site. The site plan to be analyzed in the EA was selected based on the following criteria: avoiding slopes and low area; maximizing distance from creek and nearby residence; minimizing visibility of MEP; ensuring appropriate and safe site ingress and egress; considering viewshed from the proposed recreation area/sports park; and general approval by the Town of Hartford.

Summary of Alternative 1 Potential Effects on Protected Species and Habitats

Protected Species: The 99th RSC is not aware of any resident protected species at the North Hartland Road Site. The U.S. Fish and Wildlife Service (USFWS) New England Field Office website was accessed to determine if any federally-listed species occur in the vicinity of the project location. The three-step process provided on the website was followed, including reviewing the information Vermont's Nongame and Natural Heritage Program website. No rare, threatened, or endangered species or natural communities of concern are known to occur in the vicinity of the project location. No impacts to any Federal or State protected species are expected to occur as a result of the Proposed Action.

Habitat: The AFRC and OMS would be built on land that is open and plowed and presently leased for agricultural use. Additionally, the Town of Hartford uses the site for land application of wastewater treatment biosolids under State permit. Animal waste is also applied to the non-planted areas. The south side of the parcel abuts a ravine with a stream. Stands of white birch, maple, eastern red oak, and hemlock occur around the perimeter of the property and in the center, essentially dividing the property in half. These stands would be largely left in tact.

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Wetlands: A wetlands delineation will be conducted to determine if an isolated wetland feature near the southeast corner of the site is considered to be a jurisdictional wetland under Section 404 of the CWA. If this wetland constitutes a jurisdictional wetland, and if the final construction footprint cannot be changed to avoid the wetland, appropriate mitigation would be coordinated and developed through USACE. If it is not a regulatory wetland, special consideration would still have to be made during the design, construction, and operational phases of the AFRC to account for the presence of this feature.

Alternative 2 – Drew Road Site Alternative

The Drew Road Site is located on Route 5 just north of Drew Road in White River Junction, Vermont (see Attachment 2). The site has 1,200 feet of frontage on Route 5, consists of approximately 15 acres, and is about 50 percent open field and 50 percent forested. The forested area is undulating and rocky, with exposed bedrock in several places. The site is owned by a private development company and is available for purchase.

Greater site preparation costs and proximity to rural residential areas make this site less desirable than the North Hartland Road Site Alternative. Attachment 5 shows an aerial photograph of the Alternative 2 site. Attachment 6 shows photographs of the site.

Summary of Alternative 2 Potential Effects on Protected Species and Habitats

Protected Species: The 99th RSC is not aware of any resident protected species at the Alternative 2 site. The USFWS New England Field Office website was accessed to determine if any federally-listed species occur in the vicinity of the project location. The three-step process provided on the website was followed, including reviewing the information Vermont's Nongame and Natural Heritage Program website. No rare, threatened, or endangered species or natural communities of concern are known to occur in the vicinity of the project location. No impacts to any Federal or State protected species are expected to occur as a result of the Proposed Action.

Habitat: The Alternative 2 site is approximately 50 percent open field and 50 percent wooded, with dense stands of oak, maple, and hemlock on the northern half. The terrain of the open field is gently sloping while the forested area is steep with rocky outcroppings. There is one residence on this parcel and residences located on adjacent parcels to the west, south and east.

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Wetlands: No wetlands were observed during the site visit, and no jurisdictional wetlands on the property are recorded in the National Wetlands Inventory (USDI-USFWS 1995).

Your office will be provided with a copy of the Draft EA when it is complete; however, we would appreciate any initial input you may have on the proposed action and the sites being considered. The Army does not anticipate any impacts to any Federal or State protected species as a result of the Proposed Action. If you have questions or require further information, please contact Mr. Craig Kelley at the following:

Craig Kelley, 99th RSC
NEPA Coordinator
(978) 790-2515
Craig.A.Kelley@usace.army.mil

Sincerely,



JOSEPH H. LEDLOW
Colonel, US Army Reserve
Regional Engineer

Attachments:

- Attachment 1 – Description of the Proposed Action
- Attachment 2 – Location of Alternative 1 and Alternative 2 Sites
- Attachment 3 – Aerial Photograph of North Hartland Road Site, Alternative 1
- Attachment 4 – Photographs of North Hartland Road Site, Alternative 1
- Attachment 5 – Aerial Photograph of Alternative 2
- Attachment 6 – Photographs of Drew Road Site, Alternative 2

Copy to:

Ms. Rebecca Chalmers
District Wetlands Ecologist
Vermont Department of Environmental Conservation
Barre Regional Office
5 Perry St., Suite 80
Barre, VT 05641-4268



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
HEADQUARTERS, 99TH REGIONAL SUPPORT COMMAND
5522 NASHVILLE STREET
FORT DIX, NEW JERSEY 08640-5000



December 19, 2008

Directorate of Public Works

Wayne Laroche
Commissioner
Vermont Fish & Wildlife Department
103 South Main Street
Waterbury, VT 05671-0501

Dear Mr. Laroche:

The U.S. Army Reserve (USAR), 99th Regional Support Command (RSC) is proposing to construct a new Armed Forces Reserve Center (AFRC) in the vicinity of White River Junction, Vermont as part of the restructuring of military bases as required by the Defense Base Closure and Realignment Act that became law in November 2005. The Army will provide the necessary facilities to implement the recommendations, and is preparing an environmental assessment (EA) to analyze and document the environmental effects. The purpose of this letter is to obtain your Department's comments on this project pursuant to the Fish and Wildlife Coordination Act, as amended. A location map is enclosed that indicates the area of the proposed project. A brief description of the proposed project is presented below.

The following realignment actions are to occur in the vicinity of White River Junction, Vermont:

"Close Chester Memorial Army Reserve Center and Organizational Maintenance Shop, Chester, VT and Berlin Army Reserve Center, Berlin, VT and relocate all units to a new Armed Forces Reserve Center with an Organizational Maintenance Facility in the vicinity of White River Junction, VT if the Army is able to acquire land suitable for the construction of the facilities. The new AFRC and OMS shall have the capability to accommodate units from the following facilities: Vermont Army National Guard Armories in Ludlow, North Springfield and Windsor, VT, if the state decides to relocate those National Guard units."

The Proposed Action includes the construction of a new 300-member AFRC, Organizational Maintenance Shop (OMS) and an unheated storage building, and there would be parking for about 94 privately-owned vehicles (taking into account carpooling). The expected maximum use of the facility would be about 104 members per weekend. The facility would employ about 10 permanent full-time personnel from the 99th RSC and Vermont Army National Guard. Site improvements are expected to occupy about 14 acres. Enclosure 1 provides further details of the Proposed Action.

The Army has selected two sites to analyze in the EA. Enclosure 2 shows the locations of these alternatives.

Alternative 1 - North Hartland Road Site

The North Hartland Road Site is located between Route 5 and I-91 and consists of a portion of a +/- 65.5 acre parcel currently owned by the Town of Hartford, Vermont. The Army plans to acquire about 17 acres of this site; the rest of the parcel would be retained by the Town of Hartford.

A portion of the site is plowed and presently leased for agricultural use. A commercial nursery and one residence are located along Route 5 South in the southern half of the property. The south side of the parcel abuts a ravine with a stream. Further south of the stream, there is a sanitary municipal solid waste landfill that was closed in 1992 and an operating transfer station and recycle center. The northernmost portion of the property is intended for construction of a recreational area/sports park by the Town of Hartford. A cellular telephone tower and a radio broadcast tower are located on the parcel, generally between the northern and southern portions of the parcel. Enclosure 3 shows an aerial photograph of the North Hartland Road Site. Enclosure 4 shows photographs of the site.

This site has more acceptable geographic conditions and fewer operational constraints than those of Alternative 2. At least seven potential site plans, including varying floor plans, were developed for this site. The site plan to be analyzed in the EA was selected based on the following criteria: avoiding slopes and low area; maximizing distance from creek and nearby residence; minimizing visibility of MEP; ensuring appropriate and safe site ingress and egress; considering viewshed from the proposed recreation area/sports park; and general approval by the Town of Hartford.

Summary of Alternative 1 Potential Effects on Protected Species and Habitats

Protected Species: The 99th RSC is not aware of any resident protected species at the North Hartland Road Site. The U.S. Fish and Wildlife Service (USFWS) New England Field Office website was accessed to determine if any federally-listed species occur in the vicinity of the project location. The three-step process provided on the website was followed, including reviewing the information Vermont's Nongame and Natural Heritage Program website. No rare, threatened, or endangered species or natural communities of concern are known to occur in the vicinity of the project location. No impacts to any Federal or State protected species are expected to occur as a result of the Proposed Action.

Habitat: The AFRC and OMS would be built on land that is open and plowed and presently leased for agricultural use. Additionally, the Town of Hartford uses the site for land application of wastewater treatment biosolids under State permit. Animal waste is also applied to the non-planted areas. The south side of the parcel abuts a ravine with a stream. Stands of white birch, maple, eastern red oak, and hemlock occur around the perimeter of the property and in the center, essentially dividing the property in half. These stands would be largely left in tact.

Our initial assessment indicates that the planned facilities would result in the direct long-term loss of less than one percent of prime farmland, approximately 5 acres of farmland of statewide importance, and approximately 7 acres of prime farmland if drained. The RSC is subject to the Farmland Protection Policy Act, and is coordinating with the Natural Resources Conservation Service in White River Junction, concerning loss of prime farmland.

Our initial assessment indicates the planned facilities would result in the direct long-term loss of approximately 14 acres of very low productivity habitat for ground-dwelling or nesting species and that post-construction impacts to wildlife from operation of the AFRC and OMS would not be significant.

Wetlands: A wetlands delineation will be conducted to determine if an isolated wetland feature near the southeast corner of the site is considered to be a jurisdictional wetland under Section 404 of the CWA. If this wetland constitutes a jurisdictional wetland, and if the final construction footprint cannot be changed to avoid the wetland, appropriate mitigation would be coordinated and developed through USACE. If it is not a regulatory wetland, special consideration would still have to be made during the design, construction, and operational phases of the AFRC to account for the presence of this feature.

Alternative 2 – Drew Road Site Alternative

The Drew Road Site is located on Route 5 just north of Drew Road in White River Junction, Vermont (see Enclosure 2). The site has 1,200 feet of frontage on Route 5, consists of approximately 15 acres, and is about 50 percent open field and 50 percent forested. The forested area is undulating and rocky, with exposed bedrock in several places. The site is owned by a private development company and is available for purchase.

Greater site preparation costs and proximity to rural residential areas make this site less desirable than the North Hartland Road Site Alternative. Enclosure 5 shows an aerial photograph of the Alternative 2 site. Enclosure 6 shows photographs of the site.

Summary of Alternative 2 Potential Effects on Protected Species and Habitats

Protected Species: The 99th RSC is not aware of any resident protected species at the Alternative 2 site. The USFWS New England Field Office website was accessed to determine if any federally-listed species occur in the vicinity of the project location. The three-step process provided on the website was followed, including reviewing the information Vermont's Nongame and Natural Heritage Program website. No rare, threatened, or endangered species or natural communities of concern are known to occur in the vicinity of the project location. No impacts to any Federal or State protected species are expected to occur as a result of the Proposed Action.

Habitat: The Alternative 2 site is approximately 50 percent open field and 50 percent wooded, with dense stands of oak, maple, and hemlock on the northern half. The terrain of the open field is gently sloping while the forested area is steep with rocky outcroppings. There is one residence on this parcel and residences located on adjacent parcels to the west, south and east.

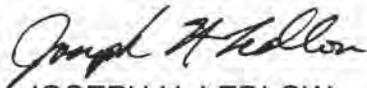
Our initial assessment indicates the planned facilities would result in the direct long-term loss of approximately 2.4 acres of prime farmland, approximately 2.4 acres of farmland of statewide importance, and approximately 10 acres of habitat for ground-dwelling or nesting species and/or woodland species. The post-construction impacts to wildlife from operation of the AFRC and OMS are not expected to result in a significant change.

Wetlands: No wetlands were observed during the site visit, and no jurisdictional wetlands on the property are recorded in the National Wetlands Inventory (USDI-USFWS 1995).

Your office will be provided with a copy of the Draft EA when it is complete; however, we would appreciate any initial input you may have on the proposed action and the sites being considered. The Army does not anticipate any impacts to any Federal or State protected species as a result of the Proposed Action. If you have questions or require further information, please contact Mr. Craig Kelley at the following:

Craig Kelley
BRAC Environment Coordinator
99th Regional Support Command (East)
11 Saratoga Boulevard
Devens, MA 01432
(978) 796-2512
Craig.A.Kelley@NAE02.USACE.Army.mil

Sincerely,



JOSEPH H. LEDLOW
Colonel, US Army Reserve
Regional Engineer

Encls:

- 1 – Description of the Proposed Action
- 2 – Location of Alternative 1 and Alternative 2 Sites
- 3 – Aerial Photograph of North Hartland Road Site, Alternative 1
- 4 – Photographs of North Hartland Road Site, Alternative 1
- 5 – Aerial Photograph of Alternative 2
- 6 – Photographs of Drew Road Site, Alternative 2

CF:

Mr. Forrest Hammond
Wildlife Biologist
Vermont Fish & Wildlife Department
100 Mineral Street, Suite 302
Springfield, VT 05156

From: Stuart, Martha - White River Jct, VT [mailto:Martha.Stuart@vt.usda.gov]
Sent: Friday, January 09, 2009 9:03 AM
To: melissar@ageiss.com
Subject: RE: Farmland Conversion Impact Rating - Town of Hartford, Vermont

Hello Melissa,

As far as the Farmland Protection Policy Act is concerned, you are done except for letting me know which site was selected by sending a copy of the completed form back after the final selection. Since the project concerns construction for national defense, it is not really subject to FPPA. The two sites are also quite close in their FPPA rankings, and neither rank particularly high. Whichever site is selected, you could safely say that the project is consistent with FPPA.

Hope that helps.
Martha

-----Original Message-----

From: Stuart, Martha - White River Jct, VT [mailto:Martha.Stuart@vt.usda.gov]
Sent: Monday, January 05, 2009 4:28 PM
To: Kelley, Craig A NAE
Subject: Farmland Conversion Impact Rating - Town of Hartford, Vermont

Mr. Kelley,

I have completed the NRCS portions of the Farmland Conversion Impact Rating (AD-1006) for the Armed Forces Reserve Center in Hartford, Vermont.

Should

I

send the completed form to you at Devens or to Col. Ledlow at Fort Dix (or both)?

Martha

Martha H. Stuart
Soil Scientist/Database Specialist/FPPA Contact USDA-Natural Resources
Conservation Service
28 FarmVu Drive
White River Junction, VT 05001
802-295-7942 ext. 28

Vermont Soils Web Site:
<http://www.vt.nrcs.usda.gov/Soils/index.html>

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency) Date Of Land Evaluation Request 12/5/08

Name Of Project Armed Forces Reserve Center Federal Agency Involved U.S. Army Corps of Engineers

Proposed Land Use Armed Forces Training Facility County And State Town of Hartford, Windsor County, Vermont

PART II (To be completed by NRCS) Date Request Received By NRCS 1/2/09

Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form). Yes No Acres Irrigated 0 Average Farm Size 129 acres

Major Crop(s) dairy-corn silage Farmable Land In Govt. Jurisdiction Acres: 449,307 % 72 Amount Of Farmland As Defined in FPPA Acres: 100,423 % 16

Name Of Land Evaluation System Used Windsor County Name Of Local Site Assessment System defined below Date Land Evaluation Returned By NRCS 1/6/09

PART III (To be completed by Federal Agency) Alternative Site Rating

| | Site A | Site B | Site C | Site D |
|---|--------|--------|--------|--------|
| A. Total Acres To Be Converted Directly | 12.1 | 4.8 | | |
| B. Total Acres To Be Converted Indirectly | 0.0 | 0.0 | | |
| C. Total Acres In Site | 12.1 | 4.8 | 0.0 | 0.0 |

PART IV (To be completed by NRCS) Land Evaluation Information

| | | | | |
|--|------|------|--|--|
| A. Total Acres Prime And Unique Farmland | 0.1 | 2.4 | | |
| B. Total Acres Statewide And Local Important Farmland | 4.6 | 2.6 | | |
| C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted | 0.0 | 0.0 | | |
| D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value | 12.9 | 22.4 | | |

PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)

| | | | | |
|--|----|----|---|---|
| | 60 | 53 | 0 | 0 |
|--|----|----|---|---|

PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b)) Maximum Points

| | | | | | |
|--|------------|-----------|-----------|----------|----------|
| 1. Area In Nonurban Use | 15 | 15 | 11 | | |
| 2. Perimeter In Nonurban Use | 10 | 8 | 5 | | |
| 3. Percent Of Site Being Farmed | 20 | 7 | 20 | | |
| 4. Protection Provided By State And Local Government | 20 | 20 | 20 | | |
| 5. Distance From Urban Builtup Area | 15 | 5 | 0 | | |
| 6. Distance To Urban Support Services | 15 | 0 | 0 | | |
| 7. Size Of Present Farm Unit Compared To Average | 10 | 0 | 0 | | |
| 8. Creation Of Nonfarmable Farmland | 10 | 10 | 10 | | |
| 9. Availability Of Farm Support Services | 5 | 5 | 5 | | |
| 10. On-Farm Investments | 20 | 10 | 20 | | |
| 11. Effects Of Conversion On Farm Support Services | 10 | 0 | 0 | | |
| 12. Compatibility With Existing Agricultural Use | 10 | 5 | 5 | | |
| TOTAL SITE ASSESSMENT POINTS | 160 | 85 | 96 | 0 | 0 |

PART VII (To be completed by Federal Agency)

| | | | | | |
|---|------------|------------|------------|----------|----------|
| Relative Value Of Farmland (From Part V) | 100 | 60 | 53 | 0 | 0 |
| Total Site Assessment (From Part VI above or a local site assessment) | 160 | 85 | 96 | 0 | 0 |
| TOTAL POINTS (Total of above 2 lines) | 260 | 145 | 149 | 0 | 0 |

Site Selected: Date Of Selection Was A Local Site Assessment Used? Yes No

Reason For Selection:



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087
<http://www.fws.gov/northeast/newenglandfieldoffice>

January 2, 2009

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/northeast/newenglandfieldoffice/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 at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

Stockbridge-Munsee Tribal Historic Preservation Office

Sherry White - Tribal Historic Preservation Officer

W13447 Camp 14 Road

P.O. Box 70

Bowler, WI 54416

January 7, 2009

Craig Kelley
BRAC Environment Coordinator
99th Regional Support Command (East)
11 Saratoga Blvd.
Devens, MA 01432

RE: Proposed construction of an Armed Forces Reserve Center in White River Junction
Windsor County, Vermont

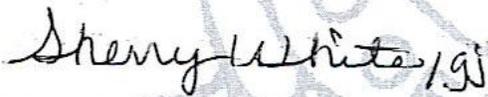
Dear Mr. Kelley:

Thank you for contacting the Stockbridge-Munsee Tribe regarding the above referenced project. The Tribe is committed to protecting archaeological sites that are important to tribal heritage, culture and religion. Furthermore, the Tribe is particularly concerned with archaeological sites that may contain human burial remains and associated funerary objects.

As described in your correspondence, this proposed project is not in a region of archaeological interest to the Stockbridge-Munsee Tribe.

We appreciate your cooperation in notifying the Historic Preservation Office. Should you have any questions, feel free to contact me.

Sincerely,



Sherry White,
Tribal Historic Preservation Officer



State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation

AGENCY OF NATURAL RESOURCES
103 South Main Street
Center Building
Waterbury, Vermont 05671-0301

February 13, 2009

Mr. Craig Kelley, 99th RSC
NEPA Coordinator
Craig.a.kelley@usace.army.mil

Re: Proposed Armed Forces Reserve Center, White River Junction, VT

Dear Mr. Kelley:

Thank you for the opportunity to present comments for consideration in the completion of the Environmental Assessment for the above mentioned project. The Agency of Natural Resources has reviewed the letter with attachments addressed to Ms. Laura Pelosi and provides the following specific comments on the affected environment and the environmental impact of the project. These comments are intended for use as the project proceeds to regulatory review.

- Attached is a Project Review Sheet for each property. The review sheets denote state permits that may be required and provide contact numbers for more program information.
- A review of the initial property assessments indicates wetland areas and small streams associated with Alternative 1 – North Hartland Road Site. The Agency generally recommends a 50 foot, undisturbed, naturally vegetated buffer for these features.

We look forward to continuing to work with you in this process.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeannine McCrumb".

Jeannine McCrumb
Regulatory Review Coordinator

- c Michael S. Adams, US Army Corps of Engineers *via email*
Jonathan Wood, VTANR Secretary *via email*
Laura Pelosi, Commissioner, VTANR Dept. of Environmental Conservation *via email*
Peter Laflamme, Director, VTANR Water Quality Division *via email*
Alan Quackenbush, Chief, VTANR Wetlands Program *via email*
Rebecca Chalmers, VTANR Wetlands Program *via email*
Forrest Hammond, VTANR Dept. of Fish & Wildlife *via email*
Sandra Conant, VTANR Permit Specialist *via email*
Steve Sease, VTANR Planning and Regulatory Management Director *via email*

AGENCY OF NATURAL RESOURCES (ANR) AND NATURAL RESOURCES BOARD

<http://www.anr.state.vt.us/dec/eao/pa/index.htm> / <http://www.nrb.state.vt.us/>

PROJECT REVIEW SHEET ONLY

THIS IS NOT A PERMIT

TOTAL # OF DEC PERMITS: _____
 RESPONSE DATE: _____
 DISTRICT: 3

Town: Hartford

PRE-APPLICATION REVIEW: _____
 PENDING APPLICATION #: _____
 PIN#: _____

| | |
|--|---|
| OWNER OF PROJECT SITE: | APPLICANT OR REPRESENTATIVE: |
| | Joseph Ledlow Colonel, US Army Reserve Dept of the Army, Headquarters, 99 th Regional Support Command 5522 Nashville Street, Fort Dix, NJ 08640-5000 |
| Project Name: Alternative 1 – North Hartland Road Site | |

Based on an oral or **written request** or information provided by Joseph Ledlow, Colonel received on 1/21/09 a project was reviewed on a tract/tracts of land of portion of 65.5 +- acres, located on North Hartland Road. Project is generally described as:

Construction of a new 300-member AFRC, Organizational Maintenance Shop, unheated storage building, parking for 94+- vehicles – use of the facility with about 104 members per week-end 10 permanent full-time personnel

Prior permits from this office:

**PERMITS NEEDED FROM THE DISTRICT ENVIRONMENTAL OFFICE
 PRIOR TO COMMENCEMENT OF CONSTRUCTION**

x I hereby request a jurisdictional opinion from the District Coordinator or Assistant District Coordinator regarding the jurisdiction of 10 V.S.A. Chapter 151 (Act 250) over the project described above.
 _____ Landowner/Agent x Permit Specialist _____ Other Person _____

ACT 250: THIS IS A JURISDICTIONAL OPINION BASED UPON AVAILABLE INFORMATION, AND A WRITTEN REQUEST FROM THE ANR PERMIT SPECIALIST, THE LANDOWNER/AGENT, OR OTHER PERSON. ANY NOTIFIED PARTY OR INTERESTED PERSON AFFECTED BY THE OUTCOME MAY REQUEST RECONSIDERATION FROM THE DISTRICT COORDINATOR (10 V.S.A. § 6007 (c) AND ACT 250 RULE 3 (b) OR MAY APPEAL TO THE ENVIRONMENTAL COURT WITHIN 30 DAYS OF THE ISSUANCE OF THIS OPINION (10 V.S.A. Chapter 220). (#47)

Project: Commercial _____ Residential _____ Municipal _____
 Has the landowner subdivided before? _____ Yes _____ No
 AN ACT 250 PERMIT IS REQUIRED: _____ Yes x No
 BASIS FOR DECISION: _____
 When/where: _____ # of lots: _____
 Copies sent to Statutory Parties: _____ Yes _____ No

Federal Exemption 10VSA § 6092

SIGNATURE: Boolie Sluka for Linda Matteson, Coordinator DATE: 1/29/09
 Assistant District Coordinator Telephone: 802-885-8843
 ADDRESS: District # 3 Environmental Commission, 100 Mineral Street, Suite 305, Springfield, VT 05156-3168

1. **WASTEWATER MANAGEMENT DIVISION REGIONAL OFFICE: PERMIT/APPROVAL REQUIRED?** x Yes _____ No
x Wastewater System Potable Water Supply Permit (#1 & 32) _____ Notice of Permit Requirements (#2) (deferral language)
 _____ Floor drains (#1.2) _____ Campgrounds (#3) _____ Extension of sewer lines #5

REGIONAL ENGINEER ASSIGNED: Jeff Svec, Assistant Regional Engineer (802) 885-8944

SIGNATURE: Sandra Conant DATE: 1/27/09
x Environmental Assistance Division, Permit Specialist, Telephone, 802-885-8850
 _____ Wastewater Management Division, Telephone: 802-885-8849
 ADDRESS: Dept. of Environmental Conservation, 100 Mineral Street, Suite 303, Springfield, VT 05156-3168

****Note: Numbers in Parentheses () refer to Permit Information Sheets in the Vermont Permit Handbook**
http://www.anr.state.vt.us/dec/permit_hb/index.htm

THIS IS A PRELIMINARY, NON-BINDING DETERMINATION REGARDING OTHER PERMITS WHICH YOU MAY NEED PRIOR TO COMMENCEMENT OF CONSTRUCTION. PLEASE CONTACT THE DEPARTMENTS INDICATED BELOW.

2. **WASTEWATER MANAGEMENT DIVISION, ANR (802-241-3822)** **Contact:** _____
 ___ Discharge Permit; pretreatment permits; industrial, municipal (#7.1, 7.2 & 8) ___ Indirect Discharge Permits (#9 & 9.1) ___ Residuals Management (10)
3. **AIR POLLUTION CONTROL DIVISION, ANR (888-520-4879)** **Not enough info** **Contact:** Doug Elliott
 ___ Construction/modification of source (#14) ___ Open Burning (#18) ___ Wood Chip Burners (>90 HP) (#14)
 ___? Furnace Boiler Conversion/Installation (#14) ___ Industrial Process Air Emissions (#14) ___? Diesel Engines (>450 bHP) (#14)
4. **WATER SUPPLY DIVISION, ANR (802-241-3400) (800-823-8500 in VT)** **Contact:** _____
 ___ New Hydrants(#22) ___ >500' waterline construction (#22) ___ Community Water System (CWS) ___ Bottled Water (#20) ___ Operating permit (#21)
 ___ Transient Non-Community water system (TNC) (#21) Capacity Review for Non-transient non-community water systems (NTNC) (#21)
5. **WATER QUALITY DIVISION, ANR** **STORMWATER PERMITS (Hotline 802-241-4320) Dan Mason**
 ___ River Management (241-3770) (Ponds) (#32,1) ___ Construction General Permits >1AC of disturbance (#6.1)
 ___ Shoreland Encroachment (241-3777) (#28) ___? Stormwater from new development or redevelopment sites (#6.2 & 6.3)
 ___ Wetlands (241-3770) (#29) **Christie Witters** ___? Multi-Sector General Permit (MSGP) industrial activities with exposure (#6.4)
 ___ Stream Alteration / Section 401 Water Quality Certificate / Stream Crossing Structures (751-0129/879-5631/786-5906) (#27 & 32)
 ___ Floodplains management (802-241-3759)
6. **WASTE MANAGEMENT DIVISION, ANR** **Contact:** _____
 ___x Notification of Regulated Waste Activity (241-3888) (#36) ___? Underground Storage Tanks (241-3888) (33)
 ___ Lined landfills; transfer stations, recycling facilities drop off (241-3444) (#37, 39, 40) ___ Asbestos Disposal (241-3444)
 ___ Disposal of inert waste, untreated wood & stumps (241-3444) (#41 & 44) ___ Composting Facilities (241-3444) (#43)
 ___ Waste oil burning (241-3888) ___ Waste transporter permit (#35) ___ Used septic system components/stone (#41)
7. **FACILITIES ENGINEERING DIVISION, ANR** **Contact:** _____
 ___ Dam operations (greater than 500,000 cu. ft.) (241-3451) (#45)
 ___ State-funded municipal water/sewer extensions/upgrades and Pollution Control Systems (241-3750)
8. **POLLUTION PREVENTION & MERCURY DISPOSAL HOTLINE (1-800-974-9559)** **Contact:** _____
SMALL BUSINESS & MUNICIPAL COMPLIANCE ASSISTANCE (800-974-9559) **Contact:** Judy Mirro/John Daly
RECYCLING HOTLINE (1-800-932-7100) **Contact:** _____
9. **FISH & WILDLIFE DEPARTMENT (802-241-3700)**
 ___ Nongame & Natural Heritage Program (Threatened & Endangered Species) (#47.4) ___ Stream Obstruction Approval (#47.5)
10. **DEPARTMENT OF PUBLIC SAFETY** **District Office** **Contact:** Bruce Martin & Asst Fire Chief of Hartford
 ___x Construction Permit fire prevention, electrical, plumbing, accessibility (#49, 50, 50.1, 50.2) (Americans with Disabilities Act) 885-8883
 ___ Storage of flammable liquids, explosives ___ LP Gas Storage ___ Hazardous Chemical Use/Tier II Reporting (800-347-0488)
 ___ Plumbing in residences served by public water/sewer with 10 or more customers (#50.2) ___ Boilers and pressure vessels (#50.3)
11. **DEPARTMENT OF HEALTH (800-439-8550 in VT) (802-863-7221) (Lab 800-660-9997)** **Contact:** _____
 ___ Food, lodging, bakeries, food processors (#51, 5.1, 52, 53, 53.1) ___ Program for asbestos control & lead certification (#54, 55, 55.1)
 ___ Children's camps ___ hot Tub Installation & Inspection - Commercial (#51.1)
12. **AGENCY OF HUMAN SERVICES** **Contact:** _____
 ___ Child care facilities (1-800-649-2642 or 802-241-2159) (#57) ___ Residential care homes (241-2345) (Dept. of Aging & Disabilities) (#59)
 ___ Nursing Homes (241-2345) (#59) ___ Assisted Living & Therapeutic Community Residence (241-2345) (#59)
13. **AGENCY OF TRANSPORTATION** **Contact:** _____
 ___x Access to state highways (residential, commercial) (828-2653) (#66) ___ Junkyards (828-2053) (#62)
 ___ Signs (Travel Information Council) (828-2651) (#63) ___ Railroad crossings (828-2710) (#64)
 ___ Development within 500' of a limited access highway (828-2653) (#61) ___ Airports and landing strips (828-2833) (#65)
 ___ Construction within state highway right-of-way (Utilities, Grading, etc.) (828-2653) (#66) ___ Motor vehicle dealer license (828-2067) (#68)
14. **DEPARTMENT OF AGRICULTURE (800-675-9873 or 802-828-3429)** **Contact:** _____
 ___ Use/sale of Pesticides (828-3429) (#72, 73, 74, 75, 76, 77, 78) ___ Slaughter houses, poultry processing (828-3429) (#81)
 ___ Milk Processing Facilities (828-3429) (#83, 83.1, 85, 87) ___ Animal shelters/pet merchant/livestock dealers (828-3429) (#89, 89.1)
 ___ Golf Courses (828-2431) (#71) ___ Weights and measures, Gas Pumps, Scales (828-2436) (#88)
 ___ Green Houses/Nurseries (828-2431) (#79) ___ Retail Sales/Milk/Meat/Poultry/Frozen Dessert/Class "C" Pesticides (828-3429) (#79.1, 80)
 ___ Medium and Large Farm Operations (828-2431)
15. **PUBLIC SERVICE DEPARTMENT Energy Efficiency Div. (888-373-2255) x** ___ VT Building Energy Standards(#47.2)
16. **DIVISION FOR HISTORIC PRESERVATION (802-828-3211)** ___ Historic Buildings (#47.1 & 101) ___ Archeological Sites (47.1 & 101)
17. **DEPARTMENT OF LIQUOR CONTROL (1-800-832-2339)** ___ Liquor Licenses (#90) ___ General Info (1-800-642-3134)
18. **SECRETARY OF STATE (1-802-828-2386)** ___ Business Registration (#90.1) ___ Professional Boards (1-800-439-8683) (#90.2)
19. **DEPARTMENT OF TAXES (802-828-2551 & 828-5787)** ___ Business Taxes (sales & rooms, amusement machines) (#91.92, 93, 94, 95, 96)
20. **DEPARTMENT OF MOTOR VEHICLES (802-828-2070)** ___ Fuel Taxes; Commercial Vehicle (#69-70)
21. **LOCAL PERMITS (SEE YOUR TOWN CLERK, ZONING ADMINISTRATOR, PLANNING COMMISSION, OR PUBLIC WORKS)**
22. **FEDERAL PERMITS U.S. ARMY CORPS OF ENG, 8 Carmichael St., Ste. 205, Essex Jct., VT 05452 (802) 872-2893 (#97, 98,99)**
23. **OTHER:** _____

Sections #3-#24 above have been completed by Permit Specialist Sandra Conant

Date: 2/9/09

I may be reached at 802-885-8850

Rev. 6/6/06

AGENCY OF NATURAL RESOURCES (ANR) AND NATURAL RESOURCES BOARD

<http://www.anr.state.vt.us/dec/eao/pa/index.htm> / <http://www.nrb.state.vt.us/>

PROJECT REVIEW SHEET ONLY

THIS IS NOT A PERMIT

TOTAL # OF DEC PERMITS: _____
 RESPONSE DATE: _____
 DISTRICT: 3

Town: Hartford

PRE-APPLICATION REVIEW: _____
 PENDING APPLICATION #: _____
 PIN#: _____

| | |
|--|---|
| OWNER OF PROJECT SITE: | APPLICANT OR REPRESENTATIVE: |
| | Joseph Ledlow Colonel, US Army Reserve Dept of the Army, Headquarters, 99 th Regional Support Command 5522 Nashville Street, Fort Dix, NJ 08640-5000 |
| Project Name: Alternative 2 – Drew Road Site Alternative | |

Based on an oral or **written request** or information provided by Joseph Ledlow, Colonel received on 1/21/09 a project was reviewed on a tract/tracts of land of portion of 15 +/- acres, located on Route 5. Project is generally described as:

Construction of a new 300-member AFRC, Organizational Maintenance Shop, unheated storage building, parking for 94+- vehicles – use of the facility with about 104 members per week-end 0 10 permanent full-time personnel

Prior permits from this office:

**PERMITS NEEDED FROM THE DISTRICT ENVIRONMENTAL OFFICE
 PRIOR TO COMMENCEMENT OF CONSTRUCTION**

I hereby request a jurisdictional opinion from the District Coordinator or Assistant District Coordinator regarding the jurisdiction of 10 V.S.A. Chapter 151 (Act 250) over the project described above.
 Landowner/Agent Permit Specialist Other Person

ACT 250: THIS IS A JURISDICTIONAL OPINION BASED UPON AVAILABLE INFORMATION, AND A WRITTEN REQUEST FROM THE ANR PERMIT SPECIALIST, THE LANDOWNER/AGENT, OR OTHER PERSON. ANY NOTIFIED PARTY OR INTERESTED PERSON AFFECTED BY THE OUTCOME MAY REQUEST RECONSIDERATION FROM THE DISTRICT COORDINATOR (10 V.S.A. § 6007 (c) AND ACT 250 RULE 3 (b) OR MAY APPEAL TO THE ENVIRONMENTAL COURT WITHIN 30 DAYS OF THE ISSUANCE OF THIS OPINION (10 V.S.A. Chapter 220). (#47)

Project: Commercial Residential Municipal
 Has the landowner subdivided before? Yes No When/where: _____ # of lots: _____
 AN ACT 250 PERMIT IS REQUIRED: Yes No Copies sent to Statutory Parties: Yes No
 BASIS FOR DECISION:

Federal Exemption 10VSA § 6092

SIGNATURE: Boolie Sluka for Linda Matteson, Coordinator DATE: 1/29/09
 Assistant District Coordinator Telephone: 802-885-8843
 ADDRESS: District # 3 Environmental Commission, 100 Mineral Street, Suite 305, Springfield, VT 05156-3168

1. **WASTEWATER MANAGEMENT DIVISION REGIONAL OFFICE: PERMIT/APPROVAL REQUIRED?** Yes No
 Wastewater System Potable Water Supply Permit (#1 & 32) Notice of Permit Requirements (#2) (deferral language)
 Floor drains (#1.2) Campgrounds (#3) Extension of sewer lines #5

REGIONAL ENGINEER ASSIGNED: Jeff Svec, Assistant Regional Engineer (802) 885-8944

SIGNATURE: Sandra Conant DATE: 1/27/09
 Environmental Assistance Division, Permit Specialist, Telephone, 802-885-8850
 Wastewater Management Division, Telephone: 802-885-8849
 ADDRESS: Dept. of Environmental Conservation, 100 Mineral Street, Suite 303, Springfield, VT 05156-3168

****Note: Numbers in Parentheses () refer to Permit Information Sheets in the Vermont Permit Handbook**
<http://www.anr.state.vt.us/dec/permit/hb/index.htm>

THIS IS A PRELIMINARY, NON-BINDING DETERMINATION REGARDING OTHER PERMITS WHICH YOU MAY NEED PRIOR TO COMMENCEMENT OF CONSTRUCTION. PLEASE CONTACT THE DEPARTMENTS INDICATED BELOW.

- 2. WASTEWATER MANAGEMENT DIVISION, ANR (802-241-3822)** **Contact:** _____
 ___ Discharge Permit; pretreatment permits; industrial, municipal (#7.1, 7.2 & 8) ___ Indirect Discharge Permits (#9 & 9.1) ___ Residuals Management (10)
- 3. AIR POLLUTION CONTROL DIVISION, ANR (888-520-4879)** **Not enough info** **Contact:** Doug Elliott
 ___ Construction/modification of source (#14) ___ Open Burning (#18) ___ Wood Chip Burners (>90 HP) (#14)
 ___ Furnace Boiler Conversion/Installation (#14) ___ Industrial Process Air Emissions (#14) ___ Diesel Engines (>450 bHP) (#14)
- 4. WATER SUPPLY DIVISION, ANR (802-241-3400) (800-823-8500 in VT)** **Contact:** _____
 ___ New Hydrants(#22) ___ >500' waterline construction (#22) ___ Community Water System (CWS) ___ Bottled Water (#20) ___ Operating permit (#21)
 ___ Transient Non-Community water system (TNC) (#21) Capacity Review for Non-transient non-community water systems (NTNC) (#21)
- 5. WATER QUALITY DIVISION, ANR** **STORMWATER PERMITS (Hotline 802-241-4320) Dan Mason**
 ___ River Management (241-3770) (Ponds) (#32.1) ___ Construction General Permits >1AC of disturbance (#6.1)
 ___ Shoreland Encroachment (241-3777) (#28) ___ Stormwater from new development or redevelopment sites (#6.2 & 6.3)
 ___ Wetlands (241-3770) (#29) Christie Witters ___ Multi-Sector General Permit (MSGP) industrial activities with exposure (#6.4)
 ___ Stream Alteration / Section 401 Water Quality Certificate / Stream Crossing Structures (751-0129/879-5631/786-5906 (#27 & 32)
 ___ Floodplains management (802-241-3759)
- 6. WASTE MANAGEMENT DIVISION, ANR** **Contact:** _____
x ___ Notification of Regulated Waste Activity (241-3888) (#36) ___ Underground Storage Tanks (241-3888) (33)
 ___ Lined landfills; transfer stations, recycling facilities drop off (241-3444) (#37, 39, 40) ___ Asbestos Disposal (241-3444)
 ___ Disposal of inert waste, untreated wood & stumps (241-3444) (#41 & 44) ___ Composting Facilities (241-3444) (#43)
 ___ Waste oil burning (241-3888) ___ Waste transporter permit (#35) ___ Used septic system components/stone (#41)
- 7. FACILITIES ENGINEERING DIVISION, ANR** **Contact:** _____
 ___ Dam operations (greater than 500,000 cu. ft.) (241-3451) (#45)
 ___ State-funded municipal water/sewer extensions/upgrades and Pollution Control Systems (241-3750)
- 8. POLLUTION PREVENTION & MERCURY DISPOSAL HOTLINE (1-800-974-9559)** **Contact:** _____
SMALL BUSINESS & MUNICIPAL COMPLIANCE ASSISTANCE (800-974-9559) **Contact:** Judy Mirro/John Daly
RECYCLING HOTLINE (1-800-932-7100) **Contact:** _____
- 9. FISH & WILDLIFE DEPARTMENT (802-241-3700)**
 ___ Nongame & Natural Heritage Program (Threatened & Endangered Species) (#47.4) ___ Stream Obstruction Approval (#47.5)
- 10. DEPARTMENT OF PUBLIC SAFETY** **District Office** **Contact:** Bruce Martin & Asst Fire Chief of Hartford
x ___ Construction Permit fire prevention, electrical, plumbing, accessibility (#49, 50, 50.1, 50.2) (Americans with Disabilities Act) 885-8883
 ___ Storage of flammable liquids, explosives ___ LP Gas Storage ___ Hazardous Chemical Use/Tier II Reporting (800-347-0488)
 ___ Plumbing in residences served by public water/sewer with 10 or more customers (#50.2) ___ Boilers and pressure vessels (#50.3)
- 11. DEPARTMENT OF HEALTH (800-439-8550 in VT) (802-863-7221) (Lab 800-660-9997)** **Contact:** _____
 ___ Food, lodging, bakeries, food processors (#51, 5.1, 52, 53, 53.1) ___ Program for asbestos control & lead certification (#54, 55, 55.1)
 ___ Children's camps ___ hot Tub Installation & Inspection - Commercial (#51.1)
- 12. AGENCY OF HUMAN SERVICES** **Contact:** _____
 ___ Child care facilities (1-800-649-2642 or 802-241-2159) (#57) ___ Residential care homes (241-2345) (Dept. of Aging & Disabilities) (#59)
 ___ Nursing Homes (241-2345) (#59) ___ Assisted Living & Therapeutic Community Residence (241-2345) (#59)
- 13. AGENCY OF TRANSPORTATION** **Contact:** _____
 ___ Access to state highways (residential, commercial) (828-2653) (#66) ___ Junkyards (828-2053) (#62)
 ___ Signs (Travel Information Council) (828-2651) (#63) ___ Railroad crossings (828-2710) (#64)
 ___ Development within 500' of a limited access highway (828-2653) (#61) ___ Airports and landing strips (828-2833) (#65)
 ___ Construction within state highway right-of-way (Utilities, Grading, etc.) (828-2653) (#66) ___ Motor vehicle dealer license (828-2067) (#68)
- 14. DEPARTMENT OF AGRICULTURE (800-675-9873 or 802-828-3429)** **Contact:** _____
 ___ Use/sale of Pesticides (828-3429) (#72, 73, 74, 75, 76, 77, 78) ___ Slaughter houses, poultry processing (828-3429) (#81)
 ___ Milk Processing Facilities (828-3429) (#83, 83.1, 85, 87) ___ Animal shelters/pet merchant/livestock dealers (828-3429) (#89, 89.1)
 ___ Golf Courses (828-2431) (#71) ___ Weights and measures, Gas Pumps, Scales (828-2436) (#88)
 ___ Green Houses/Nurseries (828-2431) (#79) ___ Retail Sales/Milk/Meat/Poultry/Frozen Dessert/Class "C" Pesticides (828-3429) (#79.1, 80)
 ___ Medium and Large Farm Operations (828-2431)
- 15. PUBLIC SERVICE DEPARTMENT Energy Efficiency Div. (888-373-2255) x** ___ VT Building Energy Standards(#47.2)
- 16. DIVISION FOR HISTORIC PRESERVATION (802-828-3211)** ___ Historic Buildings (#47.1 & 101) ___ Archeological Sites (47.1 & 101)
- 17. DEPARTMENT OF LIQUOR CONTROL (1-800-832-2339)** ___ Liquor Licenses (#90) ___ General Info (1-800-642-3134)
- 18. SECRETARY OF STATE (1-802-828-2386)** ___ Business Registration (#90.1) ___ Professional Boards (1-800-439-8683) (#90.2)
- 19. DEPARTMENT OF TAXES (802-828-2551 & 828-5787)** ___ Business Taxes (sales & rooms, amusement machines) (#91.92, 93, 94, 95, 96)
- 20. DEPARTMENT OF MOTOR VEHICLES (802-828-2070)** ___ Fuel Taxes; Commercial Vehicle (#69-70)
- 21. LOCAL PERMITS (SEE YOUR TOWN CLERK, ZONING ADMINISTRATOR, PLANNING COMMISSION, OR PUBLIC WORKS)**
- 22. FEDERAL PERMITS U.S. ARMY CORPS OF ENG, 8 Carmichael St., Ste. 205, Essex Jct., VT 05452 (802) 872-2893 (#97, 98,99)**
- 23. OTHER:** _____

Sections #3-#24 above have been completed by Permit Specialist Sandra Conant
 I may be reached at 802-885-8850

Date: 2/9/09

Original Message-----

From: Marshall, Everett [mailto:everett.marshall@state.vt.us]

Sent: Thursday, February 19, 2009 11:13 AM

To: Bargerhuff, Kirk E NAE

Subject: RE: GeoTech Borings_Armed Forces Reserve Centers in White River Junction and Rutland_Federal and State T & E Species clearances

Dear Kirk Bargerhuff:

Sorry for the slow reply. I have reviewed the Department's database for potential impacts to rare, threatened and endangered species and significant natural communities. A search reveals none of these resources for the two alternative sites in Rutland and the two sites in White River Junction. Furthermore, based on the current land use at the sites I would not expect any impacts to rare, threatened and endangered species and significant natural communities.

Please contact me if you have any questions.

Everett Marshall
Biologist/Information Manager
Nongame & Natural Heritage Program

Vermont Fish & Wildlife Dept.
103 South Main St.
Waterbury VT 05671-0501
Tel: 802-241-3715; Fax: 802-241-3295



State of Vermont
Division for Historic Preservation
National Life Building, Floor 2
Montpelier, VT 05620-1201
www.HistoricVermont.org

Agency of Commerce &
Community Development

[phone] 802-828-3211
[fax] 802-828-3206

February 23, 2009

Colonel Joseph H. Ledlow
C/O Craig Kelley
BRAC Environmental Coordinator
99th Regional Support Command (East)
11 Saratoga Boulevard
Devens, MA 01432

Re: Proposed Armed Forces Reserve Center, White River Junction, Windsor County, Vermont.

Dear Col. Ledlow:

Thank you for the opportunity to comment on the above referenced project having U.S. Department of the Army involvement. The following letter is in response to a letter dated December 19, 2008 which supersedes an October 24, 2008 correspondence. Both letters were to initiate consultation under Section 106 of the National Historic Preservation Act.

The Division for Historic Preservation (Division) has provided preliminary comments concerning geo-tech borings at two locations within the Town of Hartford parcel under consideration as Alternative 1. The Division understands that appropriate archeological investigations will be completed at this location and at Alternative 2, a 15 acre parcel located along VT Route 5 north of the Alternative 1 site.

We look forward to receiving the results of the archeological investigations and the draft Environmental Assessment and will complete our review of the proposed project at that time.

Thank you for your cooperation in protecting Vermont's irreplaceable historic and archeological heritage. If you have any questions, please do not hesitate to contact R. Scott Dillon, Survey Archeologist, at scott.dillon@state.vt.us or 802-828-3048. Mr. Dillon reviewed this project and prepared this letter. I concur with the findings and conclusions described above.

Sincerely:
VERMONT DIVISION FOR HISTORIC PRESERVATION

Nancy E. Boone
Acting State Historic Preservation Officer

Cc: David Pugh, U.S. Army Corps of Engineers



State of Vermont
Division for Historic Preservation
National Life Building, Floor 2
Montpelier, VT 05620-1201
www.HistoricVermont.org

[phone] 802-828-3211
[fax] 802-828-3206

Agency of Commerce &
Community Development

April 21, 2009

Colonel Joseph H. Ledlow
C/O Craig Kelley
BRAC Environmental Coordinator
99th Regional Support Command (East)
11 Saratoga Boulevard
Devens, MA 01432

Re: Proposed Armed Forces Reserve Center, White River Junction, Windsor County, Vermont.

Dear Col. Ledlow:

Thank you for the opportunity to comment on the above referenced project having U.S. Department of the Army involvement.

The following comments will assist the U.S Department of Defense (DOD) and the U.S. Army Corps of Engineers (COE) in their review responsibilities under Section 106 of the National Historic Preservation Act. The Division for Historic Preservation (Division) is providing comments pursuant to 36 CFR 800.4, regulations established by the Advisory Council on Historic Preservation to implement Section 106 of the National Historic Preservation Act.

Project review consists of identifying the project's potential impacts to historic buildings, structures, historic districts, historic landscapes and settings, and known or potential archeological resources.

The proposed project consists of the construction and operation of a new Armed Forces Reserve Center on a portion of a 65.5 acre parcel of land in Hartford, Vermont. The Division provided preliminary comments on the project in a letter dated February 23, 2009 and had provided earlier comments via email concerning geo-technical boring activity at two locations within the overall parcel.

On February 25, 2009, the Division received a copy of the Phase I Archeological Survey report dated January 8, 2009 prepared by the University of Maine Farmington Archaeology Research Center (UMF ARC). Based on negative results in the surveyed area, UMF ARC concluded that no historic sites are present within the proposed area of potential effect.



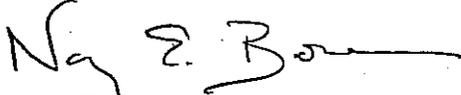
J. Ledlow
Page 2 of 2
April 21, 2009

The Division concurs with this finding and concludes that a determination of **No Historic Properties Affected** is warranted for this undertaking. This determination is limited to Alternative 1, the Town of Hartford parcel. No archeological information has been submitted for Alternative 2, a 15.5 acre parcel located along VT Route 5 to the north of the Alternative 1 site.

Thank you for your cooperation in protecting Vermont's irreplaceable historic and archeological heritage. If you have any questions, please do not hesitate to contact R. Scott Dillon, Survey Archeologist, at scott.dillon@state.vt.us or 802-828-3048. Mr. Dillon reviewed this project and prepared this letter. I concur with the findings and conclusions described above.

Sincerely:

VERMONT DIVISION FOR HISTORIC PRESERVATION



Nancy E. Boone
Acting State Historic Preservation Officer

Cc: David Pugh, U.S. Army Corps of Engineers

*Environmental Assessment for Construction of an
Armed Forces Reserve Center and
Implementation of BRAC 05 Recommendations at
White River Junction, Vermont*

APPENDIX B

WETLANDS INVESTIGATION REPORT

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APPENDIX B. WETLANDS INVESTIGATION REPORT

This appendix provides the Wetlands Investigation Report for the White River Junction Proposed Action.

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FINAL
Wetlands Investigation Report
for Construction of an Armed Forces Reserve Center and
Implementation of BRAC 05 Recommendations at
White River Junction, Vermont



SUBMITTED TO:

U.S. Army Corps of Engineers, Mobile District
P.O. Box 2288
Mobile, Alabama 36628

PREPARED BY:

AGEISS Inc.
P.O. Box 3516
Evergreen, CO 80437

June 2009

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LIST OF ACRONYMS

| | |
|--------|--------------------------------------|
| AFRC | Armed Forces Reserve Center |
| BRAC | Base Realignment and Closure |
| CFR | Code of Federal Regulations |
| CWA | Clean Water Act |
| EO | Executive Order |
| EPA | U.S. Environmental Protection Agency |
| GP | General Permit |
| GPS | Global Positioning System |
| MSL | mean sea level |
| NEPA | National Environmental Policy Act |
| OMS | Organizational Maintenance Shop |
| USACE | U.S. Army Corps of Engineers |
| U.S.C. | United States Code |
| VANR | Vermont Agency of Natural Resources |

1.0 INTRODUCTION

1.1 Project Background

The Army is directed under Executive Order (EO) 11990, *Protection of Wetlands*, to provide leadership and take action to minimize the destruction, loss, or degradation of wetlands. EO 11990 also directs that the natural and beneficial values of wetlands be preserved and enhanced while the Army carries out its responsibility with regard to acquiring, managing, and disposing of federal lands and facilities, and for funding or managing activities that could affect wetlands. An inventory aids in the compliance with the National Environmental Policy Act (NEPA) (42 United States Code [U.S.C.] § 4321 et seq.) requiring assessment of impacts to wetlands as part of the analysis process. Project-specific areas are assessed for potential wetland impacts through the identification of potential wetland areas within the project site.

To support Base Realignment and Closure (BRAC) recommendations, the Army is preparing an Environmental Assessment to determine the impacts of construction and operation of an Armed Forces Reserve Center (AFRC) training building, Organizational Maintenance Shop (OMS), unheated storage building, and an open vehicle storage facility in White River Junction, Vermont. The Army's Proposed Action includes acquisition of land for construction of these facilities. Two sites in White River Junction are being considered for this action.

The objectives of the wetlands delineation are to identify and delineate any wetlands present at the sites being considered by the Army, determine if the Army's Proposed Action would impact any wetlands, collect information in support of a jurisdictional determination if necessary, and apply for authorization under the Vermont General Permit (GP). Site-specific wetlands surveys are required to support the ongoing BRAC-directed realignment for a full NEPA analysis of the No Action Alternative, a Preferred Alternative, and other reasonable alternative locations for the construction and operation of an AFRC. The wetland delineations will be used to obtain a Clean Water Act (CWA) Section 401 and Section 404 permit from the U.S. Army Corps of Engineers (USACE), New England District Vermont Regulatory Office and if necessary the State of Vermont, if the proposed federal action would result in impacts to wetland resources and are unavoidable.

The purpose of this report is to document the results of AGEISS Inc.'s April 21-23, 2009 wetland investigation and delineation in White River Junction, Vermont.

1.2 Wetland Criteria

USACE and the U.S. Environmental Protection Agency (EPA) define jurisdictional wetlands as areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 Code of Federal Regulations [CFR] Part 328.3).

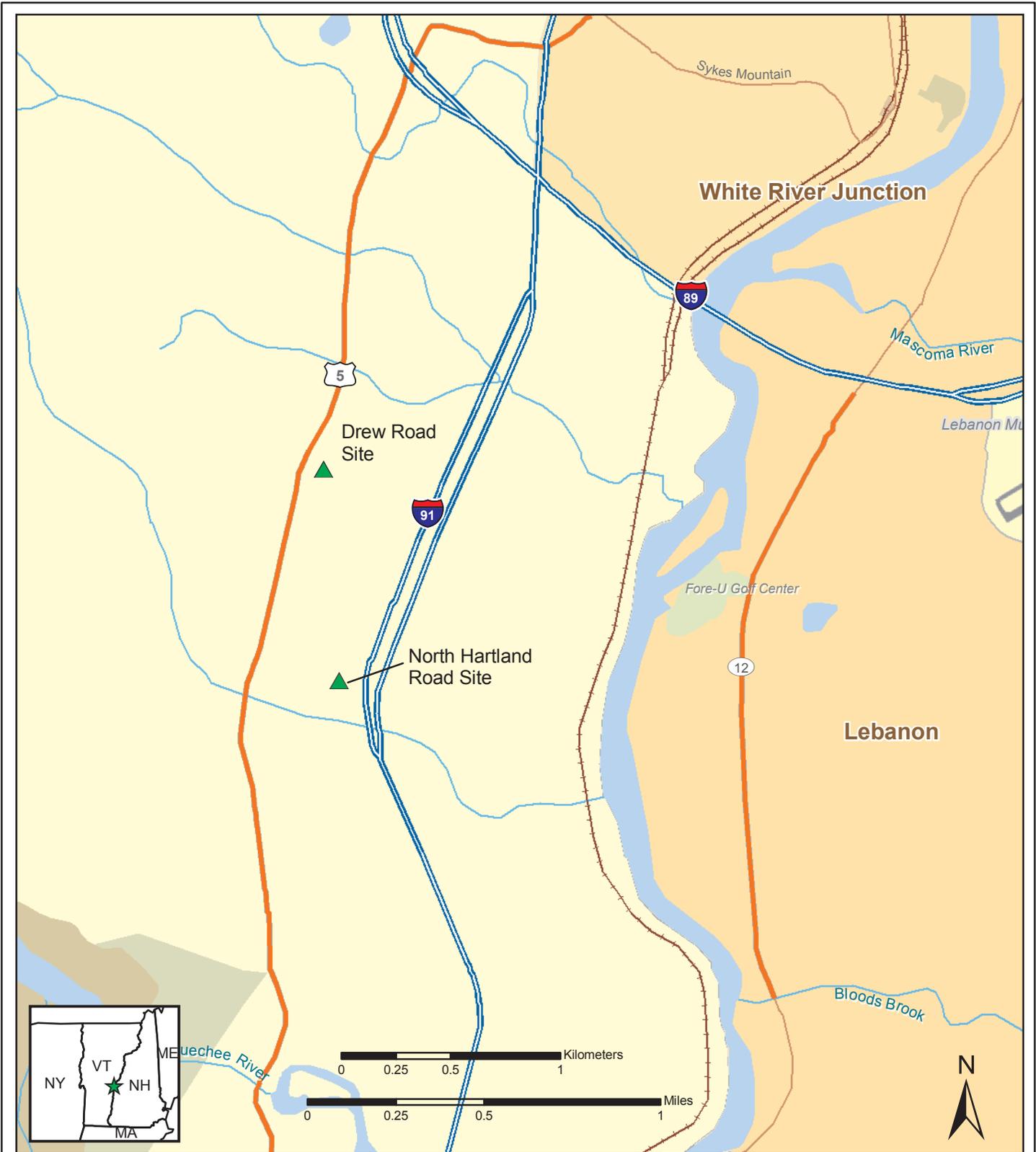
USACE regulates development in jurisdictional wetlands pursuant to Section 404 of the CWA (33 CFR Parts 320-330). Activities in wetlands are also regulated under 10 Vermont Statutes Annotated, Chapter 37, Section 905(a)(7-9) (Vermont Wetland Rules). Delineation of wetlands is based on three parameters: hydrophytic vegetation, wetlands hydrology, and hydric soils.

- Hydrophytic vegetation – Macrophytic plant life growing in water or on a substrate that is periodically deficient of oxygen as a result of excessive water content.
- Wetland hydrology – Permanent or periodic inundation or soil saturation to the surface for sufficient duration during the growing season to support hydrophytic vegetation.
- Hydric soils – A soil that formed under saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

1.3 Site Locations

AGEISS conducted a wetlands delineation to survey and inventory wetlands at the two sites being considered by the Army for construction of an AFRC: North Hartland Road Site and Drew Road Site. Figure 1 shows the site locations.

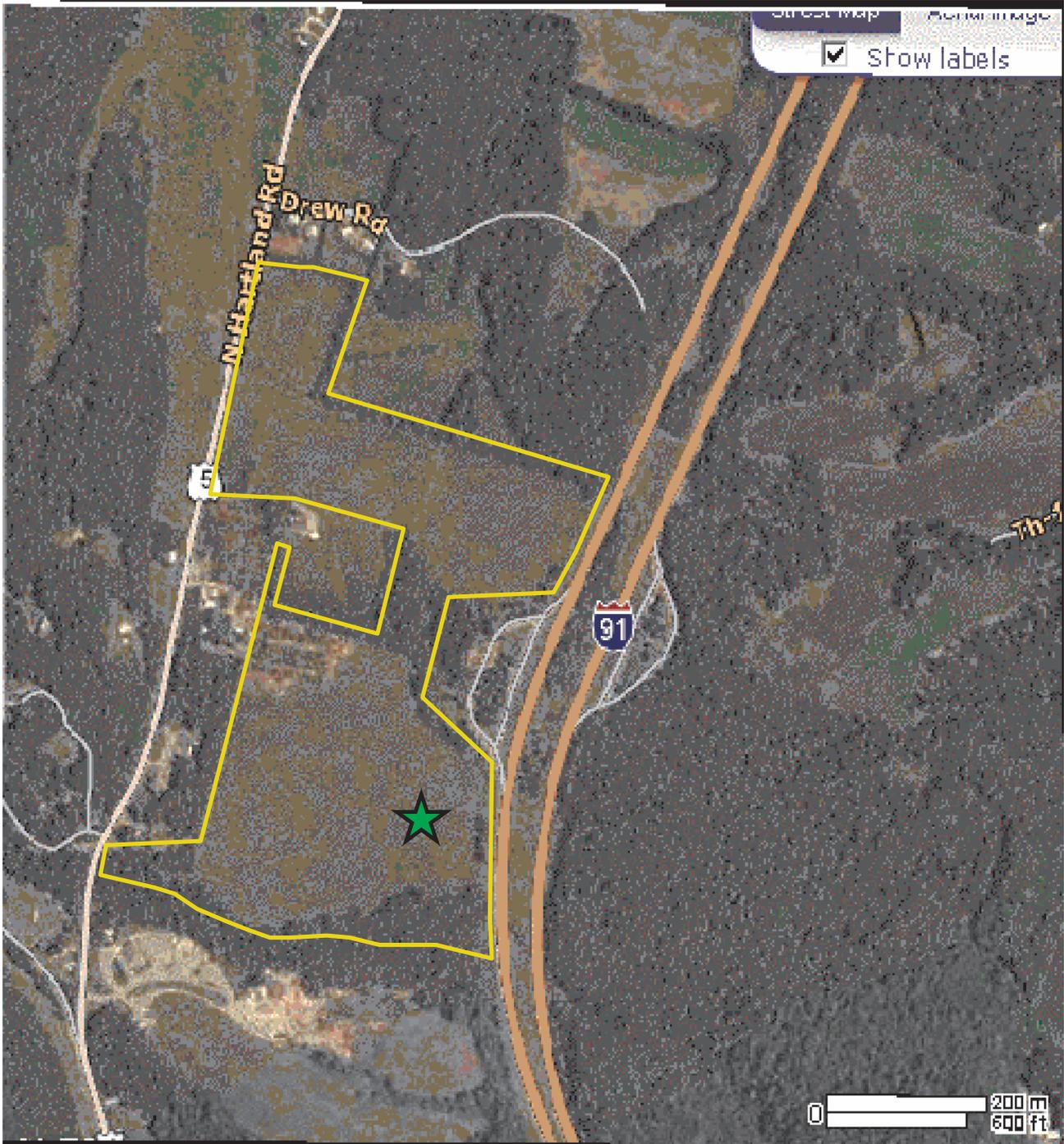
The North Hartland Road Site consists of a portion of a +/- 65.5-acre parcel owned by the Town of Hartford, Vermont. The Army would acquire about 17 acres in the southeastern corner of this parcel. The remaining acreage would be retained by the Town of Hartford for a planned recreation area/sports park. The site is located between U.S. Route 5 and I-91. Access to the site is from U.S. Route 5 South (North Hartland Road), approximately 2 miles south of the intersection of I-89 and I-91. A portion of the site is plowed and presently leased for agricultural use. A commercial nursery and one residence are located along U.S. Route 5 South along the western boundary of the property. The southern boundary of the parcel abuts a ravine with a stream. Figure 2 is an aerial photograph of the North Hartland Road Site.



Prepared For:
 U.S. Army Corps of Engineers, Mobile District

Figure 1
 Location of North Hartland Road Site and Drew Road Site,
 White River Junction, Vermont





-  Area Considered for Proposed AFRC/OMS
-  Property Boundary
- AFRC Armed Forces Reserve Center
- OMS Organizational Maintenance Shop



Prepared For:
 U.S. Army Corps of Engineers, Mobile District

Figure 2
 Aerial Photograph of the North Hartland Road Site

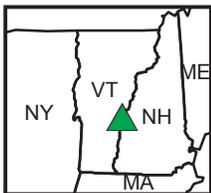
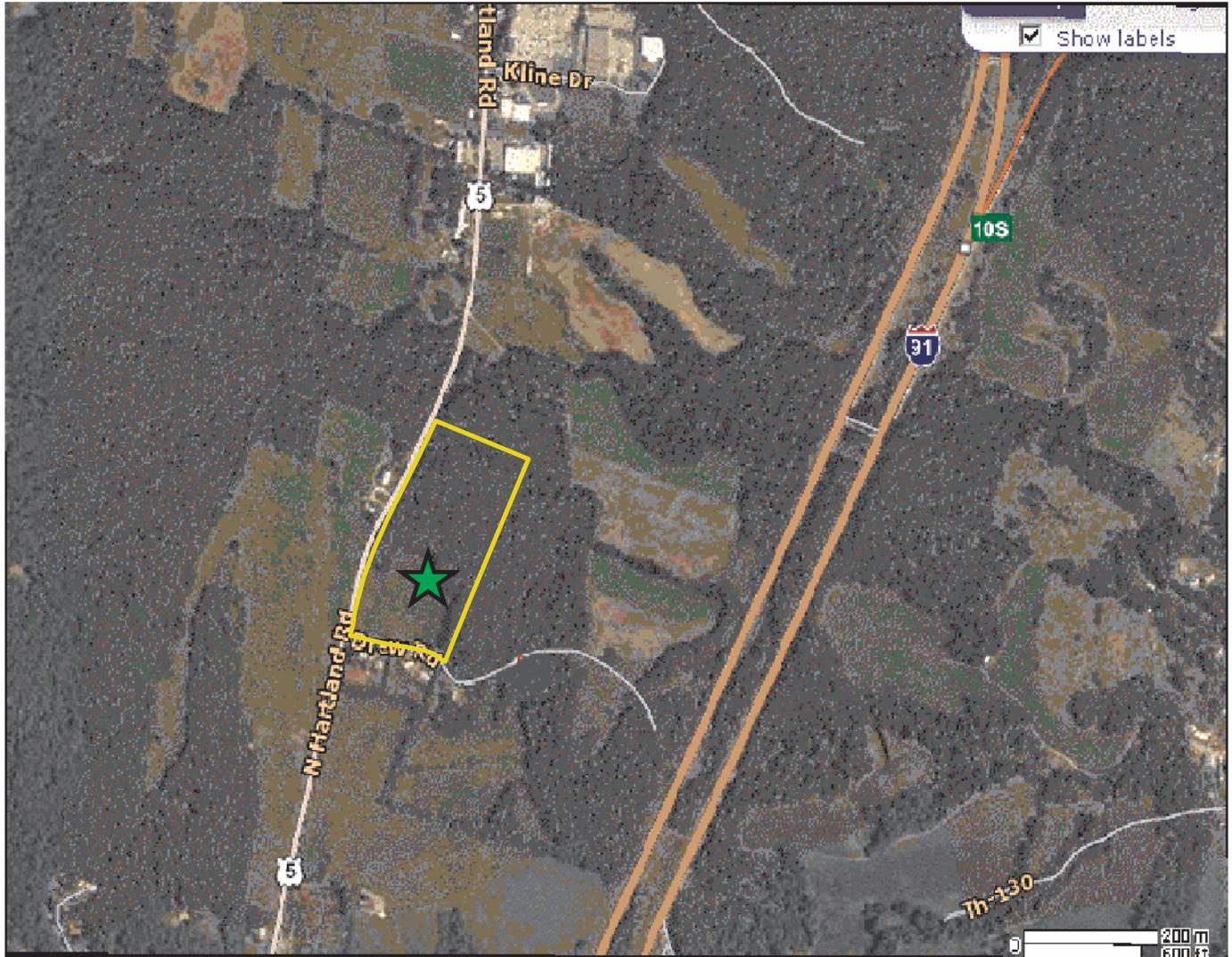


The Drew Road Site comprises about 15 acres and is approximately 50 percent open field and 50 percent wooded. The southern portion of the Drew Road Site is cleared for agricultural use but does not appear to have been planted recently. The northern portion of the Drew Road Site is heavily forested with steep terrain and rock formations at and above the land surface. The site has 1,200 feet of frontage on U.S. Route 5 South. Figure 3 is an aerial photograph of the Drew Road Site.

2.0 METHODOLOGY

Prior to the field visit, AGEISS reviewed wetlands data from the National Wetlands Inventory (<http://www.fws.gov/wetlands/>) and the Vermont Agency of Natural Resources (VANR) Environmental Locator (<http://www.anr.state.vt.us/site/html/maps.htm>), and hydric soils data from (<http://www.anr.state.vt.us/site/html/maps.htm>). These data are located in Appendices A and B for the North Hartland Road Site and the Drew Road Site, respectively, and were used to identify areas within the study area that likely contained wetlands.

Field investigations were conducted April 21-23, 2009 to determine the presence of wetlands at each site. The wetland delineation was based on the presence of hydrophytic vegetation, wetland hydrology, and hydric soils, as outlined in the USACE's Wetland Delineation Manual (USACE 1987) and the Northcentral and Northeast Supplement (USACE 2008). In summary, vegetation communities to be evaluated were mapped and named at each site in the areas considered for delineation. Strata sampling occurred in each vegetation community to determine dominant flora species. Flora nomenclature and hydrophytic status were determined in accordance with the U.S. Department of Agriculture (<http://www.plants.usda.gov/wetinfo.html>) or U.S. Fish and Wildlife Service (<http://www.fws.gov/wetlands/>) wetland indicators. Wetland hydrology indicators were determined in each plant community identified as meeting wetlands characteristics. Indicators were based on direct observations of surface water or groundwater, evidence that the site is subject to flooding or ponding. This latter visual indicator was based on drift deposit, sediment deposits, and water marks (USACE 2008). Soil strata (horizontal layers of soil, distinguished by color, texture, composition, or other characteristics) were evaluated within each vegetation community using test pits and hand-auger borings. The location of the wetland/upland boundary was identified and marked in the field with pin flags and wetland boundary tape based on the data form analysis and landform



 Area Considered for Proposed AFRC/OMS

 Property Boundary

AFRC Armed Forces Reserve Center
 OMS Organizational Maintenance Shop



Prepared For:
 U.S. Army Corps of Engineers, Mobile District

Figure 3
 Aerial Photograph of the Drew Road Site



characteristics. Upland conditions are those not exhibiting wetland characteristics. Flags placed along the wetland/upland boundary were surveyed with a global positioning system (GPS). Photographs were taken from representative points within the wetland areas and field data sheets were used to document the soil, vegetation, and hydrologic conditions. Wetlands were classified and characterized following Cowardin et al. (1979).

3.0 PROJECT SITE ECOLOGY

3.1 Topography and Geology

The North Hartland Road Site is generally flat and slopes to the east. The elevation of the site ranges from 580 to 600 feet above mean sea level (MSL), with an average surface gradient of approximately 2 percent, sloping to the east. A former borrow pit is located in the southwest portion of the site. The lowest point of the pit is approximately 30 feet below the surrounding land (Major 2008). According to the Geologic Map of Vermont, the North Hartland Road Site has Silurian-Devonian age rocks at the surface (Doll 1970). The Silurian-Devonian rocks of Vermont are composed of slate, phyllite, limestone, quartzite, conglomerates, greenstone, schist, and amphibolite. These rocks are intruded by granite and syenite (Doll 1970).

The northern part of the Drew Road Site slopes relatively steeply towards the east with a gradient of approximately 20 percent. The southern portion of the site slopes towards the south also with a gradient of approximately 20 percent. The lowest point of the site is approximately 560 feet above MSL and the highest point is approximately 680 feet above MSL. The Drew Road Site also has Silurian-Devonian age rocks at the surface (Doll 1970).

3.2 Soils

The North Hartland Road Site is covered by soils represented by three mapping units (USDA NRCS 2008). The Windsor loamy fine sand unit comprises about 40 percent of the site, along the northern edge, northeastern quarter, and southeastern corner of the property. This unit is characterized by very good drainage, low potential for surface runoff, and its susceptibility to wind erosion ranges from very high to moderate. The Grange very fine sandy loam unit also comprises about 40 percent of the site, occurring along the western quarter and east central part of the property. This unit is characterized by poor drainage, high potential for surface runoff, and moderate susceptibility to wind erosion. The

Grange very fine sandy loam unit is rated as having partially hydric soils (USDA NRCS 2008). The Hinckley sandy loam unit comprises the remaining 20 percent of the site, occurring in an area separating the Windsor loamy fine sand on the north and east and the Grange very fine sandy loam on the west. This unit is characterized by very good drainage, low potential for surface runoff, and moderate susceptibility to wind erosion. Of the 17 acres considered for the AFRC at the North Hartland Road Site, 5 acres are considered farmland of statewide importance and 7 acres are considered prime farmland if drained (USDA NRCS 2008). The USDA soil map for the North Hartland Road Site, including soil taxonomy classification and hydric rating, is included in Appendix A.

The Drew Road Site is covered by soils belonging to three mapping units (USDA NRCS 2008). The Glover-Vershire complex unit comprises approximately 79 percent of the site, occurring in the northern three-quarters of the site and in a small area in the southeastern corner. This unit is characterized by moderate drainage, moderate potential for surface runoff, and moderately high susceptibility to wind erosion and is rated as partially hydric. The Vershire-Dummerston complex unit comprises about 14 percent of the site and occurs in the central part of the southern quarter. This unit is characterized by very good drainage, moderate potential for surface runoff, and moderately high susceptibility to wind erosion and is rated as partially hydric. The Buckland loam unit comprises about 7 percent of the site, occurring in the southwestern corner. This unit is characterized by moderate drainage, moderate potential for surface runoff, and moderately high susceptibility to wind erosion and is rated as partially hydric. Of the 15 acres considered for the AFRC at the Drew Road Site, 3 acres are considered prime farmland and 3 acres are considered farmland of statewide importance (USDA NRCS 2008). The USDA soil map for the Drew Road Site, including soil taxonomy classification and hydric rating, is included in Appendix B.

3.3 Hydrology

3.3.1 SURFACE WATER

The North Hartland Road and Drew Road sites are located in the Mill Brook Sub-basin of the Lower Connecticut River Basin. Surface water features in the vicinity of the sites include Kilburn Brook. Kilburn Brook is located south of the Drew Road Site and flows in an easterly direction then north along I-91 and easterly again for approximately 0.7 mile before reaching the Connecticut River.

Surface water features on the North Hartland Road Site include 3 acres of Class III wetlands near the center of the 65-acre parcel (Dubois and King 2006) and an unnamed creek along the southern boundary near the proposed construction site for the AFRC. The unnamed creek is located immediately south of the North Hartland Road Site and flows in an easterly direction for approximately 0.7 mile before reaching the Connecticut River.

There are no surface water features on the Drew Road Site. The North Hartland Road and Drew Road sites are not located within the 100-year floodplain.

3.3.2 GROUNDWATER

The Adirondack Crystalline-Rock aquifer underlies the North Hartland Road and Drew Road sites. The aquifer consists of igneous crystalline-rock (pegmatite, granite, granodiorite, diorite, and gabbro). Well yields typically range from 2 to 10 gallons per minute, with some reported yields exceeding 500 gallons per minute. The aquifer is a source of drinking water for much of the surrounding area.

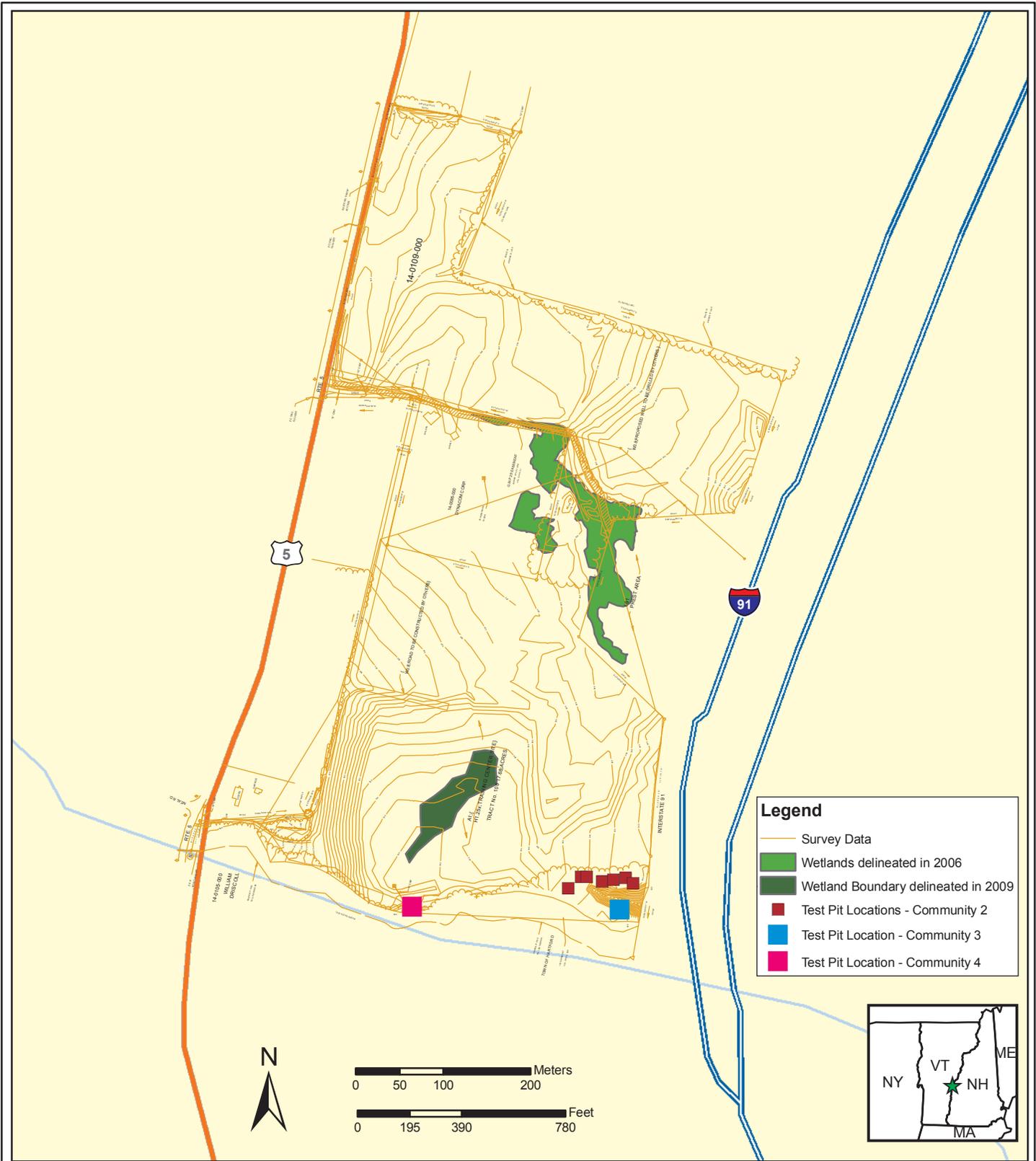
Local groundwater flow direction is approximately southeast across the North Hartland Road Site. Local groundwater flow direction across the Drew Road Site is expected to be similar to the North Hartland Road Site due to their proximity to each other. Several groundwater supply wells are present in the area surrounding the North Hartland Road and Drew Road sites. The depth to groundwater is estimated at greater than 200 feet across much of both sites (USDA NRCS 2008).

4.0 WETLAND INVESTIGATION RESULTS

4.1 North Hartland Road Site

Four separate vegetation communities within the approximate 17 acres being considered for the AFRC at the North Hartland Road Site were identified as exhibiting potential wetlands characteristics as shown on Figure 4.

The first vegetation community “North Hartland Road Community 1” is located within what was formerly a borrow pit used for construction of I-91, and is presently used for agricultural purposes (leased for corn crops). North Hartland Road Community 1 is described as a low-lying area with standing water, located within a corn field. There is a drain located at the southwest extent of this low-lying area, which drains the area to the unnamed creek along the southern property boundary.



Prepared For:
U.S. Army Corps of Engineers, Mobile District

Figure 4
Delineated Wetlands at the North Hartland Road Site



Soil strata was evaluated along three transects in seven plots (pits) to determine if hydric soil conditions exist, and if so, identify the point along each transect where hydric soil conditions transition to upland soil conditions (boundary). Vegetation and hydrology indicators were evaluated at each transect to determine if indicators were present. Based on hydrophytic plant indicators, wetland hydrology indicators, and hydric soil indicators, it was determined that a wetland does exist.

Hydrophytic plant indicators were difficult to identify because the number of plant species available was limited for two reasons. First, the area is annually plowed and planted with corn and secondly because during the time of year (early spring) in which the field effort took place, plants are not as prominent as would be expected later in the season. Two of the most common plant species occurring in the area include white clover (*Trifolium repens*) and common dandelion (*Taraxacum officianle*). Essentially, the underdeveloped corn was used as an additional indicator to identify the approximate extent of the wetland. To some extent, development of the corn stalk was clearly impaired and in most cases left standing by the farmer.

Wetland hydrology indicators identified at this site include Saturated in upper 12 inches, Drainage Patterns within Wetland, Inundated/Standing Water, and Algae Mats. The soil indicator identified in the North Hartland Road Community 1 is Loamy Gleyed Matrix, described as a gleyed matrix that occupies 60 percent or more of a layer starting within 12 inches of the soil surface (USDA 2006 and USACE 2009).

A hand-auger was used to delineate the boundary of the wetland between test pit locations. Numerous hand-auger boring transects were completed perpendicular to the perimeter of the wetland to identify points on the transects where wetland indicators (soil in this case) were no longer present and upland conditions existed. These points delineate the extent of the wetland identified in North Hartland Road Community 1. Data recorded during the investigation are found in Appendix A. Photographs taken at the site during the field investigation are also included in Appendix A.

The North Hartland Road Community 1 wetland covers approximately 0.98 acre (about 42,801 square feet) and extends approximately 505 feet with an approximate width ranging between 30 and 140 feet. This wetland community with ponded water is of sufficient size to support several wildlife species. During the field investigation, mallards (*Anas Platyrhynchos*) and killdeer (*Charadrius vociferous*)

were observed using the area. Boundary coordinates for the North Hartland Road Community 1 are presented in Table 4-1.

Table 4-1. Approximate Boundary Location of North Hartland Road Community 1 Wetland.

| boundary point | latitude | longitude |
|----------------|------------|------------|
| 10 | N43 37.117 | W72 21.119 |
| 11 | N43 37.123 | W72 21.122 |
| 12 | N43 37.129 | W72 21.115 |
| 13 | N43 37.135 | W72 21.108 |
| 14 | N43 37.145 | W72 21.109 |
| 15 | N43 37.153 | W72 21.109 |
| 16 | N43 37.158 | W72 21.098 |
| 17 | N43 37.164 | W72 21.088 |
| 18 | N43 37.169 | W72 21.082 |
| 19 | N43 37.171 | W72 21.070 |
| 20 | N43 37.179 | W72 21.066 |
| 21 | N43 37.185 | W72 21.064 |
| 22 | N43 37.186 | W72 21.054 |
| 23 | N43 37.186 | W72 21.054 |
| 24 | N43 37.186 | W72 21.049 |
| 25 | N43 37.181 | W72 21.044 |
| 26 | N43 37.175 | W72 21.046 |
| 27 | N43 37.165 | W72 21.045 |
| 28 | N43 37.157 | W72 21.068 |
| 29 | N43 37.148 | W72 21.078 |
| 30 | N43 37.139 | W72 21.083 |
| 31 | N43 37.139 | W72 21.083 |
| 32 | N43 37.133 | W72 21.097 |
| 33 | N43 37.124 | W72 21.112 |

NOTE: Coordinates are Vermont State Plane, NAD83 in meters.

Characterization of the North Hartland Road Community 1 wetland is somewhat difficult due to its origin and present use. Excavation for construction of I-91 resulted in the removal of surface soils and creation of a borrow pit in what would otherwise likely have been forested or scrub shrub system. Agricultural activities in the former borrow pit further complicate classification of the North Hartland Road Community 1 wetland. The most appropriate classification proposed for the North Hartland Road Community 1 wetland is a Farmed Wetland which was previously excavated. The Wetland Function-Value Evaluation Form is included in Appendix A.

Review of the USACE Jurisdictional Determination Form Instructional Guidebook (USACE 2007a) indicates this wetland is likely under the jurisdiction of the USACE.

The second vegetation community “North Hartland Road Community 2” is located at the southeastern corner of the parcel at the intersection of the southern and eastern parcel boundaries. North Hartland Road Community 2 is described as a mixture of soft (hemlock, *Tsuga canadensis* and white pine, *Pinus strobes*) and hard wood trees (red oak *Quercus rubra*). Soil strata were evaluated along one transect in two plots (pits) to determine if hydric soil conditions exist, and if so identify the point along the transect where hydric soil conditions transition to upland soil conditions (boundary). Hydrological indicators were evaluated to determine if indicators were present. Based on evaluation of vegetation, hydrology, and soil indicators at the North Hartland Road Community 2, there is no indication that a wetland exists in this community.

The third vegetation community “North Hartland Road Community 3” is located at the southeastern corner of the parcel at the intersection of the southern and eastern parcel boundaries, immediately south of North Hartland Road Community 2. North Hartland Road Community 3 is similar to North Hartland Road Community 2 with the addition of ferns and a steeply-sloped ravine running approximately west to east, draining towards I-91. Soil strata were evaluated at one transect in one plot (pit) to determine if hydric soil conditions exist, and if so identify the point along each transect where hydric soil conditions transition to upland soil conditions (boundary). Hydrological indicators were evaluated to determine if indicators were present. Based on evaluation of vegetation, hydrology, and soil indicators at the North Hartland Road Community 3, there is no indication that a wetland exists in this community.

The fourth vegetation community “North Hartland Road Community 4” is located near the southern boundary of the parcel, on the thin strip of vegetation between the steep ravine and grassy area, just south of North Hartland Road Community 1. North Hartland Road Community 4 is described as a mixture of willow (*Salix* sp.), winged sumac (*Rhus copallina*), and equisetum (*Equisetum* sp.) at the uppermost slope of the ravine to the south of North Hartland Road Community 1. Soil strata were evaluated along one transect in one plot (pit) to determine if hydric soil conditions exist, and if so identify the point along each transect where hydric soil conditions transition to upland soil conditions (boundary). Hydrology indicators were evaluated at the transect to determine if indicators were present. Based on evaluation of vegetation, hydrology, and soil indicators at the North Hartland Road Community 4 there is no indication that a wetland exists in this community.

4.2 Drew Road Site

Two separate vegetation communities within the approximate 15-acre Drew Road Site were identified. Neither community exhibited potential wetlands characteristics.

The first vegetation community “Drew Road Community 1” is located at the southern extent of the parcel, immediately north of Drew Road. Drew Road Community 1 is described as an open grassy slope increasing in elevation to the north. Soil strata were evaluated at a limited number of hand-auger borings in this community to determine if hydric soil conditions exist. No vegetation or hydrology indicators were present in Drew Road Community 1. Based on evaluation of vegetation, hydrology, and soil indicators at the Drew Road Community 1, there is no indication that a wetland exists in this community.

The second vegetation community “Drew Road Community 2” is located at the northern extent of the parcel, immediately north of Drew Road Community 1. Drew Road Community 2 is described as heavily-forested slope increasing in elevation from the south and then sloping to the northeast. Soil strata were evaluated at a limited number of hand-auger borings in this community to determine if hydric soil conditions exist. Again, no vegetation or hydrology indicators were evident at Drew Road Community 2. Based on evaluation of vegetation, hydrology, and soil indicators at the Drew Road Community 2, there is no indication that a wetland exists in this community.

5.0 CONCLUSIONS

If necessary, a Jurisdictional Determination will be made by the USACE. Wetlands are considered under the jurisdictional control of USACE if no formal Jurisdictional Determination is requested.

The North Hartland Road Community 1 wetland identified in Section 4.1 appears to qualify for authorization under the Vermont GP Category 2, being greater than 3,000 square feet and less than 1 acre in size and having no more than minimal individual and cumulative environmental impacts. Category 2 requires an application to and written authorization from the USACE for construction of the proposed AFRC in the identified wetland. Additionally, Vermont approvals are required as described in the GP. Review of Category 2 activities with federal resource agencies and the State of Vermont will be coordinated by the USACE (USACE 2007b). It should be noted that the GP is applied to complete projects, such that all components of a single project shall be treated together as

constituting one single and complete project (unless the USACE determines components have independent utility).

6.0 REFERENCES

- Cowardin et al. (L.M. Cowardin, V. Carter, F.C. Golet, and E.T. LaRoe). 1979. Classification of Wetlands and Deep Water Habitats in the United States. U.S. Fish and Wildlife Services, Washington, D.C.
- Doll, C.G. 1970. Generalized Geologic Map of Vermont, State Geologist, Vermont Geological Society. Available at <http://www.anr.state.vt.us/DEC/GEO/images/geo5.JPG>. Accessed October 30, 2008.
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- Major, Jr., L.C. 2008. White River Junction, Vermont, Trip Report – Environmental Reconnaissance/Site Inspection. AGEISS, Inc.
- USACE (U.S. Army Corp of Engineers). 1987. Corps of Engineers Wetlands Delineation Manual. Environmental Laboratory. Vicksburg, MS.
- USACE. 2007a. U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook.
- USACE. 2007b, December 5. Department of the Army General Permit State of Vermont, New England Division of the U.S. Army Corps of Engineers. Available at <http://www.nae.usace.army.mil/reg/vtppg.pdf>.
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- USDA (U.S. Department of Agriculture). 2006. Field Indicators of Hydric Soils in the United States. A Guide for Identifying and Delineating Hydric Soils, Version 6.0.
- USDA NRCS (U.S. Department of Agriculture Natural Resources Conservation Service). 2008. Soil Survey of Windsor County, Vermont. Available at <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed October 30, 2008 and April 14, 2009.

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*Wetlands Investigation Report for Construction of an
Armed Forces Reserve Center and
Implementation of BRAC 05 Recommendations at
White River Junction, Vermont*

APPENDIX A

NORTH HARTLAND ROAD SITE

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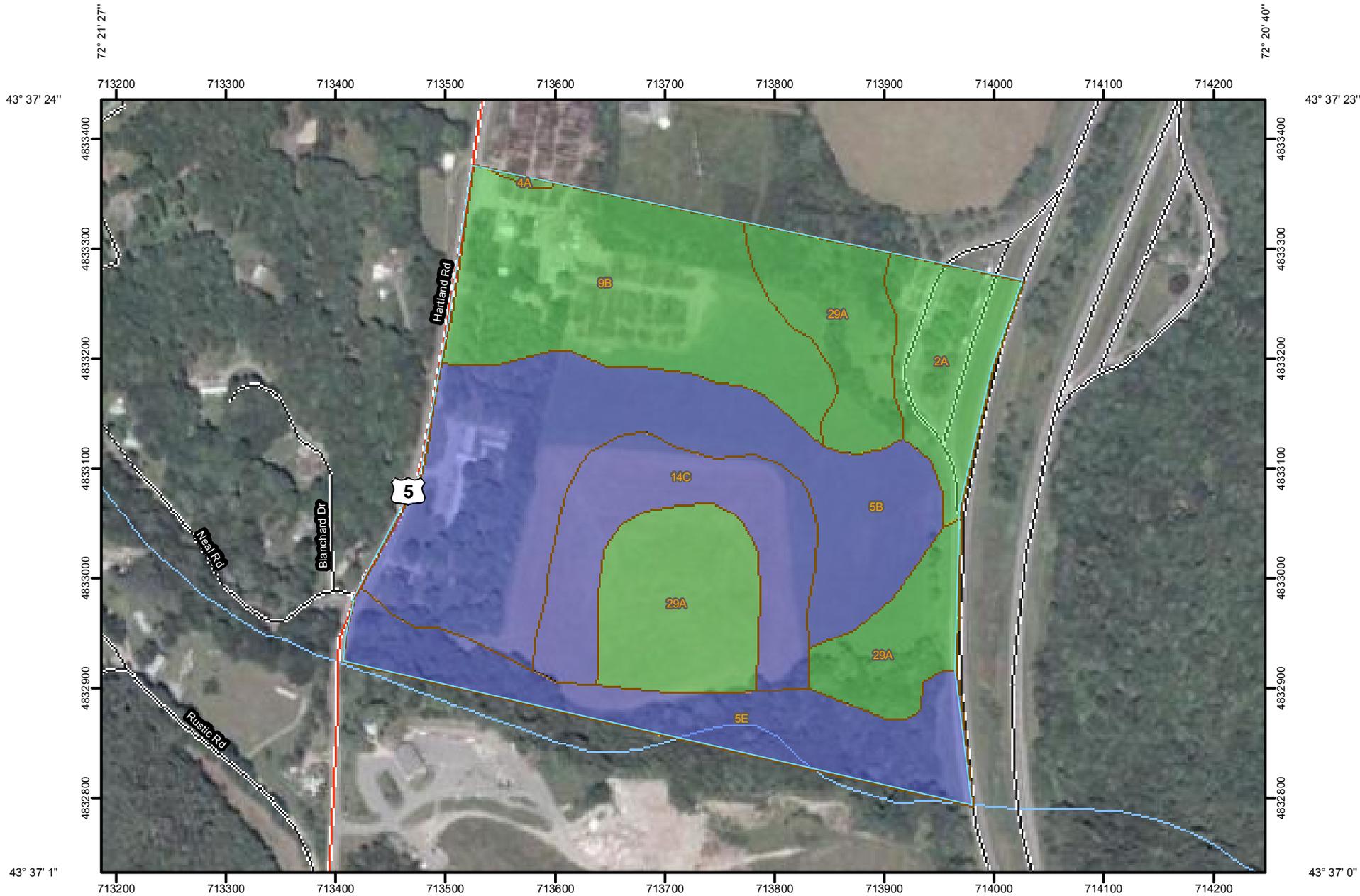
APPENDIX A. NORTH HARTLAND ROAD SITE

Appendix A contains the following information for the North Hartland Road Site:

- Soil Taxonomy and Hydric Rating Map
- Wetlands Inventory Map
- Transects at North Hartland Road Site Map
- Field Data Forms for six transects
- Wetland Function-Value Evaluation Form
- Photographs

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Hydric Rating by Map Unit—Windsor County, Vermont
(North Hartland Road Site)



72° 21' 28"



Map Scale: 1:5,030 if printed on A size (8.5" x 11") sheet.



Hydric Rating by Map Unit–Windsor County, Vermont
(North Hartland Road Site)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Soil Ratings

 All Hydric

 Partially Hydric

 Not Hydric

 Unknown Hydric

 Not rated or not available

Political Features

 Cities

Water Features

 Oceans

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

MAP INFORMATION

Map Scale: 1:5,030 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 18N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Windsor County, Vermont
Survey Area Data: Version 13, Sep 5, 2008

Date(s) aerial images were photographed: 8/24/2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

| Hydric Rating by Map Unit— Summary by Map Unit — Windsor County, Vermont | | | | |
|--|--|------------------|--------------|----------------|
| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
| 2A | Belgrade silt loam, 0 to 3 percent slopes | Partially Hydric | 4.3 | 7.2% |
| 4A | Raynham silt loam, 0 to 3 percent slopes | Partially Hydric | 0.1 | 0.1% |
| 5B | Windsor loamy fine sand, 0 to 8 percent slopes | Not Hydric | 16.4 | 27.3% |
| 5E | Windsor loamy fine sand, 25 to 60 percent slopes | Not Hydric | 7.6 | 12.7% |
| 9B | Ninigret fine sandy loam, 0 to 8 percent slopes | Partially Hydric | 11.8 | 19.7% |
| 14C | Hinckley sandy loam, 8 to 15 percent slopes | Not Hydric | 6.8 | 11.4% |
| 29A | Grange very fine sandy loam, 0 to 3 percent slopes | Partially Hydric | 13.0 | 21.7% |
| Totals for Area of Interest | | | 60.0 | 100.0% |

Description

This rating indicates the proportion of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is designated as "all hydric," "partially hydric," "not hydric," or "unknown hydric," depending on the rating of its respective components.

"All hydric" means that all components listed for a given map unit are rated as being hydric, while "not hydric" means that all components are rated as not hydric. "Partially hydric" means that at least one component of the map unit is rated as hydric, and at least one component is rated as not hydric. "Unknown hydric" indicates that at least one component is not rated so a definitive rating for the map unit cannot be made.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Absence/Presence

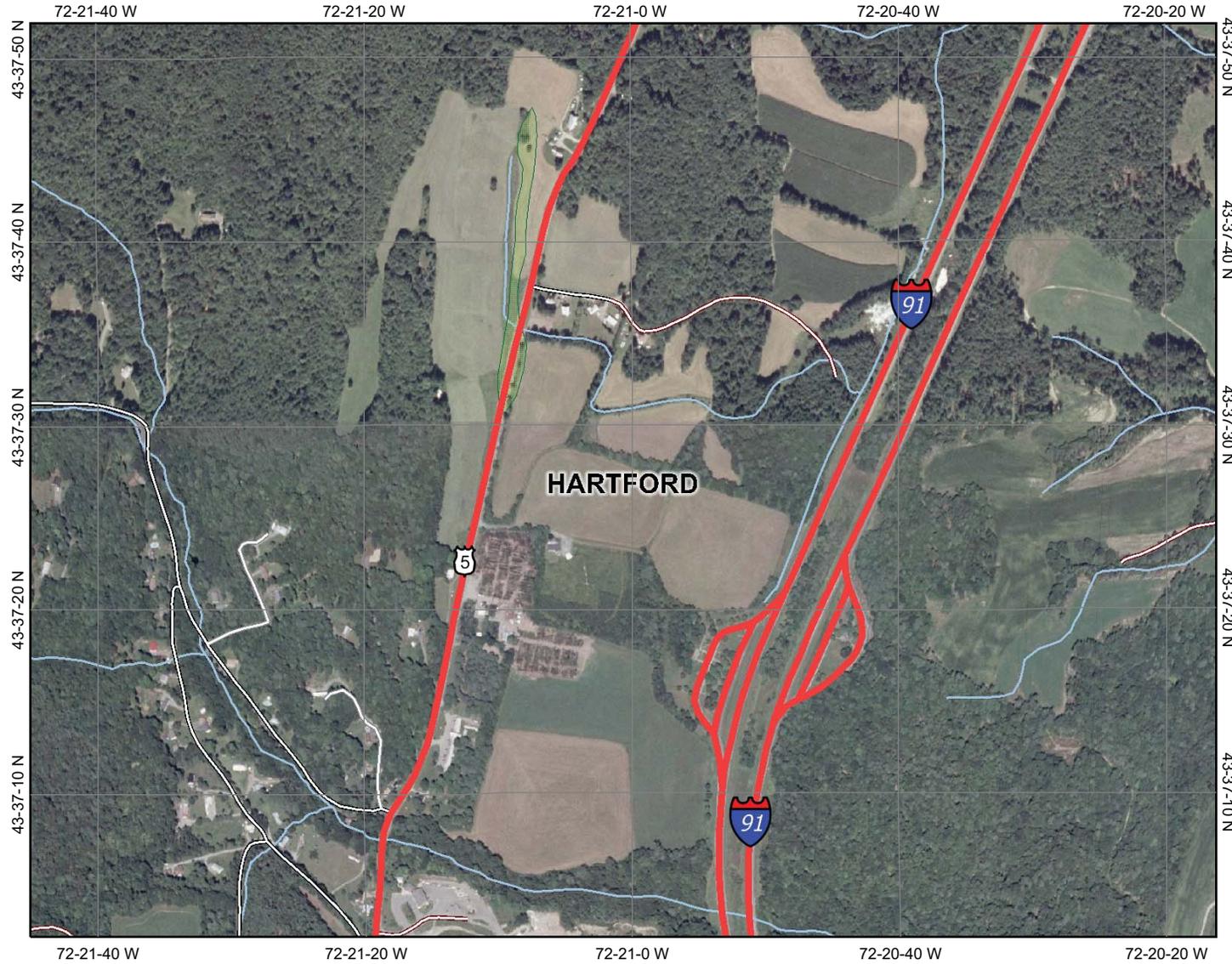
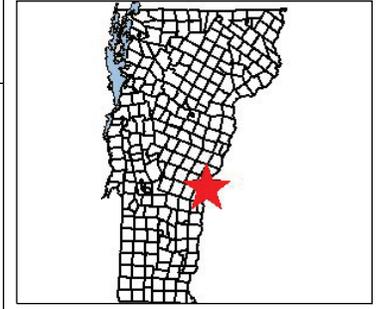
Tie-break Rule: Lower



ANR Environmental Interest Locator

Vermont Agency of Natural Resources (ANR)

White River Junction



Legend

- Roads**
 - US Highway
 - Vermont State Highway
 - Class One
 - Class Two
 - Legal Trail
 - Emergency U-Turn Area
 - Proposed Class Two
 - Proposed Class Three
 - Proposed Vermont State Highway
 - Proposed US Highway
 - Proposed Interstate
 - Discontinued Interstate
 - Class Three
 - Class Four
 - State/National Forest Highway
 - Military Road (No Public Access)
 - Private Road
- WSWI
- Hydrography Lakes and Ponds (VHD 5k)
- Hydrography (VHD 5k)
- VT County Boundary
- VT Town Boundaries (No Fill)
- NAIP Color Orthophotos
- VT State Boundary (Fill)

VT State Plane Meters (NAD83)

Scale: 1:10,727

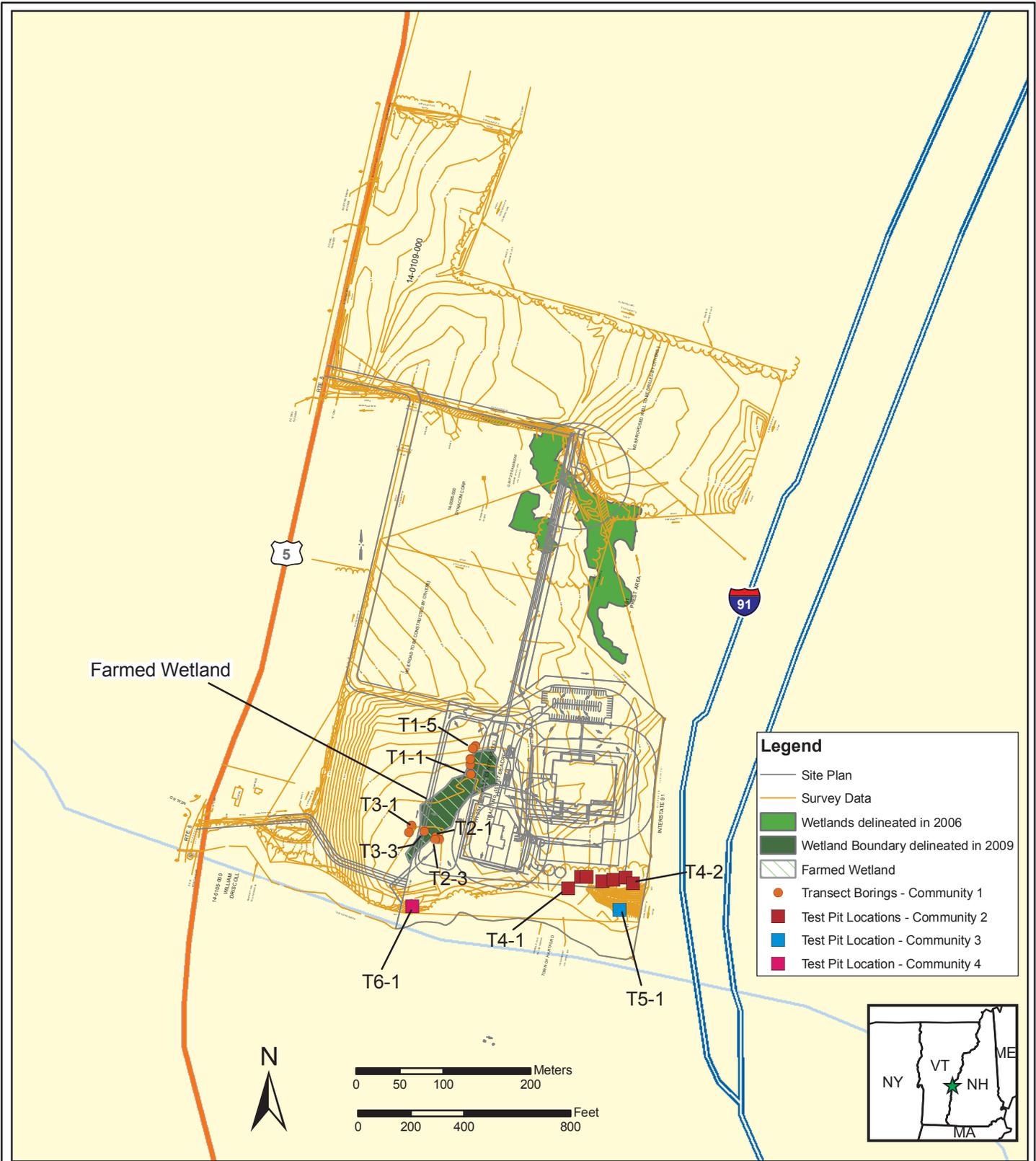


Map center: 512092, 124896

DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. VCGI and the State of Vermont make no representations of any kind, including but not limited to the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.

Vermont Significant Wetland Inventory

URL: http://maps.vermont.gov/imf/sites/ANR_NATRESViewer/jsp/launch.jsp



Prepared For:
 U.S. Army Corps of Engineers, Mobile District

Appendix A
 Transects at North Hartland Road Site

AGEISS inc.

T1-1

PROJECT TITLE: White River Junction TRANSECT: 1 PLOT: 1
N. Hartland
 DELINEATOR(S): Arg/Mayer DATE: 21 April 2009

| VEGETATION | Stratum and Species | Dominance Ratio | Percent Dominance | DOM | NWI Status |
|-------------------------------|-----------------------------|-----------------|-------------------|-----|-------------|
| white clover | <i>Trifolium repens</i> | 10/16 | 43 | X | FACU- / FAC |
| dandelion - common | <i>Taraxacum officinale</i> | 1/16 | 6 | | FACU- |
| Sedge (Carex sp.) | | 5/16 | 31 | | - |
| dead grass covers 84% of plot | | | | | |
| Plants just developing | | | | | |

| HYDROPHYTES | | | | NON-HYDROPHYTES | | |
|---|------|-----|--------|--|------|-----|
| OBL | FACW | FAC | *OTHER | FAC- | FACU | UPL |
| Hydrophytes Subtotal (A): <u>0</u> | | | | Non-hydrophytes Subtotal (B): <u>2</u> | | |
| PERCENT HYDROPHYTES (100A/A+B): <u>0/2 = 0%</u> | | | | | | |

HYDROLOGY

RECORDED DATA
 Stream, lake, or tidal gage Identification: _____
 Aerial photography Identification: _____
 Other Identification: _____

NO RECORDED DATA

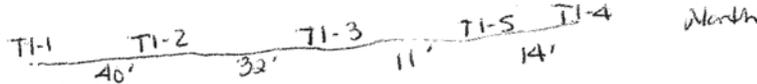
OBSERVATIONS:
 Depth to Free Water: 9" b/s
 Depth to Saturation (including capillary fringe): land surface
 Altered Hydrology (explain): _____

Inundated Saturated in upper 12" Water Marks Drift Lines Sediment Deposits Drainage Patterns within Wetland

OTHER (explain): Standing water / algal mats

NAD 83
 UTM 713729 4833026

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

| DEPTH | HORIZON | MATRIX COLOR | REDOXIMORPHIC FEATURES (color, abundance, size, contrast) | COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.) |
|--------|---------|------------------------------------|---|--|
| 0-12" | | Gley 14/10Y 10YR 3/1 | | <p>SATURATED</p> <p>Δ = 79' below</p> |
| 12-16" | | 10YR 3/1 Gley 14/10Y | 5YR5/0 c(1%) ^F PL | |
| 16-? | | 10YR 4/3 | | |

HYDRIC SOIL INDICATOR(S):

~~A2~~, ~~FA~~, F2

REFERENCE(S):

A guide for identifying and delineating hydric soils

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

| | YES | NO | REMARKS: |
|---------------------------------------|-------------------------------------|-------------------------------------|----------|
| Hydrophytic vegetation criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Hydric soils criterion met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Wetland hydrology criterion met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| IS THIS DATAPOINT IN A WETLAND? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |

PROJECT TITLE: North Hardland - WRS

TRANSECT: T1

PLOT:)

TJ-2

PROJECT TITLE: WRJ North Hartland

TRANSECT: 1

PLOT: 2

DELINEATOR(S): Mayer / Arje

DATE: 21 April 2009

| VEGETATION | Stratum and Species | Dominance Ratio | Percent Dominance | DOM | NWI Status |
|------------------------|-----------------------------|-----------------|-------------------|-----|------------|
| Clover - white | <i>Trifolium repens</i> | 25/55 | 45 | | FACU- |
| Grass - bunch | (<i>Poa</i> sp) | 20/55 | 36 | | - |
| Sedge | (<i>Carex</i> sp) | 5/55 | 9 | | - |
| Dandelion - Common | <i>Taraxacum officinale</i> | 2/55 | 4 | | FACU- |
| Common plantain | <i>Plantago major</i> | 1/55 | 2 | | FACU |
| Moss (just developing) | | 2/55 | 4 | | - |

HYDROPHYTES

NON-HYDROPHYTES

OBL FACW FAC *OTHER

FAC- 3 FACU UPL

Hydrophytes Subtotal (A): 0

Non-hydrophytes Subtotal (B): 3

PERCENT HYDROPHYTES (100A/A+B): 0%

HYDROLOGY

- RECORDED DATA
 Stream, lake, or tidal gage Identification: _____
 Aerial photography Identification: _____
 Other Identification: _____

NO RECORDED DATA

OBSERVATIONS:

Depth to Free Water: 13" bbs
 Depth to Saturation (including capillary fringe): LS
 Altered Hydrology (explain): _____

- Inundated Saturated in upper 12" Water Marks Drift Lines Sediment Deposits Drainage Patterns within Wetland
- OTHER (explain): _____

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

| DEPTH | HORIZON | MATRIX COLOR | REDOXIMORPHIC FEATURES (color, abundance, size, contrast) | COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.) |
|--------------|---------|--------------|---|--|
| 0-10" | | 10YR 3/1 | 1DR 3/6 C=25% PL granular - nd | |
| 10-14" 12 | | Gleyl 3/5GY | 5YR 5/8 C=2% granular - nd | |
| 14-14" | | 5Y 4/3 | 7.5YR 2.5/2 C=5% granular - nd | |
| 14'- | | 2.5Y 3/2 | | H ₂ O table 13" |

HYDRIC SOIL INDICATOR(S):

~~AZ~~, F2, ~~F8~~

REFERENCE(S):

A guide for identifying and delineating hydric soils

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

| | YES | NO | REMARKS: |
|---------------------------------------|-------------------------------------|-------------------------------------|----------|
| Hydrophytic vegetation criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Hydric soils criterion met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Wetland hydrology criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| IS THIS DATAPOINT IN A WETLAND? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

PROJECT TITLE: North Hartland - WRS

TRANSECT: T1

PLOT: 2

T1-3

PROJECT TITLE: WRS North Hartland

TRANSECT: 1

PLOT: 3

DELINEATOR(S): Mayer/Arje

DATE: 21 April 2009

VEGETATION

Stratum and Species

Dominance Ratio

Percent Dominance

DOM

NWI Status

White clover *Trifolium repens*

1/4

25

FACU-

Sedge (*Carex* sp.)

1/4

25

-

Spreading purple herb/weed (unidentified)

3/4

50

HYDROPHYTES

NON-HYDROPHYTES

OBL FACW FAC *OTHER

FAC- FACU UPL

Hydrophytes Subtotal (A): 0

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 0% = 0%

HYDROLOGY

RECORDED DATA

Stream, lake, or tidal gage
Aerial photography
Other

Identification: _____
Identification: _____
Identification: _____

NO RECORDED DATA

OBSERVATIONS:

Depth to Free Water: 18" bla
Depth to Saturation (including capillary fringe): LS
Altered Hydrology (explain): _____

- Inundated
- Saturated in upper 12"
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns within Wetland
- OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

| DEPTH | HORIZON | MATRIX COLOR | REDOXIMORPHIC FEATURES (color, abundance, size, contrast) | COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.) |
|-------|---------|--------------|---|--|
| 0-9" | | 10YR3/1 | 2.5YR2.5/4, C(1%)PL | - DISTURBED FROM PLOWING |
| 9-13" | | Gley 4/10Y | 2.5YR4/8, C(1%)PL, Fine, 7.5YR2.5/2, C(1%)PL, Fine | |
| 13- | | 10YR4/2 | 2.5YR3/2, C(1%)PL Fine | |

HYDRIC SOIL INDICATOR(S):

F₂

REFERENCE(S):

A guide for identifying and delineating hydric soils

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

| | YES | NO | REMARKS: |
|---------------------------------------|-------------------------------------|-------------------------------------|----------|
| Hydrophytic vegetation criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Hydric soils criterion met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Wetland hydrology criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| IS THIS DATAPOINT IN A WETLAND? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

PROJECT TITLE:

Hartland Camp - WRS

TRANSECT:

T-1

PLOT: 3

PROJECT TITLE: WRS North Hartland

TRANSECT: T-1

PLOT: 4

DELINEATOR(S): Major / Arje

DATE: 21 April 2009

VEGETATION

Stratum and Species

Dominance Ratio

Percent Dominance

DOM X

NWI Status

Spreading purple weed/herb (unidentified)

15/16

93

~~WPA~~
Common grass: crab grass (Digitaria sp)

1/16

6

FACU #A PL

HYDROPHYTES

NON-HYDROPHYTES

OBL FACW FAC *OTHER

FAC- FACU UPL

Hydrophytes Subtotal (A): 0

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 0/1 = 0%

HYDROLOGY

RECORDED DATA

Stream, lake, or tidal gage

Identification: _____

Aerial photography

Identification: _____

Other

Identification: _____

NO RECORDED DATA

OBSERVATIONS:

Depth to Free Water: 30"

Depth to Saturation (including capillary fringe): 25 heavy rains last several days

Altered Hydrology (explain): _____

Inundated

Saturated in upper 12"

Water Marks

Drift Lines

Sediment Deposits

Drainage Patterns within Wetland

OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

| DEPTH | HORIZON | MATRIX COLOR | REDOXIMORPHIC FEATURES (color, abundance, size, contrast) | COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.) |
|--------|---------|--------------|---|--|
| 0-11" | | 10R 3/2 | | plowed soil |
| 11-13" | | 5Y 4/3 | 10R 3/3 C=20% _{pl} fine | |
| 13" - | | 5Y 4/3 | | |

HYDRIC SOIL INDICATOR(S):

None

REFERENCE(S):

A guide for identifying and delineating hydric soils

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

| | YES | NO | REMARKS: |
|---------------------------------------|--------------------------|-------------------------------------|----------|
| Hydrophytic vegetation criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Hydric soils criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Wetland hydrology criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| IS THIS DATAPOINT IN A WETLAND? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

PROJECT TITLE: North Hartland - WRS

TRANSECT: T1

PLOT: 4

PROJECT TITLE: North Hartland - WRS

TRANSECT: 2

PLOT: 1

DELINEATOR(S): Arge/Mayer

DATE: 21 April 2009

VEGETATION

Stratum and Species

Dominance Ratio

Percent Dominance

DOM

NWI Status

Moss (just developing)

5/7

71

X

-

White clover

Trifolium repens

1/7

14

FACU-

Spreading herb/weed - purple (unidentified)

1/7

14

-

WM 713691 4832953

HYDROPHYTES

NON-HYDROPHYTES

OBL FACW FAC *OTHER

FAC- FACU UPL

Hydrophytes Subtotal (A): 0

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 0/1 = 0%

HYDROLOGY

RECORDED DATA

Stream, lake, or tidal gage

Identification: _____

Aerial photography

Identification: _____

Other

Identification: _____

NO RECORDED DATA

OBSERVATIONS:

Depth to Free Water: 10"

Depth to Saturation (including capillary fringe): 13"

Altered Hydrology (explain): _____

Inundated

Saturated in upper 12"

Water Marks

Drift Lines

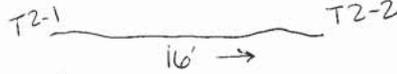
Sediment Deposits

Drainage Patterns within Wetland

OTHER (explain):

Some ponded water

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

| DEPTH | HORIZON | MATRIX COLOR | REDOXIMORPHIC FEATURES (color, abundance, size, contrast) | COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.) |
|--------|---------|--------------|---|--|
| 0-8" | | 2.5Y 3/1 | | plowed layer |
| 8-11" | | Gley 1 4/5GY | 2.5YR 3/6 C=20% md, M 2.5Y 3/1 C=20% md, M | |
| 11-24" | | 10YR 3/3 | 10YR 3/2 PL, md C=5% | |

HYDRIC SOIL INDICATOR(S):

F2

REFERENCE(S):

A guide for identifying and delineating hydric soils

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

| | YES | NO | REMARKS: |
|---------------------------------------|-------------------------------------|-------------------------------------|--|
| Hydrophytic vegetation criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | disturbed area from plowing - may be missing species not developed yet |
| Hydric soils criterion met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Wetland hydrology criterion met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| IS THIS DATAPOINT IN A WETLAND? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |

PROJECT TITLE: North Hartland - WRS

TRANSECT: T2

PLOT: 1

PROJECT TITLE: North Highland - WRS

TRANSECT: T2

PLOT: 2

DELINEATOR(S): Arjo/Mayer

DATE: 21 April 2009

| VEGETATION | Stratum and Species | Dominance Ratio | Percent Dominance | DOM | NWI Status |
|------------|---|-----------------|-------------------|-----|------------|
| | Bunch grass (Poa sp) | 1/2 | 50 | X | — |
| | Spreading herb/weed-purple (unidentified) | 1/2 | 50 | | — |

HYDROPHYTES

NON-HYDROPHYTES

OBL FACW FAC *OTHER

FAC- FACU UPL

Hydrophytes Subtotal (A): 0

Non-hydrophytes Subtotal (B): 0

PERCENT HYDROPHYTES (100A/A+B): 0

HYDROLOGY

- RECORDED DATA
 - Stream, lake, or tidal gage Identification: _____
 - Aerial photography Identification: _____
 - Other Identification: _____

NO RECORDED DATA

OBSERVATIONS:

Depth to Free Water: 26"
 Depth to Saturation (including capillary fringe): 25"
 Altered Hydrology (explain): _____

- Inundated
- Saturated in upper 12"
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns within Wetland
- OTHER (explain): _____

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

| DEPTH | HORIZON | MATRIX COLOR | REDOXIMORPHIC FEATURES (color, abundance, size, contrast) | COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.) |
|---------|---------|--------------|---|--|
| 0-10" | | 10YR3/2 | | plowed |
| 10-14" | | 5Y4/2 | 2.5YR3/3, c(10%) M _{ab} | |
| 14-27" | | 2.5Y4/2 | | |
| ▽ = 26" | | | | |

HYDRIC SOIL INDICATOR(S):

none

REFERENCE(S):

A guide for identifying and delineating hydric soils

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

| | YES | NO | REMARKS: |
|---------------------------------------|--------------------------|-------------------------------------|----------|
| Hydrophytic vegetation criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Hydric soils criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Wetland hydrology criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| IS THIS DATAPOINT IN A WETLAND? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

PROJECT TITLE:

North Hertland

TRANSECT:

T2

PLOT:

2

PROJECT TITLE: WRT - North Hartland

TRANSECT: T3

PLOT: 1

DELINEATOR(S): Arce/Mayor

DATE: 21 April 2009

| VEGETATION | Stratum and Species | Dominance Ratio | Percent Dominance | DOM | NWI Status |
|---------------------------------|-----------------------------|-----------------|-------------------|-----|------------|
| Moss (just developing) | | 25/43 | 58 | X | - |
| White clover | <i>Trifolium repens</i> | 10/43 | 23 | | FACU- |
| Spreading herb/weed-purple | (unidentified) | 6/43 | 14 | | - |
| Dandelion - common | <i>Taraxacum officinale</i> | 1/43 | 2 | | FACU- |
| Crisp Black grass | (<i>Digitaria</i> sp) | 1/43 | 2 | | FACU/UPL |

HYDROPHYTES

NON-HYDROPHYTES

OBL FACW FAC *OTHER

3
FAC- FACU UPL

Hydrophytes Subtotal (A): 0

Non-hydrophytes Subtotal (B): 3

PERCENT HYDROPHYTES (100A/A+B): 0/3 = 0%

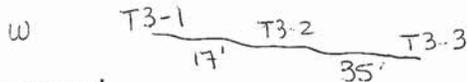
HYDROLOGY

- RECORDED DATA
 - Stream, lake, or tidal gage Identification: _____
 - Aerial photography Identification: _____
 - Other Identification: _____
- NO RECORDED DATA

- OBSERVATIONS:
 - Depth to Free Water: 17"
 - Depth to Saturation (including capillary fringe): LS
 - Altered Hydrology (explain): _____

- Inundated Saturated in upper 12" Water Marks Drift Lines Sediment Deposits Drainage Patterns within Wetland
- OTHER (explain): _____

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

| DEPTH | HORIZON | MATRIX COLOR | REDOXIMORPHIC FEATURES (color, abundance, size, contrast) | COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.) |
|---------|---------|--------------|---|--|
| 0-14" | | 2.5Y3/1 | pL 5YR3/3 fine C=5% | plowed layer |
| 14-22+" | | 5Y4/2 | 5YR 4/6 fine pL C=25% 2.5YR 2.5/1 fine pL C=3% | |

HYDRIC SOIL INDICATOR(S):

None

REFERENCE(S):

A guide for identifying and delineating hydric soils

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

| | YES | NO | REMARKS: |
|---------------------------------------|--------------------------|-------------------------------------|----------|
| Hydrophytic vegetation criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Hydric soils criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Wetland hydrology criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| IS THIS DATAPOINT IN A WETLAND? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

PROJECT TITLE: North Hartland - WRS

TRANSECT: T3

PLOT: 1

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Boundary sample

Submission of photo of plot is encouraged.

| DEPTH | HORIZON | MATRIX COLOR | REDOXIMORPHIC FEATURES (color, abundance, size, contrast) | COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.) |
|---------|---------|--------------|---|--|
| 0-7" | | 5Y 3/2 | ^{umt} 5Y 3/2 | plowed |
| 7-11" | | 5Y 3/2 | ^{umt} 5Y 3/2 | plowed - vegetation plowed in |
| 11-16" | | 5Y 4/3 | 7.5 YR 2.5/1 pH fine C=5% 5YR 4/6 C=5% pH fine | |
| 16-19+" | | 5Y 4/3 | 5YR 4/6 C=2% pH fine | |

HYDRIC SOIL INDICATOR(S):

None

REFERENCE(S):

A guide for identifying and delineating hydric soils

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

| | YES | NO | REMARKS: |
|---------------------------------------|--------------------------|-------------------------------------|----------|
| Hydrophytic vegetation criterion met? | <input type="checkbox"/> | <input type="checkbox"/> | |
| Hydric soils criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Wetland hydrology criterion met? | <input type="checkbox"/> | <input type="checkbox"/> | |
| IS THIS DATAPOINT IN A WETLAND? | <input type="checkbox"/> | <input type="checkbox"/> | |

PROJECT TITLE: North Hankland -WRS

TRANSECT: T3

PLOT: 2

PROJECT TITLE: North Hartland - WRS

TRANSECT: T3

PLOT: 3

DELINEATOR(S): Mayer / Argo

DATE: 22 April 2009

VEGETATION

Stratum and Species

White Clover

Trifolium repens

Iris

Dead grass on large portion of plot - 90%

Dominance Ratio

10/11

4/11

Percent Dominance

91

9

DOM X

NWI Status

FACU -

HYDROPHYTES

NON-HYDROPHYTES

OBL FACW FAC *OTHER

FAC- FACU UPL

Hydrophytes Subtotal (A): 0

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 0/1 = 0%

HYDROLOGY

RECORDED DATA

- Stream, lake, or tidal gage
Aerial photography
Other

Identification:
Identification:
Identification:

NO RECORDED DATA

OBSERVATIONS:

Depth to Free Water: 12"
Depth to Saturation (including capillary fringe): 25
Altered Hydrology (explain):

- Inundated
Saturated in upper 12"
Water Marks
Drift Lines
Sediment Deposits
Drainage Patterns within Wetland

OTHER (explain): Standing water in low depressions

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

| DEPTH | HORIZON | MATRIX COLOR | REDOXIMORPHIC FEATURES (color, abundance, size, contrast) | COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.) |
|--------|---------|--------------|---|--|
| 0-12" | | 5Y 3/2 | | p low iron deposits on root channels |
| 12-17" | | Gley 3/100Y | 5YR 3/4 PL C = 3% fine | |
| 17-24" | | 5Y 3/2 | | |

HYDRIC SOIL INDICATOR(S):

A 11

REFERENCE(S):

A guide for identifying and delineating hydric soils

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

| | YES | NO | REMARKS: |
|---------------------------------------|-------------------------------------|-------------------------------------|--|
| Hydrophytic vegetation criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Plowed/disturbed area and species might not be true representation |
| Hydric soils criterion met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Wetland hydrology criterion met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| IS THIS DATAPOINT IN A WETLAND? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |

PROJECT TITLE: North Hartland - WRS

TRANSECT: T3

PLOT: 3

PROJECT TITLE: North Hartland

TRANSECT: T4

PLOT: 1

DELINEATOR(S): W. Argo / L. Meyer

DATE: 22 April 2009

VEGETATION

Stratum and Species

Dominance Ratio

Percent Dominance

DOM

NWI Status

Trees

| | |
|--------------|------------------------------|
| Hemlock | <i>Tsuga canadensis</i> |
| White pine | <i>Pinus strobus</i> |
| Red maple | <i>Acer rubrum</i> |
| Red oak | <i>Quercus rubra</i> |
| Yellow birch | <i>Betula alleghaniensis</i> |

615/1757

35

X

FACU

154/1757

9

FACU

8/1757

0.5

FAC

961/1757

55

X

FACU-

19/1757

1

FAC

Saplings

| | |
|--------------|-------------------------|
| Hemlock | <i>Tsuga canadensis</i> |
| Black Cherry | <i>Prunus serotina</i> |
| Red maple | <i>Acer rubrum</i> |

415/486

85

X

FACU

7/486

2

FACU

64/486

13

FAC

Seedlings

| | |
|-------|--------------------------|
| Beech | <i>Fagus grandifolia</i> |
|-------|--------------------------|

3/3

100

X

FACU

HYDROPHYTES

NON-HYDROPHYTES

OBL FACW FAC *OTHER

FAC- FACU UPL

Hydrophytes Subtotal (A): 0

Non-hydrophytes Subtotal (B): 4

PERCENT HYDROPHYTES (100A/A+B): 0/4 = 0%

HYDROLOGY

RECORDED DATA

Stream, lake, or tidal gage
Aerial photography
Other

Identification:
Identification:
Identification:

NO RECORDED DATA

OBSERVATIONS:

Depth to Free Water: not found > 20"
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain):

Inundated Saturated in upper 12" Water Marks Drift Lines Sediment Deposits Drainage Patterns within Wetland

OTHER (explain): no standing water

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

T4-2 ----- T4-1

Submission of photo of plot is encouraged. 234

| DEPTH | HORIZON | MATRIX COLOR | REDOXIMORPHIC FEATURES (color, abundance, size, contrast) | COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.) |
|--------|---------|--------------|---|--|
| 0-20"+ | | 5Y4/2 | 10YR4/6, c(3%)p, Fine. | |

HYDRIC SOIL INDICATOR(S):

REFERENCE(S):

A guide for identifying and delineating hydric soils

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

| | YES | NO | REMARKS: |
|---------------------------------------|--------------------------|-------------------------------------|----------|
| Hydrophytic vegetation criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Hydric soils criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Wetland hydrology criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| IS THIS DATAPOINT IN A WETLAND? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

PROJECT TITLE: North Hartland - WRJ

TRANSECT: T4

PLOT: 1

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

| DEPTH | HORIZON | MATRIX COLOR | REDOXIMORPHIC FEATURES (color, abundance, size, contrast) | COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.) |
|-------|---------|--------------|---|--|
| 0-7" | | 5Y3/1 | | |
| 7-19" | | 5Y3/2 | | E = 13" 6/5 - Francisco Rose |

HYDRIC SOIL INDICATOR(S):

REFERENCE(S):

A guide for identifying and delineating hydric soils

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

| | YES | NO | REMARKS: |
|---------------------------------------|--------------------------|-------------------------------------|--------------------------------------|
| Hydrophytic vegetation criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | not sampled - same as T4-1 community |
| Hydric soils criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Wetland hydrology criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| IS THIS DATAPOINT IN A WETLAND? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

PROJECT TITLE: North Hardland - WRT

TRANSECT: T4

PLOT: 2

PROJECT TITLE: WRT North Hartford

TRANSECT: T5

PLOT: 1

DELINEATOR(S): Mayer / Arjo

DATE: 22 APR 09

VEGETATION

Stratum and Species

Dominance Ratio

Percent Dominance

DOM

NWI Status

Tree

Red Oak

Quercus rubra

1320/1735

76

X

FACU-

Hemlock

Tsuga canadensis

415/1735

24

FACU

Herb

Fern - leaf fern

Athyrium filix-femina

(no sori evident)

20/20

100

X

FAC

HYDROPHYTES

NON-HYDROPHYTES

OBL FACW FAC *OTHER

FAC- FACU UPL

Hydrophytes Subtotal (A):

Non-hydrophytes Subtotal (B):

PERCENT HYDROPHYTES (100A/A+B): 1/2 = 50%

HYDROLOGY

- RECORDED DATA
Stream, lake, or tidal gage
Aerial photography
Other

Identification:
Identification:
Identification:

NO RECORDED DATA

OBSERVATIONS:

Depth to Free Water: at surface
Depth to Saturation (including capillary fringe): LS
Altered Hydrology (explain):

- Inundated
Saturated in upper 12"
Water Marks
Drift Lines
Sediment Deposits
Drainage Patterns within Wetland

OTHER (explain): Some ponded water

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged. 237

| DEPTH | HORIZON | MATRIX COLOR | REDOXIMORPHIC FEATURES (color, abundance, size, contrast) | COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.) |
|--------|---------|--------------|---|--|
| 0-8" | | 2.5Y3/2 | | Roots |
| 8-14" | | 2.5Y4/4 | | |
| 14-27" | | 5Y3/2 | 10YR4/6 fine C=1% PL | |

HYDRIC SOIL INDICATOR(S):

None

REFERENCE(S):

A guide for identifying and delineating hydric soils

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

| | YES | NO | REMARKS: |
|---------------------------------------|-------------------------------------|--|----------|
| Hydrophytic vegetation criterion met? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> <i>unmet</i> | |
| Hydric soils criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Wetland hydrology criterion met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| IS THIS DATAPOINT IN A WETLAND? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

PROJECT TITLE: North Hartland - WRS

TRANSECT: T5

PLOT: 1

PROJECT TITLE: WRS North ~~Harland~~ Harland

TRANSECT: T6 PLOT: 1

DELINEATOR(S): Arp/Mayer

DATE: 22 April 2009

| VEGETATION | Stratum and Species | Dominance Ratio | Percent Dominance | DOM | NWI Status |
|--|---------------------------------------|-----------------|-------------------|-----|------------|
| <u>Herb</u> | | | | | |
| Equisetum | Equisetum hyemale or E. variegatum | 70/70 | 100 | X | FACW |
| <u>Sapling/Shrub</u> | | | | | |
| Winged Sumac | Rhus copallina | 87/87 | 100 | X | NI/UPL |
| <u>Shrub</u> | | | | | |
| Willow (no leaves to distinguish to species) | | 25/25 | 100 | X | FACW |
| Salix sp (most are FACW or OBL) | | | | | |

HYDROPHYTES

NON-HYDROPHYTES

2
OBL FACW FAC *OTHER

1
FAC- FACU UPL

Hydrophytes Subtotal (A): _____

Non-hydrophytes Subtotal (B): _____

PERCENT HYDROPHYTES (100A/A+B): 2/3 = 66%

HYDROLOGY

- RECORDED DATA
 Stream, lake, or tidal gage Identification: _____
 Aerial photography Identification: _____
 Other Identification: _____

NO RECORDED DATA

OBSERVATIONS:

Depth to Free Water: +24"
 Depth to Saturation (including capillary fringe): LS
 Altered Hydrology (explain): _____

- Inundated Saturated in upper 12" Water Marks Drift Lines Sediment Deposits Drainage Patterns within Wetland
- OTHER (explain): _____

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

| DEPTH | HORIZON | MATRIX COLOR | REDOXIMORPHIC FEATURES (color, abundance, size, contrast) | COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.) |
|--------|---------|--------------|---|--|
| 0-10" | | 5Y 3/2 | none | |
| 10-24" | | 5Y 4/2 | | |

HYDRIC SOIL INDICATOR(S):

none

REFERENCE(S):

A guide for identifying and delineating hydric soils

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

| | YES | NO | REMARKS: |
|---------------------------------------|-------------------------------------|-------------------------------------|----------|
| Hydrophytic vegetation criterion met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Hydric soils criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Wetland hydrology criterion met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| IS THIS DATAPOINT IN A WETLAND? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

PROJECT TITLE: North Hartland - WRS

TRANSECT: T6

PLOT: 1

Wetland Function-Value Evaluation Form

Total area of wetland: 1.0 Human made? Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent Land Use: planted crops - corn Distance to nearest roadway or other development: ~200 m

Dominant wetland system present: farmed wetland Contiguous undeveloped buffer zone present: yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? mid

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. North Hartland - WRI

Latitude: _____ Longitude: _____

Prepared by: _____ Date: 4/28/09

Wetland Impact:
Type _____ Area 1.0

Evaluation based on:
Office: _____ Field:

Corps Manual Wetland Delineation completed?
Y N _____

| Function/Value | Suitability | | Rationale (Reference #)* | Principal Function/Value | Comments |
|--|-------------------------------------|-------------------------------------|-----------------------------|-------------------------------------|--|
| | Y | N | | | |
|  Groundwater Recharge/Discharge | <input checked="" type="checkbox"/> | | 2, 4 | | |
|  Flood flow Alteration | <input checked="" type="checkbox"/> | | 5, 7 | | |
|  Fish and Shellfish Habitat | | <input checked="" type="checkbox"/> | | | No flowing inlet/outlet. |
|  Sediment/Toxicant Retention | <input checked="" type="checkbox"/> | | 3, 5 | | |
|  Nutrient Removal | <input checked="" type="checkbox"/> | | 3, 5, 7 | | Area considerably lesser than surrounding upland habitat. |
|  Production Export | <input checked="" type="checkbox"/> | | 1, 4, 5 | | May also be an artifact of surrounding veg. Mallards using area. |
|  Sediment/Shoreline Stabilization | | <input checked="" type="checkbox"/> | | | |
|  Wildlife Habitat | <input checked="" type="checkbox"/> | | 4, 5, 7, 8, 16, 17, 19, 21 | <input checked="" type="checkbox"/> | Mallard, deer, killdeer |
|  Recreation | | <input checked="" type="checkbox"/> | | | |
|  Educational/Scientific Value | | <input checked="" type="checkbox"/> | | | Area highly disturbed |
|  Uniqueness/Heritage | | <input checked="" type="checkbox"/> | | | Archaeological finding? |
|  Visual Quality/Aesthetics | | <input checked="" type="checkbox"/> | | | No direct view of wetland from roadways. |
| ES Endangered Species Habitat | | <input checked="" type="checkbox"/> | None | | None known to occur here |
| Other | | | | | |

Notes:

*attach list of considerations

Photographs at North Hartland Road Site

| | | |
|--|--------------------------|---|
|  | Photo: | 201 |
| | Location: | White River Junction, VT |
| | Site: | North Hartland Road |
| | Description/ Comment: | Community 1 – mallards and standing water |

| | | |
|---|--------------------------|-------------------------------|
|  | Photo: | 202 |
| | Location: | White River Junction, VT |
| | Site: | North Hartland Road |
| | Description/ Comment: | Community 1- drainage pattern |

Photographs at North Hartland Road Site



| | |
|----------------------|--------------------------|
| Photo: | 211 |
| Location: | White River Junction, VT |
| Site: | North Hartland Road |
| Description/Comment: | T1-1 |



| | |
|----------------------|--------------------------|
| Photo: | 213 |
| Location: | White River Junction, VT |
| Site: | North Hartland Road |
| Description/Comment: | T1-2 |

Photographs at North Hartland Road Site



| | |
|----------------------|--------------------------|
| Photo: | 215 |
| Location: | White River Junction, VT |
| Site: | North Hartland Road |
| Description/Comment: | T1-3 |



| | |
|----------------------|--------------------------|
| Photo: | 220 |
| Location: | White River Junction, VT |
| Site: | North Hartland Road |
| Description/Comment: | T1-4 |

Photographs at North Hartland Road Site



| | |
|----------------------|--------------------------|
| Photo: | 221 |
| Location: | White River Junction, VT |
| Site: | North Hartland Road |
| Description/Comment: | T2-1 |



| | |
|----------------------|--------------------------|
| Photo: | 224 |
| Location: | White River Junction, VT |
| Site: | North Hartland Road |
| Description/Comment: | T2-2 |

Photographs at North Hartland Road Site



| | |
|----------------------|--------------------------|
| Photo: | 225 |
| Location: | White River Junction, VT |
| Site: | North Hartland Road |
| Description/Comment: | T3-1 |



| | |
|----------------------|--------------------------|
| Photo: | 227 |
| Location: | White River Junction, VT |
| Site: | North Hartland Road |
| Description/Comment: | T3-2 |

Photographs at North Hartland Road Site

| | | |
|--|----------------------|--------------------------|
|  | Photo: | 228 |
| | Location: | White River Junction, VT |
| | Site: | North Hartland Road |
| | Description/Comment: | T3-3 |

| | | |
|---|----------------------|--------------------------|
|  | Photo: | 230 |
| | Location: | White River Junction, VT |
| | Site: | North Hartland Road |
| | Description/Comment: | T4-1 |

Photographs at North Hartland Road Site



| | |
|----------------------|--------------------------|
| Photo: | 231 |
| Location: | White River Junction, VT |
| Site: | North Hartland Road |
| Description/Comment: | T4-2 |



| | |
|----------------------|--------------------------|
| Photo: | 233 |
| Location: | White River Junction, VT |
| Site: | North Hartland Road |
| Description/Comment: | T5-1 |

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*Wetlands Investigation Report for Construction of an
Armed Forces Reserve Center and
Implementation of BRAC 05 Recommendations at
White River Junction, Vermont*

APPENDIX B

DREW ROAD SITE

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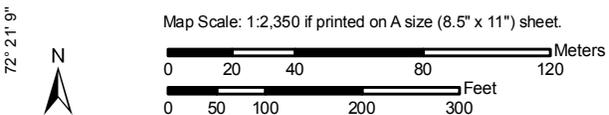
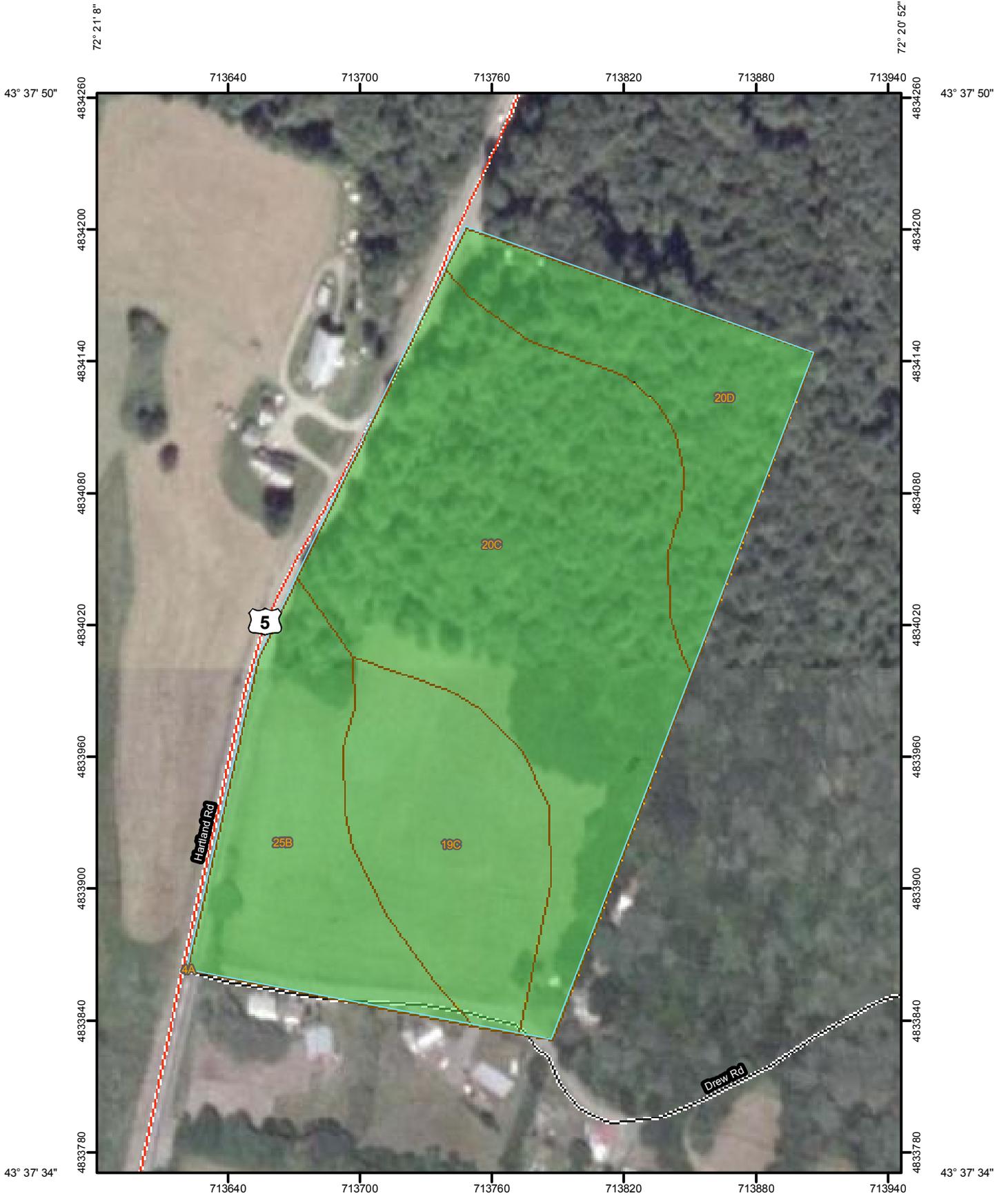
APPENDIX B. DREW ROAD SITE

Appendix B contains the following information for the Drew Road Site:

- Soil Taxonomy and Soil Hydric Rating Map
- Wetlands Inventory Map

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Hydric Rating by Map Unit—Windsor County, Vermont
(Drew Road Site)



Hydric Rating by Map Unit--Windsor County, Vermont
(Drew Road Site)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Soil Ratings

-  All Hydric
-  Partially Hydric
-  Not Hydric
-  Unknown Hydric
-  Not rated or not available

Political Features

 Cities

Water Features

 Oceans

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

MAP INFORMATION

Map Scale: 1:2,340 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 18N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Windsor County, Vermont
Survey Area Data: Version 13, Sep 5, 2008

Date(s) aerial images were photographed: 8/24/2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

| Hydric Rating by Map Unit— Summary by Map Unit — Windsor County, Vermont | | | | |
|--|--|------------------|--------------|----------------|
| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
| 4A | Raynham silt loam, 0 to 3 percent slopes | Partially Hydric | 0.0 | 0.0% |
| 19C | Vershire-Dummerston complex, 8 to 15 percent slopes, rocky | Partially Hydric | 2.7 | 17.7% |
| 20C | Glover-Vershire complex, 3 to 15 percent slopes, very rocky | Partially Hydric | 7.3 | 48.0% |
| 20D | Glover-Vershire complex, 15 to 35 percent slopes, very rocky | Partially Hydric | 2.5 | 16.1% |
| 25B | Buckland loam, 3 to 8 percent slopes | Partially Hydric | 2.8 | 18.2% |
| Totals for Area of Interest | | | 15.2 | 100.0% |

Description

This rating indicates the proportion of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is designated as "all hydric," "partially hydric," "not hydric," or "unknown hydric," depending on the rating of its respective components.

"All hydric" means that all components listed for a given map unit are rated as being hydric, while "not hydric" means that all components are rated as not hydric.

"Partially hydric" means that at least one component of the map unit is rated as hydric, and at least one component is rated as not hydric. "Unknown hydric" indicates that at least one component is not rated so a definitive rating for the map unit cannot be made.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Absence/Presence

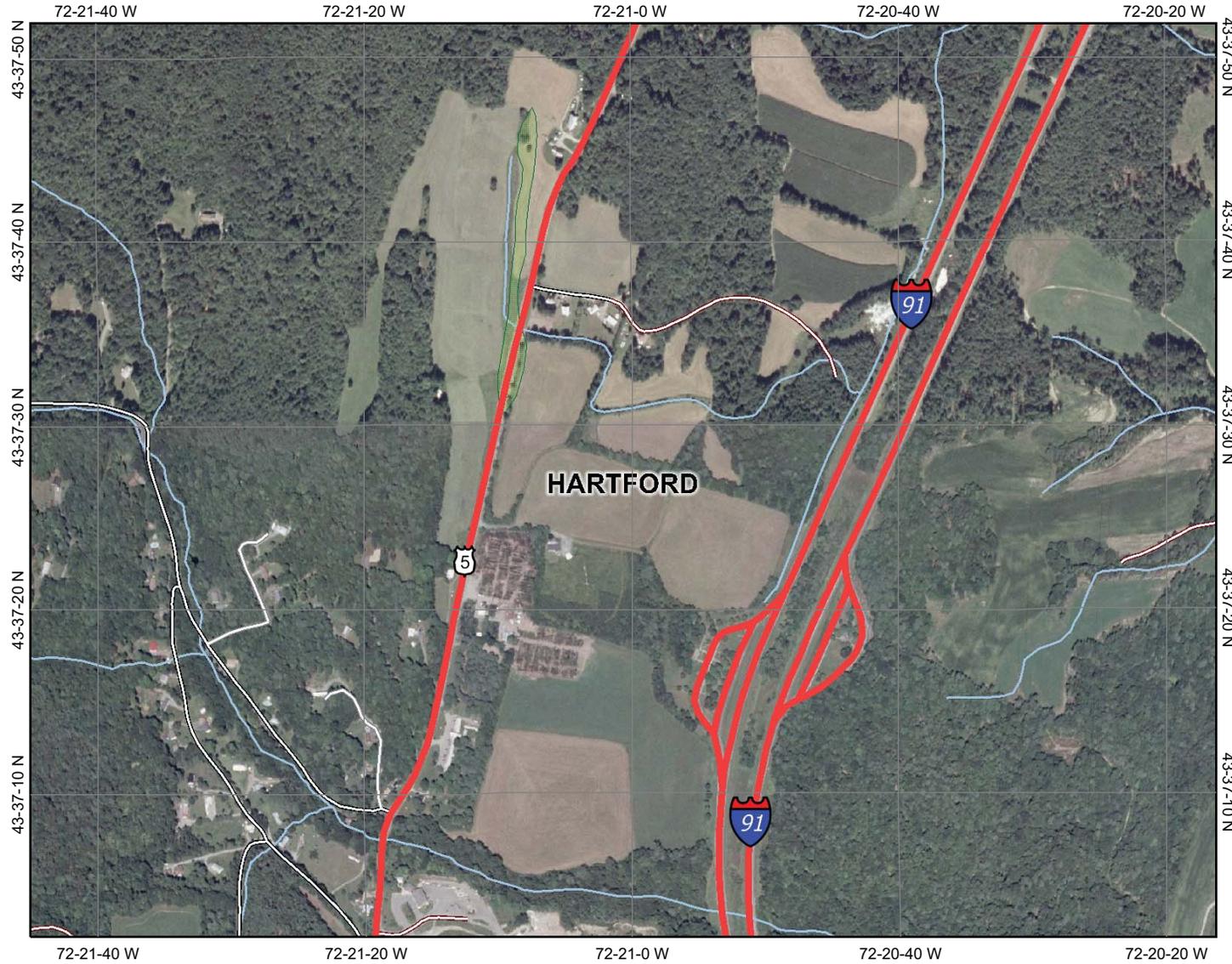
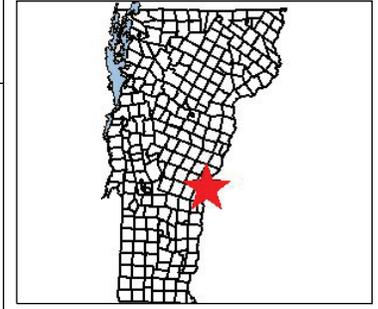
Tie-break Rule: Lower



ANR Environmental Interest Locator

Vermont Agency of Natural Resources (ANR)

White River Junction



Legend

- Roads**
 - US Highway
 - Vermont State Highway
 - Class One
 - Class Two
 - Legal Trail
 - Emergency U-Turn Area
 - Proposed Class Two
 - Proposed Class Three
 - Proposed Vermont State Highway
 - Proposed US Highway
 - Proposed Interstate
 - Discontinued Interstate
 - Class Three
 - Class Four
 - State/National Forest Highway
 - Military Road (No Public Access)
 - Private Road
- WSWI
- Hydrography Lakes and Ponds (VHD 5k)
- Hydrography (VHD 5k)
- VT County Boundary
- VT Town Boundaries (No Fill)
- NAIP Color Orthophotos
- VT State Boundary (Fill)

VT State Plane Meters (NAD83)

Scale: 1:10,727



Map center: 512092, 124896

DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. VCGI and the State of Vermont make no representations of any kind, including but not limited to the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.

Vermont Significant Wetland Inventory

URL: http://maps.vermont.gov/imf/sites/ANR_NATRESViewer/jsp/launch.jsp

*Environmental Assessment for Construction of an
Armed Forces Reserve Center and
Implementation of BRAC 05 Recommendations at
White River Junction, Vermont*

APPENDIX C

ECONOMIC IMPACT FORECAST SYSTEM REPORT

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APPENDIX C. ECONOMIC IMPACT FORECAST SYSTEM REPORT

This appendix provides the Economic Impact Forecast System Report for the White River Junction Proposed Action.

EIFS REPORT

PROJECT NAME

White River Junction

FORECAST INPUT

| | |
|-------------------------------------|--------------|
| Change In Local Expenditures | \$28,000,000 |
| Change In Civilian Employment | 0 |
| Average Income of Affected Civilian | \$0 |
| Percent Expected to Relocate | 0 |
| Change In Military Employment | 0 |
| Average Income of Affected Military | \$0 |
| Percent of Military Living On-post | 0 |

FORECAST OUTPUT

| | |
|--------------------------------|--------------------|
| Employment Multiplier | 2.56 |
| Income Multiplier | 2.56 |
| Sales Volume - Direct | \$28,000,000 |
| Sales Volume - Indirect | \$43,680,000 |
| Sales Volume - Total | \$71,680,000 4.54% |
| Income - Direct | \$5,983,534 |
| Income - Indirect | \$9,334,314 |
| Income – Total (place of work) | \$15,317,850 1.09% |
| Employment - Direct | 164 |
| Employment - Indirect | 256 |
| Employment - Total | 420 1.29% |
| Local Population | 0 |
| Local Off-base Population | 0 0.00% |

RTV SUMMARY

| | Sales Volume | Income | Employment | Population |
|---------------------|--------------|---------|------------|------------|
| Positive RTV | 14.67 % | 12.94 % | 5.25 % | 1.4 % |
| Negative RTV | -8.37 % | -4.52 % | -3.91 % | -0.5 % |