

**FINAL  
OPERATIONAL RANGE ASSESSMENT PROGRAM  
PHASE I QUALITATIVE ASSESSMENT REPORT  
NEW HAMPSHIRE NATIONAL GUARD TRAINING SITE  
CENTER STRAFFORD, NEW HAMPSHIRE**

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Prepared for:

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## EXECUTIVE SUMMARY

The United States (U.S.) Army is conducting qualitative assessments at operational ranges to meet the requirements of Department of Defense policy and to support the U.S. Army Sustainable Range Program. The operational range qualitative assessment (hereinafter referred to as Phase I Assessment) is the first phase of the U.S. Army Operational Range Assessment Program (ORAP). This Phase I Assessment evaluates the operational range area at the New Hampshire National Guard (NHNG) Training Site to assess whether further investigation is needed to determine if potential munitions constituents of concern (MCOC) are or could be migrating off-range at levels that may pose an unacceptable risk to human health or the environment. In conducting the Phase I Assessment, MCOC sources, potential off-range migration pathways, and potential off-range human and ecological receptors are evaluated as appropriate.

The NHNG Training Site occupies approximately 104.7 acres of land in Strafford County of eastern New Hampshire. The installation is located in Center Strafford, approximately 12 miles southwest of Rochester, New Hampshire. The primary mission is to support the NHNG in the execution of training. The site provides academic facilities and a small tactical training area for weekend unit training and limited annual training requirements for units of the NHNG.

As part of the Operational Range Inventory Sustainment (ORIS), an update to the Army Range Inventory Database-Geodatabase (ARID-GEO) was submitted to the U.S. Army Environmental Command in March 2006 (ARID-GEO [2007]). The ARID-GEO (2007) identified seven operational range areas encompassing 93.07 acres. A total of 11.63 acres was identified as other than operational acreage. Training activities conducted at the NHNG Training Site include physical training, indoor simulator firing, classroom training and maneuver areas.

Interviews and records indicate that small caliber blanks, simulator and smoke grenades are used at the NHNG Training Site. No live-fire training has been conducted at the site. Simulator and smoke grenades are used as part of maneuver training. Simulator and smoke grenade use is limited to approximately 75 grenades per year, thereby limiting the potential MCOC sources. MCOC can be released to groundwater (down gradient), surface water / sediment (downstream), offrange soil, or the food chain via a variety of release mechanisms. Release mechanisms for soil may include leaching from soil to groundwater or erosion and runoff to off-range surface soil or to nearby streams. Once potential MCOC are deposited in surface water / sediment, they have the potential to migrate downstream, recharge the shallow groundwater, or be taken up by aquatic plants or animals. Release mechanisms for surface water / sediment are natural stream flow and sediment transport. Drainage at the NHNG Training Site is northeast from the source areas into a wetlands area at the lowest elevation on installation. Drainage from this wetlands area is to the southeast off the installation.

Based on the data collected during the Phase I Assessment regarding current and historical MCOC sources, potential migration pathways from ranges, and potential off-range human and/or ecological receptors, the seven ranges at the NHNG Training Site have been placed into the following range grouping.

### **Unlikely – Five-Year Review**

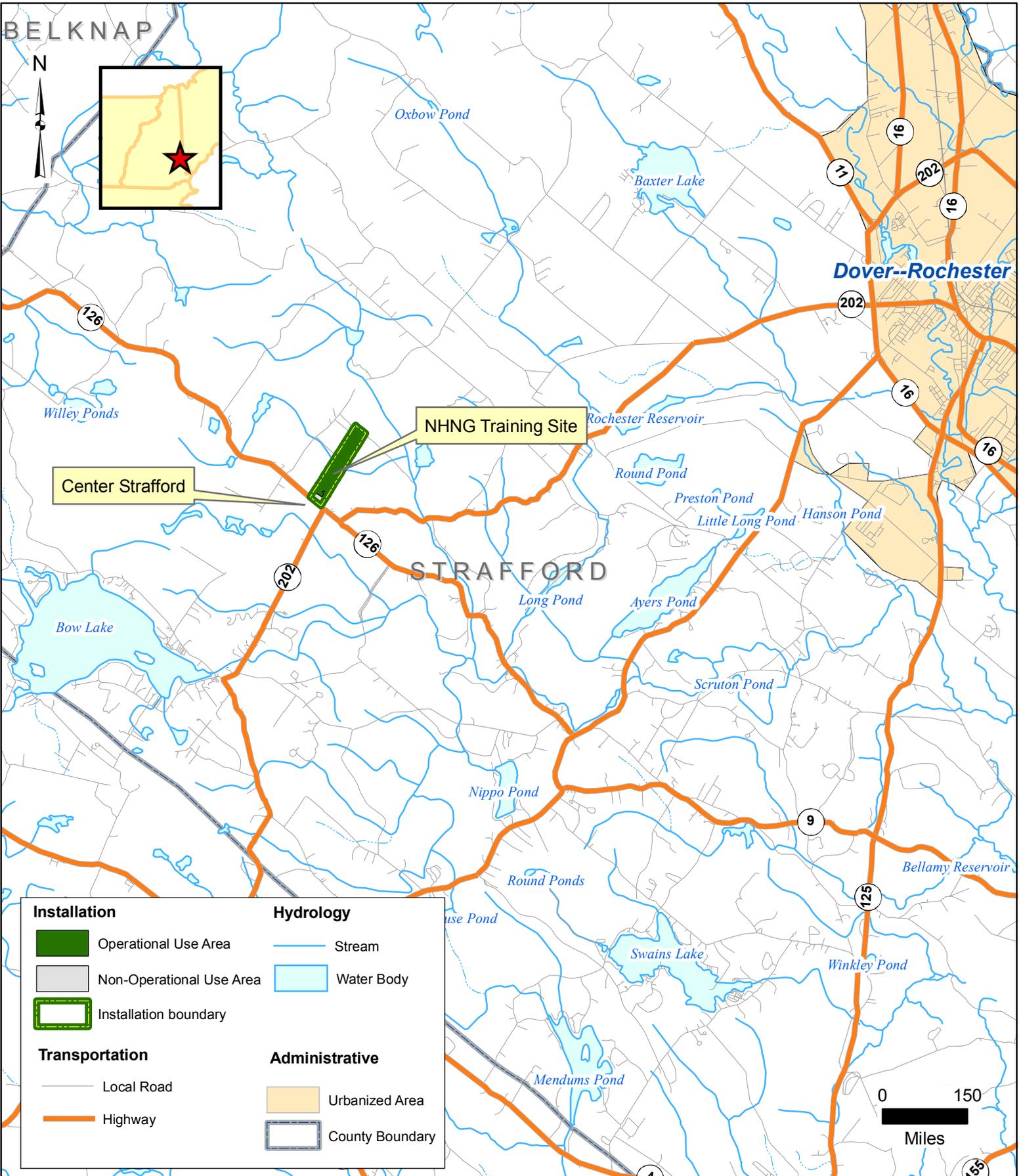
The seven ranges at the NHNG Training Site are categorized as Unlikely, totaling approximately 93 acres. These ranges are all classified as multiple use ranges. Ranges where, based upon a review of readily available information, there is sufficient evidence to show that there are no known releases or source-receptor interactions off-range that could present an unacceptable risk to human health or the environment are categorized as Unlikely. Ranges categorized as Unlikely are required to be reevaluated at least every five years. Re-evaluation may occur sooner if significant changes (e.g., change in range operations or site conditions, regulatory changes) occur that affect determinations made during this Phase I Assessment.

**Table ES-1** summarizes the Phase I Assessment findings.

<b>Table ES-1: Summary of Findings and Conclusions for NHNG Training Site</b>				
<b>Category</b>	<b>Total Number of Ranges and Acreage</b>	<b>Source(s)</b>	<b>Pathway(s)</b>	<b>Human Receptors</b>
Unlikely	Seven operational ranges; 93.07 acres	No source – limited or no military munitions use	Not evaluated (no source was identified)	Re-evaluate during the five-year review. No source was identified.

## ABBREVIATIONS/ACRONYMS

ARID-GEO	Army Range Inventory Database-Geodatabase
bgs	Below Ground Surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSM	Conceptual Site Model
DARE	Drug Abuse Resistance Education
DoD	Department of Defense
DODI	Department of Defense Instruction
E	Ecological receptors identified. (This refers to range grouping; pathway designation always precedes E designation.)
EDR	Environmental Data Resources, Inc.
GW	Groundwater pathway identified. (This refers to range grouping; M designation always precedes GW designation.)
H	Human receptors identified. (This refers to range grouping; pathway designation always precedes H designation.)
LS	Limited Source.
M	Munitions used. (This refers to range grouping; M designation always precedes applicable pathway.)
msl	Mean Sea Level
MCOG	Munitions Constituents of Concern
NBC	Nuclear-Biological-Chemical
NG	Nitroglycerine
NGB	National Guard Bureau
NHARNG	New Hampshire Army National Guard
NHNG	New Hampshire National Guard
NH NHB	New Hampshire Natural Heritage Bureau
NVC	National Vegetation Classification System
ORAP	Operational Range Assessment Program
ORIS	Operational Range Inventory Sustainment
PU	Pathway unlikely or incomplete. (This refers to range grouping; M designation always precedes PU designation.)
RTI	Regional Training Institute
SW	Surface water pathway identified. (This refers to range grouping; M designation always precedes SW designation.)
T&E	Threatened and Endangered
U.S.	United States
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAEC	United States Army Environmental Command
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service



**Operational Range Assessment Program  
Phase I Qualitative Assessment  
NHNG Training Site, NH**

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**Figure 1-1  
General NHNG Training Site Location**

Data Sources:  
 ARID-GEO, 2007  
 ESRI, StreetMap USA, 2005

