

MARSEILLES TRAINING AREA

Marseilles, La Salle County, Illinois

INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN



2016 Update

EFFECTIVE UNTIL SUPERSEDED

ILLINOIS ARMY NATIONAL GUARD

July 2016

FINAL


MARSEILLES TRAINING AREA
LASALLE COUNTY, ILLINOIS

INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN
2016 UPDATE
EFFECTIVE UNTIL SUPERSEDED

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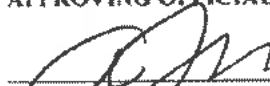
This Integrated Natural Resources Management Plan (INRMP) is an update of the 2008-2013 Marseilles Training Area (MTA) INRMP that has been reviewed for operation and effect and recommended for update and continued implementation. It meets the requirements for INRMP's as specified in the Sikes Act, as amended (16 United States Code [USC] §670a *et seq.*). It has set appropriate and adequate guidelines for conserving and protecting the natural resources of the MTA.

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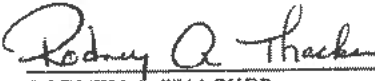

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INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN
2016 UPDATE
PLAN YEARS 2016 UNTIL REVISED

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This Integrated Natural Resources Management Plan (INRMP) is an update of the 2008-2013 Marseilles Training Area (MTA) INRMP that has been reviewed for operation and effect and recommended for update and continued implementation. It meets the requirements for INRMP's as specified in the Sikes Act, as amended (16 United States Code [USC] §670a *et seq.*). It has set appropriate and adequate guidelines for conserving and protecting the natural resources of the MTA.

COOPERATING AGENCIES – IN AGREEMENT WITH THE INRMP

Date: _____

US FISH AND WILDLIFE SERVICE

Date: _____

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Review for Operation and Effect for Plan Period 2016-2020

At the end of the period covered by the previous INRMP revision, the document was evaluated for operation and effect. For this process, the Illinois Army National Guard (ILARNG) solicited input from interested parties and regulatory agency partners.

Current guidance stipulates that if the INRMP requires only minor updates, then updates may be noted and the original master INRMP will continue to be in force. If major changes occur in the site's known natural resources or in the types of activities occurring at the training area, then the documents will need to be revised and public input invited.

It has been determined that changes to the known natural environment at the Marseilles Training Area are minor and that although some military units have reorganized, their training impacts on the post have not changed significantly. Letters of concurrence from the Illinois Department of Natural Resources and the United States Fish and Wildlife Service will be solicited for Review for Operation and Effect and placed in Appendix C, as well as recent on-site inspections from the Center for Archaeological Investigations.

The INRMP updates are included in this document, to include updated natural and cultural resources information, as well as changes, deletions, and current status of INRMP Projects. These changes are outlined in the spreadsheet. No other changes have been made.

2016 INRMP Update Changes	
Section Number	Change
Cover	Replaced
Signature Authority	Updated to current
Review for Operation and Effect	Updated to reflect current planning period
Executive Summary	Replaced for clarity of purpose and to best define INRMP Goals. No significant change to land use.
4.6	A section was added to address Climate Change, required by DODM 4715.03
16.4.2.4	A section was added for mosquito control.
17.4.1	Updates Indiana Bat, Northern Long-Eared Bat, and critical habitat management
17.4.7	A section was added to address Monarch Butterfly management
20.3	Removed requirement to have USFWS/IDNR participate in INRMP Annual Reviews and USFWS to be notified of Annual Plan of Work.
References	Added additional research documents completed, and utilized in this update, since the last INRMP.
Project Summaries	Updated project summaries. Combines projects 10, 11, and 15; Replaces Project 12 as well as Projects 18-20. (Seen in Table 13 and Appendix A)
Appendix A	Replaced. Implementation of Current Projects (Adds Project / Updates)
Appendix G	Replaced previous Timber Stand Improvement (TSI) with TSI focus on Carbon Sequestration. Added Integrated Wildland Fire Management Plan (2014).
Appendix H	An appendix was added to address mosquito surveillance and the procedures for source reduction and reporting of the Zika Virus.
Various appendices and date changes	Removed documents pertaining to earlier updates. Documents are filed with their respective five-year plan.

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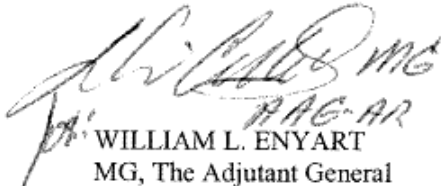
INTEGRATED
NATURAL RESOURCES MANAGEMENT PLAN

MARSEILLES TRAINING AREA
LA SALLE COUNTY, ILLINOIS
For Plan Period 2008 – 2013
(REVISION)

This revised Integrated Natural Resources Management Plan (INRMP) meets the requirements for INRMPs as specified by Army Policy and is consistent with the Sikes Act, as amended (16 USC §670a *et seq.*). It has set appropriate and adequate guidelines for conserving and protecting the natural resources of the Marseilles Training Area.


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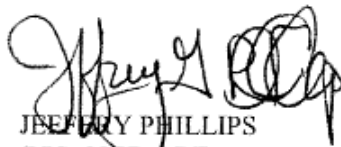
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Executive Summary

Purpose

This update to the INRMP is an update to the 2008-2013 INRMP for the Marseilles Training Area (MTA). This updated INRMP has been developed for use by the National Guard Bureau (NGB) and the ILARNG as the primary tool for managing natural resources at the MTA. The reasons for the INRMP update include (1) collecting updated resource information; (2) NGB guidance; (3) updating the goals and objectives for the MTA; (4) and to comply with the Sikes Act.

The natural resources management philosophies and existing programs have not changed. The primary purpose of MTA is to support the military training mission of the ILARNG. Training must be conducted in a way that provides for sustainable, healthy ecosystems, complies with applicable environmental laws and regulations, and provides for no net loss in the capability of military installation lands to support the military mission. INRMPs help installation commanders manage natural resources more effectively to ensure installation lands remain available and in good condition to support the military mission.

The Sikes Act Improvement Act (SAIA) of 1997, 16 U.S. Code (USC) §670a et seq., as amended, requires Federal military installations with adequate wildlife habitat to develop a long-range INRMP and implement cooperative agreements with other agencies. All of MTA land is state or privately owned. An INRMP is required for the MTA because the installation conducts intensive, on-the-ground military missions that require conservation measures to minimize impacts (e.g. soil erosion, prescribed burning, invasive species control) and sustain natural resources.

Site Overview

The MTA is located in LaSalle County in northern Illinois approximately two miles south of the City of Marseilles and approximately 78 miles southwest of Chicago. Approximately 2,550 acres of the MTA is under a joint land use agreement between the Department of Military Affairs of Illinois (DMAIL) and the Illinois Department of Natural Resources (IDNR). The remaining 300 acres of the MTA land are owned by Exelon Commonwealth Edison (ComEd), which leases the land to the U.S. Army Corps of Engineers (USACE) Louisville District. DMAIL has a land use license with the USACE for use of this land. DMAIL uses the MTA for field training during the spring, summer, and fall months, and for cantonment and range firing year round.

The MTA must provide a variety of environmental conditions and ecosystems in which to train soldiers. This objective must be met in a way that provides for sustainable, healthy ecosystems, complies with all applicable environmental laws and regulations, and provides for no net loss in the capability of military installation lands to support the military mission of the installation. INRMPs help installation commanders manage natural resources more effectively so as to ensure that installation lands remain available and in good condition to support the installation's military mission. The MTA published its first INRMP in October 2001 to guide resources management on the installation for

the years 2001-2006. A summary of the completion status for the 2001 INRMP projects is provided in Table ES – 1. Table 13 of this INRMP update includes all changes, additions, and deletions to these projects.

Table ES – 1. Completion Status of Projects through 2016	
Project	Status
High Priority Projects	
<ul style="list-style-type: none"> ▪ Indiana Bat survey 	Conducted August 2014
<ul style="list-style-type: none"> ▪ Integrating the INRMP with Geographic Information System (GIS). GIS is an effective method for managing natural resources and for assigning training areas to the optimal training areas to minimize the potential of negative impact. 	Ongoing
<ul style="list-style-type: none"> ▪ Conduct complete forest inventory 	Completed in 2013 as part of Appendix G.
<ul style="list-style-type: none"> ▪ Conduct Timber Stand Improvement (TSI) throughout the site. 	Plan has been developed, but has not been implemented. Pending IDNR approval. Listed as Project 1 (TSI) in this INRMP update.
<ul style="list-style-type: none"> ▪ Prescribed Burning Plan 	Completed as part of this INRMP update. Located in Appendix G.
<ul style="list-style-type: none"> ▪ Modify the unnatural straight edge between fields and forested areas 	Ongoing
<ul style="list-style-type: none"> ▪ Control and reduce the quantity of invasive species. 	Ongoing
<ul style="list-style-type: none"> ▪ Monitor bivouac sites 	Ongoing
Medium Priority Projects	

Table ES – 1. Completion Status of Projects through 2016	
Project	Status
<ul style="list-style-type: none"> ▪ Water quality survey 	A water assessment survey was conducted in 2004 for the South Kickapoo Creek (included hydrologic and hydraulic analyses). No water quality analysis was conducted. The Installation Spill Contingency Plan was last updated November 2013.
<ul style="list-style-type: none"> ▪ Environmental awareness 	Ongoing
<ul style="list-style-type: none"> ▪ Nest boxes 	Ongoing
<ul style="list-style-type: none"> ▪ Flora Surveys 	Not complete; May be implemented during 2016-2020 if funding allows.
<ul style="list-style-type: none"> ▪ Fauna Surveys 	Not complete; May be implemented during 2016-2020 if funding allows.
<ul style="list-style-type: none"> ▪ Invertebrate Surveys 	Not complete; May be implemented during 2016-2020 if funding allows.
Low Priority Projects	
<ul style="list-style-type: none"> ▪ Establishment of Land and Water Reserve 	Marseilles Hill Prairie area is denoted an Illinois Natural Areas Inventory (INAI) site. Maintenance Ongoing

Updated INRMP Goals

Specific goals identified in the updated INRMP are listed below. These goals are supported in the updated INRMP by measurable objectives and projects, which provide

management strategies and specific actions to achieve these goals. The ILARNG philosophy of natural resources management has not changed. Goals have been focused to emphasize sustainability of land for military training while maintaining ecosystem viability. Methods have been updated as needed.

GOAL 1: Monitor, maintain, and protect fish and wildlife resources in a manner compatible with the military mission and within the limits of the natural habitat.

GOAL 2: Restore and manage the vegetative communities for the purpose of military training, protection of species, native restoration, soil stabilization, support ecosystem functions, and for the production of forest products.

GOAL 3: Protect, maintain, and improve soil and water quality on the training site in accordance with Federal and State laws and regulations.

GOAL 4: Develop, maintain, and manage data regarding natural resources at the training site using GIS for efficient data storage, retrieval, analysis, and presentation.

GOAL 5: Identify and evaluate land impacts from training, and prioritize and assess land management activities in order to maximize the capability, accessibility, and availability of the training site land to meet the training mission by implementing the ITAM program.

GOAL 6: Educate training site users on how their activities impact the environment and their responsibility as stewards of the environment. Develop and maintain partnerships with state, federal, and local agencies.

Expectations outlined from the 2008-2013 INRMP (Revision)

Significant changes in military readiness and environmental requirements have occurred since the publication of the original INRMP and therefore the 2008-2013 INRMP was a REVISION. The main reasons for the INRMP revision were (1) to rehabilitate the 70-acre area that was previously mined within the installation to increase available training land and ensure the safety of soldiers and other site users; (2) to implement a forest and prescribed burn plan that will ensure no net loss in training lands as a result of encroaching vegetation limiting accessibility; (3) to prepare for the anticipated increased use of the MTA over the next five years; (4) significant changes in planned projects; and (5) to incorporate new Army National Guard (ARNG) guidance.

This INRMP revision was developed in cooperation with the U.S. Fish and Wildlife Service (USFWS) and the IDNR. Developed using an interdisciplinary approach, information has been gathered from the ILARNG Environmental Management Office (EMO), as well as other Federal, State and local agencies and special interest groups with an interest in the management of natural resources at the MTA. The public notice for the INRMP, as well as initial agency and tribal coordination and response letters, have been included in Appendix C.

This updated INRMP describes the installation, presents baseline environmental conditions, and assesses both the anticipated impacts to natural resources as a result of mission activities and impacts to mission activities as a result of natural resources management. Specific natural resource management programs designed for successful and sustainable military training are included. Specific plan expectations include the following:

- Provide a comprehensive plan for the ILARNG to carry out its mission while promoting ecosystem health and biodiversity at the MTA and in the surrounding region;
- Contribute to ecosystem health and biodiversity in the surrounding region by managing the sites natural resources in a wise and ecologically sound manner;
- Document goals, objectives, guidelines, and future direction for natural resources management;
- Establish a framework for implementing natural resources programs and ecosystem management;
- Provide centralized information on the natural resources program status;
- Identify environmental constraints to land use so that military training can be matched to ecosystem carrying capacity;
- No net loss in the capacity of the installation to support the military mission
- Identify mission-related impacts and options for conflict resolution;
- Serve as a updated baseline of existing environmental conditions for defensible future Environmental Assessments (EA) and Environmental Impact Statements (EIS);
- Ensure that installations comply with environmental regulations; and
- Identify, prioritize, and schedule long-term budget requirements.

The document is divided into three main sections, each are summarized below:

Part 1: Context for Integrated Natural Resource Management

Part 1 sets the stage for the natural resource management plan presented in the document. It explains what an INRMP is, why it has been prepared for the ILARNG MTA, and presents specific natural resource goals. It also summarizes cooperative agreements between ILARNG or DoD and various agencies or groups related to natural resources and environmental plans and programs at the MTA. In addition, Part 1 describes the MTA installation, its history, surrounding land use, the ILARNG and MTA military missions, and how the Integrated Training Area Management (ITAM) program is implemented at the MTA in coordination with natural resources management.

Part 2: Existing Environmental Conditions

Part 2 show the existing physical and biological conditions and natural resource management issues. These conditions summarize and form the basis for focusing on natural resource management needs at the MTA, which are presented in Part 3.

Part 3: Integrated Natural Resources Management

Part 3 presents management plans and projects for natural resources. Each of the resources is discussed with respect to military mission considerations, management objectives, guidelines, and component projects. Additional information sources are provided for each resource. An implementation plan documents the responsible parties, funding sources, installation priorities, budgets, and INRMP approval and revision process.

Environmental Assessment

This INRMP includes, as Appendix D to this document an EA. The EA presents the Proposed Action (implementation of the 2008-2012 revised INRMP) and alternatives, summarizes the affected environment, and assesses the environmental consequences of implementation. The assessment concludes that the known and potential impacts of the Proposed Action on the physical, biological, and cultural environment will generally be of a positive nature. Implementing this INRMP update will not result in major adverse environmental effects and will include only a record of environmental consideration.

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ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation	EMO	Environmental Management Office
ACSIM	Assistant Chief of Staff Installation Management	EMS	Environmental Management System
AEDB-EQ	Army Environmental Database Environmental Quality module	EQR	Environmental Quality Report
AERO	Army Environmental Reporting Online	EQRWeb	Environmental Program Requirements
ALB	Asian Long-horned Beetle	ESA	Endangered Species Act
AR	Army Regulation	EST	Engagement Skills Trainer
ARNG	Army National Guard	°F	Fahrenheit
ARPA	Archeological Resources Protection Act	FBI	Federal Bureau of Investigation
ATF	Alcohol Tobacco and Firearms	FEMA	Federal Emergency Management Agency
BMP	Best Management Practice	FM	Field Manual
CAAA	Clean Air Act Amendments	ft ²	Square Feet
CEQ	Council on Environmental Quality	FY	Fiscal Year
CERL	Construction Engineering Research Laboratory	GIS	Geographic Information System
CERP	Comprehensive Environmental Review Program	GPS	Global Positioning System
CFR	Cope of Federal Regulation	IAC	Illinois Administrative Code
CO	Carbon monoxide	ICRMP	Integrated Cultural Resources Management Plan
COL	Colonel	IDOA	Illinois Department of Agriculture
ComEd	Commonwealth Edison	IDNR	Department of Natural Resources
CTRE	Centre for Transportation Research and Education	IDT	Individual Duty Training
CWA	Clean Water Act	IEPA	Illinois Environmental Protection Agency
CX	Categorical Exclusion	IESP	Illinois Endangered Species Protection
DA	Department of the Army	IHPA	Illinois Historic Preservation Agency
DAMO-TRS	Directorate, Training Support Systems Division	ILARNG	Illinois Army National Guard
DCSOPS	Deputy Chief of Staff for Operations and Plans	ILCS	Illinois Compiled Statutes
DEA	Drug Enforcement Agency	INAI	Illinois Natural Area Inventory
DEM	Digital Elevation Model	INPC	Illinois Nature Preserve Commission
DENIX	Defense Environmental Network Information Exchange	INRMP	Integrated Natural Resources Management Plan
DFIRM	Digital Flood Insurance Rate Map	IPM	Integrated Pest Management
DMAIL	Department of Military Affairs for Illinois	ISC	Installation Spill Contingency
DoD	Department of Defense	ISGS	Illinois State Geological Survey
DoDI	Department of Defense Instruction	ISM	Illinois State Museum
DUSD	Deputy Under Secretary of Defense	ISO	International Standards Organization
EA	Environmental Assessment	ITAM	Integrated Training Area Management
EAB	Emerald Ash Borer	K ₂ O	Water-soluble potash
EIS	Environmental Impact Statement	LRAM	Land Rehabilitation and Maintenance
EO	Executive Order		

LTA	Local Training Area	POTO	Plans, Operations, and Training Officer
LTC	Lieutenant Colonel	PTS	Perino Technical Services
LWSC	Low Water Stream Crossing	RC & D	Resource Conservation and Development
MBTA	Migratory Bird Treaty Act	REC	Record of Environmental Consideration
MDC	Missouri Department of Conservation	RETS	Remote Enhanced Targeting Systems
METL	Mission Essential Task List	ROTC	Reserve Officer Training Corp
MG	Major General	ROW	Right-of-Way
MILES	Multiple Integrated Laser Engagement System	RTLA	Range and Training Land Analysis
MOA	Memorandum of Agreement	RTLTP	Range and Training Land Program
MOU	Memorandum of Understanding	RUSLE	Revised Universal Soil Loss Equation
MP	Military Police	SO ₂	Sulfur dioxide
MTA	Marseilles Training Area	SOF	Special Operations Forces
N	Nitrogen	SOP	Standard Operating Procedures
NAAQS	National Ambient Air Quality Standards	SRA	Sustainable Range Awareness
NAGPRA	Native American Graves Protection and Repatriation Act	SRP	Sustainable Range Program
NBC	Nuclear, Biological and Chemical	STA	Sparta Training Area
NEPA	National Environmental Policy Act	STEP	Status Tool for the Environmental Program
NGB	National Guard Bureau	STX	Situation Training Exercises
NGB-ARE	NGB Army Environmental Programs Division	SWPPP	Storm Water Pollution Prevention Plan
NGB-ARI	NGB Army Installations Division	T	Soil Loss
NHPA	National Historic Preservation Act of 1966	TA	Training Area
NO ₂	Nitrogen Dioxide	TNC	The Nature Conservancy
NPDES	National Pollutant Discharge Elimination System	TRI	Training Requirements Integration
NPS	Nonpoint Source	TSC	Training Site Commander
NRCS	Natural Resources Conservation Service	TSI	Timber Stand Improvement
NRHP	National Register of Historic Places	USACE	United States Army Corps of Engineers
NRCS	Natural Resources Conservation Service	USACHPPM	US Army Center for Health Promotion and Preventive Medicine
O ₃	Ozone	USC	United States Code
P2	Pollution Prevention	USDA	United States Department of Agriculture
P ₂ O ₅	Phosphorous	USEPA	United States Environmental Protection Agency
Pb	Lead	USFS	United States Forest Service
PL	Public Law	USFWS	United States Fish and Wildlife Service
PLANTS	Plant List of Accepted Nomenclature, Taxonomy, and Symbols	USGS	United States Geological Survey
PLS	Planning Level Survey	UTES	Unit Training Equipment Site
PM	Presidential Memorandum	VANHP	Virginia Natural Heritage Program
PM-2.5	Particulate matter less than or equal to 2.5 micrometers	WebWAM	Web-Based Workplan Analysis Module
PM-10	Particulate matter less than or equal to 10 micrometers		

PART 1: CONTEXT FOR INTEGRATED NATURAL RESOURCES MANAGEMENT

Chapter 1 explains what an Integrated Natural Resources Management Plan (INRMP) is and why it has been prepared for the Illinois Army National Guard (ILARNG) Marseilles Training Area (MTA). The overall natural resource goals for the MTA are presented in *Chapter 2*. Cooperative agreements between ILARNG or Department of Defense (DoD) and various agencies or groups that are relevant to natural resources are presented in *Chapter 3*. Other environmental plans and programs relevant to the MTA are presented in *Chapter 4*. *Chapter 5* of the INRMP describes the MTA installation, its history and surrounding land use. *Chapter 6* describes the ILARNG and the MTA military mission. *Chapter 7* presents the four components of the Integrated Training Area Management (ITAM) program and provides an overview of ITAM projects planned for the MTA.

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1.0 INTRODUCTION

1.1 Purpose

This update to the Integrated Natural Resources Management Plan (INRMP) has been developed for use by the National Guard Bureau (NGB) and the Illinois Army National Guard (ILARNG) as a tool for managing natural resources at the ILARNG's 2,850-acre Marseilles Training Area (MTA). It merely an update, not a revision as it was in 2008.

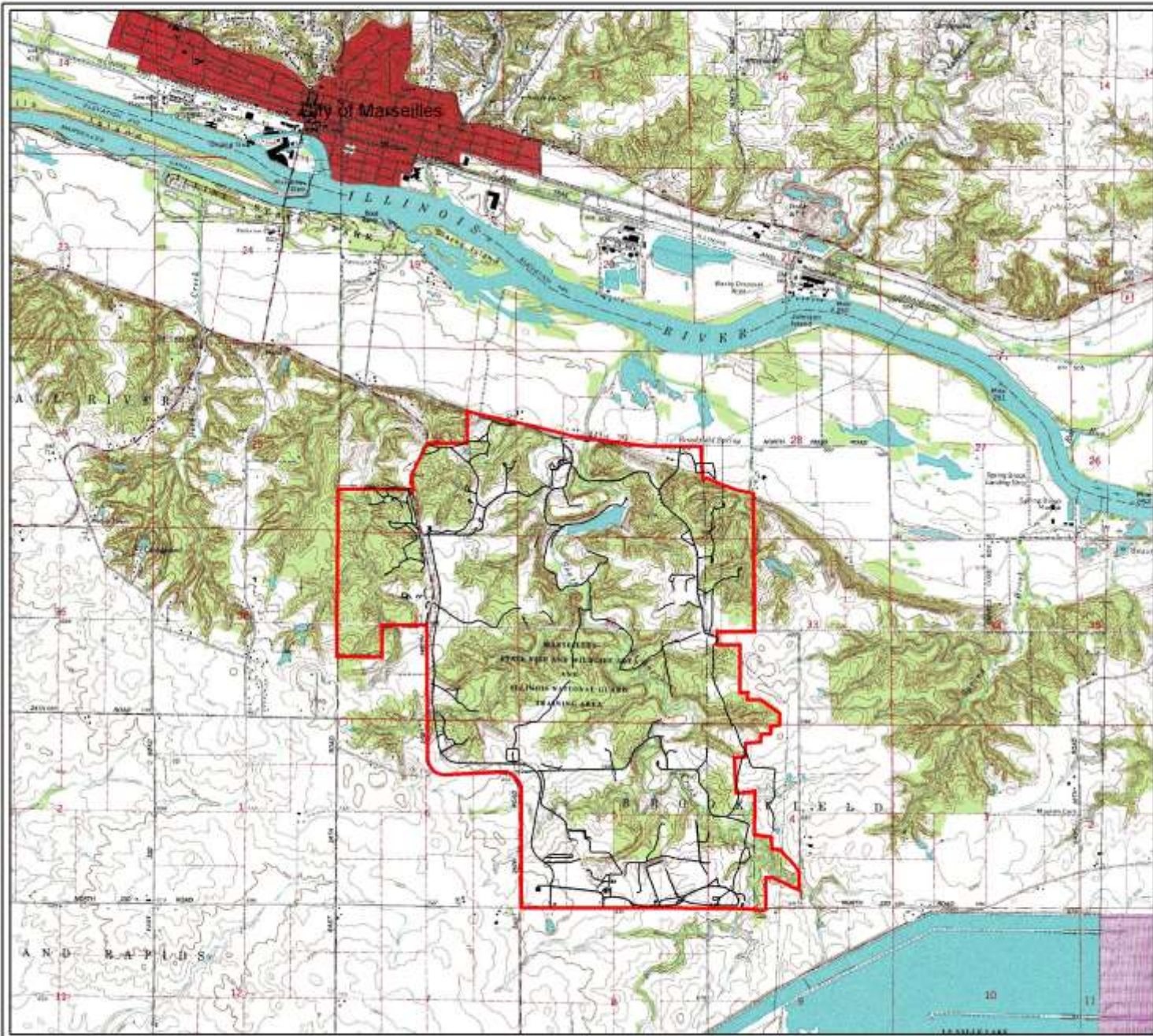
The MTA is located in LaSalle County in northern Illinois approximately two miles south of the City of Marseilles and approximately 78 miles southwest of Chicago. Approximately 2,550 acres of the MTA is under a joint land use agreement between the Department of Military Affairs of Illinois (DMAIL) and the Illinois Department of Natural Resources (IDNR). The remaining 300 acres of the MTA land are owned by Exelon Commonwealth Edison (ComEd), which leases the land to the U.S. Army Corps of Engineers (USACE) Louisville District. DMAIL has a land use license with the USACE for use of this land. DMAIL uses the MTA for field training during the spring, summer, and fall months, and for cantonment and range firing year round (**Figure 1**).

The Sikes Act Improvement Act (SAIA) of 1997, 16 U.S. Code (USC) §670a et seq., as amended, requires Federal military installations with adequate wildlife habitat to develop a long-range INRMP and implement cooperative agreements with other agencies. All of MTA land is state or privately owned. For this reason, MTA is not a "military installation" as defined in the SAIA. An INRMP is required for the MTA because the installation conducts intensive, on-the-ground military missions that require conservation measures to minimize impacts (e.g. soil erosion, prescribed burning, invasive species control) and sustain natural resources. This updated INRMP is intended to be consistent with the SAIA.

The MTA must provide a variety of environmental conditions and ecosystems in which to train soldiers. This objective must be met in a way that provides for sustainable, healthy ecosystems, complies with all applicable environmental laws and regulations, and provides for no net loss in the capability of military installation lands to support the military mission of the installation. INRMPs help installation commanders manage natural resources more effectively so as to ensure that installation lands remain available and in good condition to support the installation's military mission. The MTA published its first INRMP in October 2001 to guide resources management on the installation for the years 2001-2006. An evaluation of the 2001-2006 natural resources management goals, objectives, and projects and their implementation status can be found in **Appendix A**. A summary of the completion status for the 2001 INRMP projects is provided in **Table 1**.

Project	Status
High Priority Projects	
▪ Indiana Bat survey	Conducted August 2014
▪ Integrating the INRMP with Geographic Information System (GIS). GIS is an effective method for managing natural resources and for assigning training areas to the	Ongoing

Table 1. Completion Status of Projects through 2016	
Project	Status
optimal training areas to minimize the potential of negative impact.	
<ul style="list-style-type: none"> ▪ Conduct complete forest inventory 	Completed in 2013 as part of IWFMP (Appendix G)
<ul style="list-style-type: none"> ▪ Conduct Timber Stand Improvement (TSI) throughout the site. 	Plan has been developed, but has not been implemented. Pending IDNR approval. Listed as Project 1 (TSI).
<ul style="list-style-type: none"> ▪ Prescribed Burning Plan 	IWFMP (Appendix G)
<ul style="list-style-type: none"> ▪ Modify the unnatural straight edge between fields and forested areas 	Ongoing
<ul style="list-style-type: none"> ▪ Control and reduce the quantity of invasive species. 	Ongoing
<ul style="list-style-type: none"> ▪ Monitor bivouac sites 	Ongoing
Medium Priority Projects	
<ul style="list-style-type: none"> ▪ Water quality survey 	A water assessment survey was conducted in 2004 for the South Kickapoo Creek (included hydrologic and hydraulic analyses). No water quality analysis was conducted. The Installation Spill Contingency Plan was last updated November 2013.
<ul style="list-style-type: none"> ▪ Environmental awareness 	Ongoing
<ul style="list-style-type: none"> ▪ Nest boxes 	Ongoing
<ul style="list-style-type: none"> ▪ Flora Surveys 	Not complete; May be implemented during 2016-2020 if funding allows.
<ul style="list-style-type: none"> ▪ Fauna Surveys 	Not complete; May be implemented during 2016-2020 if funding allows.
<ul style="list-style-type: none"> ▪ Invertebrate Surveys 	Not complete; May be implemented during 2016-2020 if funding allows.
Low Priority Projects	
<ul style="list-style-type: none"> ▪ Establishment of Land and Water Reserve 	Marseilles Hill Prairie area is denoted an Illinois Natural Areas Inventory (INAI) site. Maintenance Ongoing



**Illinois
Army National Guard**



**Marseilles Training Area
Site Location Map**

Legend

- Marseilles Boundary
- Roads



Notes: Spatial Data courtesy of IGS, ILARIG and IMA
Projection: NAD 83 UTM Zone 18

Figure

1

0 2,000 4,000
Feet

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Significant changes in military readiness and environmental requirements have occurred since that publication was released. The main reasons for this INRMP update are (1) to rehabilitate the 70-acre area that was previously mined within the installation to increase available training land and ensure the safety of soldiers and other site users; (2) to implement a forest and prescribed burn plan that will ensure no net loss in training lands as a result of encroaching vegetation limiting accessibility; (3) to prepare for the anticipated increased use of the MTA over the next five years; (4) significant changes in planned projects; and (5) to incorporate new Army National Guard (ARNG) guidance.

The purpose of this update is to ensure that natural resource conservation measures and military activities on mission land are integrated and consistent to attain Army mission objectives and stewardship requirements. In consistency with the SAIA (16 USC §670 *et seq.*) this updated INRMP

“shall, to the extent appropriate and applicable, provide for:

- A) Fish and wildlife management, land management, forest management, and fish- and wildlife-oriented recreation;
- B) Fish and wildlife habitat enhancement or modifications;
- C) Wetland protection, enhancement, and restoration, where necessary for support of fish, wildlife, or plants;
- D) Integration of, and consistency among, the various activities conducted under the plan;
- E) Establishment of specific natural resources management goals and objectives and time frames for proposed action;
- F) Sustainable use by the public of natural resources to the extent that the use is not inconsistent with the needs of fish and wildlife resources;
- G) Public access to the military installation that is necessary or appropriate for the use described in subparagraph (F), subject to requirements necessary to ensure safety and military security;
- H) Enforcement of applicable natural resource laws (including regulations);
- I) No net loss in the capability of military installation lands to support the military mission of the installation; and
- J) Such other activities as the Secretary of the military department determines appropriate”

The ILARNG has embraced the concept of integrating holistic natural resource management with its mission activities. The ILARNG recognizes that its on-going and proposed training activities can use or consume the natural resources on mission land, and that successful execution of their mission is dependent upon the optimum maintenance of their environment in a mode of sustainable use. The ILARNG recognizes its responsibility to guarantee continued access to its land, air and water resources for realistic military training while ensuring that the natural and cultural resources entrusted to their care are sustained in a healthy condition for scientific research, education and other compatible uses by future generations.

The ILARNG is justifiably proud of its excellence in training, its natural resources heritage and its tradition of stewardship. As such, the ILARNG is committed to the planned, deliberate management of natural resources, supporting the installation operational mission, meeting or exceeding stewardship requirements, and enhancing the quality of life for its personnel and guests.

1.2 Authority

This INRMP update has been prepared pursuant to the following laws, regulations, and directives:

- Department of Defense Manual (DoDM) 4715.03, *INRMP Implementation Manual*;
- US Army policy entitled *Army Goals and Implementing Guidance for Natural Resources Planning Level Surveys (PLS) and INRMP (“Army INRMP Policy”)*; 21 March 1997.
- The Sikes Act “Conservation Programs on Military Reservations” (16 USC §670a *et seq.*), as amended – As stated in Section 1.1, this Army Policy INRMP is intended to be consistent with the SAIA.
- Army Regulation (AR) 200-1, *Environmental Protection and Enhancement*;
- 32 Code of Federal Regulations (CFR) 651, *Environmental Effects of Army Actions*;
- Office of the Deputy Under Secretary of Defense (DUSD), *Updated Guidance for Implementation of The SAIA*, on 5 November 2004.
- 32 CFR 190, *Appendix-Integrated Natural Resources Management*; and
- *Army National Guard Directorate, Environmental Programs Division Guidance for the Creation, Implementation, Review, and Revision and Update of Integrated Natural Resource Management Plans, (2012).*

1.3 Responsibilities

The Adjutant General, of the ILARNG is directly responsible for the operation and maintenance of ILARNG facilities, including implementation of this INRMP update. Under the direction of the Adjutant General, the force structure (types and number of units, types of equipment, training events), projects, construction and budgets at ILARNG facilities are determined throughout the 5-year operational period of the INRMP. Under the leadership of the Adjutant General, all ILARNG personnel and guests are trained in environmental awareness, and as such are explicitly mandated to comply with the policies, procedures, requirements and applicable laws and regulations that accomplish the goals and objectives of the updated INRMP.

The Army’s Deputy Chief of Staff for Operations (DCSOPS) has the primary responsibility for scheduling military training and ensuring the safety of all personnel during the conduct of training exercises at ILARNG facilities. The DCSOPS determines the training capacity based upon the force structure determined by the Adjunct General.

The ILARNG Plans, Operations, and Training Office (POTO) is responsible for insuring the revised INRMP supports ILARNG training requirements. They provide initial areas of concern, review the plans to insure they are consistent with training requirements, and are a signatory to the plan.

The ILARNG Environmental Management Office (EMO) is assigned day to day responsibility for development and implementation of the updated INRMP. The ILARNG Environmental Management Branch is responsible for directing the management of natural resources in conjunction with the IDNR. The Environmental Management Branch is also responsible for identifying compliance requirements, and providing guidance to the Training Site Commander (TSC) and other personnel. The Environmental Management Branch provides technical

assistance to the TSC and the training site personnel to develop projects, secure required permits, conduct field studies, provide Environmental Awareness materials, identify natural and cultural resources, direct the NEPA process, and manage the development and update of the INRMP. The MTA Staff is responsible for providing input to the plan and implementing specific elements of the plan.

The POTO has assigned the Integrated Training Area Management (ITAM) Program Management for ILARNG facilities to the ILARNG's EMO. The POTO and the TSC define ITAM program philosophy and guidance, and directs the EMO's ITAM Program Manager and the TSC to execute the program in accordance with his guidance. The TSC develops a baseline of current and projected ILARNG training requirements, troops utilization data, and determines the week-to-week training capacity of the training site through direct coordination with the ITAM Program Manager. The EMO, and TSC review and approve annual ITAM projects, and the EMO allocates funds to accomplish the approved ITAM program requirements.

The NGB is responsible for review and approval of this INRMP update. The NGB is also involved in programming, funding, and reviewing implementation projects set forth in the INRMP.

Per the Marseilles Memorandum of Understanding (MOU), the IDNR maintains control over the natural resources management, protection, and restoration of the MTA, excluding the 300-acre area licensed through the USACE that includes the Cantonment Area. The agreement between DMAIL and IDNR is discussed in greater detail in **Section 3.2**.

1.4 Management Philosophy

This INRMP update describes the updated baseline conditions of natural resources at a military installation and provides management programs and guidance allowing for the performance of successful military training, while providing for the conservation of renewable natural resources, preservation of rare and unique resources, and long-term resource sustainability. Specific plan expectations include the following:

- Provide a comprehensive plan for the ILARNG to carry out its mission while promoting ecosystem health and biodiversity at the MTA and in the surrounding region;
- Document goals, objectives, guidelines, and future direction for natural resources management;
- Establish a framework for implementing natural resources programs and ecosystem management;
- Provide centralized information on the natural resources program status;
- Identify environmental constraints to land use so that military training can be matched to ecosystem carrying capacity;
- Identify mission-related impacts and options for conflict resolution;
- Serve as a continuation baseline of existing environmental conditions for defensible future Environmental Assessments (EA) and Environmental Impact Statements (EIS);
- Ensure that installations comply with environmental regulations; and
- Identify, prioritize, and schedule long-term budget (10 years) requirements.

The typical management programs addressed in an INRMP include training area management, land management, forest management, aquatic and terrestrial habitat management, special natural area management, wildlife management, rare and endangered species management, pest management, fire management, recreational resource and activity management, and agricultural

program management. The MTA INRMP is a training-driven plan, created with a dual goal:

- To allow for the conduct of appropriate military training at levels necessary to maintain a full readiness posture for National defense and civil missions; and
- To provide for management of natural resources in an ecosystem-oriented, sustainable manner, consistent with IDNR policies and regulations as well as other federal, state, and local regulations.

The overall policies and philosophy of land management at the MTA are derived from AR 200-1, 32 CFR 651, and the Army's ITAM program. These policies, regulations and programs are based on the concept that natural resources management is an integral component of the primary mission of military use. The ILARNG must train; therefore, the ILARNG will manage the MTA to preserve valuable training resources, including the natural environment. The ITAM program, as well as the management of natural resources on an ecosystem basis, ensures the sustainable use of training lands while considering the effects on the surrounding environment and public concern.

This updated INRMP integrates aspects of natural resources management into the military mission. As such, it becomes the primary tool for ecosystem management at the MTA while ensuring the successful, efficient accomplishment of the military mission. A multiple-use approach will be implemented through use of the INRMP to accommodate the presence of mission-oriented activities and provide for good stewardship, thereby maintaining, protecting and improving the quality, aesthetic values and ecological relationships of the environment.

Implementation of this revised INRMP at the MTA will successfully promote adaptive stewardship practices that protect and enhance natural resources for multiple use, sustainable yield and biological integrity, while simultaneously supporting the military mission.

1.4.1 Environmental Management System (EMS)

This updated INRMP directly supports the ILARNG's EMS and Environmental Stewardship philosophy. Executive Order (EO) 13148 *Greening the Government through Leadership in Environmental Management* was signed in April 2000 and established a five-year EMS implementation goal for federal facilities. Developing and implementing an EMS is required at all Army installations, as well as at all ARNG installations. For the purpose of complying with the EO 13148 the ILARNG as a whole is considered to be a federal installation. The ILARNG has developed and is implementing an EMS that covers all its operations, facilities, and training sites. The EMS is part of the overall ILARNG management system and includes organizational structure, planning, responsibilities, practices, procedures and processes, and resource allocation for developing, implementing, achieving, reviewing, and maintaining environmental commitments. The International Standards Organization (ISO)-14001 EMS model used by the ILARNG leads to continual improvement based upon a cycle of "plan, do, check, act":

- Planning, including identifying environmental aspects and establishing goals [plan];
- Implementing, including training and operational controls on significant impacts [do];
- Checking, including monitoring and corrective action [check];
- Reviewing, including progress reviews and acting to make needed changes to the EMS [act].



Source: USEPA, 2004

The EMS is continually updated through this cycle, fine-tuning its management of operations that may harm the environment. This continual improvement cycle is a fundamental attribute of the EMS that allows the system to adapt to the dynamic nature of the organization's operations.

Annual review of the INRMP in conjunction with the U.S Fish and Wildlife Service (USFWS) and the IDNR will be conducted in order to support the concept of EMS. Annual reviews are discussed in **Section 20.3**.

1.4.2 Ecosystem Management

An ecosystem is the “sum of the plant community, animal community, and environment in a particular region or habitat” (Barbour et al., 1987). Ecosystem management may be defined as management “to restore and maintain the health, sustainability, and biological diversity of ecosystems while supporting sustainable economies and communities” (U.S. Environmental Protection Agency [USEPA], 1994).

The goal of ecosystem management is “to ensure that military lands support present and future training and testing requirements while preserving, improving, and enhancing ecosystem integrity” (DoDM 4715.03). Natural resources at the MTA will be managed with an ecosystem management approach.

Principles and guidelines of ecosystem management, per DoDM 4715.03, are as follows:

- 1) Guarantee continued access to land, air and water for realistic military training;
- 2) Maintain and improve the sustainability of native biodiversity of ecosystems;
- 3) Administer with consideration of ecological units and timeframes;
- 4) Support sustainable human activities;
- 5) Develop vision of ecosystem health;
- 6) Develop priorities and reconcile conflicts;
- 7) Develop coordinated approaches to work toward ecosystem health;
- 8) Rely on the best proven science and data available;
- 9) Use standardized benchmarks to monitor and evaluate outcomes;
- 10) Use adaptive management; and
- 11) Implement through installation plans and programs.

Biological diversity or biodiversity may be defined as “the variety of living organisms considered at all levels of organization, from genetics through species, to higher taxonomic levels, and

including the variety of habitats and ecosystems, as well as the processes occurring therein” (Meffe and Carrol, 1994).

Biodiversity refers to the variety and variability among living organisms and the environment in which they occur. Biodiversity has meaning at various levels including ecosystem diversity, species diversity, and genetic diversity. The DoD has developed a Biodiversity Management Strategy (Keystone Center, 1996). This document identifies five reasons to conserve biodiversity on military lands:

- 1) Sustain natural landscapes required for the training and testing necessary to maintain military readiness;
- 2) Provide the greatest return on the DoD investment to conserve and protect the environment;
- 3) Expedite the compliance process and help avoid conflicts;
- 4) Engender public support for the military mission; and
- 5) Improve the quality of life for military personnel.

The Keystone Center report notes that the challenge is “to manage for biodiversity in a way that supports the military mission”. This strategy identifies the INRMP as the primary vehicle to implement biodiversity conservation on military installations. The model process developed within the strategy includes the following principles:

- Support the military mission;
- Use joint planning between natural resources managers and military operations personnel;
- Integrate biodiversity conservation into the INRMP and other planning protocols;
- Involve internal and external stakeholders up front;
- Emphasize the regional (ecosystem) context; and
- Concentrate on results.

Specific management practices identified in this updated INRMP have been developed to enhance and maintain biological diversity within the ecosystems at the MTA.

1.4.3 Illinois Wildlife Management

During the INRMP update process, the ILARNG consulted the *Illinois’ Comprehensive Wildlife Conservation Plan and Strategy* (IDNR, 2005) and the *Federal Project W-76-D – Federal Statewide Public Lands Wildlife Habitat Development Project 2002-2007 – Marseilles Fish and Wildlife Area/Marseilles Training Area* (IDNR, 2000) to ensure that INRMP goals, objectives and strategies are consistent with Illinois’ overall statewide and site specific plans.

Illinois’ Statewide Plan was developed to manage public and private lands in the best way possible to benefit all Illinois wildlife, and especially those with declining populations. The Plan identifies habitat areas that demonstrate the greatest conservation need and potential, and establishes specific conservation goals for the enhancement and protection of these sites. The Plan outlines six main goals or challenges.

- 1) Increase the percentage of Illinois’ lands which are not plowed, paved, drained, or landscaped.
- 2) Increase the quality of Illinois’ natural lands as measured by their ability to support robust (abundant and rich) communities of native plants and animals.

- 3) Improve the capacities of Illinois' agricultural and urban lands to support populations of native fish and wildlife. Increase access to Illinois' lands and waters for outdoor recreational purposes.
- 4) Meet or exceed recreational and commercial demands upon Illinois' plant and animal populations.
- 5) Restore populations of plant and animal species that have become rare or are declining.
- 6) Eradicate, control, and prevent the introduction of invasive exotic species (IDNR, 2005).

For a copy of Illinois' comprehensive statewide plan contact the IDNR's Office of Resource Conservation or go to <http://dnr.state.il.us/orc/>.

The IDNR receives financial support exclusively through the Federal Aid in Wildlife Restoration program to develop habitat and manage its hunting programs at the MTA. These funds are authorized through a grant agreement (W-76-D) with the USFWS. The primary objectives of this grant are to operate and maintain access, structures, and facilities at the MTA and improve, enhance, protect, and maintain wildlife habitats. Funds are from the federal excise tax on sporting arms, ammunition, and archery equipment and tax on handguns. Each state gets an apportionment determined by a formula, which considers the total area of the state and the number of licensed hunters. It is a cost reimbursement program where the state covers the full amount of an approved project and applies for reimbursement for up to 75 percent of the project.

The Marseilles Fish and Wildlife Area is managed by the Illini State Park IDNR personnel, which are approximately two miles from the site. Wildlife resources goals are set forth within the six-year W-76-D Plan as follows:

- Manage wildlife populations and habitats for their ecological, sociological and economic values.
- Collect data and compile information necessary to achieve Divisional goals
- Develop educational programs that improve public awareness, appreciation and support of wildlife resources and their management.
- Provide for compatible public use of wildlife resources and their habitats.
- Provide and enhance wildlife habitat on this public land site.
- Provide wildlife oriented outdoor recreational opportunities on this public land site.
- Demonstrate sound wildlife management on this public land site that can be used on private and other public land wildlife management efforts.
- Annually operate and maintain access, structures, other infrastructure facilities and project administration.

The W-76-D Plan can be obtained through the IDNR Illini State Park. Specific management strategies to meet these goals are discussed within this Plan and the IDNR's consultation and coordination letter provided in **Appendix C**. In addition, if the IDNR chooses to provide a list of recommended projects for the MTA, the ILARNG will consider incorporating these projects in their five year plan.

Goals and objectives pertaining to wildlife resources management from the above plans and the IDNR consultation and coordination letter (Appendix C) were considered and incorporated, when feasible, within the appropriate natural resources management plans found within Chapters 11 through 18.

1.4.4 Sustainable Range Program

The Sustainable Range Program (SRP) is the Army's overall approach for improving the way in which it designs, manages, and uses its ranges to ensure long-term sustainability. Requirements for the SRP are set forth in AR 350-19, *Army Sustainable Range Program*, dated 30 August 2005. SRP is defined by its two core programs, the Range and Training Land Program (RTLTP) and the ITAM Program, which focus on the doctrinal capability of the Army's ranges and training land. To ensure the accessibility and availability of Army ranges and training land, the SRP core programs are integrated with the facilities management, environmental management, munitions management, and safety program functions supporting the doctrinal capability.

Both programs are directly managed and funded by Directorate, Training Support Systems Division (DAMO-TRS) of the Office of the Deputy of Chief of Staff. Because many programs and functional offices affect the management of Army ranges, the core programs are integrated under the SRP and are integrated with the Assistant Chief of Staff Installation Management (ACSIM's) facilities as well as environmental management responsibilities and programs through the G-4's Munitions Management functions and the Army Range Safety Program.

1.4.4.1 Range and Training Land Program

The RTLTP provides a range operations and modernization capability for the central management and prioritization and the planning and programming of live-fire training ranges and maneuver training lands, including the design and construction activities associated with them.

The RTLTP planning process integrates mission support, environmental stewardship, and economic feasibility and defines procedures for determining range projects and training land requirements to support live-fire and maneuver training. The RTLTP defines the quality assurance and inspection milestones for range development projects and the standard operating procedures (SOPs) to safely operate military training, recreational, or approved civilian ranges under Army control and support Commanders' Mission Essential Task List, (METL) and Army training strategies. RTLTP also establishes the procedures and means by which the Army range infrastructure is managed and maintained on a daily basis in support of the training mission.

1.4.4.2 Integrated Training Area Management

The ITAM program provides Army range managers with the capabilities to manage and maintain training and testing lands by integrating mission requirements derived from the RTLTP with environmental requirements and environmental management practices. The objectives of the Army's ITAM program are to:

- Achieve optimal sustained use of lands for the execution of realistic training and testing by providing a sustainable core capability that balances usage, condition, and level of maintenance.
- Implement a management and decision-making process that integrates Army training and other mission requirements for land use with sound natural resources management.
- Advocate proactive conservation and land management practices by aligning Army training land management priorities with the Army training and readiness priorities (Department of the Army [DA], 2005).

The MTA is classified as a Category IV ITAM site. The ITAM program is discussed in greater detail in Chapter 7.

1.5 Conditions for INRMP Implementation and Update

1.5.1 Implementation

The ILARNG EMO is responsible for directing the management of natural resources and for the development and implementation of the updated INRMP. Successful implementation of the updated INRMP will require:

- Administrative and technical support;
- Agency cooperation and technical assistance;
- Funding;
- Priorities and scheduling;
- Production of project scopes and budgets;
- The ability to amend and revise this document as necessary;
- IDNR approval per the Marseilles MOU.

Where projects identified in the plan are not implemented because of lack of funding, or other compelling circumstances, the installation will review the goals and objectives of this INRMP update to determine whether adjustments are necessary.

1.5.2 Effectiveness

The primary measure of INRMP effectiveness is whether it helps prevent “net loss in the capability of military lands to support the military mission”. The ILARNG is preserving the MTA’s capability to support training through its natural resource management practices outlined in the original 2001-2006 INRMP and in this update. The ILARNG continues to work with several partnerships and cooperative agreements (USFWS, IDNR, etc.) to manage the forest, preserve sensitive areas, and practice effective soil conservation. These activities are coordinated through ongoing INRMP implementation.

Long-term management effectiveness is also evaluated through periodic inventories of species populations, habitat quantity and quality, and habitat values through the recurring PLS. Trends can be used to indicate the degree of success. The ILARNG will evaluate these recurring data as they become available.

A practical evaluation of INRMP implementation includes reviewing whether planned projects have been accomplished. Overall, the MTA has benefited from using the INRMP as a management tool. The goals articulated in the current INRMP are being addressed through implementation of management actions recommended in this INRMP update. Most of the specific management actions have been implemented through projects. A large number of the projects are recurring actions that are continued in this INRMP update. Appendix A contains a list of projects from the 2001-2006 INRMP, and their implementation status.

1.5.3 Agency and Public Participation

This INRMP update has been developed in cooperation with the USFWS and the IDNR. Developed using an interdisciplinary approach, information has been gathered from the ILARNG EMO, as well as other Federal, State and local agencies and special interest groups with an interest in the management of natural resources at the MTA. Initial agency coordination and response letters have been included in Appendix C.

The original and revised draft and final INRMP were released to the public for review and advertised in the *Ottawa County Times*, the *Edwardsville Intelligencer*, the *News-Tribune*, and *The State Journal – Register* for a 30-day comment period. A copy of the public notice is included in Appendix C.

1.5.4 Revisions

The INRMP is effective from the date of approval for a period of five years. Army Policy requires annual review of the INRMP to keep the plan current (see Section 20.3). Major revisions must be made no less often than every five years (typically three to five years). Page revisions can be made when major revisions are unnecessary. Information such as that relating to the soils, natural vegetation, and environmental data, not requiring revision, will be retained in the plan. Periodic evaluations and revisions will be conducted under the management of the ILARNG EMO with input from the DSCOPS, MTA staff, USFWS, IDNR and internal and external stakeholders, as appropriate.

1.5.5 Environmental Assessment

The last revised INRMP includes, as **Appendix D**, an EA. The EA is written pursuant to the National Environmental Policy Act of 1969, as amended (NEPA, 42 USC §4321); Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508); Army regulation (32 CFR Part 651, Environmental Effects of Army Actions); National Guard Bureau NEPA Handbook, June 2006; and the NGB Army Environmental Program (NGB-ARE) Memorandum 9 August 2004, *Additional Guidance for National Environmental Policy Act Documentation*. The EA presents the Proposed Action (implementation of the revised INRMP) and alternatives, summarizes the affected environment, and assesses the environmental consequences of implementation. The assessment concludes that the known and potential impacts of the Proposed Action on the physical, biological, and cultural environment will generally be of a positive nature. A new EA was developed in 2008 because of the significant changes in the planned projects and because of the joint use of the site. This updated INRMP will include a Record of Environmental Consideration (REC), rather than an additional EA.

The ILARNG must also get Comprehensive Environmental Review Program (CERP) approval for all planned projects, excluding the type of projects listed in **Section 10.3**. Planned projects are described in Chapter 10 and are environmentally reviewed within the EA or REC. Sign offs on projects approved through the CERP Program are valid for a 2-year period, after which they must be resubmitted for an updated review. The EA/REC will be instrumental in facilitating the initial CERP process

During the ILARNG and IDNR annual Plan of Work meeting, the planned INRMP projects, which are two years old or greater, will be reevaluated by the IDNR. The ILARNG will make any changes to the project scope, if deemed necessary, to ensure compliance with the CERP Program and allow the ILARNG to meet their implementation goals, objectives, projects, and funding requirements on schedule (see **Table 13**).

2.0 NATURAL RESOURCES GOALS

This chapter presents the overall natural resource management goals for the MTA. Goals and objectives for specific resource areas are discussed in detail in Part 3.

2.1 Military Mission

The primary purpose of natural resources management at the MTA is to support the military training mission. With regard to accomplishment of the military mission, the overall goal is *to provide quality natural resources as a critical training asset* upon which to accomplish the mission of the ILARNG at the MTA. Components of this overall goal include:

- Ensure no net loss in the capability of installation lands to support existing and projected military training and operations at the MTA;
- Maintain quality training lands through range monitoring and damage minimization, mitigation, and rehabilitation.

This updated INRMP integrates aspects of natural resources management into the current military mission. As such, it becomes the primary tool for ecosystem management at the MTA while ensuring the successful, efficient accomplishment of the military mission. A multiple-use approach will be implemented through use of the revised INRMP to accommodate the presence of mission-oriented activities and provide for good stewardship, thereby maintaining and improving the quality, aesthetic values and ecological relationships of the environment.

Implementation of the INRMP at the MTA will successfully promote adaptive stewardship practices that protect and enhance natural resources for multiple use, sustainable yield and biological integrity, while supporting the military mission.

2.2 Stewardship

Another goal for management of natural resources at the MTA is to assure good stewardship of public lands entrusted to the care of the Army. Components of this goal include:

- Maintain sustainable, realistic terrain for military training;
- Monitor and manage soils, water, vegetation, and wildlife at the MTA with a consideration for all biological communities and human values associated with those resources;
- Provide economic and other human-valued products of renewable natural resources when such products can be produced in a sustainable fashion without significant negative impacts on the military training mission or other natural resources;
- Provide professional enforcement of natural resources related laws;
- Involve the surrounding community in the natural resources program at the MTA;
- Ensure the MTA natural resources program is coordinated with other agencies and conservation organizations with similar interests.

2.3 Compliance

Compliance with laws and regulations that pertain to management of natural resources at the MTA is of paramount importance to the ILARNG. Individual compliance goals of the ILARNG include:

- Minimize training limitations caused by regulatory enforcement actions;
- Manage natural resources within the spirit and letter of environmental laws;
- Protect, restore, and manage sensitive species and wetlands;
- Use procedures within NEPA to make informed decisions that include natural resources considerations and mitigation;
- Ensure the MTA's natural resources program is consistent with the protection of cultural and historic resources;
- Implement this INRMP update within the framework of Army and IDNR policies and regulations.

2.4 Integration

The ILARNG proposes to integrate elements of natural resources management into a single program which, in turn, is integrated into the MTA's environmental and military training programs. Components of the integration goal include:

- Ensure the integration of the military training mission and natural resource management in order to improve and sustain realistic training;
- Ensure the integration of, and consistency among, various activities identified within this updated INRMP (that is, forest management, fish and wildlife management, land management, and outdoor recreation management);
- Ensure natural resources management is consistent with principles of Integrated Pest Management (IPM);
- Coordinate implementation of natural resources management with the overall ILARNG environmental program at the MTA;
- Coordinate implementation of this INRMP update with military mission requirements;
- Ensure that principles in the INRMP update are incorporated into military training where practicable.
- Coordinate implementation with IDNR

2.5 Natural Resources Management

Another natural resources goal is to provide principles and guidelines pertaining to the management of:

- Forest, grassland and fire management;
- Fish and wildlife;
- Stormwater and water quality;
- Floodplain and riparian zone management;
- Wetlands;
- Invasive and exotic species and noxious weeds;
- IPM;
- Threatened and endangered species and sensitive areas;
- Landscaping and grounds maintenance;
- Erosion control;
- Outdoor recreation.

3.0 COOPERATIVE AGREEMENTS

3.1 Federal Agreements

The DoD and subcommand entities have MOUs, Memorandums of Agreement (MOAs), and other cooperative agreements with other federal agencies, interest groups, and various state agencies in order to provide assistance with natural resources management at installations across the United States. Generally, these agreements allow installations and agencies or interest groups to obtain mutual conservation objectives. The DoD agreements applicable to the MTA include:

- MOU between DoD, the USFWS, and the United Fish and Wildlife Agencies concerning ecosystem-based management of fish, wildlife, and plant resources on military lands, dated 31 January 2006;
- Cooperative Agreement between the DoD and The Nature Conservancy (TNC) for assistance in natural resources inventory;
- MOA for Professional and Technical Assistance Conducting Biological Surveys, Research and Related Activities between the DoD and the National Biological Service of the Department of the Interior;
- MOU between the DoD and the USEPA with respect to IPM;
- MOA for Federal Neotropical Migratory Bird Conservation Program and addendum (“Partners in Flight-Aves De Las Americas”) among DoD, through each of the Military Services, and over 110 other Federal and State agencies and non-governmental organizations;
- MOU between the U.S. Army Environmental Center and the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) for Watershed and Environmental Enhancement of U.S. Army Installations;
- MOU between the DoD and Ducks Unlimited, Inc. to provide a foundation for cooperative development of selected wetlands and associated uplands in order to maintain and increase waterfowl populations and to fulfill the objectives of the North American Waterfowl Management Plan, within the context of DoD’s environmental security and military missions; and
- MOU for Watchable Wildlife Programs.

A copy of these documents is on file in the Facilities Division of DMAIL.

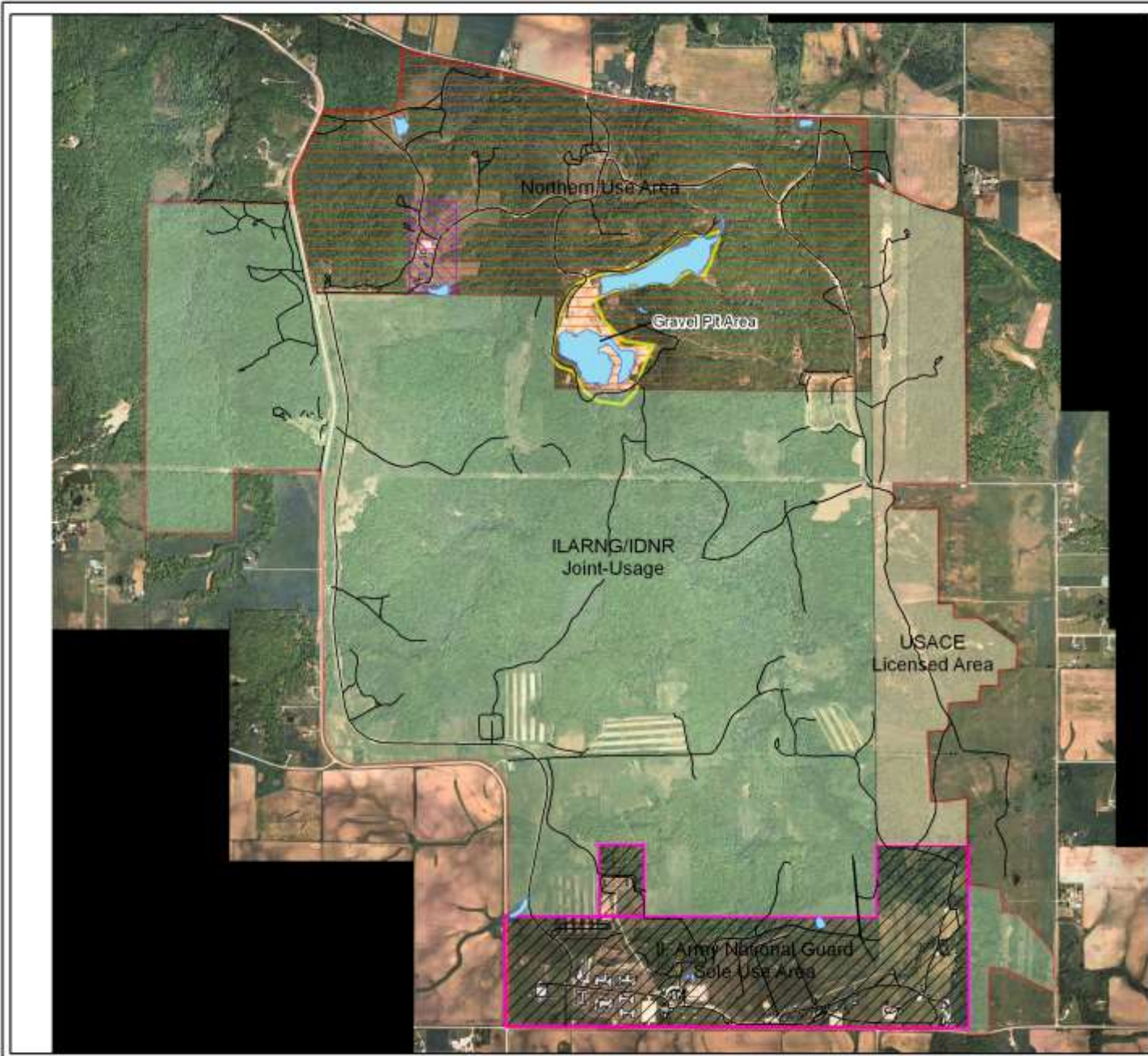
3.2 State Agreements

ILARNG has an inter-agency agreement with the Illinois Historic Preservation Agency (IHPA), dated August 2001. ILARNG has an intergovernmental joint use agreement with the IDNR for the MTA dated September 1999 (DMAIL and IDNR, 1999). The Marseilles MOU establishes when the military and IDNR have jurisdiction over the site throughout the year. The agreement designates that the IDNR will retain control over the natural resources management, protection, and restoration of the total site, excluding the 300-acre area licensed through the USACE that includes the Cantonment Area (**Figure 2**). The Marseilles MOU (DMAIL and IDNR, 1999) is provided in Appendix B.

When the ILARNG and IDNR are proposing a new project, the project must go through each organizations environmental review process and be included in the annual Plan of Work. Therefore, the ILARNG must get approval through the IDNR’s CERP before implementing natural resource projects on site. For additional details on CERP and how this impacts natural resources projects at the MTA refer to Section 10.3 and Appendix B. In turn, the IDNR must

complete a Record of Environmental Consideration (REC), EA, or EIS depending on the proposed project. Categorical Exclusions (CXs) are actions that the ILARNG has determined as not individually or cumulatively having a significant effect on the human environment. An EA is prepared to determine the extent of environmental impacts of an action and decide whether or not those impacts are significant. If a significant environmental impact is associated with the project, an EIS is prepared.

The ILARNG also has a license agreement with the USACE Louisville District dated September 2001 for the use of approximately 300 acres, which comprise the eastern boundary of the MTA (Appendix B). According to this license agreement, the ILARNG is responsible for protecting this land and its natural resources against pollution of its air, ground and water.



**Illinois
Army National Guard**



**Marseilles Training Area
Land Ownership Map**

Legend

- Marseilles Boundary
- Existing Structures
- WaterBodies
- Roads

Land Usage

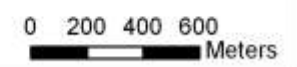
- Containment Area
- Northern Use Area
- Military Maintenance & Storage area
- Former Leased Gravel Mine
- USACE Leased Area
- ILARNG/IDNR Co-Usage Land



Notes: Spatial Data courtesy of IAG, ILARNG and MTA
Projection: NAD 83 UTM Zone 18



Figure
2



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4.0 ENVIRONMENTAL PLANS AND PROGRAMS

4.1 Spill Prevention, Control and Countermeasure Plan and Installation Spill Contingency Plan

Spill Prevention, Control and Countermeasure (SPCC) Plans are site specific plans for facilities having oil product storage capacity in containers of 55Gal. or greater capacity with a total storage capacity in excess of 1,320Gal or more. The last update to the SPCC for MTA was November 2013.

4.2 Pollution Prevention (P2) Plans

Pollution Prevention (P2) Plans are maintained for ILARNG training sites. The purpose of the P2 Plan is to prevent, whenever possible, releases of pollutants to the land, air, and water by means of source reduction or elimination. The ILARNG statewide P2 Plan was last updated in 2009. Federal agencies and facilities are required to implement pollution prevention measures as a result of EO 12856, *Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements*, dated 3 August 1993.

4.3 Integrated Cultural Resources Management Plan (ICRMP)

The ILARNG completed the "Integrated Cultural Resources Management Plan for Illinois Army National Guard", effective 2011-2016. An ICRMP is a five-year plan required by AR 200-4 for compliance with applicable federal laws and regulations concerning cultural resources. The ICRMP is a component of the installation master plan and functions as a decision document for cultural resources management actions and specific compliance procedures. The plan's purpose is to integrate cultural resources requirements with ongoing mission activities so that the availability of mission-essential properties and acreage is maintained and compliance with requirements is achieved.

4.4 Integrated Pest Management Plan

The IPM Plan for Illinois Army National Guard" was completed in 1997 and updated in August 2006 and then again in 2013. This statewide plan describes the ILARNG's pest management requirements, outlines the resources necessary for surveillance and control, and describes the administrative, safety, and environmental requirements of the program (U.S. Army Center for Health Promotion and Preventive Medicine [USACHPPM], 2003). Pests detailed in the plan include weeds and other unwanted vegetation, mosquitoes, other miscellaneous insects, spiders, mice, and miscellaneous vertebrate pests such as skunks (*Mephitis mephitis*), raccoons (*Procyon lotor*) and squirrels (*Sciurus carolinensis*). The statewide IPM Plan will include pest management strategies specific to the MTA. Invasive species management, pesticide and prescribed burn use are also included in the statewide plan.

4.5 Natural Resources Planning Level Surveys

Natural Resources PLS are training site-wide inventories to characterize essential components of the training site natural resources - landform, soil, water, and biota. The kinds, locations, and sensitivity of the resources are the foundation for environmental planning, including preparation of the INRMP. Training sites must conduct PLS as the foundation for natural resources management planning, including preparation of the INRMP. PLS include spatial products that can

be hard-copy maps, Geographic Information System (GIS) data layers, or both according to training site needs and capabilities. Required PLS include:

Topography PLS: At a minimum, this is a map that shows elevation, elevation contours, and associated data consistent with U.S. Geological Survey (USGS) standards and topographic map products. A digital elevation model (DEM) with a 5-meter horizontal resolution was created by ILARNG from 1.5 meter contours using Spatial Analyst. Topographic survey data for the area is available through DMAIL (Clements *pers. comm.*, 2006).

Wetlands PLS: At a minimum, this survey must describe and map the distribution and extent of wetlands on a training site. Wetland areas were delineated at the MTA by the NRCS in 1997. This survey was considered a jurisdictional wetland delineation.

Surface Waters PLS: At a minimum, this is a survey that describes and maps the distribution and extent of surface waters, consistent with USGS standards. A flood study was conducted on the South Kickapoo Creek. The Strahler Method of stream hierarchy was used to assign stream levels to each stream segment. Stream segments were mapped in GIS files (AMEC, 2004). Water quality samples were taken in South Kickapoo Creek and the two lakes within the Gravel Pit Area in the summer and fall of 1995 (Perino Technical Services [PTS], 1996). Because these surveys were not extensive, additional surveys may be needed to fully describe or assess water quality on the MTA.

Soils PLS: At a minimum, this PLS must classify, categorize, describe, and map soils by map unit, and meet current National Cooperative Soil Survey standards and procedures. The NRCS conducted a soil survey in 1995 at the MTA. This survey is comprised fully of electronic data in the form of GIS data layers.

Flora PLS: At a minimum, this is training site-wide vascular plant survey that produces a list of plant species with verified nomenclature, classification and annotation compatible with the USDA, NRCS's Plant List of Accepted Nomenclature, Taxonomy, and Symbols (PLANTS). A vascular plant inventory was conducted in 1995 at the MTA (Jones, 1996). An update of the flora PLS is planned for this implementation period.

Vegetation Communities PLS: At a minimum, this survey, including field data, must describe and map the distribution and extent of plant alliances (alliances are characterized by diagnostic species or group of diagnostic species usually occurring in the dominant and uppermost stratum; similar to cover type). Positional and classification accuracy must be field checked. The vegetation communities PLS was conducted in 1995 (Jones, 1996). Vegetation data is compiled in GIS files. An update of the vegetative communities mapping is planned for this implementation period.

Threatened & Endangered Species PLS: At a minimum, this survey must produce a map that shows the kinds and known distribution of Federally endangered, threatened, proposed, and candidate species occurring on the training site. A survey for the Indiana bat (*Myotis sodalis*) for the MTA was completed in August 2001 (Carter, 2001). Threatened and endangered species lists for the MTA will be updated during the new flora and fauna PLS.

Fauna PLS: At a minimum, this survey, including field data, must describe and map the distribution and extent of sensitive species. A terrestrial and aquatic vertebrate study was conducted in 1995, which excluded birds (PTS, 1996). The avian survey was conducted separately in April, May and June 1995 (Birkenholz, 1995). An update of the fauna PLS is planned for this implementation period.

4.6 Climate Change

Recognizing that there is a potential for climate change to result in adverse environmental impacts on local levels, sustainment of military missions could be impacted. MTC will focus on the environmental impacts such as noxious weed infestations, change in fire cycles, and vegetative and animal community changes. Surveys could indicate the likeliness of adverse climate change. Per DoDM 4715.03, State ARNG shall support the development of vulnerability assessments to better understand the potential impacts related to a changing climate. However, the abundance and distribution of species and habitats on State ARNG properties is too small in scale to address comprehensive climate change vulnerabilities. In developing strategies to address the potential impacts of climate change, State ARGN will look at existing regional plans, partnerships, or other reports that agencies, universities, and non-profits are conducting in assessing, developing, and implementing climate change adaptation strategies.

In 2003, the most recent year for which data were available, Illinois produced an estimated 269 million metric tons of GHGs on a CO₂ equivalent basis (MtCO₂e), ranking it 7th compared to other states, only slightly behind Florida and Indiana. Illinois generated 4.0 percent of total U.S. emissions in 2003. For international context, if Illinois were its own country, it would rank as the 26th largest emitter in the world, slightly ahead of Thailand.

On October 5, 2006, Governor Blagojevich launched his Global Warming Initiative by signing an Executive Order (EO) that created the Illinois Climate Change Advisory Group (ICCAG). The ICCAG was directed to consider the full range of policies and strategies to reduce GHG emissions in Illinois and to make recommendations to the Governor. The EO said the ICCAG should have broad representation and be chaired by the Director of the Illinois EPA, Doug Scott.

At the regional level, Governor Blagojevich signed the Midwestern Greenhouse Gas Reduction Accord (the "Accord") in November 2007 along with the governors of Iowa, Kansas, Michigan, Minnesota, and Wisconsin, and the Premier of Manitoba.

In addition to State guidance, the Marseilles Training Area aims to achieve its own carbon sequestration initiatives through TSI goals referenced in Appendix G.

5.0 INSTALLATION SETTING

5.1 Location and Area

The MTA is located in LaSalle County, Illinois. Seven of Illinois' eight metropolitan areas, representing over three-fourths of the State's population, are within 80 miles of LaSalle County. The ILARNG is responsible for the prudent management and use of 2,850 acres comprising the MTA, which is located approximately two miles south of the City of Marseilles and approximately 78 miles southwest of Chicago (Figure 1). The MTA is under a joint land use agreement between the DMAIL and the IDNR. DMAIL uses the MTA for field training during the spring, summer, and fall months, and for cantonment and range firing year round. IDNR uses the site for wildlife propagation, prairie restoration, and outdoor recreational opportunities year round, and for upland game hunting during the late fall and winter months. During the hunting season, field training is not conducted. The site is also known as the Marseilles Fish and Wildlife Area (DMAIL and IDNR, 1999).

Acquisition and development of the MTA was the direct result of compatible needs of the IDNR, formerly known as Illinois Department of Conservation and DMAIL. Expansion of the Illinois Beach State Park was identified as a major need in the State of Illinois. In 1968, negotiations began between IDNR and DMAIL in regards to the acquisition of Camp Logan. Camp Logan comprised 248.5 acres on the northern boundary of the Illinois Beach State Park. The size and location of Camp Logan caused severe constraints on continued usage for proper unit training and future development by the ILARNG. It was agreed that Camp Logan would be transferred to IDNR on the condition a suitable replacement training site fulfilling the long term needs of the ILARNG could be acquired. The new training site would also meet the needs of IDNR for the development and management as a State Wildlife Area for use by the citizens of Illinois. In 1972, a 2,550-acre site was selected and agreed upon as the best relocation site for both agencies. Property transfer was completed in 1980. A more complete description of parcel acquisitions is provided in the MTA Title Certificate and Legal Description and MTA Land Acquisition Legend. These documents are on file in the Facilities Division of DMAIL.

In 1987, DMAIL secured a lease from Commonwealth Edison for several parcels of land along the east boundary. The area consists of approximately 300 acres. Currently, this area is leased by the USACE Louisville District. The ILARNG is licensed through the USACE to use of this area. The license is granted for a five year period and was recently renewed on 29 February 2007. A copy of the most recent license agreement is included in Appendix B.

The total acreage of state land owned and managed by the IDNR and the ILARNG is approximately 2,550 acres. Approximately 290 acres of the jointly owned property, which comprise the Cantonment area on southernmost end of the property and a small parcel of land in Training Area 102S, is for permanent sole military use. The federal land licensed through the USACE (approximately 300 acres) is for sole military use as well. Figure 2 is a map displaying leased and owned areas of MTA.

5.2 Installation History

Prior to the ILARNG and IDNR taking over the site in 1980, the land was mainly used for timber, grazing, and agriculture. No historical data on logging practices are available, but it is estimated that the area was last logged between 1935 and 1950.

A 210-acre area in the north-central portion of the MTA was leased through the IDNR for mining sand, gravel and other similar materials (Figure 2). Spicer Gravel Company, Inc. held the most recent mining lease for this area. The lease that Spicer Gravel was operating under was purchased from Garrow Gravel Service, Inc. in 1997. Prior to Spicer Gravel taking over the lease, Garrow Gravel Service mined the area for approximately 20 years. Spicer Gravel's lease was scheduled to expire on 31 December 2004. Spicer Gravel terminated their lease in 2002. During this time, little was done in this area in terms of land reclamation. Approximately 70 acres of the leased area is currently a large quarry with two lakes that is hampered by extreme soil erosion conditions.

5.3 Land Use

The MTA is adjacent to and south of the Illinois River Valley. The northern boundary lies near a bluff overlooking the broad, flat floodplain. The area is covered with prairie and mid-successional forested areas. Land use at the MTA is comprised mainly of undeveloped grounds, which include upland and lowland forests, food plots, restored prairie and grasslands, scrub-shrub areas, and surface water features. Surface water features include South Kickapoo Creek, several unnamed intermittent and perennial streams of Kickapoo Creek, four small ponds, and one 0.7-acre wetland on the southwest portion of the site. All developed and maintained grounds are located within Cantonment Area along the southern boundary of the MTA. The majority of infrastructure on the property is located in the Cantonment area (Figure 2). Total acreage of land cover types calculated from ILARNG GIS data is provided in **Table 2**.

Land Cover Type	Acres
Forest	1890
Grassland	540
Gravel Mining Area (includes lakes)	70
Agriculture	120
Lakes and Ponds	20
Wetlands	0.7
Improved Grounds	150
Main Roads	20 miles
Trails	10 miles
Perennial Streams	3 miles
Intermittent Streams	66 miles

Surrounding land use is comprised mainly of agriculture with increasing residential development to the east. The Exelon nuclear power station is southeast of the site. The nuclear power plant also contains a large reservoir. The Illinois River's lock and dam are located approximately 2 miles north of the site. The Illini State Park is located northwest of the MTA.

6.0 MILITARY MISSION

6.1 Military Mission

The ILARNG mission includes both federal and state components. The primary federal mission is to provide trained and equipped units capable of immediate expansion to war strength. These units must be available for service in times of war or national emergency, or when appropriated to augment the active Army. The primary state mission is to provide well-trained, fully qualified, and well-equipped personnel and units that are continually ready to support national military strategy, state requirements and local community needs. ILARNG provides units and equipment to protect life and property, preserve peace and order, and ensure the public safety of Illinois' citizens as ordered by the Governor of Illinois.

In addition to the MTA, the ILARNG uses the Sparta Training Area (STA), which provide maneuver-training areas to help its units accomplish specific missions and maintain overall military readiness. Several local training areas (LTAs) are available throughout the state, but the availability, environmental restrictions, and size of these sites is a limiting factor. The STA is located in southwestern Illinois.

The primary mission of the MTA is to provide a training site for combat, combat support or combat service support units through battalion size. The major training area is most suitable, and primarily used for, small arms qualification and small unit field activities. The presence of the armory, which is now home to A Company, 33rd BST (Engineers), allows assigned ILARNG units to conduct Individual Duty Training (IDT) at the MTA.

6.2 MTA Facility Usage and Activities

Patrolling, surveillance, terrain navigation, small weapons firing, dismounted movement techniques, service support establishment, track vehicle operation, engineering support and aviation support are some examples of training activities that are conducted at the MTA. **Table 3** provides a full summary of specific training activities. The ILARNG units use the site for individual duty training, weekend training, and annual training. In addition to military training, a variety of police and other government agencies also use the ranges and training areas at the MTA. **Table 4** contains a list of all external agencies that regularly use the MTA.

The maximum usage density of the MTA is dependent upon the type of training activities being conducted. When correctly dispersed, the MTA can support up to battalion size (600-1,000 soldiers) elements. The MTA is typically used for smaller unit training. For example, a heavy weekend would normally consist of 300-500 soldiers. **Chart 1** depicts the breakdown of usage at the MTA for all users over an 18-year period.

Chart 1. MTA Usage between 1997 through 2015.

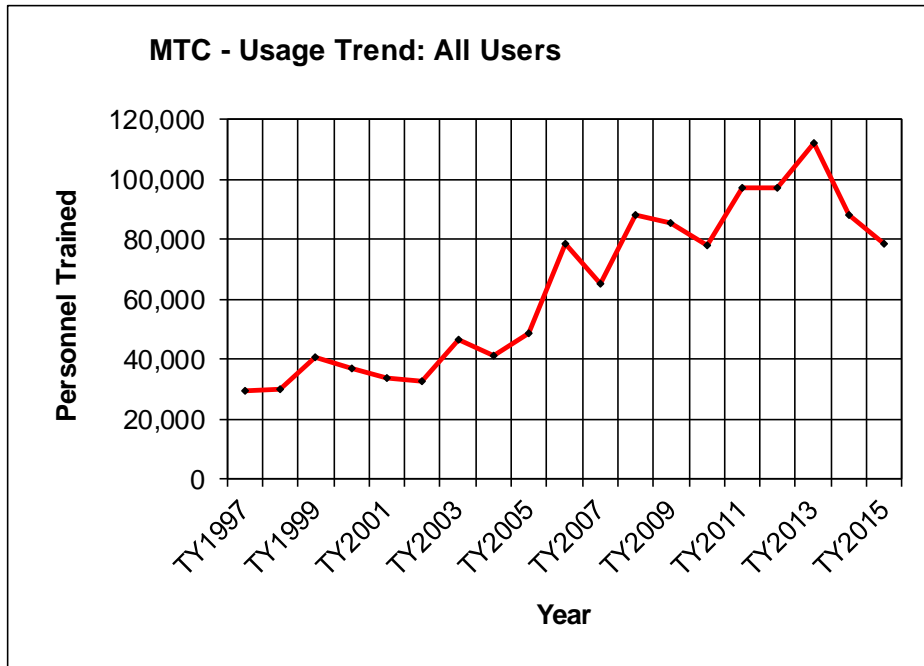


Table 3. MTA Training Resources	
Training Resources	Designated Training Area(s)*
Helicopter Maneuvering and Landing	All
Land Navigation <ul style="list-style-type: none"> ▪ Compass Courses ▪ Land Navigation course ▪ Special Operations Forces (SOF) Advanced and Expert Courses 	TAAs 102S and 104W TA 101 TA 106
Combat Skills Situation Training Exercises (STXs)	All
Nuclear, Biological and Chemical (NBC) proficiency test	TA 200 (east of Range "E")
Smoke	TA 104C
CS Chamber	TA 200
Rappel Facility	TA 200
Confidence Obstacle Course	TA 105W area C
Military Police (MP) Confinement Facility	TA 104W
Small Arms Instructors Trainers	TA 200
Engagement Skills Trainer (EST) (12-lane Laser marksmanship trainer)	TA 200
Beam Hit (portable electronic marksmanship trainer)	TA 200
Semi-Automated Weapons Cleaning Facility	Behind "B" Range
Water Operations	TAs 102N and 102S
Sling Load Operations	TAs 105W, 102S, and 104E All
Hornickel Tactical Training House and Red Brick House <ul style="list-style-type: none"> ▪ Reconnaissance, building assault, and clearing procedures ▪ Shoot/don't shoot situations using pop-up and static targetry ▪ Multiple Integrated Laser Engagement System (MILES) ▪ Simunitions and Paint Ball Systems 	TA 103W
Portable Pop-Up Targetry	TA 200
Portable Live Fire Shoot Room	TA 200
MILES Equipment	TA 200
Machine Gun Flash	TA 200
Range Facilities and Primary Use <ul style="list-style-type: none"> ▪ Range "A" – Machinegun Range ▪ Range "B" – Individual Rifle Qualification ▪ Range "C" – Zeroing Individual Weapons, Night Firing, and NBC Firing ▪ Range "D" – Pistol Qualification ▪ Range "E" – Grenade Launcher Qualification ▪ Range "G" – Hand Grenade Qualification ▪ Scaled Mortar Sabot Range – Mortar SRT Firing ▪ EST – Marksmanship Training, Combat Scenario Training, and MP Scenario Training 	Cantonment Area TA 200
* Training resources with a designated training area location, when available, were denoted.	

Source: DMAIL, 2005

Alcohol Tobacco and Firearms (ATF)	Department of Natural Resources (Conservation Police)
Federal Bureau of Investigation (FBI)	Illinois Tactical Officers Association
U. S. Marshals Service	Illinois Valley Crime Commission
Drug Enforcement Agency (DEA)	South Suburbs Response Team
U.S. Customs Service	Northeast Multi Region Training
International Mountain Bike Police Association	Northern Illinois Police Alarm Systems
Chicago Police Department	Tri-Rivers Police Training
Joliet Police Department	Cook County Sheriff Department
Marseilles Police Department	LaSalle County Sheriff Department
Ottawa Police Department	Cook County Special Operations Response Team
Skokie Police Department	Dupage County Sheriff Department
Orland Park Police Department	Oglesby Fire Department
Tinley Park Police Department	Seneca Fire Department
Minooka Police Department	Seneca Soccer Association
Bolingbrook Police Department	North South Skirmish Association
Naperville Police Department	G.E. Plastics
Department of Corrections (Prisons)	Burns Security Service
Illinois State Police	

Source: ILARNG, 2001

6.3 Facilities and Training Assets

The Cantonment area contains the majority of the permanent facilities at the MTA. The only other permanent structures located on the training site are the custodian's residence, the Nuclear, Biological and Chemical (NBC) chamber, and a storage barn managed by IDNR. See **Figure 3** for a MTA facility map.

6.3.1 Cantonment Area

The Cantonment area consists of approximately 290 acres located on the southern portion of the training area. This area is the permanent site of the National Guard Armory, site manager residence, Unit Training Equipment Site (UTES), indoor simulation range, vehicle maintenance facility, wash rack, fuel island, vehicle parking lots, ammunition supply point, a range complex, and various support buildings. The ILARNG has sole use of the Cantonment area year round. The Cantonment area is used for National Guard activities and is not managed for natural resources because it is comprised of improved grounds.

6.3.2 Training Areas

The MTA is divided into 14 training areas (TA) that encompass the entire site (Figure 3). Training activities are assigned to training areas based on availability, range activities, and whether the physical attributes of the training area suit the training mission. See **Section 6.7** for potential impacts of military training activities on natural resources.

6.3.3 Vehicle Maneuvering

Tracked vehicle training includes driver training, maintenance, and crew drill. Movement of vehicles is generally conducted on hard surfaced roads and trails (Figure 3). Off-road vehicle movement occurs during tactical deployment (for example, accessing bivouac areas) and other occasional training activities, which require prior approval from the TA Manager. The TA Manager is responsible for considering the potential impacts of the particular training activity and issuing the appropriate training area.

Two track vehicle-driving courses are located at the MTA. Mobile tactical training is currently not conducted. Impact to natural resources is minimal in the driving courses and non-significant at the remainder of the site.

6.3.4 Bivouac Sites

Bivouacking involves establishing temporary field quarters for as little as one or as many as several platoons or companies. Temporary infrastructure for bivouacs can consist of vehicle parking, tents, portable latrines, and potable water. Bivouac sites can be established throughout the MTA. Approximately 670 acres of the MTA are currently used for bivouacking (Figure 3).

6.3.5 Ranges

A range complex, comprising approximately 70 acres, was constructed at the MTA in 1984/1985. The ranges are located in the Cantonment area along the south boundary road near the east end of the property (Figure 3). The complex consists of six individual ranges as described in **Table 5**. The range complex includes support facilities for parking, latrines, target storage building, range control towers, a flagpole, and an observation tower.

Name	Ammunition Type	Acres
A - Machine Gun Range	Ball Lead	1.2
B - Field Fire Remote Enhanced Targeting Systems (RETS)	Ball Lead	18.6
C - Zero Range	Ball Lead	2.1
D - Combat Pistol Range	Ball Lead	1.2
E - M 203 Range	B-59 & M880 Practice	45.7
G - Grenade Range	M-288	1.2

Approximately 1,000 acres of forested area in the central section of the MTA is devoted to a range fan. The range fan area is off limits to all activities while the range complex is in use. A 45-acre area within the range complex is used as an inert round impact area. Only practice grenade and mortar rounds are fired into the impact area (Figure 3).

Illinois
Army National Guard



Marseilles Training Area

Facility Map

Legend

- Lakes
- Above Ground Storage Tanks
- Water Wells
- Fences
- General Lanes
- Roads
- Water Cutoffs
- Existing Structures
- Marseilles Boundary
- Division Sites
- Lodgment Area
- Training Areas
- Firing Fan
- Firing Ranges
- Restricted Access Area
- No Dig/Grapple Vehicle Traffic
- No Training Access

Location Map



Notes: Spatial Data courtesy of IGS, ILARNG and MTA
Projection: NAD 83 UTM Zone 18



Figure

3

0 200 400 600 Meters

Range List

- A - Machine Gun Range
- B - Field Fire RETS Range
- C - Zero Range
- D - Combat Pistol Range
- E - M203 Range
- G - Grenade Range

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6.4 IDNR Areas

The IDNR retains sole use of the area around the barn and corn crib in the northeast corner of the property. The IDNR uses the MTA, also known as the Marseilles Fish and Wildlife Area, for wildlife propagation, forestry (non timber production) and prairie habitat restoration, and outdoor recreational activities throughout the year when properly coordinated. Consult the Marseilles MOU for IDNR and DMAIL special use areas, dates, and times (DMAIL and IDNR, 1999).

IDNR manages five agricultural fields totaling approximately 125 acres as wildlife food plots. These fields may be planted with combinations of wheat (*Triticum* spp.), sunflower (*Helianthus* sp.), alfalfa (*Medicago* spp.), corn (*Zea* spp.) and clover (*Trifolium* spp.). These fields are primarily managed as habitat for mourning dove (*Zenaida macroura*). The IDNR also plants and manages fields for warm season grasses.

6.5 Restricted Use Areas

Several locations are restricted as shown in Figure 3. During the winter months, military training is restricted to the Cantonment area and Northern Use Area (Figure 2). The Cantonment area is jointly owned, however the ILARNG has permanent sole use of this area. The ILARNG is responsible for the maintenance and development of this approximate 290-acre area. All uses of this area will be coordinated with the TA Manager. The Northern Use area is available for training year round with the exception of firearm deer season weekends and Monday through Thursday between 1 November and 10 January as outlined in the 1999 Marseilles MOU (Appendix B).

The ILARNG has jurisdiction year round on the approximate 300-acre area licensed through the USACE on the eastern boundary of the 2,850-acre property.

Troop training activities are limited within six areas at the MTA. The small three acre area located within the Northern Use Area in TA 102S is restricted at all times to troop training and hunting. Troop training is currently not conducted in the approximate 70-acre Gravel Pit Area due to safety concerns; however, this area would be available for training after restoration activities are conducted in this area. The 35-acre Marseilles Hill Prairie Area, the small 0.7-acre wetland, and two cultural resource sites, comprising approximately four acres, are foot traffic only. No digging or vehicular traffic is allowed in any of these areas.

6.6 Current Potential Impacts

Due to the nature of the training activities conducted at the MTA, impact to natural resources is minimal. Impact to natural resources (for example, vegetation removal) is minimized to preserve tactical concealment and maintain training areas in a sustainable manner. Vehicle movement is mostly limited to the road network with the exception of transporting materials and establishing positions within the bivouac areas. Routine monitoring is conducted to ensure bivouacking does not significantly impact natural resources. Track vehicle training is limited to two areas of the training site and the road network.

Activities at the range complex have no apparent impact to natural resources because the entire site is managed and maintained for the purpose of live firing. Two munitions storage buildings are located in the Cantonment area of the MTA. Only small arms munitions, CS gas, signal flares, and smoke ammunition are stored. No explosives or weapons are stored in the facilities.

6.7 Potential Future Impacts

Training site development projects are not part of this INRMP update, but they are briefly mentioned to identify the types of activities and projects supported by the INRMP. Natural resources management requirements are given consideration by the ILARNG in training site development and management. The natural resources management program is in place to support training and assist in training site usage and development by facilitating things like effective vegetation control, water protection, ecosystem sustainability, soil stabilization and seeding recommendations, and timber salvage as needed for construction projects.

Training site usage and development priorities change as missions change. At this time, proposed expansion plans include range expansion and development. The project proposes to expand Range B- by obtaining a portion of Range C. C Range would take the place of D Range. Prior to project implementation, the proper NEPA review will be initiated. Lead reclamation may be required at the time of range expansion and development. Environmental remediation activities are not covered in the INRMP, and therefore they are not discussed further.

6.8 Natural Resources Needed to Support the Military Mission

Relatively natural landscapes are required for the success of training activities at the MTA. The ILARNG recognizes that its on-going and proposed training activities can potentially use or consume the natural resources on mission land, and that successful execution of their mission is dependent upon the optimum maintenance of their environment in a mode of sustainable use. The ILARNG recognizes its responsibility to guarantee continued access to its land, air and water resources for realistic military training while ensuring that the natural and cultural resources entrusted to their care are sustained in a healthy condition for scientific research, education and other compatible uses by future generations. This sometimes means that we need to implement activities, such as, but not limited to, timber stand improvement (TSI), prescribed burning, soil stabilization, and invasive species management. The ILARNG conducts these types of activities in cooperation with the IDNR by using scientific studies, natural resource assessments, and sound environmental practices. A list of planned projects for this implementation period is provided in **Section 10.1**. Descriptions of where these projects will be implemented as well as how they will benefit the military mission are summarized in this section.

6.9 Effects of Natural Resources on the Military Mission

The SAIA requires that INRMPs provide for "...no net loss in the capability of military installation lands to support the military mission of the installation" (16 USC §670 *et seq.*). Primary impacts result from restrictions placed upon areas of environmental concern, including wetlands, woody vegetation encroachment, overstocking of forest, natural erosion, and endangered species locations. Training may also be adjusted periodically to allow for natural resources management activities, such as, but not limited to, prescribed fire, TSI, and herbicide treatment.

Soldiers need to be aware of Environmental constraints; they can promote awareness on the part of the mission analysis. Learning to plan around environmental restrictions helps develop a disciplined mindset that is a valuable asset to today's soldier. However, this must be balanced to avoid inadequate training caused by unnecessary constraints. Currently, training activities are restricted in six areas within the MTA (see **Section 6.5** for more details). Refer to Figure 3 for restricted area locations.

6.10 Natural Resources Considerations for Mission Planning and Initiation

The ultimate goal of this INRMP update is to ensure the sustainability of doctrinally-required military training at the MTA, while providing for realistic protection of the installation's natural resources. Training success at the MTA is only possible through a supportive, proactive natural resource management program. The MTA natural resource management program aims to minimize the impacts of normal training use on MTA natural resources, and complements the doctrinally required military training conducted on the installation. Proper execution of the MTA natural resource management plan provides sustainable training lands, and provides adaptive means of dealing with normal training impacts, thereby protecting our natural resources. Many features of this plan contribute to its ability to provide sustainable training lands. Some of these features are techniques, practices and procedures, which include immediate repair and restoration of terrain damage, "resting" repaired terrain while vegetation is re-established, minimizing off-road vehicle activity when soil is saturated, establishing wetlands as restricted areas, and establishing rotational use of field bivouac sites. Other features provide for "hardening" of areas frequently used for training, to minimize impacts on natural resources within the surrounding areas. Permanent stream crossing sites are another example of these best management practices (BMPs), which minimize damage to vegetation, soil loss, erosion, and sedimentation. Natural resources management will facilitate the accomplishment of the military mission.

Refer to Chapters 11 through 18 for additional information on how to properly manage these natural resources limitations during mission planning. Laws and regulations that pertain to these natural resources are also incorporated into these Chapters.

6.11 Natural Resources Law Enforcement

The IDNR is responsible for the hunting program and the enforcement of all hunting regulations at the MTA. Hunting seasons and regulations are published by the IDNR. Both the ILARNG and IDNR enforce other regulations affecting the use of natural resources for the entire site. MTA Staff assist IDNR in this endeavor.

The Site manager with the assistance of the environmental branch of DMAIL are responsible for relaying information on natural resource conservation to all MTA personnel who have access to the site. Environmental guidance for training at the MTA is presented in a MTA SOP. This SOP addresses environmental compliance that must be followed by all units utilizing MTA. The Facility Manager for the MTA is responsible for insuring that all units training at the MTA are briefed on and comply with environmental guidelines in the most current version of the MTA SOP (**Appendix E**). All training areas are examined after training activities occur. Unit commanders are responsible for any impacts to natural resources that occur during training activities.

7.0 INTEGRATED TRAINING AREA MANAGEMENT

As discussed in **Section 1.4.4**, the ITAM program is one of the two SRP core programs. The SRP/ITAM program is the U.S. Army standard for sustaining the capability of installation land units to support military training missions, to ensure compliance with existing statutory regulations, and to promote sound stewardship of natural resources contained therein. The ITAM subcomponent consists of four proactive subprograms designed to facilitate these processes:

- 1) ***Range and Training Land Analysis*** (RTLA) is the ecological monitoring component that serves to characterize and monitor installation natural resources;
- 2) ***Training Requirements Integration*** (TRI) uses information generated and assimilated from RTLA to assist with military exercise scheduling and logistics so as to minimize harmful practices or activities within given Training Areas (TAs);
- 3) ***Land Rehabilitation and Maintenance*** (LRAM) provides mitigation measures and land rehabilitation where needed or desired; and
- 4) ***Sustainable Range Awareness*** (SRA) activities serve to promote awareness of environmentally sensitive issues and to foster a stewardship ethic among unit commanders, ground troops, neighboring communities, and other concerned or involved parties.

Information acquired under the SRP/ITAM umbrella is incorporated into an installation-specific INRMP, which guides overall military training within the constraints of NEPA and other applicable legislation and ARs, threatened and endangered species management, rehabilitation activities, and projected sustainability guidelines. The components of the ITAM program are discussed in the following sections.

7.1 Range and Training Land Analysis

7.1.1 Overview

RTLA is the natural resources data collection and analysis component of the ITAM Program and is used to establish a baseline for inventory and monitoring on properties owned and/or managed by the DoD. The intent of RTLA is to collect essential natural resources baseline information that is needed to effectively manage training lands. The flora, fauna, and soils data obtained from RTLA surveys may be integrated with standard data elements from the ancillary components of ITAM (for example, cultural resources, forest surveys, wetland surveys, endangered species surveys, and water quality monitoring). GIS technology is used to integrate all natural and cultural resources data and graphically display the relationships between individual resource components. RTLA provides for the collecting, inventorying, monitoring, managing, and analyzing of tabular and spatial data concerning land conditions on an installation.

The Army initiated the RTLA concept in the mid-1980s as a program emphasizing uniform data collection methodologies to provide regional, Major Command, or national-level assessments of land. With the adoption of SRP/ITAM by the Training and Operations community, the RTLA program has evolved to a decentralized, installation-level management of objectives to document the status and trends in natural resources, examine the relationships between disturbance and condition, and support training area land use decisions. This program allows installation-level managers (land managers and range operations staff) to determine how they can best collect and

use resource data to support short- and long-term land management decisions such as training area allocation, training area use, and land rehabilitation.

RTLA provides data needed to evaluate the capability of training lands to meet multiple use demands on a sustainable basis. It incorporates a relational database and GIS to support land use planning decision processes. RTLA collects physical and biological resources data to relate land conditions to training and testing activities. These data are intended to provide information to effectively manage land use and natural resources and supply information for a variety of decision support and information management systems.

A successful RTLA program provides scientifically valid baseline and long-term monitoring data. Monitoring is a critical component of the adaptive management cycle, especially in the context of ecosystem management, but can only be successful if it is objective-based. Limited resources dictate that both qualitative and quantitative methods be utilized to address short- and long-term objectives.

7.1.2 RTLA Implementation

RTLA plots have not been established throughout the MTA to date because it is a Category IV ITAM site. Currently, the ILARNG does not have the ability to establish and maintain them. However, forest plots were established in 2002. During 1995-1996, initial physical and biological resources data were collected and georeferenced.

Management goals for RTLA implementation at MTA include identifying and evaluating land impacts from training, and identifying training activities compatible with the MTA topography, soils, land cover, and ecosystems. The following objectives are intended to accomplish these goals:

- Ensure that physical and biological resources are georeferenced and recorded using global positioning system (GPS) technology to ensure data collection consistency from year to year.
- Establish additional RTLA areas as needed in training areas and planned future training areas.
- Record the type of training that occurs in various areas so that correlations among site conditions and training may later be established.
- Record natural events (for example, weather events) that could affect land condition.

The ILARNG plans to implement the following ITAM projects in conjunction with this INRMP update:

RTLA Projects

- Project 7. Track INRMP Project Success using RTLA

Additional information pertaining to these projects is provided in Part 3, Natural Resource Management Programs, Chapter 10 and **Table 10**.

7.2 Training Requirements Integration

7.2.1 Overview

TRI is the land degradation prevention program of ITAM. The siting of military training exercises, and other land uses in areas that are most capable of supporting the activities is the main goal of TRI. TRI relies heavily on RTLA-generated data to assist in determining the capability of the land to sustain a particular training activity with minimal disturbance to the affected environment. The integration of all requirements occurs through continuous consultation between the Directorate of Plans, Training, and Mobilization, natural and cultural resources managers, and other environmental staff members, as appropriate. The INRMP is an implementing document and requires TRI input.

TRI matches the training activity with the most suitable site, and includes a rotation schedule for training lands. TRI also includes any restrictions required to maintain site quality, protect significant natural resources and minimize land damage while providing a safe training environment.

The implementation of TRI requires coordination between installation/operations training staff and natural resources management/environmental staff. TRI allows for the appropriate allocation of specific training requirements to specific land parcels. The decision-making and allocation process is based on the land's "carrying capacity" with respect to training activities. The following are examples of possible land use options exercised through TRI:

- Designate the parcel's use to an alternative training, mission, or non-mission activity to permit natural recovery; prolong sustainable use; or allow for rehabilitation, repair and maintenance;
- Designate a given parcel to support higher impact training (for example, mined area);
- Establish guidelines for the likely training use of a given parcel;
- Accept a specific level of training-related degradation of a given parcel;
- Modify training on a given land parcel to permit timely rehabilitation, repair and maintenance; and
- Modify training on a given parcel of land due to severe impacts and immediately initiate restoration of that parcel.

The TRI function is managed by the ITAM coordinator, with direct support from the Range and Training managers, and the RTLA and LRAM coordinators. TRI is further supported by the natural resources management and/or environmental staff and the Directorate of Public Works. In addition, TRI involves coordination with external agencies and Federal departments.

The operational scheduling and control of the MTA for military training is accomplished by dividing the installation into TAs (see Figure 3). Each area is designated according to its location or use, and any site-specific constraints identified. Parameters for each different area can include the acreage of the site, acreage and type of any special or sensitive habitat (includes wetlands, erodible soils, species of concern), types of training allocated (i.e. weapons training, demolition, tracked vehicle training), types of access (paved roadways, gravel roadways, wooded trails), restricted areas, and any other environmental considerations specific to the individual TA.

The Sustainable Range Awareness program (see **Section 7.4**) serves to educate the training site users about site limitations and instructs guest units on the importance of minimizing damage to

natural resources. This allows training site users to accomplish their training missions with minimal damage to the environment.

7.2.2 TRI Implementation

Management goals for TRI implementation at the MTA include minimizing training impacts, preventing excessive or irreversible land damage, and minimizing training-related land rehabilitation costs. The following objectives are intended to accomplish these goals:

- Evaluate potential impacts of proposed training events, and modify training locations when necessary to prevent impacts to natural resources;
- Maintain a record of types and locations of training that occur at the MTA;
- Rotate use of bivouac sites to prevent overuse of any one site.

7.3 Land Rehabilitation and Maintenance

7.3.1 Overview

LRAM involves repair of training-damaged lands and use of land construction technology to avoid future damage to training lands. LRAM uses technologies such as revegetation and erosion control techniques to prevent site degradation, soil erosion, and water/wetlands pollution. Projects are specifically designed to maintain quality military training lands, minimize long-term costs associated with land rehabilitation or additional land purchase, ensure compliance with environmental laws and regulations, and reduce erosion. LRAM is the component of the ITAM Program that provides a preventive and corrective land rehabilitation and maintenance procedure to reduce the long-term impacts of training on an installation. It includes training area redesign and/or reconfiguration to meet training requirements.

LRAM projects may be planned and conducted in-house or through contract. The LRAM process begins with identification of potential LRAM projects. RTLA data and GIS technology are typically used to help identify projects. Two common types of LRAM projects are training area rehabilitation and hardened sites.

Training area rehabilitation involves a wide array of techniques to correct erosion features, minimize disturbance, and revegetate denuded areas. Rehabilitation may occur within large training areas or more localized sites used for training. Rehabilitation areas may also be temporarily “off-limits” or protected through other restrictions. Revegetation is the critical stage of training area rehabilitation. Commonly used techniques for erosion control and establishment of vegetation include seedbed preparation, seeding, mulching, fertilizer application, and protection from runoff until vegetation is established. Techniques are specific to each project and revegetation processes would be completed utilizing native grasses and plant species. Species chosen would have proven ability to control and diminish erosion processes and will be approved by IDNR. The ILARNG will utilize the NRCS conservation tool box for standard design parameters.

Hardened sites are areas that have been resurfaced with a base material, often overlaid with gravel. Sensitive areas within hardened sites may also be protected using barriers. Hardened sites are created in areas that receive repetitive training within a small area to the point where vegetation is damaged and “realism” is already drastically compromised. Potential locations include bivouac sites, firing points and troop assembly areas.

7.3.2 LRAM Implementation

LRAM efforts are specifically designed to minimize long-term costs associated with land rehabilitation and reduce the need for additional land purchase due to unusable existing training site conditions. Successful execution of an LRAM program will ensure compliance with environmental laws and regulations, in particular the Federal Clean Water Act (CWA, 33 USC 1251 *et seq.*).

General guidelines for LRAM projects are listed below.

- Schedule and perform land rehabilitation projects during optimum seeding periods. If projects cannot be performed within the optimum seeding period, then stabilize the soil immediately and complete seeding as soon as possible.
- After heavy training exercises are conducted on the site, identify damaged areas and schedule appropriate rehabilitation.
- Use temporary erosion control methods (such as silt fences or hay bale diversions) as needed during periods of heavy troop training and inclement weather to avoid silt migration to water bodies and other sensitive areas.
- Include soil capabilities, water management, landscaping, erosion control and conservation of natural resources in all site feasibility studies and in project planning, design, and construction.
- Include costs to obtain required permits and perform necessary rehabilitation work in project proposals and construction contracts.
- Re-seed areas that fail to establish a vegetative cover adequate to prevent rill or dendritic erosion as soon as possible.

Erosion control, soil conservation, and training area rehabilitation are discussed further in Chapter 12. The ILARNG plans to implement the following ITAM projects in conjunction with this revised INRMP:

LRAM Projects

- Project 4. Trail and Access Point Expansion or Hardening
- Project 5. Trail Maintenance
- Project 8. General Erosion Control and Soil Stabilization
- Project 9. Mine Reclamation
- Project 16. Pollinator Management

Additional information pertaining to these projects is provided in Part 3, Natural Resource Management Programs, Chapter 10 and Table 10.

7.4 Sustainable Range Awareness Program

7.4.1 Overview

SRA is an educational program that promotes environmental stewardship and responsible use of the natural resources on military lands. An SRA program would focus on all land users including soldiers, leaders, civilians, and the local community who may use training lands for recreational purposes. SRA also serves to educate the public on the natural resources needs and impacts of the military mission and natural resources management. Awareness is crucial to the protection of diverse resources, such as sensitive species and wetlands.

The SRA program particularly focuses on developing and distributing awareness materials, such as soldier's handbooks, leader's handbooks, field cards, training videos, posters, etc. The SRA program provides site-specific information to all site users of the MTA to prevent unnecessary damage to the environment and in particular, training lands. Through the dissemination of information, ILARNG personnel and guests will improve their understanding of the effects of their mission and training activities on the natural resources at the MTA.

The SRA program for the ILARNG has a two-fold thrust: one for units, leaders, commanders at all levels, training site staff, and the other for other non-military training site users (range users, local population, hunters, school and community groups). SRA is designed to improve their understanding of the effects of their mission, training, or activity on natural resources. Objectives of the SRA program at the MTA include:

- Help units, leaders, soldiers, civilian employees, and other installation users understand how their activities affect the environment;
- Provide decision-makers with information needed to make judgments affecting MTA;
- Educate the military community about recreational opportunities and conservation efforts, especially those related to hunting and fishing;
- Educate the local community about conservation;
- Maintain good relations between the MTA and regional media.

7.4.2 Military Personnel Awareness

Implementation of natural resources protection requirements in the field depends upon effective communication with military trainers. Two important means of communicating natural resources concerns to military personnel are awareness materials and briefings.

SRA materials will be as site-specific as possible, with photographs or drawings illustrating specific or unique on-site natural resources. Materials will be durable for field use. Photographs of rare species and special habitats will be placed in highly visible places to ensure maximum audiences (briefing rooms, billeting common areas, etc.).

The Resource Management personnel with DMAIL are responsible for relaying information on natural resource conservation to MTA ILARNG personnel. Environmental guidance for training at the MTA is presented in an Environmental Policy Letter. This policy letter addresses environmental compliance that must be followed by all units utilizing MTA. The Facility Manager for the MTA is responsible for insuring that all units training at the MTA are briefed on and comply with environmental guidelines in the most current Environmental Policy Letter. All training areas are examined prior to and after training activities occur. Unit commanders are responsible for any impacts to natural resources that occur during training activities. Trainers are issued a map that identifies restricted areas, which include impact areas and sensitive ecological and cultural resource areas with use restrictions (Figure 3).

Briefings are usually informal, conducted as needed. For instance, a military unit preparing to bivouac near a sensitive area or a contractor preparing to work near a wetland will be briefed on environmental requirements by EMO personnel or the trainer. The unit commander will ensure compliance of the troops. Resource awareness training includes: a briefing on wetland locations; rare, threatened, and endangered species locations; cultural resources; restricted areas; pest management; information on dangerous or toxic plants and animals on the site such as poison ivy, poisonous snakes, and ticks; and any other pertinent information that helps reduce the risk of negative impacts to resources on the site and dangers to personnel at the site.

7.4.3 Public Awareness

The ILARNG is committed to cultivating a conservation ethic in the community, especially local youth. Natural resources personnel will work with community and youth groups on conservation programs whenever possible. Scouts, in particular, often need support with projects, merit badges, and conservation talks. The ILARNG will continue to work with community and youth groups whenever possible.

Articles published in local newspapers and public service announcements on television and radio are excellent means of promoting new or existing programs involving the MTA. Educating and informing the public of management practices (such as prescribed burning, wildlife food plots, reduced grounds maintenance) generally increases support rather than opposition of the public. Such media reaches a diverse audience, and can be specifically designed to promote the MTA mission within the context of stewardship. Awards presented to training site personnel are a good topic for such articles/announcements, and can highlight a “good neighbor” ethic. All media reports will be coordinated through the ILARNG Public Affairs Office in Springfield, Illinois.

7.4.4 SRA Implementation

The primary SRA management goal is to educate MTA users about environmental concerns and responsibilities while using the site. The following objectives are intended to accomplish this:

- Brief decision-makers about the MTA natural resources program.
- Maintain SRA materials on-site at the MTA.
- Provide information to units, leaders, soldiers, civilian employees, and other installation users to improve their understanding of impacts of their activities on the environment.
- Brief the advance parties of units using the site.
- Encourage SRA activities at the MTA such as Earth Day, Arbor Day, as appropriate.

The ILARNG plans to implement the following ITAM projects in conjunction with this INRMP Update:

SRA Projects

- Project 13. Community Outreach and Prairie Restoration
- Project 16. Pollinator Management
- Project 17. Raptor Rehabilitation Program

Additional information pertaining to these projects is provided in Part 3, Natural Resource Management Programs, Chapter 10 and Table 10.

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PART 2: EXISTING ENVIRONMENTAL CONDITIONS

Chapters in Part 2 describe baseline conditions at the MTA. These provide the basis for focusing on natural resource management needs presented in Part 3.

Chapter 8 presents the Physical Environment, with setting and topography, climate, air quality, geology and soils, water resources and water quality, floodplains, and ground water.

Chapter 9 presents the Biological Environment, with flora and terrestrial communities, fauna, aquatic and wetland habitats, and threatened and endangered species.

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8.0 THE PHYSICAL ENVIRONMENT

8.1 Setting and Topography

Illinois' is divided into four physiographic provinces: Ozark Plateaus, Interior Low Plateaus, Central Lowland, and Coastal Plain. The Central Lowland Province consists of four distinct sections: Wisconsin Driftless, Dissected Till Plains, Till Plains, and Great Lakes. The MTA lies within the Bloomington Ridged Plain of the Till Plains section of the Central Lowland Physiographic Province, which is characterized by gently rolling fertile plains carved and leveled by glaciers during the Ice Age (Illinois State Geological Survey [ISGS], 2006; Lloyd and Lyke, 1995). The MTA is adjacent to and south of the Illinois River Valley. The northern boundary lies near the bluff overlooking a broad, flat floodplain to the north. The area is covered with prairie and mid-successional forested areas. Most of the MTA was savanna at the time of settlement rather than the closed forest found presently (Jones, 1996).

The topographic relief at the site is associated principally with the South Kickapoo Creek, a major drainageway that bisects most of the site. The South Kickapoo and other intermediate unnamed streams at the MTA exhibit steep gradients with narrow and steep valleys. The site topography varies from a maximum elevation of about 740 feet in the upland areas to a minimum elevation of about 500 feet at the base of the bluff of the Illinois River Valley on the north end of the site. The site does not consist of a uniformly sloping plain, but is highly dissected in the transition from the higher upland area to the lower controlling elevation of the Illinois River Valley (ILARNG, 2001). **Figure 4** shows the topography within the MTA.

8.2 Climate

LaSalle County has a continental climate, typical of northern Illinois, with hot summers and cold winters. Low-pressure areas and associated weather fronts bring frequent changes in temperatures, humidity, cloudiness, and wind direction during much of the year. Summers are warm to hot, but hot periods are seldom prolonged. Cool air invasion from the north occurs frequently enough to prevent long stagnation of hot, humid air masses. July is the warmest month. The growing season lasts approximately 175 days on average in LaSalle County.

Annual precipitation averages 35 inches. About one year in six the precipitation is either less than 28 inches or more than 38 inches. Fall and winter months are the driest, while spring and summer months average almost twice as much precipitation. Summer precipitation occurs mostly as brief showers or thunderstorms that are occasionally accompanied by hail or damaging winds. More than half of the annual precipitation normally falls during the growing season from May through September. Although major droughts are infrequent, prolonged dry periods during the growing season are not unusual. Annual snowfall averages between 25 and 27 inches, however more than 20 inches has fallen in a single month on several occasions (NRCS, 1972). Average rainfall and temperatures are provided in **Table 6**.

Month	Average Rainfall	Average Temperature
	(inches)	(°F)
January	1.6	25.5
February	1.4	27.7
March	2.7	38.5
April	3.8	50.0
May	3.8	61.0
June	3.8	70.2
July	3.8	73.8
August	3.4	71.4
September	3.5	64.4
October	2.6	52.2
November	2.6	40.1
December	2.2	26.2
Year	35.1	50.4

Source: Buttle and Tuttle Ltd, 2004

8.3 Air Quality

The USEPA is the overall regulatory agency for air quality throughout the United States. However, in most cases control is delegated to individual states. In some cases, the individual states may subsequently delegate control to local air quality management agencies. The primary regulatory authority for air quality in Illinois is the Illinois Environmental Protection Agency (IEPA) Bureau of Air.

The ambient air quality in an area can be characterized in terms of whether it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS). The Clean Air Act Amendments of 1990 (CAAA) requires USEPA to set NAAQS for pollutants considered harmful to public health and the environment. NAAQS are provided for seven criteria pollutants: carbon monoxide (CO); lead (Pb); nitrogen dioxide (NO₂); ozone (O₃); particulate matter with an aerodynamic size less than or equal to 10 micrometers (PM-10); particulate matter with an aerodynamic size less than or equal to 2.5 micrometers (PM-2.5); and sulfur dioxide (SO₂). These pollutants are considered to be detrimental to public health and the environment, and are known to cause property damage.

Areas are designated as “attainment”, “nonattainment”, “maintenance”, or “unclassified” with respect to the NAAQS. 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 standards are designated as attainment areas. Areas for which no monitoring data is available are designated as unclassified, and are by default considered to be in attainment of the NAAQS. In areas where the applicable NAAQS are not being met, a nonattainment status is designated.

Air quality within La Salle County, is “in attainment” for all NAAQS criteria pollutants (IEPA, 2004a).

Illinois
Army National Guard



Marseilles Training Area

Topography

Legend

- Marseilles Boundary
- WaterBodies
- Existing Structures
- Roads

Location Map



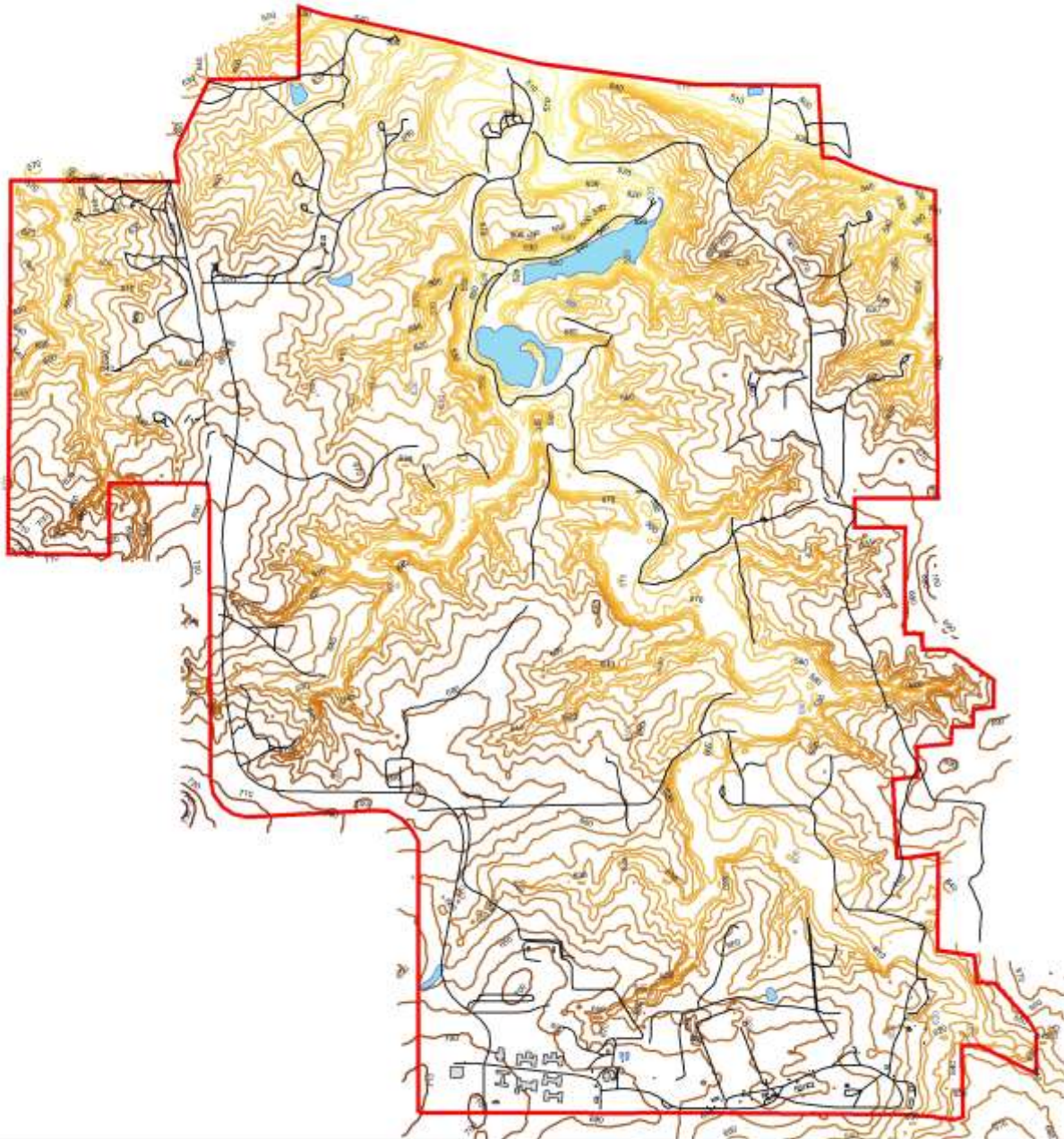
Notes: Spatial Data courtesy of IGC, ILARNG and MTA
Projection: NAD 83 UTM Zone 18



Figure

4

0 190 380 570 760
Meters



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8.4 Geology

The underlying bedrock material at the MTA consists of sandstone, siltstone, shale, coal, limestone, and claystone. Bedrock outcrops occur in major drainage ways where the glacial drift has been eroded.

Windblown silt (loess) mantles the entire region except for the floodplains of the Illinois River and its major tributaries where alluvial/outwash deposits are present. The loess was derived mainly from the broad Illinois River Valley just north of the site when Wisconsin glaciers were contributing great volumes of meltwater to streams. The silt was blown from the sediment-laden floodplain by prevailing northwesterly winds and deposited on the bluffs and upland, forming thick deposits of loess adjacent to the Illinois River and thinning rapidly farther from the river. At the southern portion of the MTA, the loess is generally no thicker than about four feet on uneroded topography. Much loess has been washed into bottom land and tributary stream valleys where it lies at the foot of the slopes or is mixed with other sediments of the streams.

Beneath the loess, the glacial deposits that form the end moraines (Marseilles Moraine) constitute the bulk of the unconsolidated overburden above bedrock. The deposits are predominantly glacial till and an unsorted mixture of soil and rock particles of diverse sizes, from clay to boulders, deposited directly by the glacial ice. In most places, the till is firm and tight because it is a compacted mixture of clay, silt and sand in which larger rocks are embedded. Within the till are lenses of silt, sand and gravel deposited by meltwater. The uppermost Wisconsinan age till material is identified as the Yorkville Till Member of the Wendron formation. This material generally consists of a gray or brownish gray very clayey till. Because the till deposits comprise a moraine feature, the initial till surface exhibits rather continuous curvilinear areas which have elevated hummocky topography and local deposits of sand, gravel and peat in addition to the till. Following the retreat of the Wisconsinan Ice Sheet, considerable erosion and weathering of the till surface occurred. The concurrent deposition of windblown silt became mixed with colluvial till material that accumulated near the base of slopes on the morainic till surface. Thus, the material immediately below the thin loessial surface mantle in the site area is best described as a combination of colluvial and weathered till. Below that mixed zone, unweathered Wisconsinan and Illinoian till materials are present above bedrock.

The major glacial drainageways contain granular outwash and terrace deposits. Such deposits are often of commercial value and are found in the Illinois River Valley and along major tributaries, such as the South Kickapoo Creek that bisects MTA (ILARNG, 1994, 1987).

8.5 Minerals

The underlying bedrock material at the MTA consists of sandstone, siltstone, shale, coal, limestone and claystone. Bedrock outcrops occur in major drainage ways where the glacial drift has been eroded away and the stream has incised in the bedrock. Available mapping information from the ISGS indicates that this site has not been undermined by past coal mining activities, although coal mining has occurred in the surrounding areas (ILARNG, 1994, 1987).

8.6 Soils

The best available soil data for the MTA were obtained through the USDA, NRCS for La Salle County (NRCS, 1995). This soil survey of the MTA was conducted in 1995 by the NRCS and provided to DMAIL in digital format. **Table 7** provides a summary of the soil map units observed at the MTA. **Figure 5** shows their locations within the installation.

MTA has three general types of soils: Upland Prairie Soils, Upland Timber Soils and Terrace Soils. The Upland Prairie Soils are located on the flatter areas of the site. This constitutes a small portion of the site located on the south side. The upper horizons of these soils are high in organic matter. Erosion tendency is slight, but internal drainage is usually poor.

The Upland Timber Soils are found along the slopes of South Kickapoo Creek. The degree of slope ranges from moderate to severe. These soils drain fairly well, but are susceptible to erosion due to the steepness of the slopes. The Upland Timber Soils on site generally support hardwood forest and grasses in open areas.

The Terrace Soils are located along the South Kickapoo Creek and other drainage ways. These soils are made up of silt and gravel and are periodically flooded. Vegetation on these soils is poorly established due to periodic flooding and poor water retention of the soils (ILARNG, 1983).

Approximately 81 percent of the soils at the MTA have a severe to very severe erosion potential. Other soil management concerns include low moisture holding capacity and excess water hazards, which include poor soil drainage, wetness, high water tables and overflow. Only 30 acres of the property are classified as hydric soils. Approximately 824 acres are characterized as prime farmland, and an additional 41 acres are classified as prime farmland if drained.

As mentioned previously, a 210-acre area in the north-central portion of the MTA was leased through the IDNR for mining sand, gravel and other similar materials for approximately 25 years (Figure 2). Approximately 70 acres of the leased area is currently a large quarry with two lakes that is hampered by extreme soil erosion conditions.

**Illinois
Army National Guard**



Marseilles Training Area

Soils Map

Legend

-  Marseilles Boundary
-  WaterBodies
-  Existing Structures
-  Former Gravel Mine
-  Roads

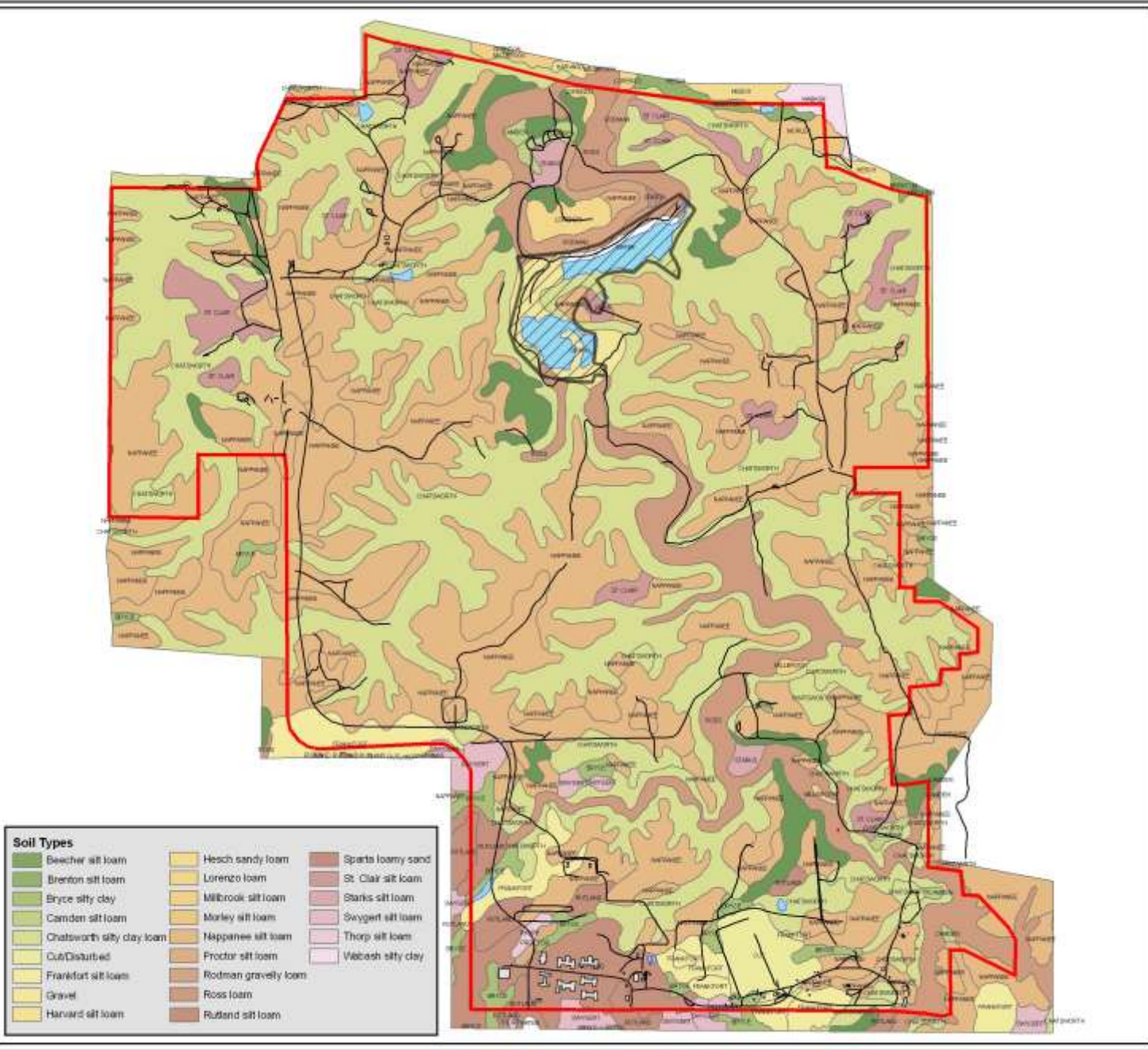
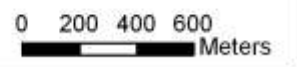
Location Map



Notes: Spatial Data courtesy of IGG, ILARNG and MTA
Projection: NAD 83 UTM Zone 18



Figure
5



Soil Types

Beecher silt loam	Hesch sandy loam	Sparta loamy sand
Brenton silt loam	Lorenzo loam	St. Clair silt loam
Bryce silty clay	Milbrook silt loam	Starks silt loam
Camden silt loam	Morley silt loam	Swygert silt loam
Chatsworth silty clay loam	Nappanee silt loam	Thorp silt loam
Cut/Disurbed	Proctor silt loam	Vebosh silty clay
Frankfurt silt loam	Rodman gravelly loam	
Gravel	Ross loam	
Harvard silt loam	Rutland silt loam	

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Table 7. NRCS Soil Map Unit Descriptions and Percent Cover on the MTA

Map Unit Name	Site Cover (acres)	Description					
		Slope (%)	Hydric Soil	Prime Farmland	Drainage	Native Vegetation	Management Concerns
Brenton silt loam	0.3	2 to 4	N	Y	Somewhat poorly drained	Tall prairie grasses	Slight to moderate erosion potential
Bryce silty clay	20.9	0 to 2	Y	Y ₁	Poorly drained	Marsh grass and sedges	Moderate excess water hazard
Camden silt loam	17.4	2 to 12	N	Y ₂	Well drained	Mixed hardwood forest	Moderate to very severe erosion potential
Chatsworth silty clay loam	298.9	7 to 50	N	N	Moderately well drained	Prairie grass and deciduous forest	Very severe erosion potential
Frankfort silt loam	37.3	2 to 7	N	Y ₃	Somewhat poorly drained	Open hardwood forest and prairie grass	Severe to very severe erosion potential
Hesch sandy loam	7.4	0 to 2	Y	N	Well drained	Mixed grasses with scattered oak and hickory trees	Severe excess water hazard
Lorenzo loam	51.8	2 to 4	N	N	Well drained	Tall prairie grasses	Low moisture holding capability
Millbrook silt loam	7.8	2 to 4	N	Y	Somewhat poorly drained	Tall prairie grasses and widely spaced trees	Moderate erosion potential
Morley silt loam	1.5	7 to 12	N	N	Moderately well drained	Mixed deciduous forest	Severe erosion potential
Nappanee silt loam	1,605.7	0 to 7	N	Y ₄	Somewhat poorly drained	Forest	Severe to very severe erosion potential
Proctor silt loam	3.4	4 to 7	N	Y	Well drained	Prairie grasses	Severe erosion potential
Rodman gravelly loam	139.8	12 to 30	N	N	Excessively drained	Forest	Very severe erosion potential
Ross loam	16.7	0 to 2	N	Y ₁	Well drained	Scattered deciduous forest with prairie grasses	Moderate excess water hazard
Rutland silt loam	185.5	2 to 7	N	Y	Somewhat poorly drained	Prairie grasses	Moderate to severe erosion potential

Table 7. NRCS Soil Map Unit Descriptions and Percent Cover on the MTA

Map Unit Name	Site Cover (acres)	Description					
		Slope (%)	Hydric Soil	Prime Farmland	Drainage	Native Vegetation	Management Concerns
Sparta loamy sand	1.6	7 to 12	N	N	Excessively drained	Prairie grasses with widely spaced oak and hickory.	Low moisture holding capability
St. Clair silt loam	30.3	7 to 18	N	N	Moderately well drained	Forest	Severe to very severe erosion potential
Starks silt loam	4.7	2 to 4	N	Y	Somewhat poorly drained	Deciduous hardwood forest	Moderate erosion potential and excess water hazard
Swygert silt loam	141.3	2 to 7	N	Y	Somewhat poorly drained	Prairie grasses	Moderate to very severe erosion potential
Thorp silt loam	< 0.1	0 to 2	Y	Y ₁	Poorly drained	Marsh grass and sedges	Moderate excess water hazard
Wabash silty clay	< 0.1	0 to 2	Y	Y ₁	Poorly and very poorly drained	Marsh grass and sedges	Severe excess water hazard
<p>¹ Prime farmland if drained. ² Camden silt loam with 0 to 4 percent slopes is prime farmland. ³ Frankfort silt loam with 2 to 4 percent slopes is prime farmland. ⁴ Nappanee silt loam with 0 to 2 percent slopes is prime farmland if drained, and is prime farmland with 2 to 4 percent slopes</p>							

Source: NRCS, 1995; NRCS 1972

8.7 Water Resources and Water Quality

The MTA is located within the Upper Illinois River Basin. The Upper Illinois River Basin drains approximately 10,950 square miles, which includes metropolitan Chicago and portions of Indiana and Wisconsin. Approximately 91 percent of the basin is drained by three principal rivers: the Kankakee, the Des Plaines, and the Fox. The Kankakee and Des Plaines Rivers join near Morris, Illinois to form the Illinois River approximately 25 miles east of the MTA (USGS, 1998). The MTA is adjacent to and south of the Illinois River Valley. The northern boundary lies near the bluff overlooking the broad, flat floodplain to the north.

8.7.1 Surface Water

South Kickapoo Creek, a tributary of the Illinois River, is the major stream draining the MTA. Several tributaries of South Kickapoo Creek, including many perennial streams, are found throughout the installation. South Kickapoo Creek flows from south to north and discharges into the Illinois River approximately 3000 feet downstream of the MTA. Hydrologic modeling of the area was performed using the USACE HEC-1 model to determine peak discharge (cubic square feet) at the downstream-most location in the watershed. Several storm durations were inputted into the model in order to find the critical storm duration and the storm with the highest peak flows. Peak flows (ranging from 1,180 to 2,570 cubic square feet) were found to occur during 12-hour storms.

Stream segments within the MTA were classified using the Strahler Method of stream hierarchy. The Strahler Method assigns the upstream most segment of a stream as Level 1. Once a Level 1 stream segment converges with another Level 1, it then becomes a Level 2 and so forth. According to a 2003 flood study, the MTA contains Level 1 through Level 5 stream segments (AMEC, 2004).

Five small ponds and two lakes are located throughout the MTA. The ponds range in size from less than 0.1 acres to 0.9 acres. The two lakes are located in the northern portion of the training site. These lakes were formed as a result of the gravel mining operation. The larger lake is approximately 12.1 acres and the smaller lake is approximately 2.4 acres (**Figure 6**).

PTS conducted a limited survey of water quality on South Kickapoo Creek, the two lakes and in one of the larger ponds located in the northern portion of the training area. These surveys were conducted in the summer and fall of 1995. A copy of the report is on file in the Facilities Division of DMAIL. The data from these studies are inadequate and incomplete to describe the water quality in the ponds and lakes. Additional water quality surveys may be needed to describe water quality on the MTA.

8.7.2 Floodplains

Floodplains generally are areas of low, level ground present on one or both sides of a stream channel that are subject to either periodic or infrequent inundation by flood waters. Floodplains are typically the result of lateral erosion and deposition that occurs as a river valley is widened. The porous material that composes the floodplain is conducive to retaining water that enters the soil via flooding events and elevated groundwater tables. Inundation dangers associated with floodplains have prompted federal, state, and local legislation limiting the development in these areas to recreation, agriculture, and preservation activities. Floodplains are regulated by the Federal Emergency Management Agency (FEMA) with standards outlined in 44 CFR Part 60.3.

EO 11988 (Floodplain Management) requires agencies to assess the effects that their actions may have on floodplains and to consider alternatives to avoid adverse effects and incompatible development on floodplains. The MTA is not located within either the 100-year or 500-year floodplains based on the Digital Flood Insurance Rate Map (DFIRM) - 17099C0575E, dated 7 September 2001.

8.7.3 Ground Water

Groundwater in the region is supplied by two aquifer systems: a surficial aquifer and the underlying Pennsylvanian Aquifer. The surficial aquifer is composed of Quaternary sediment deposits that consist mainly of unconsolidated sand and gravel extending less than 100 feet below the ground surface. Groundwater moves through the aquifer along short paths and discharges into streams. Groundwater in the surficial aquifer is typically hard with high iron concentration. Well yields from the surficial aquifer in this area are less than 100 gallons per minute typically, but they can range from less than 100 to more than 500 gallons per minute (Lloyd and Lyke, 1995).

The Pennsylvanian aquifer, which lies beneath the surficial aquifer, is composed of consolidated sandstone and some limestone of Pennsylvanian age. Groundwater moves through the fractures in the limestone. The surficial aquifer replenishes this aquifer. The Pennsylvanian aquifer typically has been found to yield 1 to 100 gallons per minute, however well yields on average are 10 gallons per minute. Smaller well yields are usually found in areas that are composed of sand lenses surrounded by fine grained deposits (for example, till) within interstream areas. Within freshwater portions of the Pennsylvanian aquifer the water is moderately hard with a median dissolved solids concentration of slightly greater than 500 milligrams/liter with concentrations increasing with depth (Lloyd and Lyke, 1995).

Illinois uses approximately 14 billion gallons of groundwater on an annual basis. About 82 percent is used for thermoelectric power, close to 13 percent for public water supplies, and the remaining 5 percent is used for irrigation, industrial, domestic, and livestock purposes (IEPA, 2004b).

Ground water in La Salle County is prevalent within the sandstone layers at depths ranging from near the surface to over 2,000 feet below the ground surface. A large portion of water for municipal and domestic uses is taken from shallow wells. Existing wells at the MTA vary in depth from about 250 to 400 feet and produce about 9 to 10 gallons per minute. In general, the county has an adequate ground water supply of water for all uses (ILARNG, 1994; ILARNG, 1987).

The high silt and clay content of the loessial surface soils prohibit rapid drainage, and a perched water table exists at the base of the loess where the more impermeable till material is encountered. During wetter seasonal periods, perched ground water appears very near the ground surface. Specific ground water quality data is not available for the MTA (ILARNG, 1994; ILARNG, 1987).

Illinois
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Marseilles Training Area

Surface Waters
and Wetlands

Legend

STRAHLER Stream Order

- 1
- 2
- 3
- 4
- 5

WaterBodies

- Ponds/Lakes
- Wetlands
- Marseilles Boundary
- Existing Structures
- Roads

Location Map



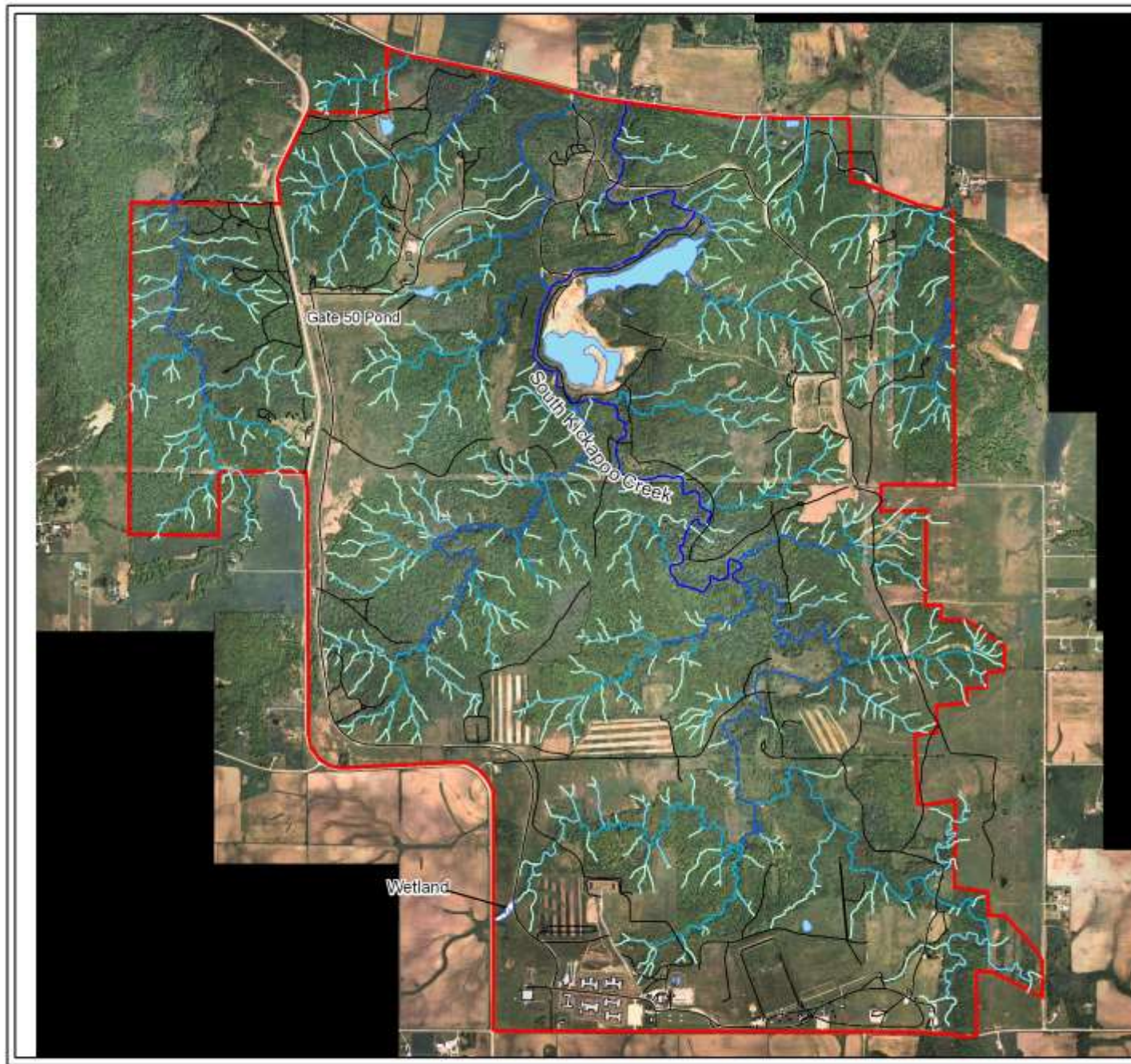
Notes: Spatial Data courtesy of IGG, ILARNG and MTA
Projection: NAD 83 UTM Zone 18



Figure

6

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9.0 THE BIOLOGICAL ENVIRONMENT

Six predominant habitats are present at the MTA that include: managed and disturbed areas, upland and lowland forest, food plots managed by the IDNR, restored prairie and grasslands, scrub shrub, and aquatic (streams, ponds and lowlands) (PTS, 1996). The following is a brief description of these habitats. **Figure 7** shows the location of the biological habitats found at the MTA.

Managed and disturbed areas - These areas are frequently used for military activities. These areas indicate a long-term presence of humans. They are not managed as natural habitats.

Forests - A description of the different types of forested areas at the MTA is provided in **Section 9.1.1**. The forested areas are primarily immature oak hickory stands that are not high quality. The woodlands located at the MTA are highly fragmented by roads, trails, and isolated fields. This fragmentation limits the size of interior forest habitat (Birkenholz, 1995).

Native and Restored Prairie and Grassland – The MTA contains many areas of restored prairie and open grassland, which is described in **Section 9.1.2**.

Food Plots - A description of the food plots is included in **Section 9.1.4**.

Scrub-Shrub - Scrub shrub areas are successional fields scattered around the edge of the MTA in recently disturbed areas. These areas are interspersed grasslands containing shrubs and trees. They are usually located in the transition areas between forests and grasslands.

Aquatic Habitat - Aquatic habitats include the South Kickapoo Creek and its tributaries, several ponds and lakes, and a variety of ephemeral pools and a 0.7 acre wetland. Further discussion on aquatic habitats is provided in **Section 9.3**.

9.1 Flora and Terrestrial Communities

The MTA is covered with prairie and mid-successional forested areas. At the time of settlement, the area was mainly savanna rather than the closed canopy forests found presently. Three types of forest communities are now found at the MTA: dry-mesic upland forest, mesic upland forest and mesic floodplain forest. The prairie communities located at the MTA are glacial drift hill prairies and dry-mesic prairies (Jones, 1996).

A total of 489 vascular plant species were identified during the vascular plant inventory (see **Appendix F** for taxa list). Approximately 15 percent of the species identified are invasive species. No state or federal endangered species were identified at the MTA.

Seven natural plant communities and three cultural communities were identified at the MTA. The seven natural communities observed are mesic floodplain forest, dry-mesic upland forest, mesic upland forest, glacial drift hill prairie, dry-mesic prairie, sandstone cliff community, and eroding bluff community. The three cultural communities are successional field, developed land, and prairie restoration. **Figure 8** shows the distribution of the forest and hill prairie communities at the MTA (Jones, 1996).

9.1.1 Description of Forest Plant Communities

Jones characterized all forested areas at the MTA as being of moderate quality. A moderate quality forest is described as being mid-successional or moderately to heavily disturbed. Forest communities were assessed using a grading system utilized by the IDNR to describe plant communities that was developed by White (1978).

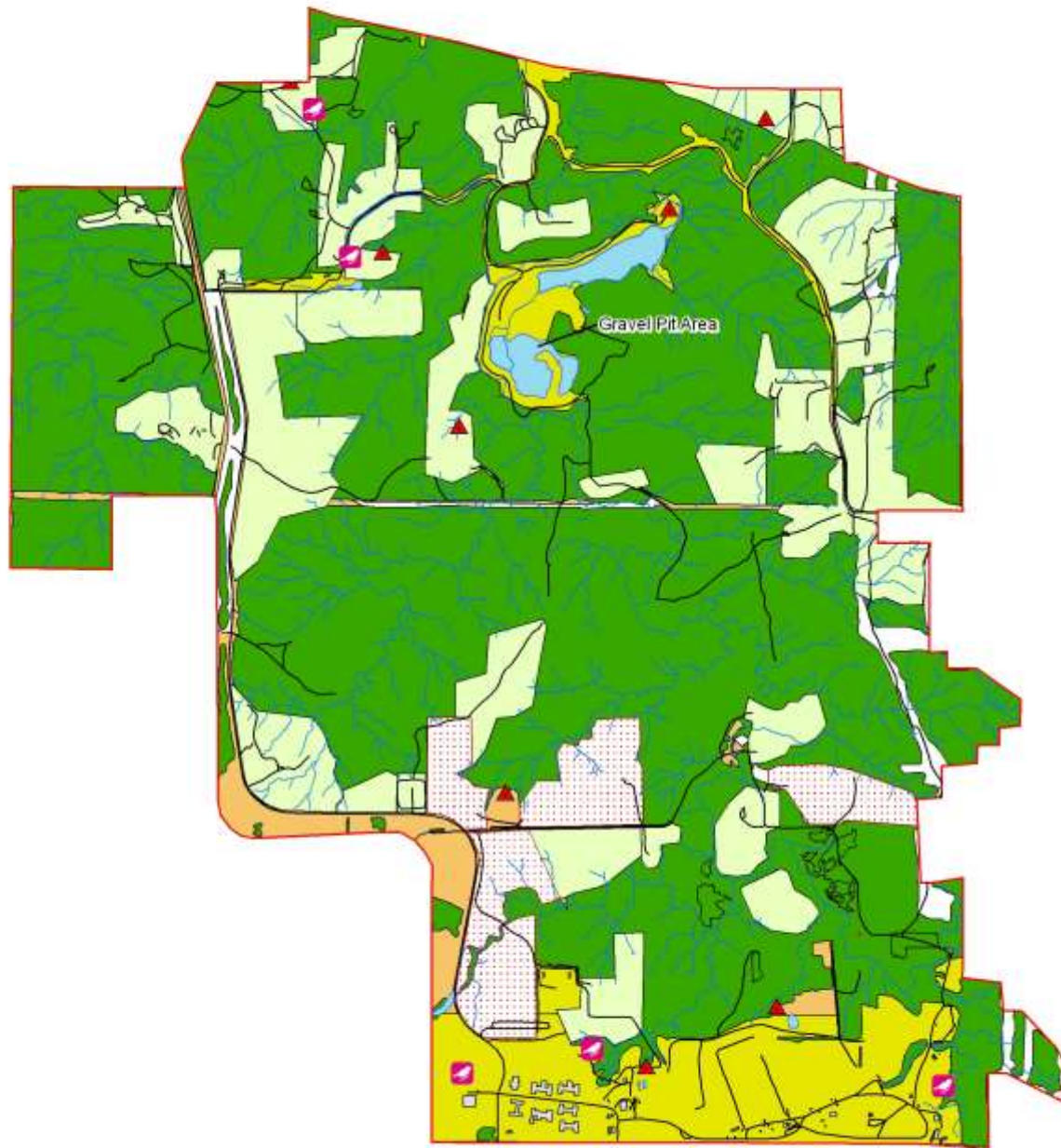
Dry-mesic upland forest - This plant community is found on slopes and the sides of ravines at the MTA. The community makes up approximately 68 percent of the forested area at the MTA. A total of 175 forest species (35 percent of all species identified) are found in this plant community twelve of which are exotic (see Appendix F). The canopy is dense with 184.75 trees per hectare. The dry-mesic upland forests are found primarily on Nappanee soils although it can be found on small areas of Chatsworth soil series in ravines. The Nappanee soil series is characterized by light color soils that developed in 12 to 24 inches of loess over silty clay and glacial till. These soils are somewhat poorly drained with slow to very slow permeability.

Mesic upland forest - This plant community occupies the narrow ravines and the north-facing side and slopes of large ravines. The mesic upland forest is distinguished from the dry-mesic upland forest by an increase in soil moisture. The canopy is also dense consisting of 259.33 trees per hectare with an understory of shade tolerant plants. This community type occupies approximately 18 percent of the forested area at the MTA. A total of 140 plant species (28.6 percent of all species identified) occur in this community. Eight of these plant species are exotic. Jones identified the encroachment of sugar maple (*Acer saccharum*) as the biggest concern in this community. The establishments of this species will likely shade-out all the herbaceous and shrub species in the understory.

The mesic upland forests are found almost exclusively on Chatsworth soil series. Chatsworth soils are characterized by light color soils that are moderately to well drained. The Chatsworth soils have less than 12 inches of loess on medium-textured material over silty clay loam and clay glacial till. They are generally described as having low permeability with rapid to very rapid runoff.

Mesic floodplain forest - This forest community is found along the bottoms of South Kickapoo Creek and within some of the larger ravines. The community is characterized as moderately well drained. The mesic floodplain forest makes up about 14 percent of the total forested area at the MTA. Jones describes this forest community as ranging from low to moderate quality. These forests are the most disturbed and have the most exotic species of all forest types at the MTA. A total of 171 species or 35 percent of all plant species identified are found within this community. Of the 171 species identified, 18 are exotic. At the MTA, these forests are generally found on Chatsworth soils, which are described under Mesic upland forest.

A forest inventory was conducted recently at the MTA within the ten forest management compartments (Groninger and Ruffner, 2004). A map of these compartments is provided in **Appendix G. Table 8** provides a summary of the forest inventory findings. Additional information pertaining to forest composition and management can be obtained within the *MTA Fire and Vegetation Management Plan* (Groninger and Ruffner, 2004).



Illinois National Guard



Marseilles Training Area

Biological Habitats

Legend

- Bat & Bat's Nests
- BWT
- Purple Martin
- Roads
- Streams
- Marseilles Boundary
- IDNR Managed Agricultural Fields
- Grasslands
- Forested or Shrub/Scrub
- Disturbed Areas
- Existing Structures
- Water Bodies
- Fire Storage Area

Location Map



Notes: Spatial Data courtesy of IGC, ILARNG and MTA
Projection: NAD 83 UTM Zone 18



Figure

7



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Illinois
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Marseilles Training Area

Plant Communities

Legend

- Marseilles Scenery
- Water Bodies
- Existing Structures
- Roads
- Streams
- Misc. Bottomland Forest
- Misc. Upland Forest
- Dry Misc. Upland Forest
- Former Gravel Mine
- Hill Prairies
- QUALITY
- High - Glacial Drift
- Moderate - Glacial Drift
- Low - Dry Mead

Location Map



Notes: Spatial Data courtesy of IGS, EARNG and MTA
Projection: NAD 83 UTM Zone 18



Figure

8

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Meters

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Table 8. Forest Inventory Summary of the MTA Forest Management Compartments

Compartment	Description	Dominant Species (≥5 percent of total trees)
101S	Approximately 145.7 acres with an average of 510 trees/acre (ranging from 280 to 940), 135 square feet (ft ²) of basal area/acre (ranging from 100 to 160) and > 100 percent stocked (ranging from 94 to > 110). Sawtimber is the main size class.	White oak (<i>Quercus alba</i>) is the most abundant (45 percent) followed by northern red oak (<i>Quercus rubra</i>), shagbark hickory (<i>Carya ovata</i>), black oak (<i>Quercus velutina</i>), and sugar maple
101N	Approximately 99.8 acres with an average of 533 trees/acre (ranging from 200 to 740), 142 ft ² of basal area/acre (ranging from 120 to 190) and > 100 percent stocked (ranging from 103 to > 110). Sawtimber is the main size class.	White oak (50 percent), northern red oak, elm (<i>Ulmus</i> spp.), and black oak.
102N	Approximately 71.7 acres with an average of 520 trees/acre (ranging from 280 to 760), 116 ft ² of basal area/acre (ranging from 80 to 160) and > 100 percent stocked (ranging from 93 to > 110). Sawtimber is the main size class.	White oak was most numerous (28 percent) followed by white ash (<i>Fraxinus Americana</i>), red oak, dogwood (<i>Cornus</i> spp.), and sugar maple
102S (North)	Approximately 73 acres with an average of 320 trees/acre (ranging from 220 to 380), 107 ft ² of basal area/acre (ranging from 80 to 120) and 102 percent stocked (ranging from 81 to 110). Sawtimber is the main size class.	Oaks were the most abundant, particularly white oak and northern red oak (69 percent). Elm species represent 14 percent.
102S (South)	Approximately 63 acres with an average of 369 trees/acre (ranging from 200 to 500), 90 ft ² of basal area/acre (ranging from 60 to 110) and 82 percent stocked (ranging from 61 to 110). Primarily comprised by a young forest stand with pole-size trees.	Mainly a hickory-oak cover type (49 percent). Black locust (<i>Robinia pseudoacacia</i>) comprises 8.8 percent.
102E	Approximately 90.9 acres with an average of 418 trees/acre (ranging from 140 to 660), 110 ft ² of basal area/acre (ranging from 80 to 150) and 108 percent stocked (ranging from 83 to > 110). Sawtimber is the main size class.	White oak was most numerous (24 percent) followed by elm, black cherry (<i>Prunus serotina</i>), black oak, shagbark hickory, black locust, and northern red oak.
103W	Approximately 227.2 acres with an average of 548 trees/acre (ranging from 400 to 660), 118 ft ² of basal area/acre (ranging from 80 to 180) and > 110 percent stocked (ranging from 83 to > 110). Sawtimber is the main size class.	White oak was most numerous (22 percent) followed by shagbark hickory, ash, elm, bur oak, blackjack oak (<i>Quercus marilandica</i>), black oak, and northern red oak.
103E	Approximately 63.68 acres with an average of 528 trees/acre (ranging from 360 to 660), 107 ft ² of basal area/acre (ranging from 90 to 140) and > 110 percent stocked (ranging from 95 to > 110). Sawtimber is the main size class.	White oak was most numerous (37 percent) followed by bur oak, red oak, hickory, black oak, sugar maple, and ash.
104W	Approximately 238 acres with an average of 469 trees/acre (ranging from 160 to 660),	White oak was most numerous (22 percent) followed by black oak,

Table 8. Forest Inventory Summary of the MTA Forest Management Compartments		
Compartment	Description	Dominant Species (≥5 percent of total trees)
	124 ft ² of basal area/acre (ranging from 80 to 210) and > 110 percent stocked (ranging from 87 to > 110). Sawtimber is the main size class.	shagbark hickory, northern red oak, ash, and ironwood.
104C	Approximately 219.4 acres with an average of 532 trees/acre (ranging from 200 to 1220), 98 ft ² of basal area/acre (ranging from 50 to 150) and 105 percent stocked (ranging from 50 to > 110). Sawtimber is the main size class.	Red and white oak were most numerous (57 percent) followed by black oak, elm, and ironwood.

Source: Groninger and Ruffner, 2004

9.1.2 Description of Prairie Plant Communities

As previously mentioned, 38 percent of the MTA is open field. Open fields include both prairie communities and successional fields. Prairie communities are described as being dominated by grasses with few shrubs and trees. The two prairie communities identified at MTA are dry-mesic prairie and glacial drift hill prairie. Successional fields are described as plant communities occupying formerly managed lands such as abandoned farm fields or pasturelands. The successional fields at the MTA are all characterized as severely disturbed. A total of 225 species were identified in the successional fields, 24 percent of which are exotic.

Dry-mesic prairie - The dry-mesic prairies at the MTA were characterized as low quality because they are early successional and severely disturbed. A total of 100 plant species are located in this community type, 18 percent of which are exotic.

Glacial drift hill prairie - A hill prairie is described as a prairie opening on a well-drained, forested, south to west facing slope. These hill prairies usually occur on eroded glacial drift most often along major rivers. The hill prairies located at MTA range from moderate to high quality and contain 111 plant species (22.6 percent of the species identified at MTA). This 35-acre area has been designated as an Illinois Natural Area Inventory (INAI) site. Less than 10 percent of the plant species within the hill prairies are exotic. The 3.75-acre high quality hill prairie is a rare community. Jones states that only 29 acres of this prairie type are known to exist in the Grand Prairie Division of the Natural Divisions of Illinois. The MTA is included in the Grand Prairie Division (Jones, 1996).

9.1.3 Other Primary Plant Communities

Two primary communities were identified at MTA. A primary community is an area where soil is thin or absent. Substrate and/or natural disturbance maintain these communities in an early successional stage. Sandstone cliff and eroding bluff are the only primary communities found at the MTA.

Sandstone Cliff Community- This community is found on the east side of the Kickapoo Creek near the northern boundary of the site. Jones describes the cliff as 50 feet high, a few hundred feet long and heavily shaded. Very little vegetation is able to grow on the cliff.

Eroding Bluff Community - The eroding bluff communities occur on vertical slopes that are maintained by stream erosion. These communities are generally formed on unconsolidated material such as glacial drift. They are generally found on Chatsworth soil series. Plant communities are poorly developed because of slumping. The eroding bluff communities at MTA are classified as either shaded or open. The shaded communities contain 55 species, all of which are native. The open bluff communities have 71 plant species, eight of which are exotic. The shaded eroding bluffs experience less slumping than the open bluffs. This allows for the growth of shrubs and some fast growing tree species on the shaded bluffs (Jones, 1996).

9.1.4 Food Plots

In addition to the natural vegetative communities located at the MTA, several food plots are located throughout the training area. The IDNR manages five fields totaling approximately 123 acres for wildlife habitat. These fields are primarily managed as habitat for Mourning Dove. These fields are planted with sunflower and millet (*Echinochloa sp.*). Corn is planted around the perimeter of the fields. Approximately half of the sunflower, all of the corn and all of the sorghum are left standing as a winter food source (PTS, 1996). Figure 7 shows the location of the food plots.

9.2 Fauna

A faunal species survey, excluding birds, was conducted in the spring, summer, and fall of 1995 (PTS, 1996). The avian survey was conducted separately during April, May and June of 1995 (Birkenholz, 1995). A bat mist net survey was conducted in 2001 (Carter, 2001). Consult survey reports for additional detail on species habitats and breeding locations. Surveys are on file in the Facilities Division of DMAIL.

9.2.1 Mammals

In the terrestrial habitats, 21 species of mammals, including three bat species, were identified (Carter, 2001; PTS, 1996). The three bat species included little brown bat (*Myotis lucifugus*), red bat (*Lasiurus borealis*), northern long-eared bat (*Myotis septentrionalis*). The endangered Indiana bat was not identified during mist net surveys (Carter, 2001). Mammal species observed at the MTA include opossum (*Didelphis virginiana*), gray squirrel, Eastern cottontail (*Sylvilagus floridanus*), Eastern chipmunk (*Tamias striatus*), beaver (*Sciurus niger*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), and white-tailed deer (*Odocoileus virginianus*). Refer to Appendix F of this INRMP for a complete list of all species observed at the MTA. A mist net survey for bats was conducted in 2001. No federal or state-listed mammal species were captured or otherwise observed during the survey.

9.2.2 Birds

A total of 91 avian species were positively identified with 82 of these species considered residents. The remaining seven species are in the area sporadically and are considered visitants (Birkenholz, 1995). The northern harrier (*Circus cyaneus*) and Henslow's sparrow (*Ammodramus henslowii*), state-listed bird species, were observed on site in the summer of 2006 (ILARNG, 2007). No federally listed bird species have been captured or otherwise observed at the MTA. Refer to Appendix F of this INRMP for a complete list of all bird species observed at the MTA.

9.2.3 Reptiles and Amphibians

Reptiles are less water dependent than amphibians, which are water dependent during the early parts of their life cycle and during spring mating. Both amphibians and reptiles may be found in forests and grasslands, but many species are especially prevalent in seasonally ponded areas that dry out and do not contain fish. The nine species of amphibians observed at the MTA include the bull frog (*Rana catesbeiana*), green frog (*Rana clamitans*), American toad (*Bufo americanus*), Fowler's Toad (*Bufo woodhousii fowleri*), Blanchard's Cricket Frog (*Acris crepitans blanchardi*), Northern Cricket Frog (*Acris crepitans*), Western Chorus Frog (*Pseudacris triseriata triseriata*), Copes Gray Tree Frog (*Hyla chrysoscelis*), and gray tree frog (*Hyla versicolor*). The three species of reptiles included the Eastern plains garter snake (*Thamnophis radix radix*), midland brown snake (*Storeria dekayl wrightorum*), and northern water snake (*Nerodia sipedan sipedan*) were positively identified. Aquatic turtles were observed, but they could not be positively identified. No federal or state-listed amphibian or reptile species were captured or otherwise observed during the survey. For a complete reptile and amphibian list, see Appendix F.

9.3 Aquatic and Wetland Habitats

Both Federal and State laws and regulations protect waters of the state. The CWA is the primary law protecting US waters. Section 319 (33 USC 1329) of the CWA addresses nonpoint source management programs and, Section 404 of the CWA (33 USC 1344) prevents the discharge of dredged or fill material into waters of the US without a permit from the USACE. In Illinois, a joint application process requires project review by the USACE, IDNR, and IEPA.

Aquatic habitats at the MTA include Kickapoo Creek and its unnamed tributaries, seven ponds, two lakes, and a 0.7 acre wetland (see Figure 6). The two lakes developed as a result of gravel mining operations.

The USACE and the USEPA define wetlands as:

“Those areas that are inundated or saturated by surface or ground water 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. Wetlands generally include swamps, marshes, bogs, and similar areas” (33 CFR 328.3[b]).

According to the 1987 *Corps of Engineers Delineation Manual*, three conditions must be present for an area to be classified as a wetland: (1) wetland hydrology; (2) hydric soil; and (3) hydrophytic vegetation. Areas that may be periodically wet, but that do not meet the requisite criteria, are not classified as wetlands (Environmental Laboratory, 1987).

EO 11990 (Protection of Wetlands) requires Federal agencies to take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the beneficial values of wetlands.

Wetland areas were delineated at the MTA by the NRCS in 1997. Only one 0.7 acre jurisdictional wetland was delineated during this survey (Figure 6). It is located along the southwestern boundary just north of the Cantonment area. The area met the three criteria of hydrology, hydric soils, and vegetation. Troop training is restricted in this area.

Several areas at MTA contain hydric soils. These areas will be monitored using GIS and field assessments as potential wetlands (Table 7 and Figure 5).

9.4 Threatened and Endangered Species

The IDNR, Illinois Endangered Species Protection (IESP) Board determines the state status of species. Species listed as endangered in Illinois are those in danger of extinction as a breeding species within the State. Threatened species are Illinois breeding species that are likely to become state endangered in the foreseeable future (IDNR, 2006a). Species may be included on the state list when one or more of the following criteria exist:

- 1) Species is currently on the federal endangered or threatened species list.
- 2) Proposed species for the federal endangered or threatened species list known to occur in Illinois.
- 3) Species formerly widespread that have been nearly extirpated from Illinois as a result of habitat destruction, collecting, or other development pressures.
- 4) Species with a restricted geographic range that includes Illinois.
- 5) Species with restricted habitats or with low population in Illinois.
- 6) Species that are significant disjuncts in Illinois (IDNR, 2006a).

Four federally listed and 29 state-listed species, a total of 33 rare species, are known to occur in La Salle County (see **Table 9**). The bald eagle (*Haliaeetus leucocephalus*), as of 8 August 2007, has been de-listed from the federal list of threatened and endangered species. This species is still a state-listed species and is also protected under the Bald and Golden Eagle Protection Act.

The northern harrier and Henslow's sparrow, state-listed species, are the only threatened or endangered species that have been observed at the MTA. They were both observed during the summer of 2006 (ILARNG, 2007). No federally listed species have been observed and no critical habitat exists at the MTA.

The USFWS requires that a survey for the endangered Indiana bat be conducted when potential bat habitat alterations may arise. A mist netting survey was conducted in 2001 at the MTA. No federally endangered Indiana bats were captured during the bat survey. The habitat at the MTA is not ideal to support autumn and spring Indiana bat populations. The forest is relatively young and there are few dead or dying trees with exfoliating bark (Carter, 2001).

There are three INAI sites within the MTA or within one mile of the site. INAI sites identify and classify areas within Illinois that represent the State's vanishing natural heritage.

- The Marseilles Hill Prairie Area (INAI #1520) is recognized as Category 2 for high quality glacial drift hill prairie within the MTA (Figure 3).
- The Illinois River near the City of Marseilles (INAI #1446) is recognized as Category 1 for the greater redhorse (*Moxostoma valenciennesi*), a state endangered fish.
- La Salle Lake (INAI # 1689) is recognized as Category VI for an unusual concentration of birds and a major waterfowl wintering area (IDNR, 2006b).

Table 9. Threatened and Endangered Species observed in La Salle County, Illinois

Group	Common Name	Scientific Name	State Status	Federal Status
Amphibian	Four-toed salamander	<i>Hemidactylium scutatum</i>	LT	-
Bat	Indiana Bat	<i>Myotis sodalis</i>	LE	E
Bat	Northern long-eared bat	<i>Myotis septentrionalis</i>	LT	T
Bird	Bald Eagle	<i>Haliaeetus leucocephalus</i>	LT	-
Bird	Cerulean warbler	<i>Dendroica cerulea</i>	LT	-
Bird	Henslow's sparrow *	<i>Ammodramus henslowii</i>	LT	-
Bird	Loggerhead shrike	<i>Lanius ludovicianus</i>	LT	-
Bird	Northern Harrier *	<i>Circus cyaneus</i>	LE	-
Bird	Upland sandpiper	<i>Bartramia longicauda</i>	LE	-
Butterfly	Regal Fritillary	<i>Speyeria idalia</i>	LT	-
Fish	Greater Redhorse	<i>Moxostoma valenciennesi</i>	LE	-
Fish	River Redhorse	<i>Moxostoma carinatum</i>	LT	-
Mussel	Slippershell	<i>Alasmidonta viridis</i>	LT	-
Mussel	Spike	<i>Elliptio dilatata</i>	LT	-
Plant	Alkali bulrush	<i>Bolboschoenus maritimus</i>	LE	-
Plant	American brooklime	<i>Veronica americana</i>	LE	-
Plant	Bunchberry	<i>Cornus canadensis</i>	LE	-
Plant	Cliff goldenrod	<i>Solidago sciaphila</i>	LT	-
Plant	Decurrent false aster	<i>Boltonia decurrens</i>	LT	T
Plant	Eastern prairie fringed orchid	<i>Platanthera leucophaea</i>	LE	T
Plant	Fibrous-rooted sedge	<i>Carex communis</i>	LT	-
Plant	Forked aster	<i>Aster furcatus</i>	LT	-
Plant	Hairy woodrush	<i>Luzula acuminata</i>	LE	-
Plant	Leafy-prairie clover	<i>Dalea foliosa</i>	LE	E
Plant	Long beech fern	<i>Phegopteris connectilis</i>	LE	-
Plant	Pink corydalis	<i>Corydalis sempervirens</i>	LE	-
Plant	Prairie Bush Clover	<i>Lespedeza leptostachya</i>	LE	T
Plant	Queen-of-the-prairie	<i>Filipendula rubra</i>	LE	-
Plant	Red-berried elder	<i>Sambucus racemosa ssp. Pubens</i>	LE	-
Plant	Red pine	<i>Pinus resinosa</i>	LE	-
Plant	Shadbush	<i>Amelanchier sanguinea</i>	LE	-
Plant	Snowberry	<i>Symphoricarpos albus var. albus</i>	LE	-
Plant	Weak bluegrass	<i>Poa languida</i>	LE	-
Reptile	Blanding's turtle	<i>Emydoidea blandingii</i>	LT	-
Reptile	Timber rattlesnake	<i>Crotalus horridus</i>	LT	-
FEDERAL STATUS		ILLINOIS STATUS		
E = Endangered = Danger of extinction throughout range		LE = Endangered includes any species which is in danger of extinction as a breeding species in Illinois		
T = Threatened = Likely to become endangered in foreseeable future throughout range		LT = Threatened includes any breeding species which is likely to become a state endangered species within the foreseeable future in Illinois		
* Species previously observed at the MTA.				

Source: USFWS, 2015; IDNR, 2006b, 2006c.

PART 3: NATURAL RESOURCES MANAGEMENT PROGRAMS

The purpose of Part 3 of the INRMP is to outline natural resources management that will support and be consistent with the military mission while protecting and enhancing such resources in accordance with accepted stewardship principles.

Chapter 10 highlights specific natural resource management projects desired for the MTA and how they interrelate to the various management programs.

Chapter 11 through **Chapter 18** outlines the following management programs: Grounds Maintenance; Soil Conservation and Water Quality; Grassland, Forest, and Fire Management; Fish and Wildlife Management; Floodplains, Wetland and Aquatic Habitat Management; Invasive Species and Integrated Pest Management; Threatened and Endangered Species Management; and Recreation and Public Outreach. For each management program, the following subsections are provided:

- Overview;
- Compliance;
- Goals and Objectives;
- Management Strategies;
- Inventory and Monitoring,
- Projects,
- Relationship to other Natural Resources Issues;
- Military Mission Considerations; and
- Additional Information.

Cultural Resources Management and Native American Consultation are discussed in **Chapter 19**.

Finally, a plan for implementing this INRMP is presented in **Chapter 20**, which discusses funding sources, installation priorities, budgets, and the INRMP approval process.

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10.0 IMPLEMENTATION PROJECTS

This section outlines projects desired for implementation and how they are interrelated to the various management plans developed for the MTA in the following chapters. Table 13 in **Section 20.1** lists projects, funding classification, proposed implementation date, estimated cost, and legal driver(s). CERP activities on all projects and project locations, when available or feasible, are provided in **Figure 9**. Details specific to Project 1 and 2 are provided in Appendix G.

10.1 INRMP Implementation Projects

Project 1: Comprehensive Timber Stand Improvement (TSI) – This project includes the implementation of TSI prescriptions outlined in the *Integrated Wildfire Management Plan (IWFMP, Feb 2014)*. The Plan separates the MTA into ten forest compartments. TSI will be used to help maximize the usability of forests for training while favoring desirable trees from unwanted competition, thinning trees to healthy numbers, and removing poor quality or diseased trees. This improves the overall condition of the stand and concentrates wood growth on a number of selected trees. TSI also can improve wildlife food and habitat, appearance and health of a woodlot. Improving timber stands enhances habitat for deer, turkey, squirrels, songbird, and nongame animals.

The purpose of this project is to enhance the long term naturally occurring oak-hickory type of ecosystem while simultaneously enhancing military training. Additionally, shade tolerant species, such as, but not limited to, maple trees are becoming invasive over the site and are reducing the seed crop for wildlife, future propagation, and further limiting accessibility of the site for troop training.

When trees are pulled during thinning operations, some of them will be transplanted using a tree spade within the Cantonment Area. Only healthy trees with no sign of disease will be transplanted. If any trees are to be spaded outside the Cantonment Area, the location of this action will be illustrated on a map and attached to a CERP request for IDNR review prior to conducting any work.

In addition, forest compartments will be managed in a way that coincides with findings in the June 2014 report, *Quantifying the Carbon Sequestration Potential of Forested Landholding at the Marseilles Training Center (Walker 2014)*. These management strategies will be used to increase carbon sequestration and parallel both State and Federal Carbon emission goals for the next decade.

Consult Appendix G for a proposed TSI project schedule and a forest compartment location map. Consult the IWFMP for information pertaining to the characteristics and management strategies for the specific forest units.

A new IDNR Tree Cutting Policy was issued 1 June 2006. In general, this new policy requires that trees will need to be replaced (replanted) when cut or killed on IDNR lands and the cut and replaced trees will need to be documented with the Regional Forester's office. All projects involving tree cutting will need to follow this new policy document. For a copy of this new policy and procedures document refer to **Appendix H**.

Project 2: Comprehensive Burn Plan – This project includes the implementation of prescribed burn management prescriptions also located in the *Integrated Wildfire Management Plan (IWFMP, Feb 2014)*. The previous *MTA Fire and Vegetation Management Plan* (Groninger and

Ruffner, 2004) is still used as a guide and preliminary forest inventory. The IWFMP breaks down burn units ranging in size from just over 250 acres to under 40 acres. Each unit is unique with regard to topography, vegetation, geological features, soils, usage, and overall management objectives. For burn unit locations and schedule, consult Appendix G. Please note that these burn units are being altered currently with oversight by IDNR and will likely change. Consult the *MTA Fire and Vegetation Management Plan* for information pertaining to the characteristics and management strategies for the specific burn units. A copy of the report is on file in the Facilities Division of DMAIL.

Equipment that will be used in the implementation of the Comprehensive Burn Plan will include the following: prescribed fire hand tools (council rake, fire flapper, fire brooms, and shovels), drip torches, chainsaws, weed eaters, ATVs, ATV mowers, ATV sprayers, tractors, brush hog mowers, and Class A foaming agents.

In addition, a new IDNR Prescribed Burn Policy was issued 1 January 2006. Per this new policy, all prescribed burns must be executed statewide between 1 October and 30 April. Special approval from the Office of Resource Conservation is required for prescribed burns outside this window. For a copy of this new policy and procedures document refer to **Appendix H**.

Project funds will include the purchase of needed equipment. The NRCS recommends burning to increase biodiversity, soil development/structure (see Chapter 13), and to reduce the use of herbicides for invasive species control. The purpose of this project is to protect nearby farms and residences from a fire breaching the MTA boundaries, to enhance ecosystem functions, to increase troop and hunter accessibility by controlling the increasing spread of maple trees, invasive brush and exotic species, and to support ILARNG and IDNR management goals.

Project 3: Forest Inventory – This project would occur subsequent to TSI activities (Project 1). Result from this inventory would be compared to the previous forest inventory to assess the affects (both positive and negative) of TSI prescriptions on the MTA forest composition. Findings will be used to reassess future management strategies.

Project 4: Trail Expansion or Hardening – This project includes the hardening of existing trails and the establishment of new trails. All new trails established will be coordinated with and approved by IDNR personnel to ensure both parties will benefit. Increased trails will provide for easier access for both hunters and troops. Existing access points are within the northwestern portion of the site only, which results in the overuse of the trails and land in this area. Trails will not only provide easier access for both hunters and troops, but provide better sustainable land use and management of wildlife. Hunter and public safety would be enhanced because hunters would no longer be clustered near the limited access points. Increased trails would provide more natural firebreaks and enhance training options for maneuvers. Proper care will be taken to avoid forest habitat fragmentation. New trails will be built, when feasible, in areas of previous disturbance.

Equipment that will be used in the implementation of the Trail Expansion Project will include the following: hand tools, loppers, chainsaws, brush cutters (weed eater mounted), Bobcat work machine, tractors, graders, front end loaders, ATVs, wood chipper, and a stump grinder.

Project 5: Trail Maintenance – This project includes the regrading and maintenance of eroded areas along MTA trails. Improper drainage has impacted some areas resulting in severe rutting on many trails. Rehabilitation of these trails will provide an overall benefit to soils, water resources, and aquatic habitat resources.

Equipment that will be used in the implementation of the Road and Trail Maintenance Project will include the following: hand tools, loppers, chainsaws, brush cutters (weed eater mounted), Bobcat work machine, tractors, graders, front end loaders, ATVs, wood chipper, and a stump grinder.

Project 6: Invasive Species Control – This project includes various activities to control the spread of already established invasive species and prevent establishment of additional undesirable species. Activities include removing undesirable plants and revegetating with more desirable native species. Removal techniques include primarily mechanical methods, such as cutting, mowing, biological control, use of explosives, or fire, and/or grazing, followed up with a limited amount of timely herbicide application (see **Section 16.4**). Invasive species targeted in this project include, but are not limited to, poison ivy (*Toxicodendron radican*), black locust (*Robinia pseudocacia*), musk thistle (*Carduus nutans*), phragmites (*Phragmites australis*), and autumn olive (*Elaeagnus umtollata*).

Natural removal of undesirable species is the preferred method and includes burning and grazing. Grazing includes the use of sheep, goats, cows, or other livestock. Grazing has also been proven to be an effective and safe means to create fire breaks (Project 2).

Managing invasive species allows native plant communities to flourish, enhancing both forest and non-forest habitats at the MTA. This project is necessary to prevent the loss of available training land because several of these species can create impenetrable thickets. Additionally, managing invasive species benefits soils, water resources, and biological resources. See Chapter 16 for additional information on controlling invasive species and noxious weeds.

Project 7: Track INRMP Project Success through RTLA – This will be an ongoing project that will incorporate GIS and on-site monitoring to affectively manage natural resources and for assigning training areas. The goal of this project is to achieve the military mission while at the same time sustain these training areas and minimize the potential for adverse impacts to natural resources. GIS will also be used as a tool to monitor and track the progress and success of implementation projects. Training areas will continue to be periodically examined for signs of adverse impact. The training unit's commanding officer will continue to be responsible for leaving the training area in the same or better condition than it was prior to the activity.

Project 8: General Erosion Control and Soil Stabilization – This project provides funds for purchasing seed, mulch, sediment fences, and erosion control fabric to stabilize areas disturbed by training exercises. The project includes recontouring steep eroding slopes, when project funds are available, through the entire MTA installation. This project benefits soils by reducing soil erosion, water resources by preventing sedimentation, and prevent the loss of military training land.

Project 9: South Kickapoo Creek (SKC) Maintenance – This project would include the development of a Watershed Plan. IDNR and DMAIL will collectively develop this plan. As part of this plan, projects will focus on reducing severe soil erosion (e.g., re-contouring steep slopes and re-vegetating areas). The goal of this project is to protect water resources and increase hunter and troop safety. Currently, this area poses a significant hazard to both troops and hunters. Additionally, this project will serve as a means to maintain the already established SKC Riffle Structure that was completed in 2012.

Equipment that will be used in the implementation of the re-contouring and re-vegetation projects includes the following: chainsaws, skid-steer work machine, tractors, graders, front-end loaders, dozers, ATVs, and a wood chipper.

Project 10: Monarch Butterfly Program – The Monarch Butterfly population has decreased by 90 percent in the past two decades. USFWS is currently in the process of a formal review that likely will result in the listing of this species as threatened or endangered. This project includes the establishment, maintenance, and monitoring of Monarch Butterflies and their associated habitats.

Project 11: Recycling Program – This project includes the implementation of a recycling program at the MTA that includes plastic, cardboard, paper, scrap metal and aluminum recycling, and food composting. The goal of this project is to reduce solid waste by approximately 50 to 75 percent. In 2014, a consolidated waste and recycling point was established within the Cantonment Area. Maintenance and growth of this project is ongoing as technologies present themselves. Currently, the waste accumulation site includes the recycling of wood, e-waste, single-stream commodities (plastics, cardboard, paper, glass, and aluminum), and general waste only.

Project 12: Energy Conservation – This project will include instituting alternative energy sources, such as wind and solar, to reduce fuel costs associated with the operation of the installation and provide an overall benefit to the environment through energy reduction.

Project 13: Community Outreach and Prairie Restoration - This project provides funds to replant disturbed areas with native prairie grasses and plants through community outreach projects. The goal is to give local groups ownership of specific prairie areas and let them work on them and watch them grow for extended periods of time. This project provides several benefits including soil stabilization and reduction of sedimentation into water resources. Planting native prairie plants also helps to control invasive species on site and enhances habitat quality for native fauna. Only native prairie grasses and plants will be used in this project. Prairie plot locations will be coordinated with the IDNR and DMAIL.

Project 14: Power Line Right of Way Prairie Restoration Plan – This project provides funds to plant and maintain large strips of power line right-of-way (ROW) as prairie corridors. This project will serve two purposes: (1) it will lower the amount of herbicide used by the power company on site to keep the ROW clear of woody vegetation; and (2) it will provide easier hunter and troop access to the entire site.

Project 15: Noise Modeling – This project would assess the topography, terrain, and vegetation impacts on noise levels in the remainder of the MTA. A noise study was conducted previously in the southern portion of the site (Cantonment Area) through the USACE. This survey would expand the previous study to provide a comprehensive noise assessment for the entire MTA site.

Project 16: Pollinator Management – This project will supplement Project 15 with the establishment of Bee Apiaries for the purposes of prairie and forest pollinator management. Managed hives will be used to increase environmental awareness as well as establish a greater population of Honey Bees (Genus: *Apis*) IAW federal guidelines.

Project 17: Raptor Rehabilitation Program – With cooperation from local non-profit organizations in our area, such as Save Our American Raptors (SOAR), efforts have been made to establish a raptor rehabilitation and release program. This project will be in addition to federal

regulations regarding the protection of Migratory Birds and will include additional avian surveys and land management changes (Appendix K).

Project 20: Forest Management for Reptiles and Amphibians – This project includes recommendations based on the article, “Forest Management for Reptiles and Amphibians: A Technical Guide for the Midwest”. PLS will need to be initiated for Faunal Surveys and may include management of wetlands for suitable habitat.

10.2 Natural Resource Management Programs

Natural resource management at the MTA is divided into eight broad categories for discussion in this INRMP update as listed below:

- Grounds Maintenance, Landscaping, and Urban Forestry;
- Soil Conservation and Water Quality;
- Grassland, Forest, and Fire Management;
- Fish and Wildlife Management;
- Floodplains, Wetland and Aquatic Habitat Management;
- Invasive Species, Exotic Species and Noxious Weed Management, and Integrated Pest Management;
- Threatened and Endangered Species Management; and
- Recreation and Public Outreach.

The 18 implementation projects described in Section 10.1 are highly related to the above management programs. Table 10 depicts the interrelation between the desired projects and management programs planned for the MTA. Projects at times are overlapping (see Table 10); thus the implementation of one project is often related to the success of one or more additional projects. Therefore, if one project is not funded or implemented, there may be a negative impact to the intent or success of other projects.

Management programs are discussed in subsequent chapters (Chapters 11 through 18). The interrelationship between projects is addressed in greater detail throughout these sections.

10.3 IDNR Comprehensive Environmental Review Program Process

The Natural Areas Preservation Act (525 Illinois Compiled Statutes [ILCS] 30/1), the Interagency Wetland Policy Act (20 ILCS 830), the Endangered Species Protection Act (520 ILCS 10/1), the State Agency Historic Resources Preservation Act (20 ILCS 3420/1), the Archaeological and Paleontological Resource Protection Act (20 ILCS 3435/1), 3rd Act Human Skeletal Remains Protection Act (20 ILCS 3420) and the National Historic Preservation Act (NHPA; 16 USC 470) declare that environmentally sensitive and historically valuable resources are irreplaceable assets and require state agencies to consider the adverse impacts of their actions on these and other sensitive resources (e.g., forests, prairies, streams, and riparian corridors). In response, IDNR developed the CERP to coordinate the review of all projects proposed, funded, or permitted and licenses by IDNR.

The ILARNG is responsible for submitting a project description, relevant information and mapping to the CERP using the appropriate CERP review form. The CERP conducts an initial review to determine the scope of the project and identify resources that could be potentially impacted. After this occurs, the appropriate units within the IDNR (For example, the Division of

Fisheries, Forestry, Natural Heritage, Wildlife and Planning) are contacted and asked for their comments.

Within 45 days, the IDNR CERP program can approve the project, request additional information, or identify the need to conduct surveys. Restrictions can be included in a project approval. If restrictions are included in the approval, ILARNG is required to accept these restrictions in writing prior to initiating the project. Approvals on projects submitted to the CERP Program are valid for a 2-year period, after which they must be resubmitted for an updated review. .

During the ILARNG and IDNR annual Plan of Work meeting, the planned INRMP projects, which are two years old or greater, will be reevaluated by the IDNR. The ILARNG will make any changes to the project scope, if deemed necessary, to ensure compliance with the CERP Program and allow the ILARNG to meet their implementation goals, objectives, projects, and funding requirements on schedule (see Table 13).

Under the 1999 Marseilles MOU, CXs exist for ILARNG activities on the MTA and include:

- Control or reduction of encroaching woody vegetation in areas mowed or cultivated within the last three years.
- Maintenance of existing levees, dams, riprap areas, trails, parking areas, trails, firebreaks, access lanes, water control structures, pump sites, culverts, erosion control structures, and military constructed fence.
- Routine building and grounds maintenance including, but not limited to, mowing, trimming, painting, and signing (except for historical structures as identified by IDNR staff archaeologists).
- Renovation of existing buildings both internally as well as externally (except for historical structures as identified by IDNR staff archaeologists).
- Replacement of deteriorating wooden pit toilet vaults with new concrete vaults in same locations.
- All routine annual turf management activities such as mowing of grass, aeration, seeding, and fertilizer application.
- Routine trail maintenance and/or rehabilitation (i.e., resurfacing, pot-hole repair, regarding, clean-out of ditches, mowing, etc.).
- Resurfacing only of existing hiking, biking trails with materials that are of the same type as the existing surface. Widening, expansion, or rerouting of trails is not exempt.
- Installation and/or replacement of traffic, trail, and information signs provided that vegetation removal will not be necessary.

The CXs address existing structures only. Any new construction or maintenance projects other than existing must be processed through the CERP review. Projects that fit within this list of activities do not have to be submitted for CERP review as it has been determined that the activities do not individually or cumulatively have an adverse effect in the environment. CXs within the 1999 Marseilles MOU are not precluded from the NEPA requirement (e.g., REC, EA, or EIS) and are not applicable to the EA in Appendix D.

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10.4 Environmental Assessment

The development of an INRMP is a “proposed federal action”, for which an environmental analysis must be performed pursuant to NEPA. NEPA requires federal agencies to prepare a statement of environmental impact in advance of each major action that may significantly affect the quality of the human environment. Implementation of the previous revised MTA INRMP was considered a major federal action. The purpose of the EA is to assess the impacts and potential environmental consequences of 1) Implementing the revised INRMP (the Preferred Action Alternative), and 2) Not implementing the revised INRMP and continuing to follow the 2001-2006 INRMP. An EA is included as Appendix D of this INRMP.

The INRMP EA will form the basis for the initial CERP review. Projects will be approved for a two year period. When this time period expires, project scopes will be reevaluated and changes, if needed, will be made by ILARNG to ensure re-submittal to IDNR for re-approval.

Table 10. Relationship Between INRMP Implementation Projects and Natural Resource Management Programs

PROJECTS	MANAGEMENT PLANS							
	Grounds Maintenance, Landscaping, Urban Forestry	Water Quality And Soil Conservation	Forest, Grassland, And Fire Management	Fish And Wildlife	Floodplain, Riparian Zone, Wetland, And Aquatic Habitats	Invasive And Integrated Pest Management	Threatened And Endangered Species	Recreation and Public Outreach
1. Comprehensive Timber Stand Improvement	X	X	X	X	X	X	X	X
2. Comprehensive Burn Plan	X	X	X	X	X	X		
3. Forest Inventory	X		X	X	X	X	X	
4. Trail and Access Point Expansion or Hardening	X	X	X	X	X			X
5. Trail Maintenance	X	X		X	X			
6. Invasive Species Control	X	X	X	X	X	X		
7. Tracking INRMP Project Success using RTLA	X	X	X	X	X	X	X	
8. General Erosion Control and Soil Stabilization	X	X		X	X	X		
9. SKC Maintenance	X	X		X	X	X		X
10. Community Outreach			X	X	X			X
11. Burn Education	X	X	X	X		X		X
12. Monarch Butterfly Program	X		X		X		X	
13. Recycling Program	X							X
14. Energy Conservation	X							X
15. Community Outreach and Prairie Restoration	X	X	X	X		X		X
16. Power Line Right of Way Prairie Restoration Plan	X	X	X	X		X		
17. Noise Modeling	X		X	X	X			X
18. Pollinator Management	X		X	X	X	X	X	
19. Raptor Rehabilitation Program				X			X	X
20. Forest Management for Reptiles and Amphibians			X	X	X	X	X	

11.0 GROUNDS MAINTENANCE, LANDSCAPING AND URBAN FORESTRY

11.1 Overview

A Presidential Memorandum (PM), *Environmentally and Economically Beneficial Practices on Federal Landscaped Grounds*, dated April 1994, directs federal executive departments and agencies to use regionally native plants in landscaping for federal grounds and federally-funded projects. Native species generally provide better habitat for wildlife and have relatively low irrigation requirements. In addition, the use of native species generally reduces the need for pesticides and fertilizers. Landscaping often involves urban forestry. Urban forestry is the maintenance of individual trees or groupings of trees in an urban environment or between dominant land uses. Urban forests are valued for non-consumptive uses such as providing shade, aesthetic value, and habitat for wildlife.

Lands at the MTA are divided into improved, semi-improved, and unimproved grounds. Improved grounds are those intensively maintained, such as the Cantonment area. There are approximately 300 acres of improved grounds. Semi-improved grounds are areas that receive some maintenance, but are not as intensively maintained as improved grounds. These areas include ranges, bivouac areas, roadsides, and fence lines. A total of approximately 750 acres are classified as semi-improved grounds. Unimproved grounds are those that receive little or no regular maintenance, such as streams, ponds, wetlands, forests, and grasslands. The bulk of the MTA acreage fits into this category (approximately 1,800 acres).

11.2 Compliance

Laws and regulations pertaining to grounds maintenance, landscaping, and urban forestry are as follows (see also Appendix H):

- EO 13148, Greening the Government through Leadership in Environmental Management;
- PM, dated April 1994, Environmentally and Economically Beneficial Practices on Federal Landscaped Grounds;
- Migratory Bird Treaty Act (MBTA), as amended (16 USC §703-712);
- Federal Insecticide, Fungicide, and Rodenticide Act (7 USC §136).

Grounds maintenance and landscaping is performed in accordance with federal and state laws and regulations. The MTA also carries out these activities in accordance with the statewide IPM Plan and the MTA ICP Plan.

11.3 Goals and Objectives

The goal of grounds maintenance and landscape management is to effectively and economically maintain the landscapes and grounds of the MTA in an environmentally safe and sensitive manner that compliments the military mission while protecting real estate and human health. To accomplish this goal, the ILARNG will strive to fulfill the following objectives:

- Reduce grounds maintenance costs through innovative management practices;
- Use mowing and the usage of fertilizers and pesticides sparingly to maintain healthy landscapes; and
- Use energy conservation methods when possible.

11.4 Management Strategy

As required by AR 200-1, “grounds will be maintained at levels and intensities necessary to meet the designated use criteria, protect, and enhance the natural resources, and ensure a pleasing appearance in harmony with the natural landscape.” Specific management strategies for landscaping and grounds maintenance are as follows:

- Use native species in landscaping; do not plant exotic or ornamental species.
- Minimize grounds maintenance costs by using low maintenance species.
- Transplant healthy trees pulled during TSI operations using a tree spade within the Cantonment Area, when feasible (see Project 1);
- Allow areas not required to be intensively managed to revert to a natural state.
- Revegetate exposed soils with native species following training events to ensure no net loss of training lands.
- Ensure that BMPs for spill prevention and pollution prevention are followed to protect surface water and aquatic habitats;
- Ensure the use of herbicides and pesticides are minimized in accordance with Invasive Species and Noxious Weed Control and IPM strategies;
- Mow grasslands (non-range lands) before 15 April and/or after 15 August in areas, where feasible, to minimize disturbance on ground-nesting birds.

The above management strategies can be applied to all MTA lands, however the level of maintenance and management varies between improved, semi-improved, and unimproved grounds. General grounds maintenance for improved grounds includes maintaining drainage and lawns. Vegetation management includes regular mowing of grass within the MTA Cantonment area, weeding, landscape plantings, and occasional weed control using herbicides. General grounds maintenance in semi-improved areas includes maintaining existing drainage, vegetation management using mowing, brush cutting, and herbicides, soil stabilization, and erosion control and repair. However, these activities are not done regularly throughout the year, but on an as needed basis. For example, grass is only mowed if needed to support troop training usage. Unimproved grounds management for forest and wildlife at the MTA is described throughout this plan.

11.5 Monitoring and Inventory

No monitoring or inventory programs pertaining to grounds maintenance or landscaping are planned.

11.6 Projects

Projects pertaining to land use planning and grounds maintenance include:

- Project 1: Comprehensive Timber Stand Improvement
- Project 2: Comprehensive Burn Plan
- Project 3: Forest Inventory
- Project 4: Trail and Access Point Expansion
- Project 5: Trail Maintenance
- Project 6: Invasive Species Control
- Project 7: Track INRMP Project Success through RTLA
- Project 8: General Erosion Control and Soil Stabilization
- Project 9: SKC Maintenance

- Project 11: Burn Education
- Project 13: Recycling Program
- Project 14: Energy Conservation
- Project 15: Community Outreach and Prairie Restoration
- Project 16: Power Line Right of Way Prairie Restoration Plan
- Project 17: Noise Modeling
- Project 18: Pollinator Management
- Project 19: Raptor Rehabilitation Program
- Project 20: Forest Management for Reptiles and Amphibians

Additional project information is provided in Chapter 10 and Table 13.

11.7 Military Mission Considerations

Appropriate grounds maintenance and landscaping practices support military training missions such as firing ranges and bivouac areas. They do not pose a threat to the military mission.

11.8 Additional Information

Internet sites presented in **Appendix I** provide additional information pertaining to grounds maintenance, landscaping, and urban forestry.

12.0 WATER QUALITY AND SOIL CONSERVATION

12.1 Overview

Stormwater and Water Quality: Surface water and groundwater quality is directly related to natural resources management practices that affect stormwater runoff. Stormwater runoff is produced when rainfall during a storm exceeds the infiltration capacity of the soil. When this happens, water accumulates in small depressions and runs down slope as overland flow. Stormwater runoff can be a significant source of pollutants and sediment into surface waters, especially in areas where groundcover has been disturbed. Water quality also may be negatively impacted by disturbances causing increased sedimentation to wetlands and stream channels. Sources of stormwater runoff and pollution at the MTA could originate from the Cantonment area. Stormwater runoff from impervious surfaces has a high potential to carry pollutants into wetlands, surface waters, and groundwater. Impervious surfaces at the MTA, which are mainly contained in the Cantonment area, include paved areas and buildings.

Erosion and Soil Conservation: Erosion control and soil conservation are important natural resource issues at the MTA because of the highly erodible soils found on the installation. Accelerated erosion, continued compaction, or the removal of topsoil can drastically alter soils. Sediment resulting from erosion affects surface water quality and aquatic organisms. Two main types of soil erosion exist, wind erosion and water erosion. Water causes most of the erosion at the MTA. Silt loams and loams are found throughout the property, which are typically not as susceptible to wind erosion. All soils are at risk for water erosion, but silty soils are more susceptible than most soil types. Several factors affect water erosion. These factors include rainfall, slope steepness and length, soil texture or erodibility, cover protecting the soil, and special practices such as terracing or planting on the contour.

12.2 Compliance

Laws and regulations that are associated with control and abatement of pollution in U.S. waters, and erosion control and soil conservation include:

- Federal Water Pollution Control Act as amended by the CWA of 1977 (33 USC §1251);
- U.S. Fish and Wildlife Coordination Act (16 USC §661);
- NEPA (42 USC §4321);
- EO 11752, Prevention, Control, and Abatement of Environmental Pollution;
- EO 11989, Off-road vehicle use;
- EO 11990, Protection of Wetlands;
- EO 12088, Federal Compliance with Pollution;
- Soil Conservation Act (16 USC §590a et seq.);
- SAIA (16 USC §670 *et seq.*);
- AR 200-1, 32 CFR 651;
- Rivers, Lakes, and Streams Act (615 ILCS 5/);
- Flood Control Act of 1945(615 ILCS 15/);
- Watershed Improvement Act (505 ILCS 140/);
- Soil and Water Conservation Districts Act (70 ILCS 405/);
- Water Pollutant Discharge Act (415 ILCS 25/);
- Illinois Pollution Prevention Act (415 ILCS 115/);
- Illinois Lake Management Program Act (525 ILCS 25/);
- Illinois Water Quality Standards (35 IAC 302).

These laws and regulations are described in Appendix H.

Permitting: Under the CWA, Section 319 requires each state to prepare a Nonpoint Source (NPS) Management Program. The IEPA is the designated state agency in Illinois to receive Section 319 federal funds from USEPA. The purpose of IEPA's Section 319 program is to work cooperatively with units of local government and other organizations toward the mutual goal of protecting the water quality in Illinois through the control of NPS pollution.

Currently, the only permits needed at the MTA are when construction or other land-disturbing activities create a minimum of one (1) acre of soil disturbance; IEPA must permit the activity with a construction site activity storm water National Pollutant Discharge Elimination System (NPDES) permit. The NPDES permit establishes the required erosion control and revegetation standards. When preparing the soil erosion and storm water pollution plan, use the following guidance documents.

BMPs for Illinois are discussed in the "2002 Illinois Urban Manual" (prepared by USDA, NRCS in Illinois for IEPA), which supersedes the IEPA 1987, "Standards and Specification for Soil Erosion and Sediment Control", the original "1995 Illinois Urban Manual", and Chapter 6 entitled "Procedures and Specifications", of the Association of Illinois Soil and Water Conservation District's 1988 "Procedures and Standards for Urban Soil Erosion and Sedimentation Control in Illinois." Where previous manuals have focused mainly on construction site erosion or stormwater runoff control, this manual is designed for more comprehensive, multi-objective ecosystem protection and enhancement (addresses both fish and wildlife habitat improvement).

Water quality and soil conservation management is performed in accordance with federal and state laws and regulations as well as statewide plans. A statewide P2 Plan, updated in 2002, was developed for the MTA to identify potential sources of pollution or contamination at the installation and carry out actions to prevent or control future storm water pollution. An ISC Plan, dated June 2005, was developed for the MTA to provide guidelines to prevent contamination of soil and water by oil and other hazardous substances (Section 4.1).

12.3 Goals and Objectives

It is a goal of the MTA to minimize pollutants entering surface waters. To accomplish this goal, the following objectives have been established.

- Integrate mission requirements with the capability of the land to ensure sustainable use;
- Comply with water quality and other environmental laws and cooperate with Federal, State, and local regulatory authorities in forming and implementing water pollution control plans;
- Consider non-point source pollution abatement in all construction, installation operations, and land management plans and activities.
- Obtain permits as needed and limit discharges;
- Prevent erosion through education of personnel, design of new facilities, establishment of streamside management zones, and monitoring of training areas and bivouac areas;
- Rehabilitate eroded areas through establishment of vegetation, use of anchored mulch or erosion control mats; establishment of stable training surfaces, restrictions to access, site monitoring, and slope recontouring;

- Ensure sustainable use of the land through vegetation establishment, streamside management zones, retention of sediment on-site, education, and monitoring of eroded areas.

12.4 Management Strategies

As discussed in Section 6.5, training limitations (no digging or vehicular traffic) are in place for approximately 90 acres (Figure 3). These sensitive areas include the Gravel Pit Area, the Hill Prairie Area, two cultural resource sites, a small area in TA 102S, and a 0.7 acre wetland. To protect water quality and conserve soils, it is recommended the MTA implement the following strategies:

- Adhere to BMPs for construction activities described in the 2002 Illinois Urban Manual and in USEPA's Storm Water Management for Construction Activities;
- Minimize the use of pesticides and herbicides;
- Stabilize steep slopes by regrading, recontouring, and revegetating to protect against soil erosion and head-cutting (Project 9, Chapter 10);
- Prohibit the practice of driving vehicles through streams to wash them;
- Revegetate barren ground as soon as possible;
- Establish and maintain hardened low water crossings where appropriate;
- Ensure that BMPs for spill prevention and pollution prevention are followed to protect surface water and aquatic habitats;
- Avoid constructing permanent structures within the 100-year floodplain;
- Plant trees and shrubs, when appropriate, to stabilize soils and serve as wind breaks;
- Minimize the amount of impervious surfaces in newly developed areas;
- Restrict vehicle use to established roadways. Off-road vehicle use will only be allowed during dry conditions with the proper approval by the Training Area Manager;
- Minimize troop movements in ponds, wetlands, streams, drainage ways, headwaters and unapproved off-road areas; and
- Maintain erosion-control measures while ground disturbing activities are ongoing in accordance with the NPDES permit requirements.

12.4.1 General Soil Management Concerns at the MTA

Soil resources at the MTA will be managed to reduce the potential for soil erosion. Approximately 85 percent of the soils at the MTA have a severe to very severe erosion potential (Table 7). Training areas will be monitored and an effort will be made to schedule training activities with greater likelihood of impacting soils in areas with less erosion potential (e.g., selecting bivouac areas).

The NRCS has estimated the tolerable soil loss (T) for all soils at MTA. The tolerable soil loss is the average loss of soil in tons/acre/year that can be tolerated without diminishing soil productivity. The percent-required vegetative cover to maintain T levels of soil loss was then computed for each soil using the RUSLE. A layer has been created in GIS of the percent-required cover necessary to maintain T for all soils at the MTA. Data is available through the Facilities Division of DMAIL. Training areas will be monitored periodically to insure that vegetative cover equals or exceeds the percent-required vegetative cover. Should an area not meet or exceed the percent-required vegetative cover, the disturbed area will be prepared. Native and local plants will be used to revegetate disturbed areas.

Other soil management concerns include low moisture holding capacity and excess water hazards, which include poor soil drainage, wetness, high water tables and overflow. Vegetation on these soils tends to be poorly established because of these limitations. When revegetating these, certain plants or special conservation practices may be necessary.

A prime farmland designation is given to an area if the soils have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and/or oilseed crops. Prime and Unique Farmlands are monitored by the NRCS to ensure preservation of agricultural lands that are of statewide or local importance. Approximately 824 acres are characterized as prime farmland, and an additional 41 acres are classified as prime farmland if drained.

Hydric soils are defined by the National Technical Committee for Hydric Soils 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 of the profile, and therefore, support hydrophytic vegetation. Four MTA soil types (30 acres) are classified as hydric soils: Bryce silty clay, Hesch sandy loam, Thorp silt loam, and Wabash silty clay. See Figure 5 for locations of these soil types on the MTA installation. Only one 0.7 acre area was delineated as a wetland in 1997 (NRCS, 1997). Approximately 30 acres at the MTA contain hydric soils. These areas will be monitored using GIS and field assessments as potential wetlands.

12.4.2 General Erosion Prevention

Institutional practices are procedures, policies, or regulations that ensure operations are conducted in a manner that minimizes their impact. *Structural practices* include permanent construction to install erosion-resistant surfaces, stabilize drainage, and modify slopes to reduce runoff velocity and trap sediments on-site. *Vegetative practices* consist of establishing live plants on erosive or exposed surfaces. Plants stabilize slopes by binding soils with their roots, shielding soils from rainfall impact, interrupting surface runoff by roughening the surface, allowing more water to infiltrate rather than run off over the surface, trapping sediments in runoff, and wicking moisture out of soils by evapotranspiration. In addition, vegetative practices are self-regenerating and relatively maintenance free. **Table 11** lists institutional, structural, and vegetative practices that may be used to prevent or repair erosion problems.

Table 11. Soil Erosion Control Practices		
Institutional Practices	Structural Practices	Vegetative Practices
EMO review of land use changes; Stormwater Discharge Permits; Operation Regulations; Streamside Management Zones; Inspection of facilities; Training of personnel; and Limiting vehicle access.	Erosion-resistant surfaces; Improved/hardened stream crossings; Drainage ditches and culverts; Silt fence, sediment traps, and sediment ponds.	Seeding; Reforestation; Transplants; Vegetative Filter Strips.

As required by AR 200-1 and 32 CFR 651, the ILARNG will assess the potential erodibility of a site during the planning of new development, training, and other land uses.

12.4.2.1 Low Water Stream Crossings

A low water stream crossing (LWSC) is a structure that provides access across a stream during normal flow but is periodically closed as a result of flooding. LWSC can provide low cost

alternatives to bridges or culverts for areas with low traffic volumes like training roadways at the MTA. They are particularly suitable across streams that are sometimes dry or with low normal depth of flow. Usually, LWSC are designed to provide streambed stabilization as well as access (Centre for Transportation Research and Education [CTRE], 2001). Three common types of LWSC are the unvented ford, the vented ford, and the low water bridge. Each is described below:

- **Unvented Ford:** This structure has no culvert pipes and crosses streams that are dry most of the year, or have normal depth less than six inches. An unvented ford can conform to the streambed or it can be raised above the streambed. These crossings are usually constructed of rip rap, precast, concrete, crushed stone, or articulated concrete. These are most suited for intermittent or ephemeral streams, or wide and shallow perennial streams.
- **Vented Ford -** This type of LWSC has one or more pipes under the crossing to accommodate low flows without overtopping the road. Water will flow over the crossing during higher water events. The pipes or culverts can be embedded in Portland cement concrete, aggregate, riprap, or earthen fill. A vented ford may work where stream depth is deeper than recommended for an unvented ford. However, if there is a high potential for debris that may clog the pipes, this type of crossing is not recommended.
- **Low Water Bridge -** This is a flat-slab bridge deck that is approximately the elevation of the stream bank. Its smooth cross section allows high water to flow over the structure without damaging it. This type of LWSC is recommended where higher stream flows exceed the capacity of a vented ford, where there is potential for clogging, or where an obstruction in the streambed will not be environmentally acceptable (CTRE, 2001).

Currently, a quasi low water cement crossing with a culvert and dry water crossing on Ruffus Lane exist. There are no future plans to develop additional low water crossings at the MTA.

12.4.2.2 Revegetation

Success in revegetating disturbed sites depends on the chemical and physical properties of the soil. Correct pH, phosphorus levels, and nitrogen fertilization are necessary for degraded lands to be re-vegetated. Therefore, soil amendments (lime and fertilizer) will be applied to rehabilitation sites before seeding. Application procedures will include soil analysis to determine proper nutrient application levels. Other factors to consider are soil moisture, weather patterns and potential contamination of streams, ponds and lakes.

Use lime to neutralize acidic soils, and raise soil pH to a value that will support the species used for re-vegetation. Quality agricultural limestone is generally the preferred choice. Incorporate the lime into the top six inches of soil to allow better rooting of plants and minimize loss to rainfall runoff. Do not apply lime under wet soil conditions because it is difficult to incorporate uniformly into wet soil.

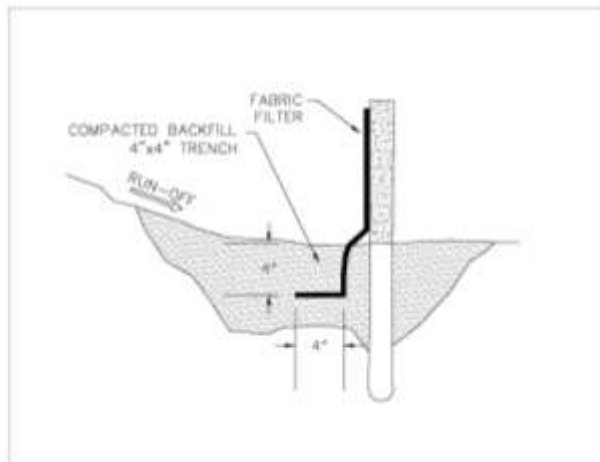
Fertilizers consist of three primary plant nutrients: nitrogen (N), available phosphorous (P_2O_5) and water-soluble potash (K_2O). Mixtures of fertilizer materials are commercially available; their grade or content is expressed as a ratio in weight percent as N:P:K. Choose and apply fertilizer according to the soil test results. Fertilizers are also incorporated into the top two to four inches of soil, and will not be applied when soils are wet. In wet soils, salt forms from the fertilizer, which can significantly reduce the percentage of seed germination, especially with grasses.

Specific recommendations concerning revegetation at the MTA include:

- Enhance and restore warm season prairies throughout the site through prescribed burns and the planting of native grassland species to reduce soil erosion and storm water runoff.
- Avoid chemical application during revegetation activities near water bodies. Fertilizer runoff into lakes can have serious adverse effects on water quality. Nitrogen and phosphorus increase the productivity of the lake and can result in eutrophication, when organic matter increases and slowly replaces oxygen.
- If soils are found to have undesirable nutrient or pH levels, plant native plants with a higher tolerance for poor soil conditions instead of applying nutrients along nearby lake banks. If no alternative species exist, use BMPs to prevent runoff of fertilizers into lakes and other water bodies.

12.4.2.3 Silt Fences

In addition to seeding and mulching areas greater than 15 square meters, use silt fences to prevent silt from leaving the site. Line the borders, from which runoff could occur, with silt fences. Install silt fences according to the instructions below.



- Place the silt fence at the lowest elevation of the graded area.
- Fasten silt fence securely to each steel support post or to woven wire, which is in turn attached to the steel fence posts.
- Embed silt fence in trench and backfill.
- At each end of the silt fence, turn fence upslope, and extend until ground surface rises.
- Inspect the silt fence frequently, and repair or replace promptly as needed.
- Remove accumulated silt when it reaches a depth of six inches. Dispose of sediment trapped by this practice in an area not prone to erosion.
- Remove silt fence when it has served its usefulness to avoid blocking storm flow or drainage.

12.4.2.4 Guidance for Roadways and Ditches

Provide v-shaped side ditches as shown in Field Manual (FM) 5-35 “Engineer Field Data” (DA, 1987) along roadways. Size and shape the ditches according to this manual. Provide properly sized and installed culverts according to FM 5-35 to protect roadways and prevent erosion.

Shape and crown roads to drain water. Install culverts to improve drainage and minimize shrinking, swelling, and frost damage. Add crushed rock or gravel to prevent trail damage caused by low strength.

In sloping areas where road ditches have a tendency to wash, place straw bales end-to-end, perpendicular to the ditch to completely dam the waterway approximately every 50 feet. Seed ditch banks with the recommended grass mixture. After the grass becomes established, remove every other row. Remove additional bales as the grass grows in where the removed bales were. The anchored straw bales slow the flow of water and prevent erosion.

- Place bales in a row with ends tight against adjacent bales.
- Embed each bale in the soil a minimum of four inches where possible.
- Anchor bales securely with wooden stakes or steel re-bar driven through the bales. Angle the first stake in each bale toward previously laid bale to force bales together.
- At each end of dike, turn dike upslope, and extend until ground surface rises 18 inches.
- Inspect bales frequently, and repair or replace them promptly as needed.
- Remove accumulated silt when it is 6 inches deep to avoid impeding or blocking storm flow or drainage. If the silt is not removed, storm water may cut a new gully around the dike.
- Remove bales when they have served their usefulness. Fill in and smooth the area.

12.5 Inventory and Monitoring

Water quality monitoring is important to measuring ecosystem health at the MTA. Land-based environmental degradation eventually affects water quality and aquatic ecosystems. A South Kickapoo Flood Study was conducted that mapped and classified all stream segments within the MTA property (AMEC, 2004). No long-term surface or ground water quality studies have been conducted at the MTA. PTS conducted a limited survey of water quality on South Kickapoo Creek, the two lakes and in one of the larger ponds located in the northern portion of the training area. These surveys were conducted in the summer and fall of 1995. A copy of the report is on file in the Facilities Division of DMAIL. The data from these studies are inadequate and incomplete to describe the water quality in the ponds and lakes. Additional water quality surveys will be needed to describe water quality on the MTA.

12.6 Projects

Soil conservation and erosion problems could arise from training activities. Actual projects, including construction measures and other means pertaining to soil conservation and erosion control will be administered through the ITAM program. Projects pertaining to water quality improvements and soil conservation and erosion control include:

- Project 1: Comprehensive Timber Stand Improvement
- Project 2: Comprehensive Burn Plan
- Project 4: Trail and Access Point Expansion
- Project 5: Trail Maintenance
- Project 6: Invasive Species Control
- Project 7: Track INRMP Project Success through RTLA
- Project 8: General Erosion Control and Soil Stabilization
- Project 9: SKC Maintenance
- Project 11: Burn Education
- Project 15: Community Outreach and Prairie Restoration
- Project 16: Power Line Right of Way Prairie Restoration Plan
- Project 18: Pollinator Management
- Project 20: Forest Management for Reptiles and Amphibians

Additional project information is provided in Chapter 10 and Table 13.

12.7 Military Mission Considerations

Improper stormwater control can potentially lead to CWA violations, thus potentially resulting in

ines and other penalties, which may ultimately compromise the integrity of the MTA as a viable training installation. Appropriate soil conservation and erosion control are vital to the military mission. A key element in the Sikes Act establishment of INRMPs is to ensure “no net loss” of military training capability. Management of soil erosion is necessary to maintain military training areas in usable condition. Threats to the military mission, as characterized by removal of and/or lack of accessibility to available training lands and other resources, such as infrastructure components, include:

- Undermining of roads;
- Poorly maintained roads;
- Increased wear and tear on vehicles;
- Equipment damage;
- Safety concerns;
- Loss of topsoil, which will decrease revegetation rates;
- Impacts to streams or other aquatic habitats, potentially resulting in CWA implications;
- Establishment of washout areas on training lands.

12.8 Additional Information

Contact information pertaining to stormwater, land disturbance, and public water permit requirements are provided in Appendix I. Internet addresses are also provided that are relevant to water quality and soil conservation.

13.0 GRASSLAND, FOREST, AND FIRE MANAGEMENT

13.1 Overview

The MTA is currently comprised of several habitat types including old fields, prairies, native warm season grasslands, savannas', scrub-shrub, mid and mid-to-late successional upland and floodplain forests as well as wetlands. At the time of settlement, the area was mainly savanna rather than the closed canopy forests found presently. Three types of forest communities were identified by Jones (1996) as occurring at the MTA: dry-mesic upland forest, mesic upland forest and mesic floodplain forest. The prairie communities located at the MTA were identified as glacial drift hill prairies and dry-mesic prairies (Jones, 1996). Refer to Chapter 9 for additional flora information.

In general, the ILARNG plans to manage the land to promote native vegetation, while maintaining lands appropriate for required military training. This chapter of the INRMP update specifies management strategies for grassland, forest, and fire management. The ILARNG will implement a forest and fire management prescriptions outlined in the *MTA Fire and Vegetation Management Plan* (Groninger and Ruffner, 2004), pending IDNR approval, to manage vegetation at the MTA. This plan also included a forest inventory of the MTA. Goals, objectives and management strategies developed within this Plan are incorporated throughout this section.

13.2 Compliance

Laws, regulations and policies pertaining to terrestrial habitat and fire management at the MTA include:

- Federal Insecticide, Fungicide, and Rodenticide Act (7 USC §136);
- Forest and Rangeland Renewable Resources Planning Act (16 USC §1601 *et seq.*)
- NEPA (42 USC §4321);
- SAIA (16 USC 670 *et seq.*);
- Sale of Certain Interests in Land, Logs (10 USC §2665);
- Illinois Forestry Development Act (525 ILCS 15/);
- IDNR Tree Cutting Policy and Procedures (1 June 2006);
- IDNR Prescribed Burns Policy and Procedures (1 January 2006).

Descriptions of the above listed laws and regulations as well as a copy of the IDNR policies and procedures are provided in Appendix H.

13.3 Goals and Objectives

Terrestrial habitat and fire management goals of the MTA are as follows:

- Maintain healthy, biologically diverse terrestrial ecosystems to sustain native populations of flora and fauna;
- Maintain and enhance the quality of both forested and non-forested areas appropriate and beneficial for military training;
- Maintain forested areas in a condition that minimizes threat to safety and human health;
- Maintain and improve terrestrial wildlife habitat; and
- Provide watershed protection.

To accomplish these goals, the following objectives have been established:

- Implement *Integrated Wildland Fire Management Plan* (Ruffner and Henry, 2014);
- Implement *Quantifying the Carbon Sequestration Potential of Forested Landholdings* (Walker 2014)
- Control the spread of invasive exotic vegetation within the site (see Section 16.4.1);
- Enhance and restore native vegetation sources;
- Implement TSI plan (pending approval by IDNR) consistent with soil conservation, erosion control, water quality protection, and the IDNR Tree Cutting Policy;
- Provide a setting for ILARNG small unit training;
- Establish vegetation along eroding lake banks;
- Protect riparian corridors adjacent to South Kickapoo Creek and its tributaries;
- Improve hunter access;
- Protect wetlands, soil stability and water quality;
- Enhance natural forest edges;
- Prevent and reduce forest fragmentation while at the same time developing better site access;
- Improve long-term quality and productivity of timber when this does not interfere with the aforementioned objectives.

13.4 Management Strategies

General terrestrial habitat management of the MTA will include maintaining healthy and biologically diverse ecosystems by conserving and protecting the natural communities and through the use of environmentally sound management methods. Appropriate management strategies included in the *MTA Fire and Vegetation Management Plan* were established by forest compartments (see Appendix G for compartment locations). Treatments vary considerably within each compartment and range from multiple applications of fire, cutting, and chemical treatments to locations where active management is not desirable at this time. Specific management strategies pertaining to forest, grasslands, and are discussed in greater detail below.

13.4.1 Forest Communities

At the time of settlement, the area was mainly savanna (savannas have 10 to 70 trees per hectare) rather than the closed canopy forests (closed forests have greater than 120 trees per hectare) found presently. Pre-settlement forested areas were dominated by white oak (*Quercus alba*) [58.6 percent], black oak (*Quercus velutina*) [29.3 percent], and shagbark hickory (*Carya ovata*) [6.9 percent]. In 1995 species composition was dominated by white oak (27 percent), shagbark hickory (23 percent), and black oak (16 percent). The change in species dominance can be attributed to canopy closure. Jones described the MTA forests as continuing towards more shade tolerant species. The decline in dominance of white oak and black oak is being accelerated in the understory. Shagbark hickory is also decreasing within the understory, while more shade tolerant and fire sensitive species have increased in dominance within the understory. Sugar maple, a shade tolerant species, is now highly abundant in the understory. Canopy closure and increased trees per hectare have resulted from fire suppression (Jones, 1996).

In the dry-mesic upland forests heavy shading within the closed canopy forest has resulted in reductions in the oak population. The development of the closed canopy is primarily a result of fire suppression. Periodic fires within the forest community will reduce the shading effect by woody species and promote rich assemblages of grass and forbs within the ground layer (Jones, 1996). The forests at MTA would benefit from a gradual reintroduction of fire (see section 13.4.3).

Mesic upland forests along the north and east facing ravines and hillsides were not previously savanna areas. Sugar maple is the dominant species for this community. No management efforts will be made to convert these areas into savannas.

Mesic floodplain forests are of moderate to low quality because periodic flooding and over 50 years of human disturbance (Jones, 1996). Minimizing human disturbance and monitoring stream bank erosion in these areas will prevent the further degradation of forest habitat quality and protect stream quality. Tree planting along stream banks will be initiated to reduce the encroachment of exotic species and stabilize banks.

General forest management strategies at the MTA include:

- Comply with IDNR Tree Cutting Policy (Appendix H);
- Minimize the amount of vegetation removal for concealment and bivouacking purposes;
- If standing dead trees or fallen logs are not a safety hazard, leave them in place for nesting birds and roosting bats;
- Promote shade intolerant species while maintaining an overstory canopy through a comprehensive prescribed burn plan and TSI plan (pending approval by IDNR);
- Use TSI in thin successional, overstocked woodlands;
- Identify and mark trees to be cut or girdled to meet TSI objectives (District Forester will mark trees at the MTA);
- Only cut trees identified or marked by a District Forester for logs and firewood to be used by IDNR or for training and maintenance needs by ILARNG;
- Reduce forest fragmentation by allowing old, abandoned trails and roads to convert to a closed canopy;
- Isolated fields will be examined and allowed to reforest if they are not needed for other purposes;
- Create and enhance more natural transitions between forests and open fields by modifying woodlands and promoting high quality shrub scrub habitat through selective tree plantings and removal;
- Promote native forest species;
- Plant trees where stream and lake banks need stabilized;
- Minimize human disturbance in floodplain forests;
- Identify, mark, and fell trees that are deemed safety hazards, especially along roads, parking lots, around training structures, and within tree fall reach of bivouac areas for the safety of IDNR users and ILARNG personnel.

13.4.1.1 Timber Stand Improvement

TSI will be used to help maximize the usability of forests for training while favoring desirable trees from unwanted competition, thinning trees to healthy numbers, and removing poor quality or diseased trees. This improves the overall condition of the stand and concentrates wood growth on a number of selected trees. TSI also can improve wildlife food and habitat, appearance and health of a woodlot. Improving timber stands enhances habitat for deer, turkey, squirrels, songbird, and nongame animals. Because properly thinned forests have more moisture and growing room available, vigorously growing trees are also better able to withstand stresses caused by insects, disease and drought.

TSI efforts at the MTA are focused to control invasive species, to improve conditions for the regeneration of shade intolerant species, and to retain species diversity. TSI work is done in specific problem locations dominated by invasive species and around shade intolerant species.

Other areas are left untouched so as not to disrupt the forest structure and function. TSI is not done to remove all non-timber species, all understory vegetation, or all poorly formed or cull trees in an effort to grow only high quality timber trees. Characteristics of trees that will be removed to allow desirable trees room to grow include:

- Undesirable, invasive or exotic species;
- Multiple sprouts from one stump;
- Low-forked, crooked, leaning, and root sprung;
- Swellings or bumps on the trunk that indicate internal damage;
- Fire scars or other damage to the trunk.

Cutting: All tree cutting activities at the MTA will be conducted in accordance with the IDNR Tree Cutting Policy. Cutting and removing trees is used as a silvicultural practice to achieve various objectives. Tree cutting can be used to stop or impede the spread of insects or disease (clearcuts or sanitation cuts); to reduce the number of trees in overstocked stands (thinning cuts); to remove undesirable trees species (weeding cuts), to utilize material that has sustained substantial damage as a result of some environmental factor such as wind, ice, flood, insects, etc. (salvage cuts); to regenerate a stand area for a particular species (clearcut, shelterwood cut, seedtree cut); or to clear an area for a non-forest use (clearcut). Site condition and overall strategy for managing a particular stand are considered to determine the type of cut to use, if any, to reach the stand goal. Young stands should be evaluated every 10 years due to their vigorous growth. As stands mature, this cycle can be repeated less frequently.

Terrestrial Habitat Pests and Chemical Treatments: Tree loss from disease can be subtle, but occasionally significant. Diseases can weaken the trees and increase the chances of damage caused by winds. Tree disease can be especially prevalent where diversity is low and/or where tree density is higher than natural. Chemical treatments generally are not recommended for use at the MTA. Mortality or decline of trees caused by insects or pathogens is not currently a problem at the MTA. Refer to Section 16.4.2 for potential pests that will be monitored.

13.4.1.2 Forest Fragmentation

Forest fragmentation is the process by which contiguous forest areas are subdivided into smaller forest tracts surrounded by nonforest land uses, such as urban development or agriculture. Fragmentation induces transformations of the physical structure of communities that compel changes in species composition and distribution. Over the last 200 years, Illinois forests became increasingly fragmented. As much as 40 percent of eastern deciduous forests exist as small isolated woodlots in the midst of commercial, agricultural, and residential properties. While Illinois forests only occupy 12 percent of the area of the state, they provide habitat for over half of the botanical species native to the state. Forests are essential refuges for wildlife. Recreational uses, from trails to hunting, face future complicated challenges as forest blocks shrink (Yahner, 1995).

Roads precipitate fragmentation by dissecting previously large patches into smaller ones and in so doing they create edge habitat in patches along both sides of the road, potentially at the expense of interior habitat. As the density of roads in landscapes increases, these effects increase as well. The apprehension concerning the introduction of edges onto landscapes results from potentially detrimental microclimatic and biological changes, relative to intact forest, which occur along edges. Edge habitats along roads and clearcuts experience microclimatic changes, including increased evaporation, increased temperature, increased incident solar radiation, decreased

available soil moisture, and may induce populations changes in the vegetation and animal communities (Noss and Cooperrider, 1994).

Many fragments are severely affected by the invasion of non-native species. Several studies have found that small habitat patches tend to be dominated by generalist birds, and as habitat size increases, the diversity of birds requiring specialized habitats also increases. Second, as large tracts of forest area are broken into small, isolated woodlots, more forest edge is created and more opportunities exist for edge-adapted species to usurp habitat from forest-interior species. A number of animals favor this area between two habitats, called edge habitat, there are many species of forest animals, birds in particular, that require larger, uniform blocks of land in order to breed and raise young successfully. Increases in edge habitat and a decrease of unbroken blocks of forest result in increases in populations of species like deer and Brown-headed Cowbirds (*Molothrus ater*) (Schulze et al., 1996).

The MTA forest communities, characterized as moderate to low quality habitat, are highly fragmented. However, the MTA is located within the overall forested corridor of the Illinois River Valley. Reducing fragmentation will also help in maintaining connectivity of the forested bluffs along the Illinois River Valley. Connected forested drainages along the major river corridors of such rivers in Illinois as the Fox, Kankakee, Des Plaines, Illinois, and Mississippi all contribute to the safer migration of many of the small forest interior birds and neo-tropical migrants. Large forested blocks along these routes also contribute to the breeding habitat for sensitive species within the area. General forest fragmentation management strategies at the MTA include:

- Larger forested areas will be maintained as large as possible.
- The forest canopy will be allowed to close on abandoned trails and roads that are no longer necessary to reduce fragmentation. To facilitate restoration, trees and shrubs will be planted.
- Efforts will be made to reforest isolated fields that are not serving any other military or natural resources related purpose.
- When implementing TSI or prescribed burns, forest fragmentation will be taken into consideration.

Additional trails and access points are needed for troop training activities and for hunter safety (see Project 4, Chapter 10). Existing access points are within the northwestern portion of the site only, which results in the overuse of the trails and land in this area. Every effort will be made to prevent further forest fragmentation. New access points and trails will be planned with the idea that large forested tracts will be kept intact, thereby reducing edge effects deep into forested tracts. Previously disturbed areas or old, abandoned trails will be used first.

13.4.1.3 Stream, Lake and Pond Bank Enhancement and Maintenance

Management activities in riparian areas are intended to protect water quality, soil stability, and stream bank integrity. Priorities for stream, lake and pond edges include establishment of riparian corridors of native species in areas with no existing corridors, and enhancement of existing corridors. Recommended strategies include:

- Plant buffer strips 60-75 feet wide of native tree and shrub species adjacent to unstable lake and stream banks to provide riparian habitat and protect aquatic resources. Establishment of native trees along sloping lake banks benefits both training operations by stabilizing banks and reducing erosion and natural resources.

- Maintain grass buffer strips around ponds and plant scattered trees around the circumference of the ponds to provide shoreline protection and wildlife habitat.
- Prioritize planting efforts to first establish corridors that flood infrequently. Floodwaters will float light seeds in and out of these areas. Give a lower priority to areas along lake and stream banks that frequently flood.
- Plant more mature seedlings or trees in flood prone areas.
- “Heel in” seedlings when planting to reduce flooding impacts.

13.4.1.4 In-House Timber Use

Troops training in the field are not permitted to use trees for training activities unless it is deadfall or the activity has been approved through the EMO and IDNR. If trees are needed for logs or firewood, trees with poor form or disease will be cut (see Project 1, Chapter 10).

13.4.2 Prairie, Grassland, and Scrub-Shrub Communities

Maintaining open grasslands is desirable to improve diversity in an area that naturally tends to revert to forest cover. A wide variety of other bird, mammal, reptile and insect species depend on grasslands or the transition zone between grassland and forest. Transition zones, or the "edge," between grassland and forest are of special concern. Ideally, the transition zone will not be abrupt, but will contain an area in intermediate stages of conversion between field and mature forest. Edges also provide valuable cover for military training. Existing natural edges will be retained and enhanced, wherever possible, to improve areas for training and wildlife habitat.

The MTA contains moderate to high quality glacial drift hill prairies and low quality dry-mesic prairies. Other areas not classified as forest or prairie communities are considered successional fields. Successional fields are undeveloped, disturbed lands.

The Marseilles Hill Prairie Area (Figure 3), a 35-acre INAI site restricted to foot traffic only, contains a 3.8-acre area of rare high-quality hill prairie, approximately 1.3 acres of moderate-quality hill prairie, and approximately 30 acres of upland forest. The area is marked off limits to all vehicle traffic. Only about 29 acres of high-quality hill prairie are known to occur in this region. Using prescribed fire in this area periodically will maintain these habitats.

The dry-mesic prairie habitat and many of the successional fields contain scattered native species. The introduction of fire into this area will increase the dominance of native plant species. These areas and the dry-mesic prairie area should be frequently burned (Jones, 1996). See Section 13.4.3 for more details. Because these areas are used for military training and hunting and there is a need to maintain cover to protect soils, it may not be feasible to burn at the recommended frequency. In this event, a mowing program will be developed to supplement the prescribed burn program in the prevention of woody encroachment. The mowing program for grasslands and prairies is subject to IDNR approval and will be proposed on an annual basis during the joint Plan of Work meetings.

Mature stands of shrub-scrub land located in the transition areas between forests and open fields are important as habitat for avian and terrestrial wildlife. These areas are also important as Tactical Concealment Areas for the military mission. Native species within shrub-scrub habitats will be maintained and enhanced, while nonnative species will be controlled.

General prairie and grassland management strategies will include:

- Native prairie plants, approved by IDNR, will be planted to maintain adequate vegetation cover and repair disturbed areas;
- Perform prescribed burns to enhance and maintain native prairie grassland habitat;
- Implement mowing plan (pending IDNR approval) to facilitate prescribed burn plan;
- Monitor and revegetate areas to ensure proper soil cover;
- Limit the amount of herbicides used for invasive species control, and use mechanical methods when appropriate;
- Prairie grasses will be mowed before 15 April and/or after 15 August to protect breeding and nesting birds subject to IDNR approval; and
- Prairie grasses will only be mowed to a height of 10 to 12 inches.

13.4.3 Prescribed Burning

Prescribed burning is the purposeful application of fire in a controlled, knowledgeable manner that may be used as an effective land management tool. The occurrence of fire is a natural component of many ecosystems (including both forests and grasslands) and prescribed burning can be a desirable and economically sound management practice. Prescribed fire may be used to accomplish the following:

- *Reduce hazardous fuels* - Periodically burning the underbrush can significantly decrease the chance of a catastrophic forest fire.
- *Prepare sites for seeding or planting* - prescribed burns often expose adequate mineral soil and can control competing vegetation.
- *Improve wildlife habitat* - Prescribed burning can improve wildlife habitat and increase forage by keeping hardwood sprouts short, tender, palatable, and abundant. Deer, dove, quail, and turkey generally benefit from prescribed burns. In addition, grassland habitat is improved by the removal of undesirable grassland species.
- *Manage competing vegetation* - Prescribed burning can be used to control invasive vegetation.
- *Control insects and disease* - Prescribed burns may be used to control some insects and diseases.
- *Enhance appearance* - Prescribed burns often enhance recreation and aesthetic values of a forest and native grasslands by removing understory brush.
- *Perpetuate fire-dependent species* - Prescribed burning may be used to perpetuate many fire-dependent species. However, it is imperative to understand the ecology of the species to know which months will be ideal for a burn (Wade and Lunsford 1988).

In addition, prescribed fire in grasslands can increase grass nutritive quality, palatability, availability, and yield, reduce hazardous fuels, suppress unwanted plants, and improve wildlife habitat. Grass quality, palatability, and availability are improved because the fire removes dead plant material and improves access to new growth. If soil moisture is adequate, grass yields increase because baring and darkening the soil surface allows it to warm more quickly and stimulate earlier growth, and because competing weeds are suppressed (Ortmann et al. 1998).

Prescribed burns may also be administered to improve wildlife habitat. To enhance wildlife habitat, prescribed burns will be administered from January to March to prevent the killing of new spring growth and enhance the growth of hardwood sprouts and herbaceous growth. Burns during January to March will not interfere with the nesting season; however, some areas will remain unburned to provide sufficient cover for nesting. Quail, turkey, and small game generally benefit from prescribed burns every two years, while deer benefit from a prescribed burn rotation of two to four years (NRCS, 1999).

The primary land uses at the MTA are associated with a high potential for initiation and spread of wildfire. The MTA is a mosaic of dry upland forests, savannas and grasslands; thus all fire management activities must be integrated across all cover types. The comprehensive prescribed burning management plan (Project 2, Chapter 10) will be implemented in a way to maintain adequate canopy cover to protect soils, protect nesting birds and other animals, and control exotic species. Care will be taken for uneven burns as an uneven patchwork of habitat is more desirable to wildlife. The ILARNG will implement prescribed fire prescriptions outlined in the *MTA Integrated Wildland Fire Management Plan* for the MTA.

The MTA was divided into five fire management zones that are broken down further into burn units ranging in size from just over 250 acres to under 40 acres. Each unit is unique with regard to topography, vegetation, geological features, soils, usage, and overall management objectives. However, burn unit boundaries and locations are constantly being redeveloped with oversight from IDNR. For current (unrevised) burn unit locations and a prescribed burning schedule, consult Appendix G. Consult the *MTA Integrated Wildland Fire Management Plan* for information pertaining to the characteristics and management strategies for the specific burn units.

Recommendations concerning prescribed burning at the MTA include:

- Comply with the IDNR Prescribed Burn Policy (Appendix H);
- Use prescribed fire to enhance native grassland and forest species and control invasive species;
- Use only trained ILARNG and/or IDNR staff to conduct prescribed burns;
- Evaluate weather conditions and the proximity of the burn to roads and built-up areas prior to each burn. Smoke management has become an important factor in scheduling prescribed burns. Information pertaining to smoke management is provided in the *MTA Fire and Vegetation Management Plan* (Groninger and Ruffner, 2004);
- Execute prescribed burns between 1 October and 30 April per IDNR policy;
- Avoid burns located in the vicinity of forested habitat when wind conditions would result in smoke entering the forested area to prevent impacts to forest nesting birds and roosting bats;
- Take all necessary precautions to avoid inhaling smoke or contact of smoke with skin and clothing when burning in areas with a high abundance of poison ivy because burning produces soot particles which carry the oil into the air;
- Obtain approval annually for each site specific prescribed burn plan.

Firebreaks: Firebreaks are an essential management tool for both prescribed burning and wildfire prevention. Wildfires could result from the use of pyrotechnic devices or tracer fire. In an active effort to confine fires to the smallest area possible, firebreaks will surround active impact areas and ranges where these activities might occur. However, natural firebreaks, such as South Kickapoo Creek and its tributaries, occur within the MTA. Manmade or artificial firebreaks on site include the cleared boundary of the range fans, and the interior trail network. Implementation of prescribed burns and the natural firebreaks within the property boundary will reduce the likelihood of wildfires to spread into nearby residences and farms. It is recommended that activities that have a high potential to create wildfires be conducted near natural firebreaks.

Fire Prevention and Reporting: The local fire department and IDNR will be contacted if a fire can not be contained by MTA personnel. Wildfire prevention, detection, and control are interrelated. Wildfires at the MTA could result from the use of pyrotechnic devices. Fire

protection procedures for troops using the MTA are to be specified in the *MTA Fire and Vegetation Management Plan* and the MTA's SOP.

13.5 Inventory and Monitoring

An inventory of flora at the MTA was conducted in 1995, and a follow up survey is planned during this implementation period (2008-2013).

13.6 Projects

Projects pertaining to forest, grassland, and fire management include:

- Project 1: Comprehensive Timber Stand Improvement
- Project 2: Comprehensive Burn Plan
- Project 3: Forest Inventory
- Project 4: Trail and Access Point Expansion
- Project 5: Trail Maintenance
- Project 6: Invasive Species Control
- Project 7: Track INRMP Project Success through RTLA
- Project 10: Community Outreach
- Project 11: Burn Education
- Project 12: Purple Martin and Bat Houses
- Project 15: Community Outreach and Prairie Restoration
- Project 16: Power Line Right of Way Prairie Restoration Plan
- Project 17: Noise Modeling
- Project 18: Pollinator Management
- Project 20: Forest Management for Reptiles and Amphibians

Additional project information is provided in Chapter 10 and Table 13.

13.7 Military Mission Considerations

ILARNG will coordinate required land management and training activities. The MTA staff will coordinate this activity to ensure conflicts with military mission do not arise. Additionally, the ILARNG will coordinate land management activities with the IDNR. The site is becoming encroached with undesirable woody species, including sugar maple and exotic species, which are reducing accessibility of the site for troop training. To ensure "no net loss" of military training capability, TSI projects and prescribed burns are planned for this implementation period.

13.8 Additional Information

Refer to the article, "Status of Reforestation Technology in Southern Illinois" authored by W.C. Ashby from Southern Illinois University at Carbondale for additional reforestation information and references pertaining to southern Illinois and reforestation on reclaimed mine land.

Internet addresses are provided in Appendix I that address forest, grassland, and fire management issues.

14.0 FISH AND WILDLIFE MANAGEMENT

14.1 Overview

This section discusses the management of terrestrial habitats and wildlife at the MTA. Six predominant habitats are present at the MTA that include: managed and disturbed areas, upland and lowland forest, food plots managed by the IDNR, restored prairie and grasslands, scrub shrub, and aquatic (streams, ponds and lowlands) (PTS, 1996). Additional information pertaining to terrestrial habitats and wildlife at the MTA is included in Chapter 9.

The MTA has no areas designated as critical habitat by the USFWS. Critical habitats are areas believed by the USFWS to be essential to the conservation of a listed species and that may require special management considerations or protection.

14.2 Compliance

Protection and management of fish and wildlife resources will be conducted in accordance with federal laws and regulations, EOs, DoD Manual 4715.03, USFWS regulations and agreements, and other applicable laws and guidance from higher headquarters. Laws and regulations pertaining to fish and wildlife management include:

- Bald Eagle Protection Act (16 USC §668a-d);
- Endangered Species Act of 1973 (ESA; 16 U.S.C 1536);
- CWA: Section 401 Water Quality Certification, 1986 (33 USC §1341);
- EO 11990, Protection of Wetlands;
- EO 11988, Floodplain Management
- Federal Water Pollution Control Act: Section 404, as amended by the CWA of 1977 (33 USC §1251);
- Fish and Wildlife Conservation Act (USC §2901 et seq.);
- Fish and Wildlife Coordination Act, as amended (16 USC §661 et seq.);
- MBTA, as amended (16 USC §703-712);
- NEPA (42 USC §4321 et seq.);
- SAIA (16 USC §670a-o);
- Illinois Water Quality Standards (35 IAC 302);
- Fish and Aquatic Life Code (515 ILCS 5/); and
- Wildlife Code (520 ILCS 5/).

These laws and regulations are described in Appendix H.

Incidental taking of migratory birds is regulated in 50 CFR 21, *Migratory Bird Permits*. Part 21.15, *Authorization of Take Incidental to Military Readiness Activities*, effective 28 February 2007, allows incidental take by DoD in the course of military readiness activities under certain conditions specified in Paragraph (a) *Take Authorization and Monitoring*:

- (1) Except to the extent authorization is withdrawn or suspended pursuant to paragraph (b) of this section, the Armed Forces may take migratory birds incidental to military readiness activities provided that, for those ongoing or proposed activities that the Armed Forces determine may result in a significant adverse effect on a population of a migratory bird species, the Armed Forces must confer and cooperate with the USFWS to develop and implement appropriate conservation measures to minimize or mitigate such significant adverse effects.

- (2) When conservation measures implemented under paragraph (a)(1) of this section require monitoring, the Armed Forces must retain records of any monitoring data for five years from the date the Armed Forces commence their action. During INRMP reviews, the Armed Forces will also report to the USFWS migratory bird conservation measures implemented and the effectiveness of the conservation measures in avoiding, minimizing, or mitigating take of migratory birds.

14.3 Goals and Objectives

Fish and wildlife goals of the MTA include:

- Maintain and restore natural ecosystems favorable for the production of indigenous fish and wildlife populations;
- Maintain diverse plant and animal life where it does not conflict with the military mission;
- Support an optimal mix of multiple uses, both consumptive and non-consumptive;
- Minimize wildlife-related health risks, safety risks, and environmental damage.

In order to meet the above-specified goals, the following objectives have been established:

- Minimize negative impacts to native ecosystems where practicable;
- Restore impacted lands;
- Reduce forest fragmentation;
- Maintain game species populations that provide recreational harvest opportunities on a sustainable basis;
- Maintain wildlife populations at or below carrying capacity to prevent damage to their habitats; and
- Reduce numbers of dangerous or nuisance wildlife.

14.4 Management Strategies

As co-owners of the MTA property, the IDNR uses the site for wildlife propagation, forestry and prairie restoration, and outdoor recreational opportunities year round, and for upland game hunting (permit-regulated) during the late fall and winter months. During the hunting season, field training is not conducted and the site is also known as the Marseilles Fish and Wildlife Area (DMAIL and IDNR, 1999).

To accomplish the fish and wildlife goals and objectives, the ILARNG will implement management strategies pertaining to general terrestrial habitat management, fish and game population management, and nuisance wildlife and wildlife diseases. Fish and wildlife management strategies are presented in the following subsections.

14.4.1 Fish Management

The two quarry lakes associated with the gravel mining operations will be managed to protect biological communities and shoreline erosion. Fish and aquatic vegetation samples have been conducted periodically in the two quarry lakes. The IDNR is responsible for monitoring fish populations. Fish stocking of desirable species, such as channel catfish (*Ictalurus punctatus*), largemouth bass (*Micropterus salmoides*), bluegill (*Lepomis macrochirus*), and red-eared sunfish (*Lepomis microlophus*), may be needed to maintain healthy populations. Aquatic habitat management is discussed in greater detail in Chapter 15.

The IDNR monitors and controls aquatic vegetation to avoid overgrowth in the lakes. The IDNR and ILARNG will coordinate in regard to the type or use of aquatic vegetation control implemented.

14.4.2 Wildlife Management

Wildlife management involves manipulating various aspects of an ecosystem to benefit chosen wildlife species. The primary terrestrial habitat at the MTA includes approximately 61 percent forested and 38 percent open field. Forests range from dry-mesic and mesic upland forest, and mesic floodplain forest. Open field includes glacial drift hill prairie area, dry-mesic prairie, and successional fields. Management of these habitats generally is focused to benefit indigenous species, particularly threatened and endangered species and game species. The ILARNG will maintain and enhance the terrestrial habitat at the MTA by implementing the strategies listed below.

- Unless required for safety considerations, preserve snags and large trees for cavity-nesting species and for the Indiana bat within the forested areas. Cavity and den trees are vital to support squirrel populations as well as many nesting birds. It is desirable to leave one den tree per acre;
- Perform prescribed burns to enhance native prairie grassland and forest habitat.
- Limit the amount of herbicides used for invasive species control, and use mechanical methods when appropriate.
- Care will be taken to maintain an uneven patchwork of habitat. An uneven burn is desirable for wildlife. Per the IDNR Burn Policy, no more than 50 percent of a given natural community type may be burned annually to protect wildlife habitat.
- When practical, mowing and brush cutting will not be conducted between 15 April and 15 August to minimize disturbance on ground-nesting birds.
- Whenever possible, timber harvest operations will not be conducted between 15 April and 15 August to minimize impacts to forest nesting birds or potential roosting bats.
- Update biological inventories periodically as the occurrence of threatened and endangered species is subject to change over time as a result of either recruitment, identification of additional protected species, or the change in status of species currently present at the MTA.
- Establish bird and bat houses for additional bird and bat habitat in open areas and along forest boundaries to control insects and improve wildlife habitat (see Project 13, Chapter 10).
- Plant trees around food plots to increase concealment for hunters and troops.

14.4.3 Game Management

The MTA is also known as the Marseilles Fish and Wildlife area. During late fall and winter, the IDNR has jurisdiction over the site and it is available to the public for hunting. Traditionally, habitat management at the MTA has been conducted for the following game species: mourning dove, squirrel, ringneck pheasant (*Phasianus colchicus*), northern bobwhite quail (*Colinus virginianus*), eastern cottontail rabbit, American woodcock (*Scolopax minor*), wild turkey (*Meleagris gallopavo*), white-tail deer, red fox (*Vulpes vulpes*), and coyote. Hunting is permitted at the MTA in compliance with federal and state laws. The goal of hunting at the MTA is to facilitate biodiversity and maintain healthy wildlife populations. Details pertaining to the hunting program administered by the IDNR at the MTA (Marseilles Fish and Wildlife Area) are provided in **Section 18.5**.

14.4.4 Nuisance Wildlife and Wildlife Diseases

No wildlife is presently considered a nuisance at the MTA. Large populations of deer are possible at the MTA, which have the potential of causing ecological damage. The IDNR will continue to monitor and control deer populations through the hunting program.

Diseases affecting fish and wildlife may occur on the installation. As outlined in AR 200-1, installation Natural Resources personnel will consult with appropriate experts in the field regarding large-scale fish and wildlife deaths and unnatural behavior occurring on the installation.

14.5 Inventory and Monitoring

Inventory and monitoring of terrestrial habitats, wetlands and aquatic habitats, fish and game populations, non-game populations, threatened and endangered species were conducted as planning-level surveys, as discussed in Section 4.4. Additional surveys are planned within this implementation period.

14.6 Projects

The ILARNG plans to implement the following projects as part of their fish and wildlife management program.

- Project 1: Comprehensive Timber Stand Improvement
- Project 2: Comprehensive Burn Plan
- Project 3: Forest Inventory
- Project 4: Trail and Access Point Expansion
- Project 5: Trail Maintenance
- Project 6: Invasive Species Control
- Project 7: Track INRMP Project Success through RTLA
- Project 8: General Erosion Control and Soil Stabilization
- Project 9: SKC Maintenance
- Project 10: Monarch Butterfly Program
- Project 13: Community Outreach and Prairie Restoration
- Project 14: Power Line Right of Way Prairie Restoration Plan
- Project 15: Noise Modeling
- Project 16: Pollinator Management
- Project 17: Raptor Rehabilitation
- Project 18: Forest Management for Reptiles and Amphibians

Additional project information is provided in Chapter 10 and Table 13.

14.7 Military Mission Considerations

General fish and wildlife management is accomplished in conjunction with the military mission and training activities. Fish and wildlife management generally does not interfere with the military mission. A permit regulated hunting program through the IDNR occurs during the late fall and winter months. During the hunting season, field training is not conducted. However, all these hunting programs are dependent on national security considerations. In the event that heightened security measures are necessary, these hunting programs will be closed with little or no notice. Concealment for hunters and troops conducting training is reduced in some areas

containing food plots. Per the IDNR's W-76-D Plan, trees and shrubs will be planted around the perimeter of these fields to enhance concealment.

14.8 Additional Information

Contact information for fish and wildlife resources within the project boundaries is provided in Appendix I. Internet addresses related to fish and wildlife management are also provided.

15.0 FLOODPLAIN, RIPARIAN ZONE, WETLAND AND AQUATIC HABITAT MANAGEMENT

15.1 Overview

Wetlands and aquatic habitats on-site include South Kickapoo Creek, numerous unnamed tributaries of South Kickapoo Creek, two lakes, seven ponds, and one 0.7 acre wetland (Figure 6). Floodplains are low areas adjacent to streams, rivers, or lakes prone to flooding. Riparian zones are vegetated communities along water bodies and may include both uplands and wetlands. Floodplains and/or riparian zones provide the following benefits:

- Store excess water during flood events;
- Provide shade for fish and other aquatic species;
- Improve water quality by reducing sedimentation;
- Stabilize stream banks;
- Provide quality habitat and wildlife corridors.

No FEMA 100-year or 500-year floodplains occur within the MTA DFIRM - 17099C0575E, dated 7 September 2001).

Wetlands and aquatic habitats are some of the most productive ecosystems, and they often provide migration corridors for a variety of species. The Illinois Interagency Wetlands Policy Act of 1989 (20 ILCS 830), defines a wetland as

“Land that has a predominance of hydric soils (soils which are usually wet and where there is little or no free oxygen) and that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of hydrophytic vegetation (plants typically found in wet habitats) typically adapted for life in saturated soil conditions.”

15.2 Compliance

Riparian and floodplain protection is required by the SAIA, when applicable. In addition, required floodplain management is outlined in EO 11988, *Floodplain Management*. Requirements of this EO include:

- Proposed actions must be evaluated to assess potential adverse effects to the floodplain;
- Alternatives must be considered to avoid adverse effects and incompatible development of the floodplain;
- Agencies or proponents must provide opportunity for early public review of any plans or proposals for actions in floodplains.

Laws, regulations, and executive orders pertaining to wetland and aquatic habitat protection policies include:

- Rivers and Harbors Act of 1899;
- Fish and Wildlife Coordination Act of 1967;
- Land and Water Conservation Fund Act of 1968;
- Federal Water Pollution Control Act as amended by the CWA of 1977 (33 USC §1251);
- EO11988, Floodplain Management;
- EO 11990, Protection of Wetlands;

- NEPA (42 USC §4321);
- SAIA (16 USC §670 *et seq.*)
- Illinois Water Quality Standards (35 IAC 302);
- Illinois Lake Management Program Act (525 ILCS 25/);
- Watershed Improvement Act (505 ILCS 140/);
- Illinois Interagency Wetlands Policy Act of 1989;
- Flood Control Act of 1945(615 ILCS 15/); and
- Rivers, Lakes, and Streams Act (615 ILCS 5/).

These laws and regulations are discussed in Appendix H.

The primary vehicle of wetlands protection and regulation is Section 404 of the CWA, which allowed the USACE to establish a permit system to regulate the dredging and filling of materials in “waters of the U.S” (Mitch and Gosselink, 1993). The USACE prohibits the discharge of dredged or fill material into “waters of the U.S.”, which includes jurisdictional wetlands, without a permit. The type of permit required depends on the extent of disturbance to the subject wetland or waterbody.

Wetland protection is also required by the SAIA and EO 11990, which “requires agencies to take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the beneficial values of wetlands.” In addition, appropriate wetland management and inventory is outlined in AR 200-1, and potential wetland impacts are a consideration of 32 CFR 651 when considering projects for analysis under NEPA. The Illinois Interagency Wetlands Policy Act of 1989 established the IDNR as the direct regulatory authority over wetlands in Illinois. Peripheral authority is provided in the Rivers, Lakes, and Streams Act, which provides the IDNR with regulatory authority over activities in floodplains.

CWA Permitting: Physical disturbances to wetlands and disturbances to both perennial and intermittent streams are regulated by the Federal CWA under Sections 404 and 401. Section 404 gives the USACE primary regulatory responsibility for permitting issues. Most proposed activities within streams or wetlands (such as filling, dredging, or clearing of ditches) require either a general or individual permit. The USACE will be consulted prior to any activities that could potentially affect wetlands or water bodies to determine permitting requirements. General or individual permits may be required for such activities.

General permits issued by the USACE authorize various types of development projects in wetlands and other waters of the U.S. Activities authorized under general permits are considered similar in nature, causing minimal adverse effects to the environment. The USACE uses general permits for certain activities to minimize regulatory burdens and administrative costs by allowing landowners to proceed without having to obtain individual permits in advance. One type of general permit is known as a Nationwide permit; there are 44 Nationwide permits covering a variety of issues. Nationwide permits authorize certain activities and are valid only if permit conditions are met.

In general, individual permits are required for disturbances that exceed thresholds for disturbances covered by general permits. Permitting requirements vary depending on type, location, and extent of disturbance. A Section 404 individual permit, issued by the USACE, is often required prior to impacting streams or jurisdictional wetlands. Generally, whenever a Section 404 permit is required, a Section 401 Water Quality Certification issued by the State of Illinois is also required.

The Rivers, Lakes and Streams Act requires the IDNR to regulate construction within public bodies of water and within the floodways of streams draining ten square miles or more in rural areas and one square mile or more in urban areas. Construction in the floodway of the rivers, lakes and streams of the state requires a permit from the IDNR's Division of Water Resource Management. Projects such as utility crossings, boat docks, maintenance dredging, outfalls, building additions and bridge replacements that are limited in scope and have little potential to obstruct flood flows are covered through statewide permits. A total of 14 specific statewide permits can be applied for through IDNR.

15.3 Goals and Objectives

It is the goal of the ILARNG to avoid adverse impacts to floodplains and riparian zones to the extent possible. It is also the goal of the ILARNG to avoid adverse impacts to wetlands and aquatic habitats, as these are some of the most productive ecosystems available. It is the intent of the ILARNG to proactively manage for wetlands during the environmental planning process, thereby mitigating potential impacts by avoidance. A second goal is to achieve "no net loss" of values and functions of wetlands. Currently, only one 0.7 acre wetland was delineated during the MTA jurisdictional wetland survey (NRCS, 1997). This wetland is restricted from all activities excluding foot traffic.

Management objectives to achieve these goals include:

- Maintain or enhance the quality of riparian, wetland, and aquatic habitat at the MTA.
- Maintain current maps of wetlands at the MTA.

15.4 Management Strategies

The ILARNG will avoid development or management practices that could adversely affect the attenuation capacity of floodplains at the MTA. While no FEMA floodplains are mapped on the MTA property, South Kickapoo Creek and its many unnamed tributaries are located throughout the installation. Only one 0.7 acre wetland has been delineated at the MTA. Troop training is restricted in this area.

The following strategies have been developed to protect floodplains, riparian zones, wetlands and aquatic habitats at the MTA.

- Avoid disturbance of wetlands and aquatic habitats where practicable;
- Monitor hydric soil areas for wetlands;
- Prevent erosion and sedimentation into wetlands and aquatic habitats;
- Protect South Kickapoo Creek and tributaries by protecting the riparian zone and stream banks through good forest, land, and wetland management;
- Restrict vehicles from within 30 feet of streambanks or lakes except where established stream crossings exist;
- Maintain and enhance the vegetative cover surrounding water bodies to protect aquatic habitat;
- Evaluate potential adverse effects of proposed training to the floodplain; alternatives must be considered to avoid adverse effects and incompatible development of the floodplain (EO 11988);
- Use signs prohibiting vehicle access around wetlands and aquatic habitats that are experiencing training encroachment;

- Prevent surface water pollution by ensuring environmental plans (for example, Storm Water Pollution Prevention Plans [SWPPP]) are followed;
- Monitor roads adjacent to wetlands to ensure erosion and sedimentation are not occurring;
- Provide training units with written guidance for natural resources protection;
- Ensure that a NEPA review is used to identify wetland conflicts with planned actions and projects. If necessary, projects with potential impacts will be referred to the USACE to determine if jurisdictional wetlands are implicated and to establish mitigation procedures;
- Require informal consultation with environmental personnel prior to any disturbances to wetlands or water bodies;
- Manage invasive species, (for example, phragmites) to promote the establishment of desirable native wetland species.

15.5 Inventory and Monitoring

Water quality monitoring and aquatic resource inventories are important to measuring ecosystem health at the MTA. Land-based environmental degradation eventually affects water quality and aquatic ecosystems. A South Kickapoo Flood Study was conducted for the ILARNG that mapped and classified all stream segments within the MTA property. In addition, the field effort included a survey of channel cross-sections and measurements of hydraulic structures within the downstream segment (an approximate 1-mile area) of South Kickapoo Creek (AMEC, 2004). A jurisdictional wetland survey of the MTA was conducted by the NRCS (1997) for the ILARNG to identify wetland resources. The IDNR has monitored fish populations in the past at the MTA.

Because the South Kickapoo Creek is an intermittent stream, no long-term surface or ground water quality studies have been conducted at the MTA. PTS conducted a limited survey of water quality on South Kickapoo Creek, the two lakes and in one of the larger ponds located in the northern portion of the training area. These surveys were conducted in the summer and fall of 1995. A copy of the report is on file in the Facilities Division of DMAIL. The data from these studies are inadequate and incomplete to describe the water quality in the ponds and lakes. Additional water quality surveys will be needed to describe water quality on the MTA.

15.6 Projects

The following projects are part of the floodplain, riparian zone, wetland, and aquatic habitat management program.

- Project 1: Comprehensive Timber Stand Improvement
- Project 3: Forest Inventory
- Project 4: Trail and Access Point Expansion
- Project 5: Trail Maintenance
- Project 6: Invasive Species Control
- Project 7: Track INRMP Project Success through RTLA
- Project 8: General Erosion Control and Soil Stabilization
- Project 9: SKC Maintenance
- Project 10: Community Outreach
- Project 12: Purple Martin and Bat Houses
- Project 17: Noise Modeling
- Project 19: Raptor Rehabilitation Program
- Project 20: Forest Management for Reptiles and Amphibians

Additional project information is provided in Chapter 10 and Table 13.

15.7 Military Mission Considerations

Protection of floodplains, riparian zones and wetlands limits land area for training exercises. However, their protection is important to the ecological integrity of ecosystems at the MTA. Responsible stewardship of fish and wildlife resources is imperative to good public relations. Non-permitted impacts to floodplains and wetlands may result in CWA violations, potentially resulting in fines and other penalties, which may ultimately compromise the integrity of the MTA as a viable training installation.

15.8 Additional Information

Refer to Appendix I for Internet addresses that provide additional information relevant to floodplain and wetland habitats.

16.0 INVASIVE SPECIES, EXOTIC SPECIES AND NOXIOUS WEED MANAGEMENT AND INTEGRATED PEST MANAGEMENT (IPM)

16.1 Overview

Invasive and exotic species may include plants, insects, or animals. An **invasive** species is defined as “an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.” An alien (or **exotic**) species is defined as a “species including its seeds, eggs, spores, or other biological material capable of propagating that species that is not native to that ecosystem (EO 13112)”. Because of their invasive capacity, many exotic species have the ability to spread rapidly through ecosystems since their natural predators are often not present. Such species often retard natural succession and reforestation and generally cause a reduction of biological diversity in natural ecosystems.

Noxious weeds are defined as “any living stage (including but not limited to, seeds and reproductive parts) of any parasitic or other plant of a kind, or subdivision of a kind, which is of foreign origin, is new to or not widely prevalent in the United States, and can directly or indirectly injure crops, other useful plants, livestock, or poultry or other interests of agriculture, including irrigation, or navigation or the fish and wildlife resources of the United States or the public health (Federal Noxious Weed Act of 1974).”

Several plant species were designated exotic weeds in the State of Illinois under the Illinois Exotic Weed Control Act of 1987, and are prohibited in Illinois for commercial sale. Species designated in Section 3 of this Act include: Japanese honeysuckle (*Lonicera japonica*), multiflora rose (*Rosa multiflora*), common buckthorn (*Rhamnus cathartica*), glossy buckthorn (*Rhamnus frangula*), saw-toothed buckthorn (*Rhamnus arguta*), dahurian buckthorn (*Rhamnus davurica*), Japanese buckthorn (*Rhamnus japonica*), Chinese buckthorn (*Rhamnus utilis*), and kudzu (*Pueraria lobata*).

IPM is the use of multiple techniques in a compatible manner to avoid damage and minimize adverse environmental affects while obtaining control of target pests.

16.2 Compliance

Laws and regulations pertaining to invasive and exotic species and pest control include the following (see also Appendix H):

- Federal Noxious Weed Act of 1974 (7 USC §2801 et seq.);
- Federal Insecticide, Fungicide, and Rodenticide Act (7 USC §136);
- Federal Pest Plant Act (7 USC §150a et seq.);
- EO 13112, Invasive Species;
- AR 420-76, Pest Management, 3 Jun 86
- Harmful Aquatic Organisms Act (92 SB0957);
- Illinois Seed Law (505 ILCS 110/);
- Insect Pest and Plant Disease Act (505 ILCS 90/);
- Illinois Exotic Weed Act (525 ILCS 10/);
- Illinois Pesticide Act (415 ILCS 60);
- IDNR Tree Cutting Policy and Procedures (1 June 2006);
- IDNR Prescribed Burns Policy and Procedures (1 January 2006).

16.3 Goals and Objectives

It is a goal of the ILARNG to restore and protect natural ecosystems at the MTA where such efforts do not conflict with the military mission. To help accomplish this goal, the ILARNG will take actions when feasible to detect, control, and/or eliminate to the extent possible invasive and exotic species at the MTA. It is also a goal of the ILARNG to eliminate pests using environmentally and economically sound means. Whenever possible, the goal of IPM is to utilize non-chemical procedures to control pests, including both invasive and exotic plant and animal species.

The ILARNG management objective is to use IPM methods and strategies. Typically, a combination of the following IPM techniques is required to resolve a problem on a sustained basis:

- *mechanical control*, which alters environments in which pests live, traps or removes pests (for example, glue boards and live-traps) from where they are not wanted, or excludes pests from where they are not wanted (for example, screening);
- *cultural control*, which manipulates environmental conditions to suppress or eliminate pests (for example, removal of food scraps or spreading manure on fields);
- *biological control*, which uses predators, parasites, or disease organisms to control pests (for example, *Gambusia* fish to eat mosquitoes or triploid grass carp to remove aquatic weeds);
- *chemical control*, which relies on pesticides and/or herbicides to kill pest and/or undesirable species of plants;
- *natural control*, which includes prescribed fire.

16.4 Management Strategies

A statewide IPM Plan for the ILARNG was updated in 2013 that applies to all ILARNG facilities. This Plan describes the installation's pest management requirements, outlines the resources necessary for surveillance and control, and describes the administrative, safety, and environmental requirements of the program. Pests detailed in the plan include weeds and other unwanted vegetation, mosquitoes, other miscellaneous insects, spiders, mice, and miscellaneous vertebrate pests such as skunks, raccoons and squirrels. The statewide IPM Plan includes pest management strategies specific to the MTA, as referenced in Chapter 16 of this updated INRMP. Information on invasive species management, pesticide and prescribed burn use will be included in the statewide plan revision. An IPM Plan SOP was approved in July 2013.

The task of controlling invasive and exotic species and noxious weeds is often expensive, lengthy, and risky because total eradication is required to prevent reestablishment. However, in accordance with laws and regulations pertaining to the management of these species, the ILARNG will work to prevent the introduction of these species and take measures to control them in an economically and environmentally sound manner. General management strategies include:

- Prohibit the use of invasive and exotic plants for landscaping or other purposes. Implement BMPs to minimize land disturbances that promote invasion, and re-vegetate disturbed areas with native species.
- Increase biodiversity to properly compete with invasive species.

- Control invasive and exotic species and noxious weeds through early detection, isolation of infested areas, and control of individual plants with physical, chemical or mechanical means, depending on the species. Once established, an integrated approach to control will be necessary to minimize the damage.
- Use pesticides in compliance with AR 200-1, the Illinois Pesticide Act (415 ILCS 60), and the ILARNG Integrated Pest Management Plan.
- Avoid aerial or broadcast application of herbicides and pesticides to prevent adverse impacts native plants and wildlife. Use basal application and spot treatment instead.

The use of chemicals to control invasive and exotic species can hinder an installation's efforts to reduce usage of herbicides and pesticides. Therefore, it is important to prevent the initial spread of invasive and exotic species and address the spread of such species as early as possible to reduce the amount of required herbicide and pesticide applications. The ILARNG will evaluate the threat of invasive species as well as the environmental impacts of herbicide usage (if required) to the environment prior to implementing any eradication and/or control program. The USFWS requests that the ILARNG coordinate the types of herbicides and pesticides used for invasive species management to ensure that wildlife are not adversely impacted.

The ILARNG will coordinate any eradication and/or control program efforts with the IDNR. In addition, IDNR Tree Cutting and Prescribed Burn Policies and Procedures will be adhered to during these types of activities (see Appendix H for a copy of these policies)

16.4.1 Invasive and Exotic Species and Noxious Weeds

Flora surveys were conducted at the MTA in 1995 that identified several invasive and noxious species on site (Jones, 1996). Approximately 15 percent of the species observed were considered introduced species and/or species new to La Salle County (see Appendix F). While not all invasive, non-native plant species pose a direct threat to native flora, many are highly invasive problem species. No species observed were listed on the Federal Noxious Weed List, however two were listed on the Illinois noxious weed list and 11 species are considered priority species by the Illinois Nature Preserves Commission (INPC). Four species have been identified as ILARNG high priority species and an additional four are noted as IDNR priority species. **Table 12** provides the list of these species.

Invasive plant species that have been identified at the MTA and are of particular concern to the ILARNG because of their abundance and ability to hinder training operation include poison ivy, black locust, musk thistle, and phragmites. While a native species of the U.S., poison ivy, in particular, is a highly problematic pest at the MTA. Phragmites was not identified in the 1995 vegetation surveys; they are newly introduced species. While controlling, monitoring, and managing all species in Table 12 will be a priority, the four species discussed in greater detail above are of a higher priority for control and/or eradication on the MTA. **Sections 16.4.1.1 – 16.4.1.12** provide species information and management suggestions

Common name	Scientific name	Illinois Noxious Weed	INPC Priority	ILARNG Priority	IDNR Priority
Autumn Olive	<i>Elaeagnus umbellata</i>		X		
Black Locust	<i>Robinia pseudoacacia</i>		X	X	
Bush Honeysuckle	<i>Lonicera</i> spp.		X		X
Canada Thistle	<i>Cirsium arvense</i>	X	X		X
Fescue	<i>Festuca pratensis</i>		X		
Garlic Mustard	<i>Alliaria petiolata</i>		X		
Multiflora Rose	<i>Rosa multiflora</i>	X	X		X
Musk Thistle	<i>Carduus nutans</i>			X	
Phragmites	<i>Phragmites australis</i>			X	
Poison Ivy	<i>Toxicodendron radicans</i>			X	
Quaking Aspen	<i>Populus tremuloides</i>		X		
Siberian Elm	<i>Ulmus pumila</i>		X		
Sweet Clover	<i>Melilotus officinalis</i>		X		
Trailing Crown Vetch	<i>Coronilla varia</i>		X		X

Source: Jones, 1996; INPC 2002, 2003, 2004, 2005, 2007

16.4.1.1 Autumn Olive

Autumn olive, a nitrogen-fixing woody shrub, typically occurs within disturbed areas, successional fields, pastures, and roadsides where it crowds out other native vegetation. It has been observed in varying habitats from prairies to open woodlands to forest edges; however it is seldom noted in heavily wooded areas or very moist sites. Currently, there are no restrictions on the sale or use of autumn olive in Illinois (INPC, 2002).

Autumn olive shrubs can grow to heights as great as 20 feet. The leaves are generally oval in shape, approximately one to three inches long, and entire (lack teeth). The upper surface of leaves is dark green to grayish-green in color, while the lower surface is covered with silvery white scales, an eye-catching characteristic that can be seen from a distance. Flowers and fruits develop normally after 3 years of age. Flowers are small and light yellow, and bloom in late April and May. Small (less than 1/4 inch) pink or red fruits are produced annually as well. Up to 8 pounds of fruit can be produced by a single shrub.

Birds are the primary mode of dispersal, although raccoons, skunks, and opossums are known to feed on the fruit. Once established, this species is highly invasive and difficult to control. Burned, mowed, or cut plants will resprout vigorously.

Control and Management: The most effective means of controlling and eradicating autumn olive is a combination of mechanical and chemical means. Pruning or cutting plants to the ground level alone results in a thicker stem base and denser branches. Only younger plants can be controlled solely through mechanical means. Younger sprouts and seedlings can be hand pulled in the spring during moist conditions by removing the entire root system as well as the above ground portion of the plant. Prescribed burning has been found to be ineffective as well.

Recommended Management: For removal of well-established autumn olive shrubs, a dual method of cutting and herbicide application is recommended. The INPC's Vegetation Management Guidelines recommends cutting autumn olive shrubs down to the main stem and applying herbicide directly to the stump to prevent resprouting and to kill the plants root system. Typically a 50 to 100 percent concentration is recommended for stump applications. Glyphosate herbicide solutions (that is active ingredient glyphosate) with a 10 to 20 percent concentration have been found to be effective in eradicating autumn olive, thus it is recommended these lower concentrations be employed to reduce effects of this non-selective herbicide on nearby desirable plant species. Glyphosate can be applied with a low-pressure hand-held sprayer or by wiping each stump with herbicide using a sponge applicator. A sponge applicator is recommended to eliminate harm to native plant species in the vicinity. This method of control is most effective during the late growing season (July-September) or the dormant season.

Autumn olive shrubs are found at the MTA, but are not currently a problem. This species will be monitored closely. If populations start to propagate, control and management measures will be implemented.

16.4.1.2 Black Locust

Black locust occurs in a variety of habitats including upland forests, prairies, and savannas. Black locust is native to the southeastern U.S. and parts of southern Illinois, Indiana, and Missouri. However, this species poses a serious threat to dry and sand prairies, oak savannas, and upland forest edges outside of its historic range. Thus, several states classify it as an invasive species, including the INPC (NRCS, 2004). Black locust has the ability to create dense thickets, crowding out all other species. This species has rapid juvenile growth and out competes native plant species in its vicinity.

Black locust was originally planted for its nitrogen-fixing capabilities as well as for nectar for honeybees and wooden fence posts. It has pinnately compound leaves, with one leaflet at the tip. A pair of short, sharp thorns occurs where the leaf is attached to the strong, zigzag stem. This species can grow rapidly and reach heights up to 100 feet. Fragrant, small white flowers develop into clusters in May and June, and eventually develop into fruit pods as long as 4 inches in length. Seeds are toxic.

Reproduction generally arises spontaneously from their extensive root systems, thus these trees are interconnected and form groves of trees with the oldest trees in the center. In Illinois, this aggressive plant poses a potential threat to all upland natural areas and is an especially serious management problem on hill prairies, sand prairies, and savannas (INPC, 2004).

Control and Management: Several methods have been proven ineffective in controlling black locust. Girdling kills the stem of the black locust, but results in the formation of additional root suckers. Mowing around them can promote seed germination. A combination of mowing and burning is only a temporary solution, as this species reproduces through its extensive root system. Recovery can be swift as a result of its ability for rapid growth. Because mechanical methods are unsuccessful, management has concentrated on chemical controls, which still provide only inconsistent success. Typically follow up treatments are necessary.

Recommended Management: The black locust stems will be cut at the base and the stump will be treated with undiluted or diluted Garlon 3A (triclopyr) at a rate of 50 percent water. Application using a sponge applicator to wipe each stump is recommended, however a hand held sprayer can be utilized when taking necessary precautions to avoid neighboring plants. Herbicide application can be done during any season of the year, but application during the dormant season reduces the potential for injury to non-target species (INPC, 2004).

Black locust trees are highly abundant at the MTA and hinder training operations. This species will be not only monitored, but control and management measures will also be employed as a means to control the further spread of this invasive species.

16.4.1.3 Bush Honeysuckle

Bush honeysuckles represent four honeysuckle shrubs: tartarian honeysuckle (*Lonicera tatarica*), morrow's honeysuckle (*Lonicera morrowii*), belle honeysuckle (*Lonicera bella*), and amur honeysuckle (*Lonicera maackii*). Bush honeysuckles have a broad tolerance to a variety of moisture regimes and habitats including lake and stream banks, wetlands, prairie, and upland forest communities. The species can be differentiated based on the presence of hair on leaves, flowers, and stems. In addition, length and color of flowers can vary among species. Fruits are usually red to yellow. Birds are the main contributors of the spread of these species.

Bush honeysuckles compete with native species by shading them. These shrubs have a longer leaf out period than most native species. In addition, they appear to produce an allelopathic chemical that enters the surrounding soil and inhibits native plant growth (INPC, 2007).

Control and Management: Bush honeysuckle can be controlled through a variety of measures including prescribed burning, hand pulling of seedlings, cutting, herbicide, and biological controls (for example, native ladybug beetles). However, several methods only relieve infestation temporarily. Prescribed burning kills seedlings and the top of mature plants, but bush honeysuckles will readily resprout. However, burning annually or biennially for five years has proven effective in some cases. Pulling seedlings including the entire root system is necessary to prevent resprouting. In addition, remaining open soil that results from pulling seedlings may provide an inlet for additional exotic species to invade (INPC, 2007).

Recommended Management: Bush honeysuckle will be cut and chemically treated with glyphosate (refer to Recommended Management sections above). Herbicide application is most effective in late summer, fall, or the dormant season for bush honeysuckle. However, herbicide application in late October and mid-November (depending upon the location within the state) when many if not all native species are dormant, but bush honeysuckle is still actively growing, reduces damage to nontarget species.

The two varieties of bush honeysuckle observed during the 1995 inventory include belle honeysuckle and amur honeysuckle. Bush Honeysuckle is presently a problem at the MTA and is inhibiting training. Control measures are warranted presently.

16.4.1.4 Canada Thistle

Canada thistle (*Cirsium arvense*) is a tall herb with deep, wide spreading, horizontal roots. Numerous small, compact, rose-purple or white flowers appear on upper stems from June to September. Canada thistle is distinguished from other thistles (*Cirsium* spp.) by its deep-running perennial rootstocks, more slender stems, and small compact heads.

The preferred habitat of this species includes disturbed area, such as old field, fence lines, and roadsides, and sometimes wet areas along stream banks and ditches. Introduction to new areas occurs mostly by windborn seed or sometimes by run-off in ditches. As these species increase in an area, the species diversity typically declines (INPC, 2004).

Control and Management: Prescribed fire in early spring, has been found to increase populations. Repeated and frequent pulling or hand-cutting of individual plants will eventually starve underground stems. Cutting or pulling should be done at least 3 times each season, in June, August, and September. Spot herbicide application can also be an effective control method.

In highly disturbed areas with heavy infestations, mowing has been found to be an effective control method when implemented over several years. Mowing should be done as close to the ground as possible when Canada thistle is in full bloom. Remove cut flower heads to prevent the spread of seeds over the site (INPC, 2004).

Recommended Management: It is recommended that spot herbicide application be used for controlling this Illinois noxious weed as it has been found to be the most reliable method. Use a 2.5 percent solution of glyphosate herbicide when plants are in late bud stage or early bloom stage (usually June) and root reserves are lowest.

Canada thistle is found at the MTA, but is not currently a problem. This species will be monitored closely. If populations start to propagate, control and management measures will be implemented.

16.4.1.5 Fescue

Fescue (*Festuca spp.*) is a tall, coarse grass with short creeping rootstocks. This species grows in heavy clumps with erect stems of 2 to 5 feet. Fescue emerges early in spring and often forms new growth in fall after the seed matures in July and August. Grasses, in general, are fairly difficult to identify. Fescue will be accurately identified before attempting any control measures.

Fescue has been spread widely by cultivation throughout most of the U.S. and southern Canada. It now occurs throughout Illinois, but is particularly common in southern counties where there is much pasture land. This grass occurs in a variety of disturbed habitats including pastures, abandoned fields, roadsides, grazed woods, and along railroad tracks. It can tolerate a wide range of moisture conditions and is common along stream banks (INPC, 2002).

Control and Management: Prescribed burns have been effective at controlling this species when implemented annually over an approximate three-year period. If repeated fire does not reduce fescue populations, a 1 to 2 percent solution of glyphosate herbicide should be applied in early spring or late autumn when fescue is green, but native species are dormant. This control method can be used for all levels of infestation and habitat quality.

Hand pulling, mowing, prescribed fire and most herbicides during the dormant season are considered ineffective methods.

Recommended Management: It is recommended that fescue populations be managed initially using prescribed burns. Prescribed burns will be conducted in early spring to avoid adverse impacts on ground nesting birds. If areas become heavily infested and fire no longer can control populations, herbicide control methods will be implemented.

Fescue is found at the MTA, but is not currently a problem. This species will be monitored closely. If populations start to propagate, control and management measures will be implemented.

16.4.1.6 Garlic Mustard

Garlic mustard (*Alliaria petiolata*), a biennial herb, has a characteristic fragrance of garlic from all parts of the plant making it easily distinguishable from other woodland mustard plants. This scent gradually dissipates by autumn. Plants usually contain numerous small white flowers with four petals. In northern Illinois, garlic mustard usually blooms in May and is the only tall, four-petaled, white flowering plant. Seeds germinate in early spring, young plants overwinter as basal rosettes, and adults bloom from May to June the following year. Each plant dies after producing seed. Seeds have a 20 month dormancy period and do not germinate until the second spring after ripening.

The preferred habitat of this species is shaded areas within upland and floodplain forests, savannas, and especially disturbed sites. Because this species is capable of dominating the ground layer in many areas, it can pose a severe threat (INPC, 2007).

Control and Management: Prescribed burns in the fall or early spring have been effective at controlling this species in oak forests. When using prescribed burns, fires will be of sufficient intensity to burn through the leaf litter. Cutting flowering stems has also proven successful; however cut stems would need to be removed to prevent seed germination. Spot application of 2 percent glyphosate (refer to Recommended Management sections above) on the foliage of individual plants is effective during spring and fall when most native vegetation is dormant, but garlic mustard remains green. Herbicide will be applied when air temperatures are above freezing (INPC, 2007).

Recommended Management: It is recommended that garlic mustard small populations be managed by hand pulling. In areas of larger infestation, prescribed burns, when possible, will be implemented first. Herbicide application will only be used if other control methods are unsuccessful.

Garlic mustard is found at the MTA, but is not currently a problem. This species will be monitored closely. If populations start to propagate, control and management measures will be implemented.

16.4.1.7 Multiflora Rose

Multiflora rose, named for its white flower clusters, occurs in successional fields, pastures, and roadsides. It also may occur in dense forests, particularly near natural disturbances such as treefall gaps and along streambanks. It has a wide tolerance for soil, moisture, and light conditions, however it does not grow well in standing water. Multiflora rose readily invades prairies, savannas, open woodland, and forest edges. It is a thorny, bushy shrub that can form impenetrable thickets or "living fences" and smother out other vegetation. It is a serious pest species throughout the eastern US.

Multiflora rose is a thorny, bushy shrub that can reach 15 feet in height. Leaves emerge alternately on the stems and are divided into 5-11 leaflets (usually 7-9). Each leaflet is broadly oval and toothed along its margin. The fruits are small, firm, red hips that may remain on the plant well into winter. Seeds from plants can remain viable in the soil for 10-20 years.

Plants typically emerge near previous plants that dispersed seeds into the soil; however birds and mammals often consume the red hip fruit and disperse them over greater distances.

Multiflora rose is categorized as an exotic weed under the Illinois Exotic Weed Control Act of 1987. As such, the sale or planting of this species within Illinois is prohibited (INPC, 2003).

Control and Management: Mechanically removing individual plants by pulling, grubbing, or removing is successful when the entire plant, including the roots, is removed. This method is highly intensive and inefficient when dealing with a large infestation. Prescribed burn and herbicide treatments are suggested.

Recommended Management: Prescribed burns can keep populations from further invasion when administered regularly. Therefore, it is recommended that management of this species through burning be employed to prevent any additional herbicide usage. If additional means of control are needed, application of a 10 to 20 percent solution of glyphosate herbicide on cut stems can also prove effective.

Multiflora rose is found at the MTA, but is not currently a problem. This species will be monitored closely. If populations start to propagate, control and management measures will be implemented.

16.4.1.8 Musk Thistle

Musk thistle (*Carduus nutans*), a European native, is found in waste ground, old fields, pasture, grasslands, and along rights-of-way. It can proliferate even in dense native communities. They are of particular concern in agricultural areas causing economic loss, as it competes with crops. Musk thistle has two life stages. During the first year, basal rosettes stay green over winter killing plants beneath it. An upright flowering stalk grows in the second year with smaller spiny leaves and purple flower heads. Flowering is unpredictable. It can occur biennially, as a winter annual, or an annual, and it occurs anytime from early June through October. Seeds fall in the vicinity of the parent plant and can remain viable for up to 10 years (Missouri Department of Conservation [MDC], 1997).

Control and Management: Mowing, brush hogging, and spraying thistles in full bloom is ineffective, and cutting stems or herbicide application does not kill the plant. Burning is not successful because the heat is not great enough to kill the thistle's root crown. Fire-scarred plants can flower and fruit. Herbicide treatment in its first life stage (the rosette stage) provides the best means of controlling musk thistle spread.

Recommended Management: Spot treatment of musk thistle during the first year before it forms into an upright flowering stalk is recommended. Crossbow herbicides are recommended.

Musk thistle is highly abundant at the MTA and hinders training operations. This species will not only be monitored, but control and management measures will also be employed as a means to control the further spread of this invasive species.

16.4.1.9 Phragmites

Phragmites or common reed grows along the drier more elevated portions of brackish and freshwater marshes, riverbanks, and lakeshores, and flourishes in sunny wetland habitats. This species has become abundant in disturbed, altered, and polluted soils nearby roads, ditches, and dredged areas. Common reed is a tall perennial wetland grass that varies in height from 3 to 13 feet. This plant spreads by sprouting rhizome fragments and seeds. The foliage is gray-green during the growing season, with purple-brown plumes appearing by late June. In the fall, the plant turns tan and leaves drop off and accumulate on the ground prohibiting growth of desirable native wetland species. Invasion of this plant typically results in a loss of wetland biodiversity and a reduction in food and shelter for wildlife. Phragmites typically spreads vegetatively by creeping rhizomes (Virginia National Heritage Preserve [VANHP], 2004).

Control and Management: Minimizing water pollution and land disturbance prevents common reed invasion. Once this plant invades, it is difficult to eradicate. Control treatment might include spraying herbicides, mowing, dredging, flooding, draining, and grazing. Phragmites penetrates the soil and reproduces through rhizomes, thus mechanical removal is not only expensive, but ineffective unless underground plant structures are removed.

Flooding can control the spread of phragmites, but it does not eliminate established stands. It only prevents young seedlings from establishing themselves. Another adverse impact to the flooding method is that desirable wetland species are often killed.

Draining water can reduce plant growth in established stands and allow native species to compete; however these areas may need to remain dry for several years to degrade a stand. Draining an area long-term is not beneficial to native plants and potentially opens the area for invasive upland plants.

Prescribed burns alone do not typically remove this undesirable plant. In fact, burning sometimes can increase the proliferation of this species. If burning is used, late summer burns are the most effective.

Recommended Management: Combined methods are the most successful. Burning with herbicide application afterwards has been found to have success. Additionally, draining the area, applying a spot treatment of herbicide, and then flooding the area (that is prevents seeds from reestablishing themselves) has been effective. With any method, it can be expected that repeated treatments will be necessary. A glyphosate herbicide (for example, Habitat, Aquamaster, Aqua Neat, and Eagre) that is labeled for use near sensitive aquatic areas is recommended. Habitat herbicide is licensed for aquatic use and is very effective at controlling phragmites when mixed with glyphosate herbicide. Herbicides will be mixed and/or applied only in accordance with the product label. When employing either of the two combined methods, removal of the dead plant parts is essential to aid in the establishment of desirable wetland plants (Lembi, 2003). In addition, covering phragmites with filter fabric will be used as an additional control method.

Phragmites is highly abundant at the MTA and hinders training operations. This species will be not only monitored, but control and management measures will also be employed as a means to control the further spread of this invasive species.

16.4.1.10 Poison Ivy

Poison ivy is a woody shrub or vine with hairy aerial roots. All plant parts are poisonous at all times of the year. While this plant is a nuisance to people, its white waxy berries and vines provide considerable wildlife value. Poison ivy is typically confused with other plants. This plant has three divided leaves with the center leaflet on a longer white stalk. Leaves are alternate on the stem. White, waxy berries occur along the stem.

The toxin is an oil that causes an irritation of the skin that includes an itchy rash and clear blisters. If you are in an area that is suspected to have poison ivy, change your clothing immediately and wash any exposed skin with soap and water. Wash clothing in hot, soapy water separate from other laundry. If oil can be removed within five minutes of initial contact, no reaction will occur (MDC, 2004).

Control and Management: Control methods can be implemented year round; however, May through July is optimal while the plants are flowering. Herbicide use is recommended over burning because oil vaporizes when hot and can cause a severe rash. For poison ivy vines, cut the vine off approximately 6 inches from the ground surface and spray immediately with herbicide. Because poison ivy is very persistent, several applications of herbicide may be necessary. Application of a triclopyr, such as Garlon 3A or Garlon 4 (non-aquatic locations), is recommended by Groninger and Ruffner (2004).

When implementing control measures, ensure all necessary precautions are made to avoid skin contact with this plant.

Poison ivy is highly abundant at the MTA, and has been an increasing hindrance to training operations. This native, poisonous, woody shrub or vine is considered to have the highest priority for control at the MTA. This species will not only be monitored, but control and management measures will also be employed as a means to control the further spread of this species.

One additional caution is that people can contract a rash by exposure to smoke of burning poison ivy. When implementing prescribed burns for other noxious species take all necessary precautions to avoid inhaling smoke or contact of smoke with skin and clothing.

16.4.1.11 Quaking Aspen

Quaking aspen (*Populus tremuloides*), is a medium-sized, shade tolerant tree that rapidly grows and colonizes recently burned or bare areas. This species can reproduce by seed, but establishment of stems by root suckering is more common. Quaking aspen is distinguished from other aspens, poplars and cottonwood by its finely toothed, ovate leaves that lack a white felt of hairs on the under surface and by its whitish bark. This tree can grow in a variety of soil types and is most problematic in disturbed prairie areas (INPC, 2006).

Control and Management: Girdling is the preferred management technique if practical because girdling minimizes resprouting. It should be conducted in late spring or early summer when the sap is flowing and the bark readily peels. If trees are too small for girdling, cutting them twice in one year can be effective. A common mistake is to cut down large trees, which resprout vigorously without any other treatment. Herbicide should be applied to resprouting trees. A continuous burn program in late spring (1 or 2 weeks after flowering) has proven effective as well (INPC, 2006).

Recommended Management: It is recommended that quaking aspen populations be managed initially by girdling or cutting the tree twice in one year, and maintained by prescribed burning when feasible. If resprouting of trees result, herbicides will be used.

Quaking aspen is found at the MTA, but is not currently a problem. This species will be monitored closely. If populations start to propagate, control and management measures will be implemented.

16.4.1.12 Siberian Elm

Siberian elm (*Ulmus pumila*) is a small to medium sized tree that flowers in spring before leaves begin to unfold. Samaras disseminate by the wind resulting in large thickets of hundreds of seedlings on the bare ground. Seeds readily germinate and grow rapidly. This elm is distinguished by its small, elliptic, smooth, singly-toothed leaves, which reach lengths of approximately 2.6 inches. This elm tolerates a variety of soil and moisture conditions and invades areas with past disturbance readily (INPC, 2002).

Control and Management: Girdling is the preferred management technique if practical because girdling minimizes resprouting. It should be conducted in late spring to mid summer when the sap is flowing and the bark readily peels. If girdled too deeply, the tree will respond as if it had been cut down and will resprout from the roots. If girdling is not an option, trees can be cut, and any resprouts that occur subsequently should also be cut. If time constraints prevent cutting the new sprouts, the stumps created by the initial tree cutting can be treated with glyphosate herbicide (refer to Recommended Management Sections above). A continuous burn program has proven effective as well (INPC, 2002).

Recommended Management: It is recommended that Siberian elm populations be managed initially by girdling or cutting the tree twice in one year, and maintained by prescribed burning when feasible. If resprouting of trees result, herbicides will be used.

Siberian elm is found at the MTA, but is not currently a problem. This species will be monitored closely. If populations start to propagate, control and management measures will be implemented.

16.4.1.13 Sweet Clover

White and yellow sweet clover (*Melilotus alba*, and *M. officinalis*), native to Europe and Asia, were used as a forage crop and soil builder during their initial introduction, and are now used as a wildlife cover crop and in production of honey. These biennial herbs have adapted to a variety of temperatures and light levels. In the first year, they put all energy reserves toward developing a strong root system, and in the second season they flower, set seeds and die. Thus, seed production is essential in proliferation.

The leaves of both sweet clovers are alternate and trifoliate. Leaflets are finely-toothed and oblong. Mature plants (second-year) may appear bushy and have small pea-like flowers that are yellow or white, which produce one or two seeds each. Areas most likely to contain sweet clover include roadsides, abandoned fields, railroad ballasts, pastures and any unflooded, open natural community such as a prairie (INPC, 2007).

Control and Management: Hand-pulling clover, cutting first and second year stems, and prescribed burning are feasible methods that can be utilized to control white and yellow sweet clover.

Recommended Management: Since cutting and hand-pulling are highly intensive and sweet clover does not likely have an adverse effect on training operations, it is recommended that sweet clover can be controlled inadvertently during the prescribed burn plan. An April burn followed by a late April burn the next year is the most effective way to control sweet clover infestations.

Sweet clover is found at the MTA, but is not currently a problem. This species will be monitored closely. If populations start to propagate, control and management measures will be implemented.

16.4.1.14 Trailing Crown Vetch

Trailing crown vetch (*Coronilla varia*) is a perennial, herbaceous legume that flowers from May to August. Flowers are in clusters and range from pinkish lavender to white. This plant spreads rapidly by seed and by its creeping root system. Trailing crown vetch is distinguished by its compound leaves with an odd number of leaflets (15 to 25), the presence of leaves and flower stalks arising from the main stem, and the occurrence of flowers in an umbel. The preferred habitat of this plant is open, sunny areas. It occurs along roadsides and in open fields (INPC, 2004).

Control and Management: Hand pulling is ineffective unless it is repeated numerous times during the growing season and all pieces of the root must be removed to avoid re-sprouting. Early spring burns may stimulate crown vetch by promoting seed germination. No effective biological controls that are feasible in natural areas are known.

Herbicide application has been found to be the most effective control method. However, it may still take several years to achieve desired results. Early detection is critical as crown vetch may become difficult to control once it becomes firmly established.

Recommended Management: Treatment with a one percent solution of clopyralid (Transline) is recommended for trailing crown vetch. This herbicide is selective for legumes, but may also affect composites, nightshades and certain smartweeds. Care should be used when applying Transline in prairies where legumes and composites are often important components of the community. Crown vetch develops an extensive root system; therefore, the entire infestation should be treated. If only a portion of the infestation is treated, the crown vetch will rapidly re-colonize the entire site (INPC, 2004).

Trailing crown vetch is found at the MTA and is considered a priority species; therefore control measures should be implemented for this species.

16.4.2 Exotic Insect Pests

16.4.2.1 Gypsy Moth

The gypsy moth (*Lymantria dispar*) is a leaf-eating insect that feasts on trees and shrubs, such as oak, hickory, and willow trees. In large populations, it is capable of stripping plants bare, leaving them vulnerable to secondary insect and disease attacks.

Male gypsy moths are brown with black markings and have a wingspan of about 1.5-inches. The females have wingspans of up to two inches and are white or cream-colored. Because of the weight of their eggs, female moths cannot fly. So, they typically lay their eggs on objects near the trees where they're feeding, including picnic tables, campers, and grills. When these items are moved, the moth eggs "hitchhike" along like a wandering gypsy. For this reason, it's extremely important to check all vehicles and equipment after camping in infested areas.

The gypsy moth is migrating west, and is beginning to establish itself in Illinois. The state has had isolated infestations, all of which have been eradicated. These infestations primarily have occurred in the northeast, although gypsy moths also have been found as far south as Morton and Peoria. Lake County, Illinois was quarantined in 2000 and is currently the only Illinois County under quarantine against the gypsy moth (Illinois Department of Agriculture [IDOA], 2001).

It is recommended that gypsy moth surveys or monitoring be conducted periodically if military personnel bring equipment from other sites onto the MTA. The potential for these pests to be transported could be highly significant to forested areas on the MTA, and therefore proper monitoring will be underway to detect a pest invasion early on.

16.4.2.2 Asian Long-horned beetle

The exotic, non-native Asian long-horned beetle (ALB) (*Anoplophora glabripennis*) was recently discovered attacking trees in Brooklyn and Amityville, New York. This pest was also found in the Chicago area several years ago. Efforts to suppress and eradicate this pest by the USDA appear to be successful thus far. The USDA is currently monitoring for this species. No live populations have been detected in Illinois since suppression activities were initiated. This beetle has been attacking maple species, including Norway (*A. platanoides*), red (*A. rubrum*), sugar, silver (*A. saccharinum*), boxelder (*A. negundo*) and sycamore maple (*A. pseudoplatanus*). Horse chestnut (*Aesculus spp.*) trees have also been heavily attacked.

Adult beetles are large-bodied with very long antenna. Their bodies are black with white spots, and their antennae are black and white. The best time to see the adults is from May to October. If this species continues to move west, it is recommended that monitoring for the long-horned beetle be conducted periodically to detect an invasion in its early stages.

16.4.2.3 Emerald Ash Borer

The emerald ash borer (EAB) (*Agilus planipennis*) has become a serious threat to urban and rural forests in Illinois. This pest is a slender, elongated, bright green beetle. It kills trees rapidly and affects white, green, black, pumpkin, and several horticultural varieties of ashes whether healthy or stressed. The beetle deposits eggs on the bark, which hatch larvae that feed on the bark and weaken it. In 2004, Illinois developed an "Illinois Emerald Ash Borer Readiness Plan" to combat the problem before it reached the State's boundary. Since its discovery in 2002, this insect has killed nearly 20 million ash trees (*Fraxinus spp.*) in Michigan, Ohio and Indiana with the majority of the devastation within southeastern Michigan. Firewood cannot be moved in many areas of Michigan, Ohio and Indiana because of established EAB quarantines.

The EAB was recently discovered in northern Illinois in the City of Geneva in Kane County, approximately 60 miles from the MTA, and Wilmette village and the City of Evanston in Cook County, approximately 90 miles from the MTA (IDOA, 2006). The beetles were discovered in a residential yard in both Geneva and Wilmette, and in Lovelace Park in Evanston. The IDOA established a quarantine within a 51 square mile area of Kane County as of 19 July 2006. At the time of this discovery, IDOA initiated the Illinois state response plan to eradicate the exotic pest. IDOA and U.S. Forest Service are the lead agencies in Illinois for the fight against this pest within quarantined areas.

This pest has the potential to cause great disturbance to forested areas on the MTA, and therefore proper monitoring should be underway to detect a pest invasion early on. Early detection of this species is crucial to slowing down its spread. Awareness posters located within high traffic areas aid in the identification of the EAB as well as educate site users on how to prevent the spread of this devastating pest. Additional protection measures are also important to prevent their introduction on site, such as not allowing firewood to be brought onto the MTA and avoiding the use of ash tree planting stock. The ILARNG will coordinate with the IDNR and follow their guidance to protect the ash trees within the MTA property. For example, cutting strategies and chemical treatments will be developed jointly between the IDNR and the ILARNG.

16.4.2.4 Mosquito Control

The purpose of mosquito control is to reduce mosquito populations at the MTA thus reducing bites and the potential for mosquito-borne disease transmission. Emphasis for mosquito control is placed on habitat reduction and the use of repellants. For more information, or if a mosquito-borne disease is detected in an area refer to Appendix H of this SOP.

16.4.3 Aquatic Pests

Illinois' water bodies (particularly Lake Michigan) have a variety of aquatic nuisance pests. In general, these species infiltrate waters through ballast water and are not of concern except in larger lake bodies like the Great Lakes. However, if boats from other Illinois facilities or states are brought onto the property or if the MTA boats or equipment are taken into water bodies outside the MTA, equipment and boats will be power washed to prevent infestation of nuisance species. Zebra mussels can survive on boats during transportation from one water body to the next, thus proper precautions will be taken to protect the water quality and aquatic habitats at the MTA.

Specific information on particular aquatic nuisance species can be found in Horner et al. (1999), "Illinois State Comprehensive Management Plan for Aquatic Nuisance Species".

16.5 Inventory and Monitoring

Invasive and exotic plant species and noxious weeds were inventoried in 1995 during the floral inventories at the MTA. Monitoring programs have not been established for the MTA; however a flora survey is planned for the next implementation period that will provide information on the spread of these species. No insect surveys or insect monitoring plans have been conducted previously. The pest management program will be managed by the Natural Resource Manager at the MTA.

16.6 Projects

Projects related to invasive species and IPM include:

- Project 1: Comprehensive Timber Stand Improvement
- Project 2: Comprehensive Burn Plan
- Project 3: Forest Inventory
- Project 6: Invasive Species Control
- Project 7: Track INRMP Project Success through RTLA
- Project 8: General Erosion Control and Soil Stabilization
- Project 9: SKC Maintenance
- Project 11: Burn Education
- Project 15: Community Outreach and Prairie Restoration
- Project 16: Power Line Right of Way Prairie Restoration Plan

Additional project information is provided in Chapter 10 and Table 13.

16.7 Military Mission Considerations

Invasive and exotic species and noxious weeds have the capability to form dense strata within the forest, which could interfere with on-the-ground training activities. A key element in the Sikes Act establishment of INRMPs is to ensure “no net loss” of military training capability. Management of undesirable species is necessary to maintain military training areas in usable condition. Uncontrolled pests can become health hazards, which could threaten the military mission. Poison ivy is highly abundant at the MTA, and has been an increasing hindrance to training operations. This native, poisonous, woody shrub or vine is considered to have the highest priority for control at the MTA.

16.8 Additional Information

Refer to Appendix I for additional references relevant to invasive species and pest management.

17.0 THREATENED AND ENDANGERED SPECIES

17.1 Overview

Four federally listed and 29 state-listed species, a total of 33 rare species, are known to occur in La Salle County (see Table 9). The bald eagle, as of 8 August 2007, has been de-listed from the federal list of threatened and endangered species. This species is still a state-listed species and is also protected under the Bald and Golden Eagle Protection Act.

The northern harrier and Henslow's sparrow, state-listed species, are the only threatened or endangered species that have been observed at the MTA. They were both observed during the summer of 2006 (ILARNG, 2007). No federally listed species have been observed and no critical habitat exists at the MTA

17.2 Compliance

Laws and regulations pertaining to the management of threatened and endangered species include:

- ESA of 1973 (16 U.S.C 1536);
- Bald and Golden Eagle Protection Act (16 USC §668a-d);
- SAIA (16 U.S.C.670a et seq.);
- AR 200-1, Environmental Protection and Enhancement;
- DODM 4715.03, Natural Resources Conservation Program;
- Illinois Endangered Species Protection Act (520 ILCS 10/);
- Illinois Natural Areas Preservation Act (525 ILCS 30/17).

These laws and regulations are discussed in Appendix H.

17.3 Goals and Objectives R7

It is the goal of the ILARNG to avoid adverse impacts to threatened and endangered species, as required by law and the ethics of good environmental stewardship. It is the intent of the ILARNG to proactively manage for these resources during the environmental planning process, thereby mitigating potential impacts by avoidance.

The ILARNG will maintain current records of threatened and endangered species with the potential to occur at the MTA. To date no Federal or State listed species has been observed at the MTA. If a rare species is observed at the MTA in the future, the ILARNG will protect the existing population of threatened or endangered species and implement any necessary management practices pertaining to the observed species.

17.4 Management Strategies

The occurrence of threatened and endangered species is subject to change over time as a result of either recruitment, identification of a protected species, or the change in status of species currently present at the MTA. The ILARNG will manage threatened and endangered species through the ITAM program by conducting flora and fauna inventories periodically, as funding permits, and by avoiding sensitive areas (for example, wetlands and cultural resources areas). In 2001, the ILARNG conducted an Indiana bat survey at the MTA. The Indiana bat was not detected during mist net surveys. See Section **17.4.2** for more details.

Details provided by the USFWS pertaining to the four Federal listed species with known range in La Salle County, Illinois are provided in **Sections 17.4.1** through **17.4.4**. Specific details on the remaining 29 State listed species, which include one amphibian, six birds, one butterfly, two fish, two mussels, 15 plants, and two reptiles, are not provided unless they had been observed on site previously (Table 9). Information pertaining to the Northern harrier and Henslow's sparrow is provided in **Sections 17.4.5** and **17.4.6**, respectively. If additional species are observed in future inventories, specific management practices will be implemented for these particular species.

17.4.1 Indiana Bat/Northern Long-Eared Bat

The federally endangered Indiana bat is a medium-sized bat with dull grayish chestnut fur. This bat's diet is unknown except that it consists of insects. Indiana bat habitat consists of caves, mines, small stream corridors with well-developed riparian woods, and upland forests and bottomland forests. Migration to the winter hibernacula, caves and abandoned mines, usually begins in August. This species breeds in early October, and mating takes place at night on the ceilings of large rooms near cave entrances. Hibernating colonies disperse in late March and most of the bats migrate to more northern habitat for the summer. During the summer, the Indiana bat frequents the small stream corridors with riparian woods and mature upland forests. Suitable summer habitat in Illinois is considered to have the following characteristics within a 0.5 mile radius of the installation:

- Forest cover of 15 percent or greater;
- Permanent water;
- One or more of the following tree species: dead or alive shagbark hickory and shellbark hickory (*Carya laciniosa*), and dead bitternut hickory (*Carya cordiformis*), American elm (*Ulmus americana*), slippery elm (*Ulmus rubra*), eastern cottonwood, silver maple, white oak, red oak (*Quercus rubra*), post oak (*Quercus stellata*), and shingle oak (*Quercus imbricaria*) with slabs or plates of loose bark; and
- Potential roost trees with 10 percent or more of peeling or loose bark.

In 2001, a mistnetting survey for bats was conducted on the Marseilles Training Area in LaSalle County, IL. During that survey no Indiana bats (*Myotis sodalis*) were captured. In accordance to USFWS recommendations, IDMA and the Marseilles Training Area contracted with Ball State University to resurvey the area in 2013. In 2013 the national Indiana bat survey protocol was changed to include the use of habitat assessment and acoustic detectors being favored as the first steps in surveying an area for endangered bats (USFWS, 2013). However in discussions with the USFWS, the Marseilles Training Area has opted to bypass those first steps and go directly to mistnetting because of the current issues with accurate identification of acoustic calls.

In 2014, only 6 bats were captured from the 3 most productive sites of 2013. No Indiana or northern long-eared bats were captured. Therefore, no radio telemetry was conducted. Two little brown bats were captured but we chose not to track them since previous studies show these animal travel exceptionally long distances making it unlikely they are using the training area (Bergeson 2012).

While impossible to prove that Indiana bats are not using the training area, the survey conducted exceeded the minimum level of effort needed to show that an area is or is not used extensively by Indiana bats. The results of the study clearly show the area does not have an extensive Indiana bat community. While the habitat on the Marseilles Training Area is technically suitable for use by Indiana bats, the survey demonstrated that either Indiana bats are not using the site or their activity levels are very low. The survey work documented that northern long-eared bats do use

the training area for roosting and probably foraging. However, the riparian habitat along the river is far more suitable for both species. Additionally, with the progression of the disease WNS, the populations of all the cave hibernating bats will likely decline significantly. Despite what habitat improvements IDMA may or may not implement on the training area it is unlikely that Marseilles Training Area will represent important habitat for either species anytime in the near future. Regardless, the proposed activities of IDMA that we know of will only improve the health of the forest and suitability of the habitat for future bat use. The following strategies will be implemented at the MTC in an attempt to re-establish populations and to avoid the incidental take of the NLEB.

- Prohibit the use of prescribed fire at MTC between 1 April and 14 October in riparian areas;
- Consult the USFWS prior to implementing new activities or projects at MTC that may impact known corridors associated with bat populations;
- Limit tree clearing activities and, if necessary, remove trees between October 15th and March 31st;
- Develop and implement a Forest Management Plan.

17.4.2 Prairie Bush Clover

Prairie bush clover (*Lespedeza leptostachya*) is a federally threatened prairie legume found only in the tallgrass prairie region of four midwestern states. Prairie bush clover is found today at fewer than 40 sites in 23 counties of Illinois, Iowa, Minnesota and Wisconsin. The prairie bush clover has the potential to occur throughout the State of Illinois based on historical records and habitat distribution, but is not listed as currently occurring in La Salle County. It occupies dry to mesic prairies with gravelly soil. No critical habitat for this species is designated.

Prairie bush clover is a member of the pea family. Also known as slender-leaved bush clover, it has a clover-like leaf comprised of three leaflets about an inch long and a quarter inch wide. Flowering plants are generally between nine and eighteen inches tall with the flowers loosely arranged on an open spike. The pale pink or cream colored flowers bloom in mid-July. The entire plant has a grayish-silver sheen.

Prairie bush clover's rarity is probably best explained by the loss of its tall-grass prairie habitat. At the time of settlement, native prairie covered almost all of Illinois and Iowa, a third of Minnesota and six percent of Wisconsin. Mesic moderately damp to dry prairie favored by prairie bush clover was also prime cropland, and today only scattered remnants of prairie can be found in the four states. Many of today's prairie bush clover populations occur in sites that escaped the plow because they were too steep or rocky. The loss of prairie bush clover could result in the disappearance of unknown dependent species, such as tiny predatory insects specialized to live on its seeds (USFWS, 2000).

The prairie bush clover was not observed during 1995 floral inventories. The USFWS states this species is typically found in prairie remnants. Areas with high quality prairie remnants at the MTA include the Marseilles Hill Prairie Area; however prairie bush clover has not been observed. This area is restricted to foot traffic only. No digging or vehicular traffic is allowed.

17.4.3 Decurrent False Aster

The decurrent false aster (*Boltonia decurrens*) is considered to potentially occur in any county bordering the Illinois River and the counties bordering the Mississippi River between the mouths of the Missouri River and the Ohio River. It occupies disturbed alluvial soils in the floodplains of these rivers. No critical habitat has been designated for this species.

This species relies on periodic flooding to scour away other plants that compete for the same habitat. Excessive silting seems to be a major cause of the decurrent false aster's decline. Highly intensive agricultural practices have increased topsoil runoff, which smothers seeds and seedlings. Habitat destruction as a result of agricultural practices and construction of levees is another threat. Herbicides also kill these plants and may be a factor in the decline of the species (USFWS, 2007).

The decurrent false aster has not been observed at the MTA.

17.4.4 Eastern Prairie Fringed Orchid

The Eastern prairie fringed orchid (*Platanthera leucophaea*) occurs most often in mesic to wet unplowed tallgrass prairies and meadows but have been found in old fields and roadside ditches. The eastern prairie fringed orchid also occurs in bogs, fens, and sedge meadows. This species should be searched for whenever wet prairie remnants are encountered.

This orchid produces flower stalks up to 47 inches tall with up to 40 white flowers. These nocturnally fragrant flowers of these perennial orchids attract hawk moths (Sphingidae) that feed on nectar and transfer pollen from flower to flower and plant to plant. Seed germination and proper plant growth depend on a symbiotic relationship between the plants' reduced root systems and a soil-inhabiting fungus for proper water uptake and nutrition.

The greatest threat to the prairie fringed orchids is habitat loss, mostly through conversion to cropland. Competition with introduced alien plants, filling of wetlands, intensive hay mowing, fire suppression, and overgrazing also threatens these species. In addition, the prairie fringed orchids depend on hawk moths for pollination. Any threat to these insects, such as the use of insecticides, is a threat to the prairie fringed orchids.

The Eastern prairie fringed orchid has not been observed at the MTA.

17.4.5 Henslow's Sparrow

Prior to European settlement, the Henslow's sparrow bred primarily in prairie habitat. With the loss of native prairie to agriculture, the species adapted to breeding in secondary grassland habitats, particularly hayfields and pastures. Grasslands providing Henslow's sparrow breeding habitat are generally characterized by tall, dense grass with a well-developed litter layer and a high overage of standing dead vegetation. Extensive woody invasion may preclude use by Henslow's sparrow. Habitat is considered a limiting factor to this species.

The Henslow's sparrow was observed at the MTA in the summer of the 2006 (ILARNG, 2007). In order to manage this species and its habitat, the ILARNG and IDNR will implement the following management strategies:

- Monitor species population;

- Restrict mowing at the MTA (except along roadways) during the breeding season (between 15 April and 31 August);
- Conduct prescribed burns every 3-4 years using a checker board Rx burn rotation plan, to enhance and restore prairie and native warm season grassland habitats at the MTA.

17.4.6 Northern Harrier

Northern harriers, medium sized hawks, arrive in Illinois in February or March. Most continue as far north as northern Canada. They appear again on their way south in August, and migrate as far south as Central America. A few spend the winter in Illinois, roosting along with short-eared owls (*Asio flammeus*) in groups.

Those who nest in Illinois do so in marsh or prairie habitats. The male collects grass, sticks, and hay for the female, who builds the large nest. It is up to 18 inches tall if the ground is wet, and from 15 to 30 inches across. The female lays four to six round white eggs, one every two days. She incubates them for about 21-34 days. The young start flying when they are about a month old.

In Illinois the Northern Harrier is considered endangered because of the destruction of marshland and prairies. In addition, their open ground nests make them particularly susceptible to prey (Illinois State Museum [ISM], 2001).

The northern harrier was observed at the MTA in the summer of 2006 (ILARNG, 2007). Management strategies for this species will follow those discussed in Section 17.4.5 for the Henslow's sparrow.

17.4.7 Monarch Butterfly

The number of monarchs reaching their overwintering grounds high in the oyamel fir forests of central Mexico has hit a record low. One of several factors that has contributed to the monarch's steep, decade-long population plummet is the loss of milkweeds — the monarch's host plant — as a result of herbicides used on fields of genetically modified crops. In order to manage this species and its habitat, the ILARNG and IDNR will implement the following management strategies:

- Monitor Milkweed populations;
- Restrict mowing at the MTA (except along roadways) in areas where Milkweeds are observed;
- Include a substantial amount of milkweed in warm-season grass mix purchases for prairie restoration;
- Restrict the use of glyphosates for the chemical control of pests in all grassland areas within the training area.

17.5 Inventory and Monitoring

An inventory of flora and fauna including threatened and endangered flora and fauna at the MTA was conducted in 1995. Additional surveys will be conducted as funding allows. A mist netting survey was conducted in 2001 by Carter for the federally endangered Indiana bat.

17.6 Projects

The ILARNG is planning to implement the following projects associated with threatened and endangered species:

- Project 1: Comprehensive Timber Stand Improvement
- Project 3: Forest Inventory
- Project 7: Track INRMP Project Success through RTLA
- Project 12: Monarch Butterfly Program
- Project 18: Pollinator Management
- Project 19: Raptor Rehabilitation Program
- Project 20: Plant Identification Website

Additional project information is provided in Chapter 10 and Table 13.

17.7 Military Mission Considerations

The presence of threatened and endangered species may limit the use of some areas during specific times at the MTA for some training activities. While the prairie bush clover has not been identified on the MTA, its habitat, high quality prairie remnants such as the Marseilles Hill Prairie Area are restricted to foot traffic and no vehicles or digging is allowed. If Indiana bats are ever identified on the MTA, areas near summer maternal roosting sites may need to be avoided and tree cutting restrictions could occur. In cases where endangered species management in accordance with the appropriate guidance will conflict with mission activities, consultation with the USFWS and the IDNR will be initiated to avoid jeopardizing any listed species. The ILARNG is required to manage federally listed threatened and endangered species. Failure to protect federally listed species could lead to an ESA violation, which could negatively impact training land availability.

17.8 Additional Information

Additional information sources relevant to threatened and endangered species are provided in Appendix I.

18.0 RECREATIONAL OPPORTUNITIES, PUBLIC OUTREACH AND ENVIRONMENTAL AWARENESS

18.1 Overview

The MTA is also known as the Marseilles Fish and Wildlife Area (See **Figure 10**). In the late fall and winter months, the IDNR administers a hunting program at the MTA. During the hunting season, field training is not conducted. Other recreational opportunities are coordinated between the ILARNG and IDNR on a case by case basis. No fishing access is allowed at the MTA during any time of the year, and no fishing program is planned in the future.

18.2 Compliance

Laws and regulations pertaining to outdoor recreation include the following:

- SAIA (16 U.S.C 670 *et seq.*);
- EO 12960, Recreational Fisheries;
- Wildlife Code (520 ILCS 5/).

These laws are discussed in Appendix H.

18.3 Public Access

The MTA is a joint use facility and controlled public access is permitted for the hunting program administered by the IDNR. Refer to Figure 9 for hunting access points.

It is the goal of the ILARNG to provide public access for wildlife and natural resources based recreation and public outreach activities whenever feasible and compatible with military land use and associated restrictions. Coordination needs to be made with ILARNG prior to conducting any of these other activities.

18.4 Public Outreach

Other MTA public benefits include use of the Cantonment area by nonprofit organizations. The ILARNG has hosted an Environmental Awareness Day through the University of Illinois Extension, LaSalle County Extension Office in Ottawa Illinois. The MTA also provides educational opportunities for wildlife and vegetation habitat including management demonstrations, wildlife viewing, and resource photography. Coordination needs to be made with ILARNG prior to conducting any of these other activities.

The MTA Natural Resource Manager would like to increase public outreach and environmental awareness to educate, particularly youth oriented groups, about the army and the environment. Public Outreach Projects (Project 10, 11, and 15, Chapter 10), which include youth oriented projects and tours, are discussed in greater detail in Chapter 10.

The ILARNG is interested in partnering with non-profit organizations, such as the Resource Conservation and Development (RC&D) – Prairie Rivers affiliated through the NRCS, to provide support for natural resource projects (For example, rehabilitation and enhancement of the quarry area through wetland creation).

18.5 Hunting Program

The IDNR has jurisdiction over the MTA from November through January, and the ILARNG has jurisdiction over the site the months of February through October. The hunting program is implemented during IDNR's jurisdiction over the site. Hunting events have occurred (for example, April and May) outside the late fall and winter months, however coordination with the ILARNG must occur prior to employing additional hunts in the year.

The site is predominately wooded and the terrain is fairly rugged. There is no interior vehicle access for the public. Hunters who use this area should be ready for strenuous walking if they hunt the interior. The 2005-2006 hunting regulations for the MTA and a Marseilles Fish and Wildlife Area Hunting Map (Figure 9) are provided below. If further information is needed contact the Site Superintendent at the Illini State Park, 2660 E. 2350th Rd., Marseilles, IL 61341. Phone: 815/795-2448.

Marseilles Hunting Regulations:

- All hunters must check in and out and report their harvest at the manned check station at Gate 60.
- All deer harvested must also be checked in / reported as outlined in the statewide rules and regulations for reporting deer harvested during the regular statewide deer seasons.
- Stands must be portable and must be tagged with the hunter's name, address, and phone number. One stand per permit holder may be left unattended from 1 October to 12 January. Stands left after this date will become the property of the IDNR.
- Site specific permit holders are required to check in by 0500. A drawing to allocate standby permits will be held at 0500. Standby permits are site specific for Marseilles only, valid only for the day they are issued, and cost \$5 each. No other deer permits are required. **Non-resident stand-by hunters are required to have a non-resident hunting license and a current habitat stamp.**
- During shotgun and muzzleloader deer season, hunters are required to wear a cap and upper outer garment of solid and vivid blaze orange of at least 400 square inches while hunting.
- Closed during firearm and muzzle loading deer seasons.
- Coyotes may be taken with slugs or muzzleloader rifle by hunters with a valid firearm or muzzleloader deer permit in possession during the proper season.
- The National Guard trains more heavily on weekends and for that reason the site is closed to hunting on Friday, Saturday, and Sunday from 1 August to 31 October of each year except Labor Day weekend.
- Further restrictions may exist. See regulations posted at the site before hunting.

It shall be unlawful:

- To construct or use any tree stand or accessory using nails, screws or any device which pierces or cuts the bark of the tree on which it is installed.
- To hunt in any area not designated as being open to hunting or to hunt off IDNR property.
- To park anywhere on the site except on the designated parking lots or for unauthorized vehicles to enter upon any trail.
- To hunt with other than a shotgun, handgun, or muzzleloader during the firearm deer season a muzzleloader during the muzzleloader season, or a bow and arrow during archery deer and turkey season.

- To possess firearms, bows, arrows, or ammunition that are not legal for use during the current hunting season on the site.
- For any person to consume any alcoholic beverage or illegal drugs or to be under the influence of alcohol or illegal drugs while on the area for the purpose of hunting.
- To possess weapons in the field except during hunting hours.
- To hunt while the check station is closed.
- To engage in "driving" deer for the purpose of hunting on any IDNR site.

18.6 Inventory and Monitoring

The IDNR does monitor game species populations for the hunting program.

18.7 Projects

The ILARNG is planning to implement the following projects associated with recreational activities and public outreach:

- Project 1: Comprehensive Timber Stand Improvement
- Project 4: Trail and Access Point Expansion
- Project 9: SKC Maintenance
- Project 10: Community Outreach
- Project 11: Burn Education
- Project 13: Recycling Program
- Project 14: Energy Conservation
- Project 15: Community Outreach and Prairie Restoration
- Project 17: Noise Modeling
- Project 18 Pollinator Management
- Project 19: Raptor Rehabilitation
- Project 20: Forest Management for Reptiles and Amphibians

Additional project information is provided in Chapter 10 and Table 13.

18.8 Military Mission Considerations

Recreational use of the MTA and public outreach activities do not generally impact training operations. A permit regulated hunting program through the IDNR occurs during the late fall and winter months. During the hunting season, field training is not conducted. However, all these hunting programs are dependent on national security considerations. In the event that heightened security measures are necessary, these hunting programs will be closed with little or no notice as stated in the Marseilles MOU (Appendix B). Classroom training occurs within the Cantonment area year-round.

All other recreational or public outreach activities are coordinated through the ILARNG prior to initiating them to ensure no mission impacts arise and to ensure proper safety measures are in place.

18.9 Additional Information

Additional information sources relevant to the Marseilles FWA are provided in Appendix I.

Marseilles Fish & Wildlife Area

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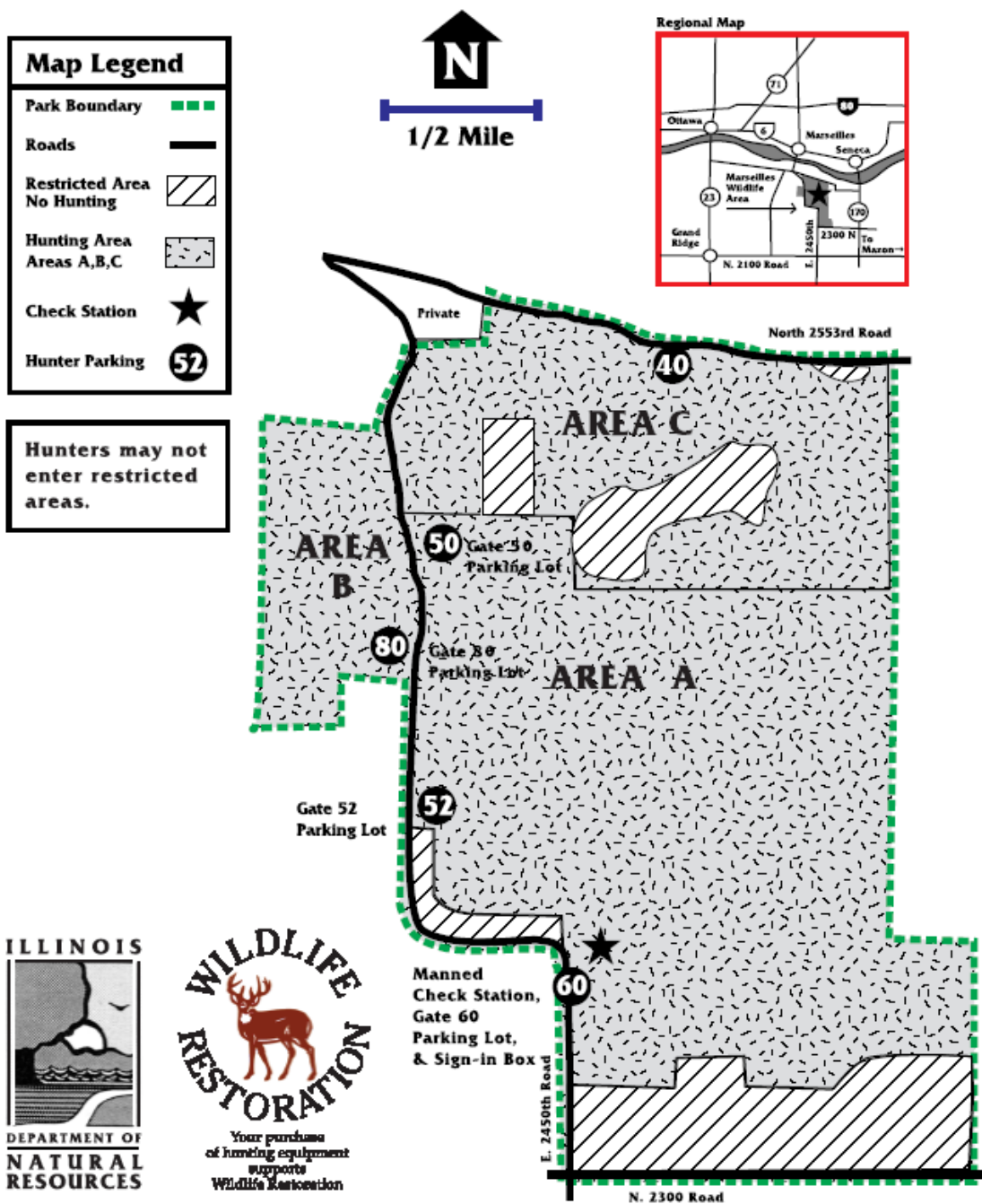


Figure 10. Marseilles Fish and Wildlife Area Hunting Map

19.0 CULTURAL RESOURCES MANAGEMENT

19.1 Overview

Cultural resources include sites, buildings, structures, or objects that may have significant archeological and historic values, or properties that may play a significant traditional role in a community's history, beliefs, customs, and practices. Cultural resources, thus, encompass a wide range of sites and buildings from prehistoric Native American campsites to Military buildings constructed during the Cold War, as well as traditional cultural properties still used today.

19.2 Compliance

Sections 106 and 110 of the NHPA (Public Law (PL) 89-655, 16 USC 470) provide the framework for federal review and protection of cultural resources, and to ensure that they are considered during federal project planning and execution. The implementing regulations for the Section 106 process (36 CFR Part 800) have been developed by the Advisory Council on Historic Preservation (ACHP). The Secretary of Interior maintains a National Register of Historic Places (NRHP) and sets forth significance criteria (36 CFR Part 60) for inclusion in the register. Cultural resources may be considered "historic properties" for the purpose of consideration by a federal undertaking if they meet NRHP criteria. Historic properties may be those that are formally placed in the National Register by the Secretary of the Interior, those that meet the criteria and are determined eligible for inclusion, and historic properties that are yet undiscovered but may meet eligibility criteria.

Archeological resources on federal lands are protected under the Archeological Resources Protection Act (ARPA, PL 96-95, 16 USC 470aa-mm). Native American human remains, burials, and associated burial goods are protected under Section 3 (c) of the Native American Graves Protection and Repatriation Act (NAGPRA, PL 101-601, 25 USC 3001-13), and its implementing regulations (43 CFR Part 10). These regulations also require Federal officials to take reasonable steps to determine whether a planned activity may result in the excavation of human remains, funerary objects, sacred objects, or objects of cultural patrimony from Federal lands (43 CFR Part 10.3(c)(1)). The MTA is comprised completely of state and privately owned land.

The Illinois Human Skeletal Remains Protection Act (20 Illinois Compiled Statutes [ILCS] 3440, 17 Illinois Administrative Code [IAC] 4170) requires a permit before anyone may disturb human remains, markers and contents where burials are more than 100 years old, and are not in a registered cemetery. This applies to both public and private lands. If human remains are discovered during a construction project all activity that could disturb them must cease immediately and application must be made to the IHPA immediately to avoid criminal penalties. Violations may result in criminal sanctions. The ISM is in charge of curation of all artifacts discovered on state property. To date no human remains have been discovered on this property.

19.3 Marseilles Cultural Resources

As discussed in Section 4.2, the ILARNG has prepared a statewide ICRMP, effective 2010 – 2015. An Update to this plan is currently in effect. Detailed cultural resource inventories were conducted at the MTA by the Illinois State Museum in both 1983 and 1995 for the entire site. A total of 97 archeological sites were documented within the MTA. A total of 85 of these sites are prehistoric in age, five are mixed historic and prehistoric, and nine are historic sites. The vast majority of these archeological sites, 75 sites, contain small artifact assemblages (1 to 4 artifacts).

Seven of the sites have medium assemblages of artifacts (4-14), and 15 sites have a large assemblage of artifacts (>15). The report states that six of the archeological sites are historically significant and potentially eligible for the NRHP. The IHPA reviewed the report conducted by the ISM. Only two of the six areas will require additional work should future land modifications impact them. The IHPA concurrence is included in Appendix C. No digging or vehicle maneuvering is allowed in these two areas (Section 6.5). An agreement has been made between the IHPA, IDNR, and DMAIL to protect two sites identified in the report as having significant historical value. Signs are posted at access gates designating that the area contains archeological areas. Artifact collecting is prohibited throughout the entire site.

The IHPA reviewed the report conducted by the Illinois State Museum. An agreement has been made between the IHPA, IDNR, and DMAIL to protect two sites identified in the report as having significant historical value. No digging or vehicle maneuvering is allowed in these two areas (Section 6.5). Signs are posted at public access gates designating the area as an archeological area. Digging and artifact collecting is prohibited throughout the entire site. In the event an archaeological resource is inadvertently discovered, DMAIL will follow the procedures outlined in Section 3E of the programmatic agreement. The IHPA concurrence is included in Appendix C.

Additionally, in 2014, the SIU Center for Archeological Investigations conducted site inspections. The finding of the site inspection indicated that both sites surveyed are in the same condition as in 1991 (Ferguson et al. 1995) and when we inspected them in 2009 (Wagner 2010). Both are located in relatively inaccessible wooded areas well away from any National Guard facilities, roads, or training activities. Their locations also are recorded on MTA maps as areas where digging or vehicular traffic are forbidden. As a result, both sites are currently in a very good state of preservation. The formal letter of concurrence is included in Appendix C.

19.4 Native American Consultation

Consultation with Native American tribes or nations is required under the provisions of the NHPA regulations, Protection of Cultural and Historic Properties (36 CFR Part 800), revised rules effective January 11, 2001, EO 13175 (Consultation and Coordination with Indian Tribal Governments), and DoDI 4710.02 (DoD Interactions with Federally-Recognized Tribes). These statutes recognize the rights and privileges of federally recognized tribes or nations, but not tribes without federal standing or activist groups (Indians and/or non-Indians). The Bureau of Indian Affairs maintains a list of federally recognized tribes. Only federally recognized Tribes or Nations can participate in consultation under the provisions of these statutes and their regulations. No Tribe or Nation resides in Illinois and there is no tribal land or reservation existing within Illinois, but tribes once resident in Illinois have a vested interest in their heritage.

The DoDI 4710.02 provides guidance for interacting and working with federally recognized American Indian and Alaska Native governments or tribes. This Instruction implements DoD policy, assigns responsibilities, and provides procedures for DoD interactions with federally recognized tribes. DoD policy is based on tribal input, federal policy, treaties, and other federal statutes. The DoD policy supports tribal self-governance and government-to-government relations between the federal government and tribes. Although these principles are intended to provide general guidance to DoD components on issues affecting tribes, DoD personnel must consider the unique qualities of individual tribes when applying these principles, particularly at the installation level. These principles recognize the importance of increasing understanding and

addressing tribal concerns, past, present, and future. These concerns will be addressed prior to reaching decisions on matters that may have the potential to significantly affect protected tribal resources, tribal rights, or Indian lands.

The ICRMP identified six tribes or nations with aboriginal title to land in Illinois. These tribes are as follows (here listed in alphabetical order: Ho-Chunk (formerly Winnebago of Wisconsin), Kaskaskia (one of the Illinois tribes now represented by the Peoria Tribe of Indians of Oklahoma), Kickapoo (there are three bands of the Kickapoo tribe), Piankashaw (now part of the Peoria), Potawatomi (there are six bands of the Potawatomi tribe), Sac & Fox (there are three bands of the Sac & Fox tribe), Wea (now part of the Peoria Tribe), and the Winnebago of Nebraska. Consultation with these tribes was initiated by the ILARNG during the ICRMP process, with follow up letters sent in June 2004. No responses were received.

In March 2006, consultation for the previously revised INRMP/EA was initiated by the ILARNG with all above mentioned tribes in accordance with NEPA, NHPA, and EO 13175 and DoDI 4710.12. A copy of the correspondence letter and Memorandum for Record are included in Appendix C.

20.0 NATURAL RESOURCES PROGRAM IMPLEMENTATION

The 2001 INRMP was reviewed “as to operation and effect” in order to develop the revised INRMP. This updated INRMP incorporates the ITAM process at the MTA and proposes actions in accordance with applicable DoD and Army policies, directives and instructions. As such, it is a dynamic or “living” document, with periodic reviews to incorporate changing mission requirements and adaptive management of natural resources. This revised INRMP presents practicable alternatives and recommendations to protect and enhance ecosystems while minimizing impacts to the ILARNG mission. Achievement of the military mission is the primary consideration with regard to environmental and installation planning. Consequently, some recommendations may favor training safety and efficiency over enhancing natural resources.

The ILARNG depends on natural resources for the sustainability of many training programs and will manage natural resources to ensure sustainable use. The INRMP is not intended to impair the ability of the ILARNG to perform its mission. However, the INRMP does identify usage restrictions on sensitive attributes such as wetlands and threatened and endangered species.

Implementation of this updated INRMP will be realized through the accomplishment of specific goals and objectives as measured by the completion of projects described within this INRMP. An INRMP is considered implemented if an installation:

- Actively requests, receives, and uses funds for “must fund” projects and activities;
- Ensures that sufficient numbers of professionally trained natural resources management staff are available to perform the tasks required by the INRMP;
- Coordinates annually with cooperating agencies;
- Documents specific INRMP action accomplishments undertaken each year.

Refer to Appendix A for an analysis of the 2001-2006 INRMP implementation goals, objectives, and projects and Table 1 for a summary of the completion status of the previous projects.

20.1 Annual Work Plans

20.1.1 Work Plans

The implementation schedule, funding requirements, and source of funds for this INRMP update are detailed in Table 13. Refer to Section 10.1 for complete project plans and specifics.

20.1.2 Funding

Implementation of this updated INRMP is subject to the availability of annual funding. Funding for the EMO staff and standard supplies comes from direct funding sources. Funding sources for specific projects can be grouped into three main categories by source: Federal NGB Funds, Other Federal Funds, and Non-Federal Funds. Each is discussed in the following subsections. Estimated funding requirements for implementing specific INRMP goals and programs are presented in Table 13.

Where projects identified in the plan are not implemented due to lack of funding, or other compelling circumstances, the installation will review the goals and objectives of this revised INRMP to determine whether adjustments are necessary.

The following discussion of funding options is not all-inclusive of funding sources. Since many funding sources rely on a variety of grant programs, award criteria and amounts can change considerably from one year to another. Funding through grant programs can occur on a one-time award, annually or in multiples of years.

20.1.2.1 NGB/ILARNG Funding

Funding from the following NGB/ILARNG sources will be required to implement the revised INRMP over the next five years:

The NGB is the primary source of funding to support the management of natural resources at the MTA through a master cooperative agreement with the ILARNG. A budget of this type is managed by the Environmental Program Manager in Camp Lincoln in Springfield, Illinois. The NGB provides funding for natural resource surveys, environmental monitoring projects, and compliance-related projects.

ITAM funding requests are not submitted via the Status Tool for the Environmental Program (STEP) process. Instead, an annual ITAM Work Plan is used for identifying installation ITAM resource requirements and for allocating funding to support installation core capabilities. ITAM funding requests are channeled from the ILARNG, through the NGB, to the Army's Office of the DCSOPS. The ITAM program is directly managed and funded by the DAMO-TRS of the Office of the DCSOPS. The ILARNG's level of ITAM funding for the MTA will be determined by a funding category established by the NGB on the basis of projected training impacts.

The NGB Army Installations Division (NGB-ARI) provides funding for the personnel, equipment and supplies in support of the MTA Facility Engineer's office. This office is involved in planning, scheduling and oversight of training, maintenance of roads and trails, vegetation management, and pest management, facilities infrastructure, and military construction planning, all of which are critical to the natural resources management program. The installation requests project validation and funding through the STEP process, completed by the EMO, for environmental and conservation projects.

All actions contemplated in this INRMP are subject to the availability of funds properly authorized and appropriated under federal law. Nothing in the INRMP is intended to be nor shall be construed it be a violation of the Anti-Deficiency Act, 31 USC § 1341.

Table 13. Implementation Projects for 2016 - 2020

INRMP Project #	Project Name	Project Description	Fund Type	Legal Driver	Plan Date
1	Comprehensive Timber Stand Improvement	This project includes the implementation of the MTA TSI Plan. The purpose of this project is to enhance the long term naturally occurring oak-hickory type of ecosystem while simultaneously enhancing military training. Additionally, shade tolerant species, such as, but not limited to, maple trees are becoming invasive over the site and are reducing the seed crop for wildlife, future propagation, and further limiting accessibility of the site for troop training. In addition to current TSI, the management strategies outlines in the article “Quantifying the Carbon Sequestration Potential of Forested Landholding at the Marseilles Training Center” will be applied. All forest compartments requiring TSI must still undergo IDNR Comprehensive Environmental Review Process.	ITAM	Sikes Act, Army Regulation	Ongoing
2	Comprehensive Burn Plan	This project includes the implementation of the MTA Integrated Wildfire Management Plan. Project funds will include the purchase of needed equipment. The NRCS recommends burning to increase biodiversity, soil development/structure (see Chapter 13), and to reduce the use of herbicides for invasive species control. The purpose of this project is to protect nearby farms and residences from a fire breaching the MTA boundaries, to enhance ecosystem functions, and to increase troop and hunter accessibility by controlling the increasing spread of undesirable trees.	ITAM/Facilities	Sikes Act, Army Regulation, Illinois Exotic Weed Control Act	Ongoing
3	Forest Inventory	This ongoing project would occur subsequent to TSI activities (Project 1). Result from this inventory would be compared to the previous forest inventory to assess the affects (both positive and negative) of TSI prescriptions on the MTA forest composition. Findings will be used to reassess future management strategies.	Environmental	Sikes Act, Army Regulation	2016-2020
4	Trail and Access Point Expansion or Hardening	This project includes maintenance of existing trails and the establishment of new trails and the installation access points. All new trails or access points established will be coordinated with and approved by IDNR personnel to ensure both parties will benefit. Increased trails will provide for easier access for both hunters and troops. Existing access points are within the northwestern portion of the site only, which results in the	ITAM/Facilities	Sikes Act, Army Regulation	Ongoing

Table 13. Implementation Projects for 2016 - 2020

INRMP Project #	Project Name	Project Description	Fund Type	Legal Driver	Plan Date
		overuse of the trails and land in this area. Increased trails would provide more natural firebreaks and enhance training options for maneuvers. Proper care will be taken to avoid forest habitat fragmentation. New trails will be built, when feasible, in areas of previous disturbance.			
5	Trail Maintenance	This project includes the regarding and maintenance of eroded areas along MTA trails. Improper drainage has impacted some areas resulting in severe rutting on many trails. Rehabilitation of these trails will provide an overall benefit to soils, water resources, and aquatic habitat resources.	ITAM/Facilities	Sikes Act, Army Regulation, CWA	Ongoing
6	Invasive Species Control	<p>This project includes various activities to control the spread of already established invasive species and prevent establishment of additional undesirable species. Activities include removing undesirable plants and vegetating with more desirable native species. Removal techniques include primarily mechanical methods such as cutting, (see Section 16.4), mowing, biological control, and use of explosives, fire, followed up with a limited amount of timely application of herbicide. Natural removal of undesirable species include the use of sheep, goats, and cows for grazing. Grazing has also been proven to be an effective and safe means to create fire breaks (Project 2) Invasive species targeted in this project include, but are not limited to, poison ivy, black locust, musk thistle, phragmites, and autumn olive.</p> <p>Managing invasive species allows native plant communities to flourish, enhancing both forest and non-forest habitats at the MTA. This project is necessary to prevent the loss of available training land because several of these species can create impenetrable thickets. Additionally, managing invasive species benefits soils, water resources, and biological resources. See Chapter 16 for additional information on controlling invasive species and noxious weeds.</p>	ITAM/Facilities	Sikes Act, Army Regulation, Illinois Exotic Weed Control Act	Ongoing

Table 13. Implementation Projects for 2016 - 2020

INRMP Project #	Project Name	Project Description	Fund Type	Legal Driver	Plan Date
7	Track INRMP Project Success through RTLA	This will be an ongoing project that will incorporate GIS and on-site monitoring to effectively manage natural resources and for assigning training areas. The goal of this project is to achieve the military mission while at the same time sustain these training areas and minimize the potential for adverse impacts to natural resources. GIS will also be used as a tool to monitor and track the progress and success of implementation projects. Training areas will continue to be periodically examined for signs of adverse impact. The training unit's commanding officer will continue to be responsible for leaving the training area in the same or better condition than it was prior to the activity.	ITAM/ Environmental	Sikes Act, Army Regulation, CWA	Ongoing
8	General Erosion Control and Soil Stabilization	This project provides funds for purchasing seed, mulch, sediment fences, and erosion control fabric to stabilize areas disturbed by training exercises. The project includes recontouring steep eroding slopes, when project funds are available, through the entire MTA installation. This project benefits soils by reducing soil erosion, water resources by preventing sedimentation, and prevent the loss of military training land.	ITAM/ Environmental	Sikes Act, Army Regulation, CWA	Ongoing
9	SKC Maintenance	This project would include the development of a Watershed Plan for the SKC watershed. IDNR and DMAIL will collectively develop this plan. As part of this Plan, projects will focus on reducing severe soil erosion (e.g., recontouring steep slopes and vegetating areas). The goal of this project is protect water resources and sustain land for training.	Environmental/ IDNR	Sikes Act, Army Regulation, CWA	2016-2020
10	Monarch Butterfly Program	This project includes the establishment, maintenance, and monitoring of monarch butterfly populations and their associated habitats.	Environmental	Sikes Act, Army Regulation	Ongoing
11	Recycling Program	This project includes the implementation of a recycling program at the MTA that includes plastic, cardboard, paper, scrap metal and aluminum recycling, and possibly food composting. The goal of this project is to reduce solid waste by approximately 50 to 75 percent. A temporary or	Facilities/ Engineering/ Pest Management/ Funds for Qualified	Sikes Act, Army Regulation	Ongoing

Table 13. Implementation Projects for 2016 - 2020

INRMP Project #	Project Name	Project Description	Fund Type	Legal Driver	Plan Date
		permanent building within the Cantonment Area will be needed to consolidate and manage the recycling program.	Recycling Program (QRP)		
12	Energy Conservation	This project will include instituting alternative energy sources, such as wind and solar, to reduce fuel costs associated with the operation of the installation and provide an overall benefit to the environment through energy reduction.	Energy Conservation Investment Program (ECIP)/ Department of Army Environmental Pollution and Prevention	Sikes Act, Army Regulation	Ongoing
13	Community Outreach and Prairie Restoration	This project provides funds to replant disturbed areas with native prairie grasses and plants through community outreach projects. The goal is to give local groups ownership of specific prairie areas and let them work on them and watch them grow for extended periods of time. This project provides several benefits including soil stabilization and reduction of sedimentation into water resources. Planting native prairie plants also helps to control invasive species on site and enhances habitat quality for native fauna. Only native prairie grasses and plants will be used in this project. Prairie plot locations will be coordinated with the IDNR and DMAIL.	ITAM/ Environmental	Sikes Act, Army Regulation	Ongoing
14	Power Line Right of Way Prairie Restoration Plan	This project provides funds to plant and maintain large strips of power line ROW as prairie corridors. This project will serve three purposes: (1) it will lower the amount of herbicide used by the power company on site to keep the ROW clear of woody vegetation; and (2) it will provide easier hunter and troop access to the entire site.	ITAM	Sikes Act, Army Regulation	Ongoing

Table 13. Implementation Projects for 2016 - 2020

INRMP Project #	Project Name	Project Description	Fund Type	Legal Driver	Plan Date
15	Noise Modeling	This project would assess the topography, terrain, and vegetation impacts on noise levels in the remainder of the MTA. A noise study was conducted previously in the southern portion of the site (Cantonment Area) through the USACE. This survey would expand the previous study to provide a comprehensive noise assessment for the entire MTA site. In addition, new noise modeling was conducted as part of the 2008 EA in support of the new Breaching Range.	Environmental	Sikes Act, Army Regulation, Installation Noise Management Plan	2016-2020
16	Pollinator Management	This project will supplement Project 15 with the establishment of Bee Apiaries for the purposes of prairie and forest pollinator management. Managed hives will be used to increase environmental awareness as well as establish a greater population of Honey Bees IAW federal guidelines.	Environmental/ITAM/Legacy Project	Sikes Act, Army Regulation	Ongoing
17	Raptor Rehabilitation Program	With cooperation from local non-profit organizations in our area such as Save Our American Raptors (SOAR), efforts have been made to establish a Raptor Rehabilitation and Release Program.	Environmental/Legacy Project	Sikes Act, Army Regulation	2016-2020
18	Forest Management for Reptiles and Amphibians	This project includes recommendations based on the article "Forest Management for Reptiles and Amphibians: A Technical Guide for the Midwest". PLS will need to be initiated for Faunal Surveys and may include management of wetlands for suitable habitat for increased diversity.	Environmental/ITAM	Sikes Act, Army Regulation	2016-2020

20.1.2.2 Federal Funds

Cooperative agreements may be entered with States, local governments, non-governmental organizations, and individuals for the improvement of natural resources or to benefit natural and historical research on federally-owned training sites. Upon written concurrence of the MTA INRMP Update by the USFWS and the IDNR, these agencies become signatory cooperators of this plan. As such, the potential for access to matching funds programs and services that are offered by these agencies will be available.

Program initiatives under the CWA provide funding through several sources. The USEPA's Office of Water sponsors those projects related to the CWA. Available funding may support programs such as cost-sharing for overall water-quality management (for example, monitoring, permitting, and enforcement), lake water quality assessments and mitigation measures, and implementation of non-point source pollution control measures. Refer to the USEPA's Office of Water funding website for potential sources of funding <http://www.epa.gov/water/funding.html>.

The Legacy Resource Management Program provides financial assistance to DoD efforts to preserve natural and cultural resources on federal lands. Legacy projects could include regional ecosystem management initiatives, habitat preservation efforts, archeological investigations, invasive species control, and/or flora or fauna surveys. Legacy funds are rewarded based on project proposals submitted to the program.

The NRCS manages the Federal Domestic Assistance Program (Plant Materials for Conservation) that assembles, evaluates, selects, releases, and introduces into commerce and promotes the use of new and improved plant materials for soil, water, and related resource conservation and environmental improvement programs.

20.1.2.3 Non-Federal Funds

Other funding sources that could be considered include The Public Lands Day Program, which coordinates volunteers to improve the public lands they use for recreation, education, and enjoyment, and the National Environmental Education & Training Foundation, which manages, coordinates, and generates financial support for the program.

20.1.3 Priorities and Scheduling

Installations develop their annual work plans in the early spring of each year to reflect detailed ITAM program requirements for the next three fiscal years and in summary format for the subsequent two fiscal years. ITAM projects required to support the installation long-range ITAM plan are identified by the ITAM coordinator, in conjunction with environmental and natural/cultural resources staff and the TSC. Once the projects are approved, they are entered into the Web-Based Workplan Analysis Module (WebWAM) database (DoD, 2005).

The STEP database will be used to validate projects and determine funding priority for environmental and conservation projects. Projects need to be funded consistent with timely execution to meet future deadlines. Projects are generally prioritized with respect to compliance. Highest priority projects are projects related to recurring or current compliance, and these are generally scheduled earliest. The MTA projects and schedules are listed in Table 13.

Recurring requirements include projects and activities needed to cover the recurring administrative, personnel and other costs that are necessary to meet applicable compliance

requirements (Federal and State laws, regulations, Presidential EOs, and DoD policies) or which are in direct support of the military mission. Recurring costs include manpower, training, supplies; hazardous waste disposal; operating recycling activities; permits and fees; testing, monitoring and/or sampling and analysis; reporting and record keeping; maintenance of environmental conservation equipment; and, compliance self-assessments.

Current compliance includes projects and activities needed because an installation is currently or will be out of compliance if projects or activities are not implemented in the current program year. Examples include:

- Environmental analyses, monitoring, and studies required to assess and mitigate potential effects of the military mission on conservation resources;
- Planning documents;
- Baseline inventories and surveys of natural and cultural resources (historical and archaeological sites);
- Biological assessments, surveys, or habitat protection for a specific listed species;
- Mitigation to meet existing regulatory permit conditions or written agreements;
- Wetland delineations in support of subsequent jurisdictional determinations and consequent permitting;
- Efforts to achieve compliance with requirements that have deadlines that have already passed; and
- Initial documenting and cataloging of archaeological materials.

Maintenance requirements include those projects and activities needed that are not currently out of compliance but shall be out of compliance if projects or activities are not implemented in time to meet an established deadline beyond the current program year. Examples include:

- Compliance with future requirements that have deadlines;
- Conservation and GIS mapping to be in compliance;
- Efforts undertaken in accordance with non-deadline specific compliance requirements of leadership initiatives;
- Wetlands enhancement, in order to achieve the Executive order for “no net loss” or to achieve enhancement of existing degraded wetlands;
- Public education programs that educate the public on the importance of protecting archaeological and natural resources.

Lower priority project include those that enhance conservation resources of the installation mission, or are needed to address overall environmental goals and objectives, but are not specifically required under regulation or EO and are not of an immediate nature. These projects are generally funded after those of higher priority are funded. Examples include:

- Community outreach activities, such as “Earth Day” and “Historic Preservation Week” activities;
- Educational and public awareness projects, such as interpretive displays, oral histories, “Watchable Wildlife” areas, nature trails, wildlife checklists, and conservation teaching materials;
- Biological assessments, surveys, or habitat protection for a species;
- Restoration or enhancement of cultural or natural resources when no specific compliance requirement dictates a course or timing of action;
- Re-interment of Native American remains on DoD managed or controlled land;

20.2 Natural Resources Management Staffing

20.2.1 Personnel

The Natural Resources Program at the MTA is administered by the ILARNG EMO, with assistance from the Environmental Management Branch staff. Responsibilities of the EMO include:

- Implementing this INRMP Update;
- Managing all phases of the MTA Natural Resources Program with appropriate natural resources management professionals;
- Developing and implementing programs to ensure the inventory, delineation, classification, and management of all applicable natural resources to include: wetlands, scenic areas, endangered and threatened species, sensitive and critical habitats, and other natural resource areas of special interest
- Providing for the training of natural resources personnel;
- Maintaining forestry records (prescribed burns, timber harvests, fire break maintenance);
- Maintaining the Endangered Species Monitoring Log;
- Reviewing all environmental documents (for example environmental impact assessments and remedial action plans) and construction designs and proposals to ensure adequate protection of natural resources, while ensuring that technical guidance as presented in this INRMP update is adequately considered;
- Evaluating impacts of training missions and providing guidance to trainers;
- Coordinating the Cultural Resources program and Section 106 compliance;
- Coordinating with local, State, and Federal governmental and civilian conservation organizations relative to the MTA natural resources management program;
- Hunting Program;
- Implementing and executing AR 200-1;
- Assisting the Adjutant General with developing funding priorities for all natural resources program and compliance activities.

The Environmental Management Officer also receives support from the MTA staff, each of whom has significant duties in addition to natural resources support. Additional labor resources may include:

- Federal agencies (USFWS, NRCS; USACE – Construction Engineering Research Laboratory (CERL), U.S. Forest Service (USFS), and the U.S. Army Environmental Center);
- State agencies (IDNR);
- Local and regional Universities;
- Scouting groups;
- Special interest groups (TNC, Audubon Society, and sportsmens' clubs).

20.2.2 Personnel

Training for ILARNG personnel, as well as others participating in the management of natural resources, should be practical and job-related. All training programs should involve at minimum a review of legal compliance requirements, applicable DoD/DA regulations, pertinent state and local laws, and current scientific and professional standards as related to the conservation of natural resources.

The following annual workshops, professional conferences, and classes are excellent means of obtaining interdisciplinary training for natural resources managers:

- North American Wildlife and Natural Resources Conference
- <http://www.jwdc.com/wmi/main.html>;
- The Army ITAM Program – <http://www.army-itam.com/main.htm>;
- NGB ITAM Workshop;
- DA ITAM Workshop – <http://www.army-itam.com/workshop.asp>;
- Army Environmental Center RTLA training;
- Defense Environmental Network Information Exchange (DENIX) - <http://www.denix.mil/>;
- Army Training Support Center - <http://www.atsc.army.mil/>;
- National Military Fish and Wildlife Association - <http://www.nmfwa.org/>;
- USACE Wetland Delineation Courses - <http://www.hnd.usace.army.mil/to/pindex.html>;
- North American Lake Management Society www.nalms.org;
- Locally available training through the Cooperative Extension Service, universities, professional and trade organizations, State government, and commercial businesses;
- Prescribed Fire Management Course and other opportunities offered by TNC - <http://nature.org/>.

Conferences and workshops will be evaluated for their usefulness, and decisions will be made based on appropriateness to ongoing projects and funding availability. Personnel will be trained in related environmental fields, as appropriate. NEPA training will be required of all supervisory personnel and those who review or prepare NEPA documents.

20.2.3 Data Management

Natural resources data are maintained by ILARNG environmental management program and natural resources personnel at Camp Lincoln in Springfield, Illinois. GIS technology is used to manipulate and analyze data. Currently, the ILARNG has electronic data files for the following natural resources on the MTA.

- Soils;
- Geology (depth to bedrock)
- Water bodies;
- Terrestrial Communities;
- Habitat Types;
- Fauna (bat and purple martin houses and bird and bat survey locations);
- Cultural Resources (archeological sites);
- DEM (Topography).

In addition, the ILARNG has electronic data files for the following:

- Installation boundary;
- Real Estate;
- Ranges;
- Roads;
- Trails;
- Utilities;
- Training area divisions;
- Bivouac areas.

GIS has become an integral part of the natural resources program, specifically with regard to endangered species management and forest management. GIS may also be used to coordinate natural resources management and troop training at the MTA. GIS is an integral part of the developing ITAM program at the MTA.

20.3 Annual Review and Coordination Requirements

Per DoD policy, the ILARNG reviews the INRMP annually. Per the Marseilles MOU, the ILARNG and IDNR are required to conduct an annual Plan of Work meeting to discuss plans for the upcoming year. Annual reviews shall verify that:

- Current information on all conservation metrics is available.
- All “must fund” projects and activities have been budgeted for and implementation is on schedule.
- All required trained natural resources positions are filled or are in the process of being filled.
- Projects and activities for the upcoming year have been identified and included in the INRMP. An updated project list does not necessitate revising the INRMP.
- All required coordination has occurred.
- All significant changes to the installation’s mission requirements or its natural resources have been identified.

One source of information for these annual reviews is the Army’s Environmental Quality Report (EQR) system. The EQR is the automated system used to collect installation environmental information for reporting to DoD and Congress. The EQR system moved to the Army Environmental Reporting Online (AERO) portal in February 2005, creating a day-to-day management tool. The Army Environmental Database Environmental Quality module (AEDB-EQ) is a full update of the Web-based software EQR application used to convey the Army’s environmental status to senior Army leadership, DoD, and Congress since 1997.

Established to fulfill a semi-annual requirement to report the status of DoD’s Environmental Quality program to Congress, EQR collects detailed information on enforcement actions, inspections and other performance measures for high-level reports and quarterly reviews. EQR also helps the Army track fulfillment of DoD Measures of Merit requirements.

The module is designed to coordinate information management for conservation, compliance, pollution prevention and other Army environmental reporting. It can adapt easily to future changes in command structure or measures of merit.

AEDB-EQ provides for the collection, review, and retrieval of data in 14 program areas, from enforcement actions to conservation program metrics. The Environmental Program Requirements (EPRWeb) reporting system is a module of AEDB.

20.4 Monitoring INRMP Implementation

The DUSD *Updated Guidance for Implementation of the SAIA* updated Conservation Metrics for Preparing and Implementing INRMPs. Progress toward meeting these measures of merit is reported in the annual EQR to Congress. Reporting requirements include:

- The installation name and state.
- The year the most recent INRMP was reviewed for operation and effect.
- Date planned for the next revision or update.
- Was the INRMP coordinated with appropriate military trainers and operators?
- Were projects added to the INRMP as a result of comments from military trainers and operators?
- Were segments of the INRMP concerning the conservation, protection and management of fish and wildlife resources agreed to by the USFWS Regional Director? (USFWS coordination)
- Were projects added to the INRMP as a result of USFWS comments?
- Has annual feedback been requested from the USFWS?
- Has annual feedback been received from the USFWS?
- Were segments of the INRMP concerning the conservation, protection and management of fish and wildlife resources agreed to by the State fish and wildlife agency Director? (State coordination)
- Were projects added to the INRMP as a result of State comments?
- Has annual feedback been requested from the State fish and wildlife agency?
- Has annual feedback been received from the State fish and wildlife agency?
- Does the INRMP contain a list of projects necessary to meet plan goals and objectives, as well as timeframes for implementation of any such projects?
- \$ spent in reporting Fiscal Year (FY) to implement the INRMP.
- Did the installation seek public comment on the draft INRMP?
- Were projects added to the INRMP as a result of public comments?

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APPENDIX A

IMPLEMENTATION STATUS
for the
2016-2020 INRMP

Table 13. Implementation Projects for 2016 - 2020

INRMP Project #	Project Name	Project Description	Fund Type	Legal Driver	Plan Date
1	Comprehensive Timber Stand Improvement	This project includes the implementation of the MTA TSI Plan. The purpose of this project is to enhance the long term naturally occurring oak-hickory type of ecosystem while simultaneously enhancing military training. Additionally, shade tolerant species, such as, but not limited to, maple trees are becoming invasive over the site and are reducing the seed crop for wildlife, future propagation, and further limiting accessibility of the site for troop training. In addition to current TSI, the management strategies outlines in the article “Quantifying the Carbon Sequestration Potential of Forested Landholding at the Marseilles Training Center” will be applied. All forest compartments requiring TSI must still undergo IDNR Comprehensive Environmental Review Process.	ITAM	Sikes Act, Army Regulation	Ongoing
2	Comprehensive Burn Plan	This project includes the implementation of the MTA Integrated Wildfire Management Plan. Project funds will include the purchase of needed equipment. The NRCS recommends burning to increase biodiversity, soil development/structure (see Chapter 13), and to reduce the use of herbicides for invasive species control. The purpose of this project is to protect nearby farms and residences from a fire breaching the MTA boundaries, to enhance ecosystem functions, and to increase troop and hunter accessibility by controlling the increasing spread of undesirable trees.	ITAM/Facilities	Sikes Act, Army Regulation, Illinois Exotic Weed Control Act	Ongoing
3	Forest Inventory	This ongoing project would occur subsequent to TSI activities (Project 1). Result from this inventory would be compared to the previous forest inventory to assess the affects (both positive and negative) of TSI prescriptions on the MTA forest composition. Findings will be used to reassess future management strategies.	Environmental	Sikes Act, Army Regulation	2016-2020
4	Trail and Access Point Expansion or Hardening	This project includes maintenance of existing trails and the establishment of new trails and the installation access points. All new trails or access points established will be coordinated with and approved by IDNR personnel to ensure both parties will benefit. Increased trails will provide for easier access for both hunters and troops. Existing access points are within the northwestern portion of the site only, which results in the overuse of the trails and land in this area. Increased trails would provide more natural firebreaks and enhance training options for maneuvers.	ITAM/Facilities	Sikes Act, Army Regulation	Ongoing

Table 13. Implementation Projects for 2016 - 2020

INRMP Project #	Project Name	Project Description	Fund Type	Legal Driver	Plan Date
		Proper care will be taken to avoid forest habitat fragmentation. New trails will be built, when feasible, in areas of previous disturbance.			
5	Trail Maintenance	This project includes the regarding and maintenance of eroded areas along MTA trails. Improper drainage has impacted some areas resulting in severe rutting on many trails. Rehabilitation of these trails will provide an overall benefit to soils, water resources, and aquatic habitat resources.	ITAM/Facilities	Sikes Act, Army Regulation, CWA	Ongoing
6	Invasive Species Control	<p>This project includes various activities to control the spread of already established invasive species and prevent establishment of additional undesirable species. Activities include removing undesirable plants and vegetating with more desirable native species. Removal techniques include primarily mechanical methods such as cutting, (see Section 16.4), mowing, biological control, and use of explosives, fire, followed up with a limited amount of timely application of herbicide. Natural removal of undesirable species include the use of sheep, goats, and cows for grazing. Grazing has also been proven to be an effective and safe means to create fire breaks (Project 2) Invasive species targeted in this project include, but are not limited to, poison ivy, black locust, musk thistle, phragmites, and autumn olive.</p> <p>Managing invasive species allows native plant communities to flourish, enhancing both forest and non-forest habitats at the MTA. This project is necessary to prevent the loss of available training land because several of these species can create impenetrable thickets. Additionally, managing invasive species benefits soils, water resources, and biological resources. See Chapter 16 for additional information on controlling invasive species and noxious weeds.</p>	ITAM/Facilities	Sikes Act, Army Regulation, Illinois Exotic Weed Control Act	Ongoing

Table 13. Implementation Projects for 2016 - 2020

INRMP Project #	Project Name	Project Description	Fund Type	Legal Driver	Plan Date
7	Track INRMP Project Success through RTLA	This will be an ongoing project that will incorporate GIS and on-site monitoring to effectively manage natural resources and for assigning training areas. The goal of this project is to achieve the military mission while at the same time sustain these training areas and minimize the potential for adverse impacts to natural resources. GIS will also be used as a tool to monitor and track the progress and success of implementation projects. Training areas will continue to be periodically examined for signs of adverse impact. The training unit's commanding officer will continue to be responsible for leaving the training area in the same or better condition than it was prior to the activity.	ITAM/ Environmental	Sikes Act, Army Regulation, CWA	Ongoing
8	General Erosion Control and Soil Stabilization	This project provides funds for purchasing seed, mulch, sediment fences, and erosion control fabric to stabilize areas disturbed by training exercises. The project includes recontouring steep eroding slopes, when project funds are available, through the entire MTA installation. This project benefits soils by reducing soil erosion, water resources by preventing sedimentation, and prevent the loss of military training land.	ITAM/ Environmental	Sikes Act, Army Regulation, CWA	Ongoing
9	SKC Maintenance	This project would include the development of a Watershed Plan for the SKC watershed. IDNR and DMAIL will collectively develop this plan. As part of this Plan, projects will focus on reducing severe soil erosion (e.g., recontouring steep slopes and vegetating areas). The goal of this project is protect water resources and sustain land for training.	Environmental/ IDNR	Sikes Act, Army Regulation, CWA	2016-2020
10	Monarch Butterfly Program	This project includes the establishment, maintenance, and monitoring of monarch butterfly populations and their associated habitats.	Environmental	Sikes Act, Army Regulation	Ongoing
11	Recycling Program	This project includes the implementation of a recycling program at the MTA that includes plastic, cardboard, paper, scrap metal and aluminum recycling, and possibly food composting. The goal of this project is to reduce solid waste by approximately 50 to 75 percent. A temporary or permanent building within the Cantonment Area will be needed to consolidate and manage the recycling program.	Facilities/ Engineering/ Pest Management/ Funds for Qualified Recycling Program (QRP)	Sikes Act, Army Regulation	Ongoing

Table 13. Implementation Projects for 2016 - 2020

INRMP Project #	Project Name	Project Description	Fund Type	Legal Driver	Plan Date
12	Energy Conservation	This project will include instituting alternative energy sources, such as wind and solar, to reduce fuel costs associated with the operation of the installation and provide an overall benefit to the environment through energy reduction.	Energy Conservation Investment Program (ECIP)/ Department of Army Environmental Pollution and Prevention	Sikes Act, Army Regulation	Ongoing
13	Community Outreach and Prairie Restoration	This project provides funds to replant disturbed areas with native prairie grasses and plants through community outreach projects. The goal is to give local groups ownership of specific prairie areas and let them work on them and watch them grow for extended periods of time. This project provides several benefits including soil stabilization and reduction of sedimentation into water resources. Planting native prairie plants also helps to control invasive species on site and enhances habitat quality for native fauna. Only native prairie grasses and plants will be used in this project. Prairie plot locations will be coordinated with the IDNR and DMAIL.	ITAM/ Environmental	Sikes Act, Army Regulation	Ongoing
14	Power Line Right of Way Prairie Restoration Plan	This project provides funds to plant and maintain large strips of power line ROW as prairie corridors. This project will serve three purposes: (1) it will lower the amount of herbicide used by the power company on site to keep the ROW clear of woody vegetation; and (2) it will provide easier hunter and troop access to the entire site.	ITAM	Sikes Act, Army Regulation	Ongoing
15	Noise Modeling	This project would assess the topography, terrain, and vegetation impacts on noise levels in the remainder of the MTA. A noise study was conducted previously in the southern portion of the site (Cantonment Area) through the USACE. This survey would expand the previous study to provide a comprehensive noise assessment for the entire MTA site. In addition, new noise modeling was conducted as part of the 2008 EA in support of the new Breaching Range.	Environmental	Sikes Act, Army Regulation, Installation Noise Management Plan	2016-2020

Table 13. Implementation Projects for 2016 - 2020

INRMP Project #	Project Name	Project Description	Fund Type	Legal Driver	Plan Date
16	Pollinator Management	This project will supplement Project 15 with the establishment of Bee Apiaries for the purposes of prairie and forest pollinator management. Managed hives will be used to increase environmental awareness as well as establish a greater population of Honey Bees IAW federal guidelines.	Environmental/ ITAM/Legacy Project	Sikes Act, Army Regulation	Ongoing
17	Raptor Rehabilitation Program	With cooperation from local non-profit organizations in our area such as Save Our American Raptors (SOAR), efforts have been made to establish a Raptor Rehabilitation and Release Program.	Environmental/ Legacy Project	Sikes Act, Army Regulation	2016-2020
18	Forest Management for Reptiles and Amphibians	This project includes recommendations based on the article "Forest Management for Reptiles and Amphibians: A Technical Guide for the Midwest". PLS will need to be initiated for Faunal Surveys and may include management of wetlands for suitable habitat for increased diversity.	Environmental/ ITAM	Sikes Act, Army Regulation	2016-2020

APPENDIX B

COOPERATIVE AGREEMENTS

COOPERATIVE AGREEMENTS

Marseilles Fish and Wildlife Area/Military Training Area Memorandum of Understanding (MOU).....	1
Department of the Army License to State of Illinois for National Guard Purposes.....	89

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MEMORANDUM

to: Karolynn Eilers
from: Jim Modglin *JM*
date: November 12, 1999
subject: Marseilles MOU

reference:

Enclosed is the signed copy of the Marseilles MOU that has been returned for Director Manning's signature, and then needs to be signed by the Governor.

~~Would you please ask Jerry Beverlin to carry this forward to the Director for signature (page #10 in the MOU section).~~

Karolynn, if possible, may a copy of the signature sheet then be returned to me and to the National Guard so that we may all keep abreast of what stage of signature this is in.

Thanks for all of your help.

JM/ce
cc: File
enc.

*Diane - please return
to Jerry.
Thanks!*

Karolynn

JB approved 12/7 per Karolynn



Illinois Department of Natural Resources

<http://dnr.state.il.us>

524 South Second Street • Springfield, Illinois 62701-1787

George H. Ryan, Governor • Brent Manning, Director

August 16, 1999

Wayne S. Carlson
Lt. Colonel, ILANG
Staff Judgement Advocate
Department of Military Affairs
Illinois Army and Air National Guard
1301 North MacArthur Boulevard
Springfield, Illinois 62702-2399

Re: Marseilles Training Area


Dear Lt. Colonel Carlson:

Thank you for your correspondence of August 4, 1999 which completed the necessary information to finalize the MOU. I have enclosed two copies of the completed MOU for your review and upon completion please forward both copies on to your General for signature.

Once your General has signed both copies, please return one to me which will be forwarded through our chain-of-command to Director Manning for his signature. After Director Manning has signed, a finalized copy will be forwarded to you for your records.

Thank you for your assistance in this matter and it has been a pleasure seeing this project come to completion.

Sincerely,


Jim Modglin
Regional Land Manager
2612 Locust Street
Sterling, Illinois a 61081

*6/30/99
Returned for
FINAL Signature -
THANKS
LTC Steve Petersen
217-761-3575*

JM/ce

cc: File
enc. MOU - 2 copies

RECEIVED

AUG 26 1999

DMAIL JA

APPENDIX B
Page 2

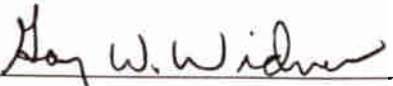
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**MARSEILLES STATE FISH AND WILDLIFE AREA/
MILITARY TRAINING AREA**

We submit for signature the revised Memorandum of Understanding Agreement for the
Marseilles State Fish and Wildlife Area/Military Training Area.

Military


Colonel Gary Widner

1 Sep 99
Date


Colonel Dennis Celletti

1 Sep 99
Date

IDNR


Regional Land Manager
Jim Modglin

8/18/99
Date

AGREEMENT

Agreement made this _____ day of _____ 1999, between the Illinois Department of Natural Resources, hereinafter referred to as IDNR, and the Department of Military Affairs, hereinafter referred to as Military, witnesseth:

Whereas, it is mutually agreed that certain lands located in LaSalle County, in Sections 29, 30, 31, and 32, T 33 N, R 5 E of the 3rd P.M. and Sections 4, 5, and 6, T 32 N,

R 5 E of the 3rd P.M. are satisfactory for a facility for Military and IDNR purposes; and

Whereas, IDNR has acquired 2,550 acres, more or less, of land in LaSalle County to be used as a replacement site for The Camp Logan property which was developed by IDNR as part of the Illinois Beach State Park and, as such, that property will not be available for use by the Department of Military Affairs. Therefore, it is understood that the replacement site will be made available to the Department of Military Affairs for their use and operation for needed training purposes; and

Whereas, the Department of Conservation (currently the Department of Natural Resources) and the Military and Naval Department (currently the Department of Military Affairs) heretofore entered into an Agreement dated March 18, 1983 concerning the management and use of the above site; and

Whereas, the parties intend that this Agreement will completely supersede and replace the Agreement dated March 18, 1983, and that this Agreement sets forth all the covenants between the parties and will henceforth govern the parties' conduct concerning the management and use of the above site.

Now, therefore, in consideration of the mutual agreements hereinafter set forth, it is

agreed as follows:

1. The site is to be known as **Marseilles State Fish and Wildlife Habitat Area/Marseilles Training Area.**
2. The site is to be developed for the combined and mutual benefit of both parties.
3. 273.94+ acres located in the southern part of the site, in Sections 4 & 5, T 32 N, R 5 E of the 3rd P.M. is to be called the **Cantonment Area** and is more particularly described as:

The West Half of the Southwest Quarter of Section 4 in Township 32 North, Range 5 East of the Third Principal Meridian; and that part of the South Half of Section 5, Township 32 North, Range 5 East of the Third Principal Meridian lying South of a line 1600 feet North of and Parallel to the South line of said Section 5.

ALSO,

The following two (2) parcels of land necessary to the DEPARTMENT OF MILITARY AFFAIRS, one parcel to be used as a maintenance and storage area, and the second parcel to provide a location for the Marseilles Training Area Ammunition Storage Facility; said parcels are more particularly described as follows:

Parcel 1 - West one-half ($\frac{1}{2}$) of the Southeast one-fourth ($\frac{1}{4}$) of the Southeast one-fourth ($\frac{1}{4}$) of Section 30, Township 33 North, Range 5 East of the Third Principal Meridian, containing twenty

(20) acres more or less.

Parcel 2 - A portion of the West one-half ($\frac{1}{2}$) of the Northeast one-fourth ($\frac{1}{4}$) of the Southwest one-fourth ($\frac{1}{4}$) of Section 5 comprising that part lying North of the 1600 foot East-West line that is parallel to the South boundary line of Section 5, Township 32 North, Range 5 East of the Third Principal Meridian, containing fifteen and seventy-five hundredths (15.75) acres more or less.

All said real estate is situated in LaSalle County, Illinois, and shall be used by Military for the installation of permanent improvements as deemed necessary by Military. Plat map of the area is attached - **Exhibit 1**. Military shall be solely responsible for site maintenance and development of these areas.

4. Both parties recognize the special use areas outlined below:
 - a. Cantonment Area - 273.94+/- acres. This area, as described earlier in paragraph 3, is the permanent site of the National Guard armory, site manager's residence, firing range, and other facilities outlined in **Exhibit 2**. The unfenced area bordering the north side as shown on Exhibit 2, will be signed by Department of Natural Resources and patrolled by National Guard security personnel.
 - b. Northern Use Area - 615 acres. This area encompasses the northern $\frac{1}{5}$ of the site. Included in this area is Parcel 1, as described in paragraph 3 above, and the sand and gravel operation described in subparagraph c below. The National Guard has assumed responsibility for maintaining a

narrow corridor; and the IDNR Site Superintendent and Military Facility Site Manager shall cooperatively determine, implement, and maintain proper signage around the borders of this corridor area running parallel to the existing road.

- c. Garrow Gravel Services, Inc. - 210.245 acre inholding. During the land condemnation process whereby the State gained the right to purchase the property now comprising Marseilles State Fish and Wildlife Habitat Area/Marseilles Training Area, a dispute arose concerning the mineral (sand and gravel) rights to the portions of the site described as 5C on the attached aerial photos - **Exhibit 3**.

Legal proceedings determined that Garrow Gravel Services, Inc. did possess certain mineral rights. On January 4, 1980, an Assignment, Relinquishment, and Quitclaim of Rights was filed which allows Garrow to remove sand and gravel and other like materials until December 31, 2004.

- d. IDNR shall retain the sole use of the area around the barn and corn crib in the northeast corner of the site more particularly described as: That part of the N ½, of the SE 1/4, of Section 29, T.33N., R 5E, of the Third Principal Meridian lying North of a line 600' South of and running Parallel to the East half of the centerline of Section 29 commencing at a point 600' East of the midpoint of Section 29 and terminating at a point 600' West of the East line of said Section. Approximately eight acres, shown in **Exhibit 4**.

5. Military shall have jurisdiction over the entire site except for IDNR's sole use area described in paragraph 4. d. above from March 1 through October 31 of each year, subject to the rights of IDNR as hereinafter described. Additionally, the site will be available to the IDNR as a wildlife and recreation area as follows:

- Beginning on the second Monday in April, after April 2, and ending on the same day in May, ie: a 31 day period, hunting will be allowed Mondays through Thursdays only, and only from 4:30 AM until 9:00 AM.
- During the month of August, hunting will be allowed Mondays through Thursdays only and only west of East 2450th Road.
- During the month of September, hunting will be allowed Labor Day Weekend and Mondays through Thursdays only - excluding the Northern Use Area.
- During the month of October, hunting will be allowed Mondays through Thursdays only.
- A review process is being conducted for the spring turkey seasons, and if an agreement can be completed, it will be attached as an Addendum for the hunting season of year 2000.

IDNR will be allowed to review the schedule of Military Training on a quarterly basis so that possible use of the entire area for weekend hunting opportunities may be explored.

6. IDNR shall have jurisdiction over the entire site, except for Military's sole use

area described in paragraph 3 above, which is used for permanent improvements, from November 1 through the first Thursday after January 10th of each year, subject to the rights of the Military to use the site as hereinafter described.

- During the month of November, Military shall have use of the Northern Use Area on all Fridays, Saturdays, and Sundays, except for the three-day firearm deer season weekend (the Friday, Saturday, and Sunday immediately before Thanksgiving).
- During the month of December, Military shall have use of the Northern Use Area on all Fridays, Saturdays, and Sundays, except for the four-day firearm deer season weekend (the first four-day weekend of Thursday, Friday, Saturday, and Sunday after the Thanksgiving weekend), and the three-day muzzleloader deer season weekend (the weekend of Friday, Saturday, and Sunday after the second firearm deer season).
- During the month of January, Military shall have use of the Northern Use Area on all Fridays, Saturdays, and Sundays through the first Thursday after January 10, and for the remainder of January, Military shall have full use of the entire site. However, Military training events will be restricted to foot traffic through training sites, and vehicle traffic will be restricted to road network and parking areas only.

- During the month of February, Military shall have sole use of the entire site for training purposes . However, Military training events will be restricted to foot traffic through training sites, and vehicle traffic will be restricted to road network and parking areas only.

IDNR will be allowed to review the schedule of Military Training on a quarterly basis so that possible use of the entire area for weekend hunting opportunities may be explored.

7. Either party may permit the other to carry out activities during its exclusive jurisdiction periods by written agreement. Written requests for such agreements shall be provided to the other party no later than sixty (60) days in advance of the proposed activity. IDNR and Military each agree to notify their staffs of the activity and dates it is to take place. Contact personnel are:

IDNR - Site Superintendent at Illini State Park

Address: Site Superintendent
Illini State Park
2660 East 2350th Road
Marseilles, IL 61341
Telephone: AC: 815/795-2448

Military - Facility Site Manager

Address: Marseilles Training Headquarters Building
2543 North 23rd Road
Marseilles, Illinois 61341
Telephone: AC 815/795-5701

8. Each party shall be solely responsible for any public liability for

damages arising by reason of its activities, insofar as such claim may exist under the laws of the State of Illinois and the United States, and shall be responsible for any site maintenance occasioned by its activities. Each party shall be responsible for any claim, suit, or proceeding for injuries or damages by third parties, or by a contractor, agent, member or employee arising from the party's use or development of the site, insofar as such claim may exist under the laws of the State of Illinois and the United States.

9. IDNR shall retain control over the natural resources management, protection, and restoration of the total site, similar to management of all IDNR properties following policy and procedure, excluding the Cantonment Area and Parcel 2 as described in paragraph 3 but not the twenty acre area described as Parcel 1. IDNR shall further retain the administration of the recreational use of the entire site, excluding the Cantonment Area and Parcel 2 described in paragraph 3, but not the twenty acre area described as Parcel 1. The IDNR Site Superintendent and Military Facility Site Manager shall cooperatively determine, implement, and maintain proper signage around the borders of Parcel 1.
10. It is understood, through mutual agreement that if the Military or IDNR are proposing a new project, that said project will go through each organization's CERP process.

Exhibit 5 - IDNR CERP Process

Exhibit 6 - Military CERP Process

Exhibit 6A - Military Environmental Assessment

11. In the event of a national or state emergency or mobilization of units that

requires Military's use of the entire site, IDNR will, upon demand, give to Military full use of the site for the duration of the national or state emergency or mobilization, with the exception of the Registered Land and Water Reserve to be added to this document as an addendum upon IDNR, Military, and the Illinois Nature Preserves Commission review and approval. It is understood, however, the Military can also use this reserve area except for the use of heavy equipment.

12. In case of an emergency, whereby either party requires use of the entire site, or any part thereof, during the period that the other party has jurisdiction, Plans Operations and Training Office shall be contacted in Military, and Illini State Park Site Superintendent or Regional Land Manager or Assistant Regional Land Manager or Office Director of Land Management and Education Division in Springfield should be contacted in IDNR. **Exhibit 7**
13. Both parties recognize the operation of a sand and gravel operation within the boundaries of the site, which is to be operated in accordance with the Assignment, Relinquishment, and Quit Claim of Rights executed on the 1st day of January 1980, a copy of which is attached hereto and made a part hereof as **Exhibit 8**.
14. In order to effectuate the use of the premises to the mutual satisfaction of both parties, an annual Plan of Work will be developed as follows:
 - a. A preliminary meeting will be set during the month of September of each year to discuss the lists of activities of both parties, to arrive at the Annual Plan of Work.

- b. Both parties will exchange information for the development of the Annual Plan of Work no later than November 15 of each year.
- c. The final Plan of Work will be prepared and exchanged at the Annual Meeting with the other party no later than the 15th of December each year.

In witness whereof, the parties hereto have hereunder set their hands the day and year first above written.

DEPARTMENT OF MILITARY AFFAIRS

DEPARTMENT OF NATURAL RESOURCES

BY


The Adjutant General

BY


Director

Approved


Governor

EXHIBITS

1. Plat Map of Area
2. Cantonment Area Map
3. Aerial Photos - Area of Garrow Gravel Services
4. Map of northeast corner of site - showing barn & corn crib area.
5. IDNR CERP Process
6. Military CERP Process
- 6A. Military Environmental Assessment
7. Emergency Contacts - IDNR and Military
8. Gravel Lease

Exhibit 1

Plat Map of Area

Exhibit 2

Cantonment Area Map

3132
6 5

3233
5 4

NW 1/4

NE 1/4

Center Section 5

15.75 ±
Parcel 2
660'

1040'

SW 1/4

SE 1/4

273.94 ±

1600'

South line, Section 5

6 5
7 8

5 4
8 9

Exhibit 3

Aerial Photos - Area of Garrow Gravel Services

546 MAT.

7920

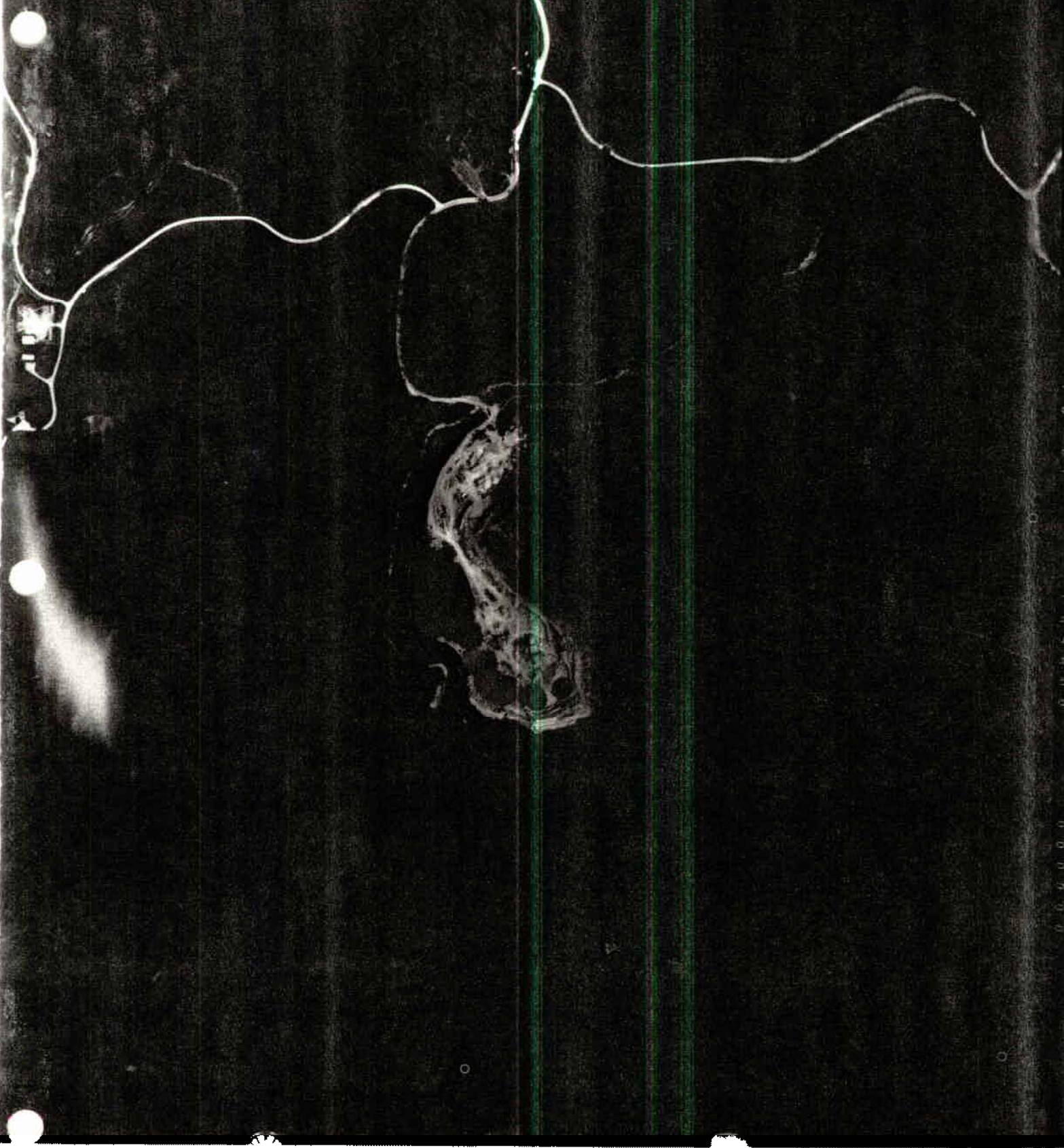
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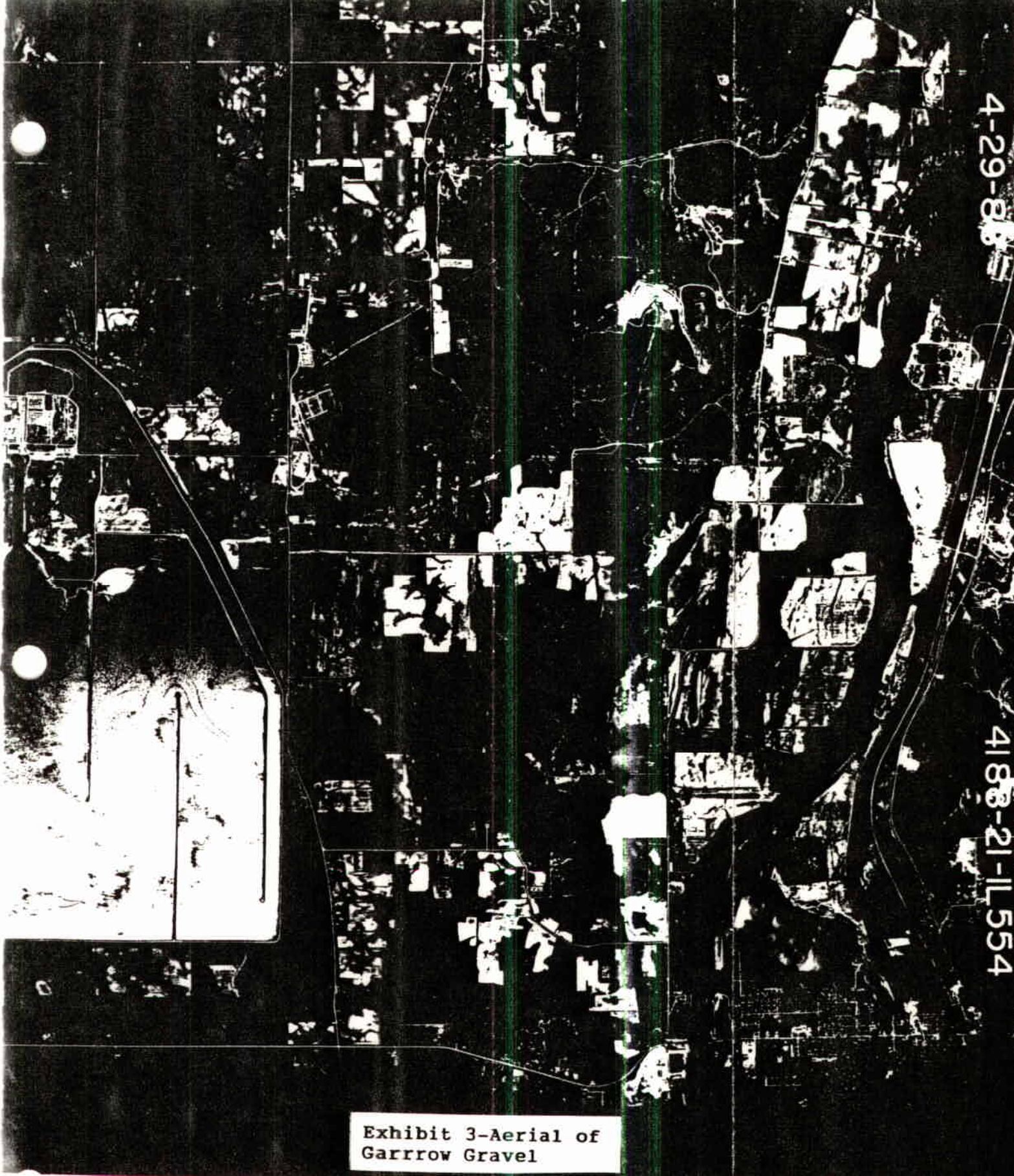


Exhibit 3-Aerial of Garrow Gravel

Exhibit 4

Map of northeast corner of site - showing barn & corn crib area.

60

61

BR 516

29

Brookfield Spring

28

510

505

506

507

73

72

71

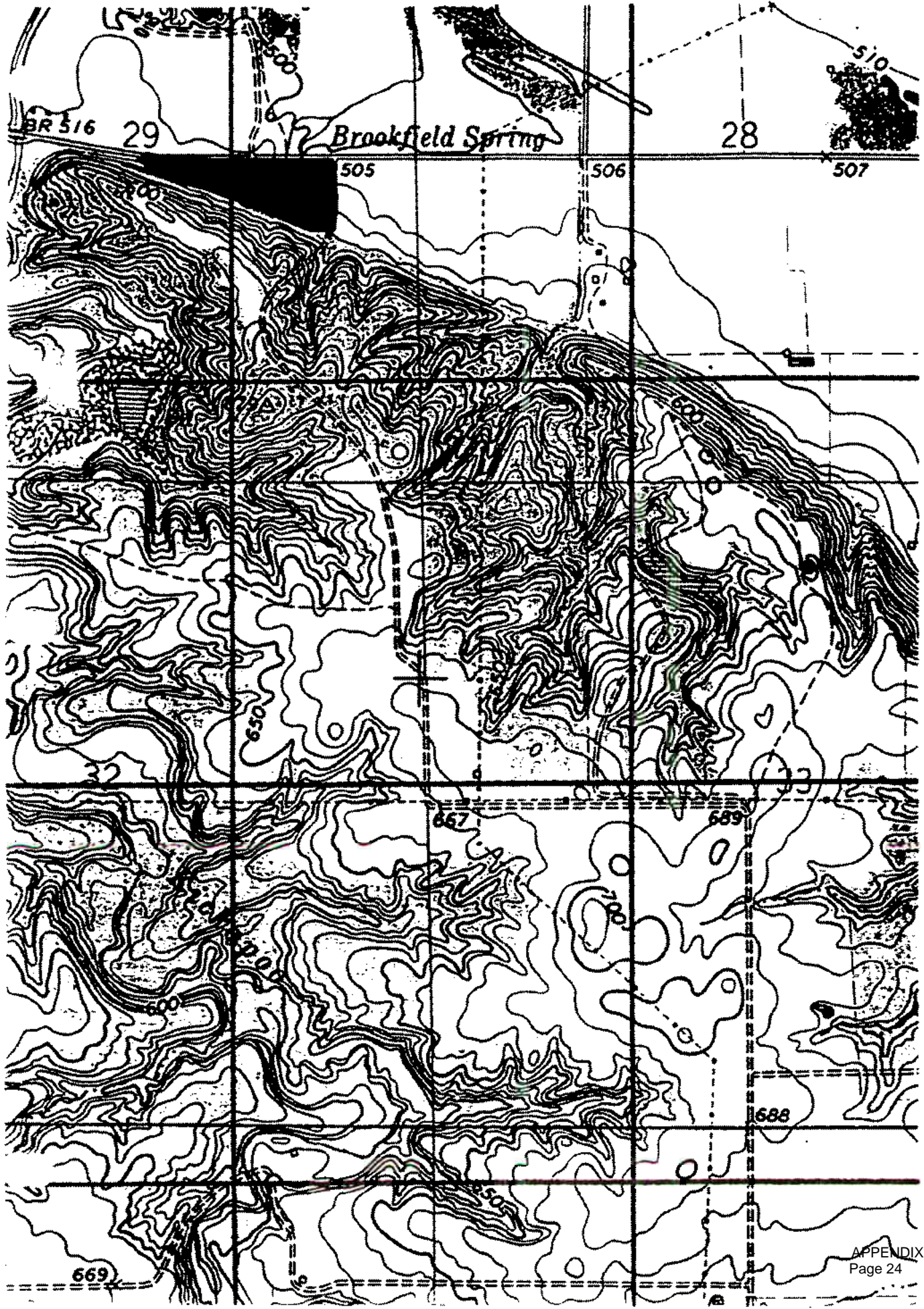


Exhibit 5

IDNR CERP PROCESS

Contact:

**Site Superintendent
Illini State Park
2660 East 2350th Road
Marseilles, Illinois 61341**

Telephone: AC: 815/795-2448

Comprehensive Environmental Review Process (CERP)

Preface

The Natural Areas Preservation Act (525ILCS30/1 et. Seq.), The Interagency Wetland Policy Act of 1989, The Endangered Species Protection Act (520ILCS10/1 et. Seq.), the State Agency Historic Resources preservation Act (20ILCS3420/1 et.seq.), the Archaeological and Paleontological Resource Protection Act (20ILCS3435/1 et. Seq.), 3rd Act Human Skeletal Remains Protection Act (20ILCS3440,17IAC4170), and the National Historic Preservation Act of 1966, as amended, declare that environmentally sensitive and historically valuable resources are irreplaceable assets. They also require state agencies, including the Department of Natural Resources (IDNR), to consider the adverse impacts of their actions on these and other sensitive resources. In response to this, the Comprehensive Environmental Review Process (CERP) was developed to coordinate the review of all projects proposed, funded, or permitted and licensed by the Illinois Department of Natural Resources. This process in conjunction with meeting other state and federal statutes ensures that the above requirements are met, and that all environmental and historic impacts to the resources are considered before a project goes to construction bid, or is initiated or authorized.

No: all of IDNR activities are required to be submitted to CERP to meet the requirements of the above statutes:

1. Permit applications from the Office of Mines and Minerals and the Office of Water Resources are subject to the requirements of the Endangered Species Protection Act and the Illinois Natural Areas Preservation Act. These reviews are conducted within the Endangered Species Consultation Program.
2. The Division of Abandoned Mined Land Reclamation (AMLR) projects are required to meet the terms of the statutes listed above. However, the cultural resource review is conducted between the Division of AMLR and the Illinois Historic Preservation Agency (IHPA). The other reviews are conducted by the CERP Program.
3. The Division of Grant Administration projects are required to meet the terms of the statutes listed above. However, the form used in submitting projects is modified to meet the needs of the grants process. The CERP form described in this document will not need to be used.

Part I The Process

It is the responsibility of all units or individuals within the Department to submit to the CERP Program all land, water, and air disturbing actions. In general, those who initiate a project should be responsible for the submittal of the proposal. In the cases of capital and force account projects, the person who initiates the action should write the project description of the work and

submit it to their regional landscape architect who will provide mapping and undertake the formal submittal. Alternatives should be considered in the early stages of planning that would avoid potential adverse impacts. Where impacts cannot be avoided, they must be minimized and/or appropriately mitigated or compensated for. The review is comprehensive, and will consider other impacts in addition to the mandated resources mentioned above (listed species, Natural Area Inventory Sites, Nature Preserves, archaeological sites and historic standing structures). These potential impacts to other resources include, but may not be limited to, forests, prairies, streams, riparian corridors etc. All projects that involve the dredging of materials or sediments from any body of water including lakes, ponds, streams or other channels will require that a CERP be submitted on it for review. The manner in which to submit projects for review is described in detail in Part III..

Once a project is received by the CERP Program, an initial review is conducted to determine the scope of the project and identify resources that could be potentially impacted. After this has been established, appropriate units within the Department are contacted and asked for their comments utilizing their particular expertise. The Division of Fisheries, Forestry, Natural Heritage, Wildlife and Planning are consulted in the review process while the Natural History Survey, Water Survey, Geologic Survey, and Waste Management and Research Center are asked to comment on the more involved and complex projects and issues. Other programs are brought into the process as particular needs arise. In all cases, reviews for federal and state listed species, Natural Areas, Nature Preserves, wetlands, and archaeological sites and historical standing structures will be conducted unless exempted by statute or administrative rule.

Certain categories of actions have been permanently exempted from the review process by administrative rule and defined in the Endangered Species Protection Act, the Illinois Interagency Wetland Policy Act, and the programmatic agreement between the IDNR and the IHPA. It has been determined that these actions do not individually or cumulatively have an adverse effect on the environment. This list of exemptions may be found as Attachment A of this document. Projects that fit within these categories do not have to be submitted for review. Any questions that arise as to the applicability of these exemptions should be directed to the manager of the CERP program.

The time allowed for the initial review is 45-days; within that time period, the project proponent shall receive a sign-off from the CERP program manager, a letter indicating the need for additional information to be submitted, or the need to conduct surveys. Additional time may be required to complete the necessary assessments. In all cases the status of any given project can be obtained by calling the CERP Program manager.

In some instances the CERP program can sign-off on a project, but the sign-off may include restrictions. In these cases, an "approval with restrictions" will be clearly indicated on the CERP cover sheet, and the details of the restrictions will be attached to the sign-off document. The project proponent must accept these restrictions in writing before the project can proceed. In cases where a project must go to construction bid, these restrictions must be accepted and included in the bid specifications.

In the special cases where a project occurs on Corps of Engineers (COE) lands that are managed by the Department, the CERP sign-off is not the last step in the review process but must be sent to the COE for their review and approval. If the project had been identified and approved by the COE in a 5 year master plan at the site, a letter indicating the COE sign-off will be received from their Environmental Planning Branch, Planning Division. If the project was not identified and approved in any 5 year plan a sign-off must be obtained from the COE Real Estate Division as well as the Environmental Planning Branch.

Actions Involving A Feasibility Study, EA, or EIS

The Department, as deemed necessary may conduct a feasibility study, EA, or EIS on a proposal that is very extensive in its scope or may have resource issues involved that would go beyond the normal CERP process. On these occasions, the project proponent, in consultation with the CERP Program Manager shall determine the type of study that would be needed and implement the process through the Department or with the help of a consultant.

The published document will become the basis for the CERP review process. Decisions concerning the project will be based on the information available within these studies and those decisions will be published in the next issue of the Environmental Reporter.

Part II Significant Actions

On occasion, either through the early planning process or during the review period, certain projects will be identified as 'significant actions'. Generally a 'significant action' is an action or activity that has the potential to (1) cause a direct or indirect alteration of the physical or biological features of the air, land or water which may affect the long term survival of a plant or animal species, (2) permanent loss to wetlands or the quality of ground or surface water, (3) cause forest fragmentation, (4) degrade, on a long term basis, habitat for fish, game or non game species or (5) adversely affect a National Register eligible archaeological site and/or historic standing structure. Examples of 'significant actions', if they result in one of the five impacts listed above; may include, but are not limited to the following:

- Construction of new roads.
- Construction of new recreation areas and facilities.
- Initiation of new farming, mining, or mineral extraction activities.

- Cutting of substantial numbers of mature trees native to the area in which they are located.
- Logging on State Forest lands that affect an area over 10 acres in size.
- Actions affecting a listed species, Natural Area, or Nature Preserve.
- Actions that cause significant alterations to lakes, or streams.
- Actions affecting National Register eligible archeological sites and/or historic standing structures.
- Actions substantially affecting an important aesthetic feature of the area in which it is located.

If a project has been determined through the review process to be a "significant action", an expanded review process that allows for public review and comment will be initiated. This will be accomplished by notifying our constituency through The Environmental Reporter and by notice through the open meeting's act. Constituents will be granted a 45 calendar day period following distribution to provide written comments on the project or action.

Following the closure of the public review period, the Department will review all written comments and within 15 calendar days will determine if there are sufficient unresolved concerns to make a public meeting necessary or whether to proceed with the project.

NOTE: If a public meeting is deemed necessary and is scheduled, pertinent information on the time, date, and place of the meeting will appear in the Environmental Reporter at least 30 days prior to the meeting. At its discretion, the Department may hold the meeting at the project site, in the town nearest the site, or at a nearby central location. Proceedings from the meeting will be recorded. After the public meeting is concluded, a record of all constituent comments, contacts, testimony, etc. will be made available to the Director who will make a decision within 15 calendar days, or for such reasonable extensions as the involved parties may agree to regarding the project or action.

Information on either the decision to proceed with the project based on comments received during the public review period or the decision made by the Director following review of the comments from the public meeting will be published in the next issue of the Environmental Reporter.

The public will have 15 calendar days from the date the decision appears in the Environmental Reporter to appeal the Agency's decision on the project or action. All appeals to the Agency must be specific and in writing to the Division of Natural Resource Review and Coordination.

Following closure of the appeal period, the Director's decision will be announced in the next issue of the Environmental Reporter. The project record, consisting of pertinent communication between the Department and constituents, and the Department's decision and supporting rationale, will be made available to constituents upon request. A reasonable charge may be made for reproducing the documents.

Part III Submitting A Project for CERP Review

All proposed projects or actions taken by the Department that are not exempted (See Attachment A) must be submitted for review to the CERP Program. CERP will ensure the project is in compliance with all relevant state statutes.

All projects submitted for CERP review must be described on the proper CERP review form (Attachment C), with all the required information. This form acts as the official record of the project review. Four copies of this information should be sent to the CERP manager. The following should help with the filling out of the form and attachments.

- 1) **PROJECT CODE:** A number will be assigned by the Division of Natural Resource Review and Coordination to track a project from the time of submittal to its completion.

PROJECT TITLE: Brief Descriptive title of project (i.e. picnic shelter replacement, test borings, etc.)

SITE NAME: State facility/site or location that work is to be conducted.

PROPOSED STARTING DATE: General time when the project is expected to be executed.

CONTACT PERSON: Person who is the central contact for the project. All questions that arise in the review process will be referred to the name listed.

COUNTY, TOWNSHIP, RANGE, SECTION#: This must be included on the form.

USGS QUAD MAPS AND QUAD #: If this information is available at your facility it will help in the expedited review of the project.

PROJECT DESCRIPTION: A brief description of the activity being performed. If space is not available for an adequate description, please attach an additional page. The description should include an estimate of the extent of tree removal, wetland fill, or other disturbances that might be associated with the activity proposed.

FUNDING SOURCE: The funding source must be filled out. Please pay particular attention to whether federal money is being used and of what type.

SUPERINTENDENT APPROVAL: For all NON CAPITAL projects, the site superintendents knowledge and approval of the project is needed to initiate the review.

A significant element needed to initiate a CERP review is the preparation and submittal of required project maps. CERP requires that both general location and site specific maps and/or plan sheets be submitted in conjunction with the review sheet and project description. Site specific maps should be as detailed as possible, although this is dependent on the type of project represented. Usually, a 1"=400' scale map can provide the necessary information. No design plans, blueprints, etc. are required for the initial submittal.

It must be noted that the project proponent is responsible for all permits (i.e. IEPA, Sec. 404, OWR, call JULIE, etc.) that may be required for the implementation of the project.

SIGN-OFFS ON PROJECTS SUBMITTED TO CERP ARE VALID FOR A 2 YEAR PERIOD, AFTER WHICH THEY MUST BE RESUBMITTED FOR AN UPDATED REVIEW.

ENVIRONMENTAL REPORTER

The Environmental Reporter is a monthly newsletter published for constituents. It will provide information on those Department projects and actions that have been reviewed and are proceeding. Additional information will be provided on :

- Departmental decision on projects/actions.
- Director's decisions on projects/actions following appeals.
- Information on the availability of Site Work Plans and Capital Budget Scopes.
- Information on how constituents can participate in the Environmental Review Process.
- Categories of actions proposed for and/or approved for exclusion from the review process.

Emergencies:

Where emergency circumstances pose an immediate threat to human life, or severe loss of property is imminent from situations involving acts of God, disaster, casualties, or national defense or security emergencies, and action must be taken immediately, the project proponent can proceed without notifying the CERP Program prior to taking action. The review process shall be initiated as soon as practicable after the emergency is under control, but not to exceed 30 calendar days. The project proponent shall submit a CERP Review Form, that shall include information on the nature of the emergency actions, the justification for requiring immediate action, and any adverse impacts to natural resources that may result. The CERP Program shall evaluate such information, and provide recommendations concerning possible mitigation measures that might be necessary.

Where emergency circumstances pose a threat to human life or loss of property, and the action must commence within 30 days, the project proponent may request that the review process be expedited prior to the action taking place. The project proponent shall contact the CERP Program prior to commencing the action and explain the nature of the problem. The CERP Program manager shall determine whether a sensitive resource is present within the vicinity of the action and notify the project proponent. If a sensitive resource is present within the vicinity of the project, alternatives shall be discussed (with IDNR Resource Personnel and CERP Program Manager) to avoid or minimize the adverse impacts prior to commencement of the action. Such reviews will be expedited to allow the project to proceed, possibly with modifications, as quickly as possible.

**Comprehensive Environmental Review Process Categorical Exclusion
for Illinois National Guard Activities on the
Marseilles State Fish and Wildlife Area/Military Training Area**

Vegetation Control and Management:

The control or reduction of encroaching woody vegetation in areas mowed or cultivated within the last three years.

Activities that promote good stewardship, provide the public safety, and proper public utilization of the State's natural resources.

The maintenance of existing levees, dams riprap area, improved roads, parking areas, trails, firebreaks, access lanes, water control structures, pump sites, culverts, erosion control structures, and military constructed fence.

Routine building and grounds maintenance including, but not limited to, mowing, trimming, painting, and signing (except for historical structures as identified by IDNR staff archaeologist).

Renovation of existing buildings both internally as well as externally (except for historical structures as identified by IDNR staff archaeologist).

Replacement of deteriorating wooden pit toilet vaults with new concrete vaults in same locations.

All routine annual turf management activities such as mowing of grass, aeration, seeding, and fertilizer application.

Routine road maintenance and/or rehabilitating (ie: resurfacing, pot-hole repair, regrading, clean-out of road ditches, mowing, etc.) on established improved roads.

Re-surfacing only of existing hiking, biking trails with materials that are of the same type as the existing surface. Widening, expansion, or rerouting of trails is not exempt.

Installation and/or replacement of traffic, trail, and information signs provided that vegetation removal will not be necessary.

The aforementioned deals strictly with existing structures only. Any new construction or maintenance projects other than existing must be processed through the CERP review.

Illinois Department of Natural Resources

COMPREHENSIVE ENVIRONMENTAL REVIEW PROCESS

Project Code: _____ Project Title: _____

Site Name: _____ Proposed Start Date: _____

Contact Person: _____ PH# _____ County: _____

USGS Quad Map: _____ T: _____ R: _____ Sec: _____

Project Description: _____ Quad #: _____

Funding Source: IDNR Capital _____, Heavy Equipment _____, Force Account _____
Other State, Local or Private Agency _____
Federal _____, Federal Program (e.g. P-R) _____

Approved by Site Superintendent: (for all NON CAPITAL projects, e.g., Heavy equipment, force account, leases, R.O.W., etc.)

Signature, Site Superintendent Date

CERP Staff Only:
REVIEWS PERFORMED

	Approved	Approved with Restrictions	Comments
Threatened & Endangered Species	_____	_____	_____
Wetlands	_____	_____	_____
Cultural Resources	_____	_____	_____
Other	_____	_____	_____

Kenneth L. Litchfield, Manager
CERP (217)785-5500

Date APPENDIX Page 34

Exhibit 6

MILITARY CERP PROCESS

Contact:

Facility Site Manager
Marseilles Training Headquarters Building
2543 North 23rd Road
Marseilles, Illinois 61341
Office: AC: 815/795-5701

EXHIBIT 6

ILLINOIS ARMY NATIONAL GUARD

1. ENVIRONMENTAL REVIEW

Environmental documentation of proposed actions can be accomplished by using one of three different levels of analysis. To determine the proper review category, the National Guard Bureau's Environmental Resources Management Office has created an Environmental Review Checklist that asks a series of questions regarding the impact of the proposed action on the environment. The proponent must fully describe the action so the Environmental Review Checklist can be properly filled out by the MAIL-FE Environmental Branch. The data resulting from the request allows determination for the proper category of environmental review that is necessary for project initiation.

a. Categorical Exclusions. A Categorical Exclusion (CX) is an action that the Army has determined as not individually or cumulatively having a significant effect on the human environment. An action, which has been categorically excluded, requires the preparation of a Record of Environmental Consideration (REC) to demonstrate that the action has been included in the environmental review process if noted on the side of the exclusion. A CX is a category of actions that do not individually or cumulatively have a significant effect on the human environment and for which, therefore, neither an EA nor an EIS is required.

(1) A CX may be used only when the criteria of items (a) thru (j) are true:

(a) This action is not a major federal action significantly affecting the quality of the human environment.

(b) There are minimal or no individual or cumulative effects on the environment as a result of this action.

(c) There is no environmentally controversial change to existing environmental conditions.

(d) There are no extraordinary conditions associated with this project.

(e) This project does not involve the use of unproven technology.

(f) This project involves no greater scope or size than is normal for this category of action.

(g) There is no potential of an already poor environment being further degraded.

(h) This action does not degrade an environment that remains close to its natural condition.

(i) There are no threatened or endangered species (or critical habitat), significant archaeological resources, National Registered or National Register eligible historical sites, or other statutorily protected resources.

(j) This action will not adversely affect prime or unique agricultural lands, wetlands, coastal zones, wilderness areas, aquifers, floodplains, wild and scenic rivers, or other areas of critical environmental concern.

(2) Lists of Categorical Exclusions CXs are:

(a) Routine repair and maintenance of buildings, roads, airfields, grounds, equipment, and other facilities, to include the layaway of facilities, except when required by application or disposal of hazardous or contaminated materials. (REC required.)

(b) Routine procurement of goods and services, including routine utility service.

(c) Construction that does not significantly alter land use, provided the operation of the project when completed would not of itself have a significantly environmental impact; this includes grants to private lessees for similar construction. (REC required.)

(d) Storage of materials, other than ammunition, explosives, pyrotechnics, nuclear, and other hazardous or toxic materials such as pesticides and herbicides. (REC required.)

(e) Acquisition, installation, and operation of utility and communication systems, data processing, cable, and similar electronic equipment that use existing rights of way, easements, distribution systems, and facilities. (REC required.)

(f) Activities that identify, or grant permits to identify, the state of the existing environment (for example, inspections, surveys and investigations) without alteration of the environment or capturing of wild animals. (REC required.)

(g) Deployment of military units on a temporary duty (TDY) basis where existing facilities are used and the activities to be performed have no significant impact on the environment. (REC required.)

(h) Grants of easements for the use, of existing rights-of-way for use by vehicles; electrical, telephone, and other transmission and communication lines; transmitter and relay facilities; water, wastewater, storm-water, and irrigation pipeline, pumping stations, and facilities; and for similar public utility and transportation uses. (REC required.)

(i) Grants of licenses for the operation of telephone, gas, water, electricity, community television antenna, and other distribution systems normally considered as public utilities. (REC required.)

(j) Disposal of uncontaminated buildings and other improvements for removal off-site. (REC required.)

b. Environmental Assessment. An Environmental Assessment (EA) is prepared to determine the extent of environmental impacts of an action and decide whether or not those impacts are significant. An EA is not required for actions that are subject to categorical exclusion. An EA provides the public a brief description of the proposed action and the writer's opinion, based on knowledge of environmental regulations or contact with appropriate governmental agencies, of the level of actual environmental impact. A description of available alternatives is typically incorporated into an EA to allow the public the opportunity to examine different methods of achieving the intended action. After public review, an EA may be finalized by preparation of a Finding of No Significant Impact. The following actions may require an EA:

(1) Special field training exercise on IL ARNG Joint Use Lands of a nature or magnitude not within the normal annual training cycle.

(2) Changes to established installation land use that generates impacts on the environment.

(3) Repair or alteration projects affecting historically significant structures, archeological sites meeting the criteria for nomination to the National Register of Historic Places.

(4) Actions, which could potentially cause soil erosion, affect prime or unique farmland, wetlands, floodplains, water supplies, etc.

(5) Development of an installation master plan.

(6) Acquisition and use of a new weapons system.

c. Environmental Impact Statement. An Environmental Impact Statement (EIS) is the most in-depth review of an action. The decision to create an EIS may be caused by the inability for the public and the proponent of an action to agree upon a Finding of No Significant Impact after conclusion of an EA, or the proponent may be required to prepare an EIS due to the obvious significant environmental impact associated with an action. An EIS is typically prepared by a contractor and involves thorough research of the effects that the proposed action will have upon the affected environment. Typical military actions, which may require an EIS, are:

(1) Significant expansion of a military facility, such as a depot, munitions plant or major training installation.

(2) Construction of facilities that have a significant effect on wetlands, coastal zones or other areas of critical environmental concern.

(3) The disposal of nuclear materials, munitions, explosives, or chemicals that have the potential to cause significant environmental impact.

(4) Land acquisition, leasing or other actions that will lead to significant changes in land use.

(5) Training exercises conducted outside the boundaries of a military installation where significant environmental damage might occur.

2. ENVIRONMENTAL REVIEW PROCESS

a. ENVIRONMENTAL REVIEW PROCESS determines the proper type of documentation for actions. The determination of proper environmental documentation and preparation of the information cannot be initiated until the proponent of the action notifies DMAIL-FE, Environmental Branch of the requirement. The proponent, the unit, battalion, group or brigade, Directorate, State or Local Agency etc., who is responsible for planning the action, will provide a complete description to allow sufficient time for the documentation to be completed prior to the implementation of the proposed action. Ongoing actions will also be described and forwarded for review.

b. Environmental documentation is only necessary for an action one time, unless there are significant changes to that action or additional specific information becomes available from new surveys, from other sources, or changes in the law and/or regulations. Proponents are encouraged to describe all possible activities. For example:

(1) Describe all events that will occur, by all units, etc. If activities differ from winter, spring, summer and fall, describe all actions. Such activities (such as burning in the spring or burning in the fall) could have different impacts on the flora, fauna or the soils at any given time.

(2) Describe all changes that will take effect due to the change of a use of an area.

c. To ensure that proper environmental documentation is prepared for proponents' actions, DMAIL-FE, Environmental Branch will:

(1) Review all projects that are submitted from proponents of a proposed action.

(2) Coordinate preparation of borderline or unique checklists with NGB-ARE to ensure that the proper review category is prepared.

(3) Prepare appropriate environmental documentation and staff with appropriate personnel and NGB-ARE prior to public review.

(4) Coordinate all EAs and EISs with applicable regulatory agencies and the public, for comments as directed by NGB-ARE.

(5) Publish Notices of Availability, Findings of No Significant Impact or Notice of Intent in a statewide publication.

(6) File all environmental documents for all actions.

(7) Forward a copy of all environmental documentation to the proponent.

d. To ensure that proper environmental documentation is prepared for actions, the proponent of the activity will:

(1) Address all the proposed actions for all activities that have not been previously documented, or proposed actions that are new or involve significant change from the original activity.

(2) Ensure that the proposed action thoroughly describes the activity and all associated activities and that all units, agencies, personnel, etc. that are involved in the action.

(3) Preplan all activities to ensure an acceptable amount of time for environmental documentation preparation by DMAIL-FE, Environmental Branch.

(4) Forward the proposed activity to DMAIL-FE, Environmental Branch immediately upon activity change or original documentation of an ongoing mission.

(5) File the completed environmental documentation, from DMAIL-FE, Environmental Branch.

ILLINOIS

ARMY NATIONAL GUARD

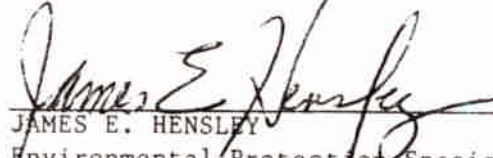
ENVIRONMENTAL ASSESSMENT

MARSEILLES TRAINING SITE

PREPARED BY:

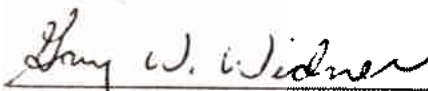

DALE R. BLOUNT
Military Environmental Specialist

3 Jan 83

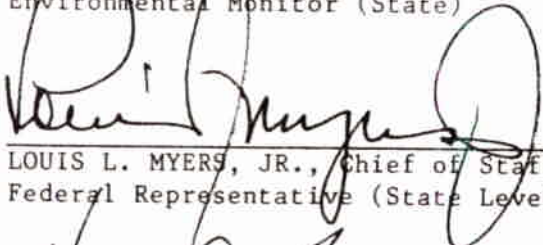

JAMES E. HENSLEY
Environmental Protection Specialist
Environmental Resources Branch
Army Installations Division
National Guard Bureau

3 Jan 83


REVIEWED BY:


GARY W. WIDNER
Environmental Monitor (State)

20 Jan 1983

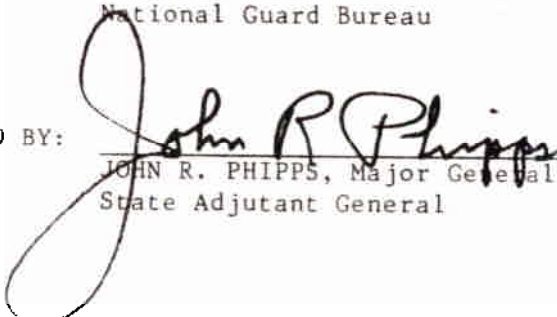

LOUIS L. MYERS, JR., Chief of Staff
Federal Representative (State Level)

20 Jan 1983


HUGO C. BIERMANN, Acting Chief
Environmental Resources Branch
Army Installation
National Guard Bureau

4 Jan 83

APPROVED BY:


JOHN R. PHIPPS, Major General
State Adjutant General

20 Jan 83

EXHIBIT 6A

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I. PURPOSE AND NEED FOR THE PROPOSED ACTION.

A. The purpose of the Marseilles Training Site (2,551.4 acres), located in LaSalle County, Illinois (Figure 1), is to provide a training site for the Illinois Army National Guard (ILARNG) and provide a wildlife habitat area for the Illinois Department of Conservation (IDOC). The title for this land is held by the State of Illinois. Use of the site is governed by a joint use agreement between the Illinois Military and Naval Department (MNIL) and IDOC.

B. This site is needed to support military field training for the ILARNG. Because there are no sites available in the State of Illinois to support realistic combat training, travel time and cost becomes prohibitive to provide out-of-state training areas for weekend training. Without this site, field training of the ILARNG members cannot occur on the frequency necessary to maintain the desired levels of proficiency.

C. The MNIL will utilize the site as a cantonment area and range firing on a year around basis. The site is utilized for field training for the ILARNG during the spring, summer and fall, and this utilization will expand.

D. The IDOC is utilizing the site for wildlife propagation and limited outdoor recreational opportunities throughout the year as scheduled between the departments. Upland game hunting is taking place during the late fall and winter months.

E. Sufficient meeting space will be provided in cantonment buildings for utilization by nonprofit organizations and activities beneficial to the local public. The site will also provide an educational opportunity for wildlife habitat management demonstrations, wildlife viewing and resource photography.

II. DESCRIPTION OF THE PROPOSED ACTION.

A. The MNIL and the IDOC will participate in the joint use of the Marseilles Training Site land. The ILARNG will utilize the site as a permanent training encampment with the construction of an armory, various buildings, training areas and ranges to support weekend and limited annual training exercises by different units of the ILARNG throughout most of the year (Figure 2). The ILARNG is currently using training areas at this site to conduct limited training exercises, but development of the permanent facilities will expand the training exercises in both numbers and type. An environmental assessment (EA) for the Marseilles range activities has been prepared entitled Illinois Army National Guard Environmental Impact Assessment, Marseilles Small Arms Range, dated 1 March 1982. The IDOC is managing and developing the site as a State wildlife area for the benefit and enhancement of the natural resources and enjoyment of the citizens of Illinois. The IDOC activities are not addressed in this EA. This EA addresses the MNIL activities on a worst case basis.

B. Through the use of Marseilles Training Area Master Plan, dated 2 February 1980, the site has been evaluated and all development and management considerations will be pursued and accomplished in accordance with the master plan. It is planned to develop a joint master plan between MNIL and IDOC at a future date to better outline the joint use of this site, but the current MNIL master plan and IDOC master plan (IDOC, Marseilles State Wildlife Area Master Management Plan) are currently in general agreement.

C. The Marseilles Training Site is to be classified by the MNIL as a high concentration training site with weekend training and limited two week annual training for various ILARNG units from 1 March to 30 October. The MNIL proposes to develop this site to support the following actions:

1. Permanent Training Areas (Figure 2).

a. Training area "A" will be utilized for battalion size unit training. Track vehicles, engineering support and aviation support can be utilized in this training area to add realism to each exercise.

b. Training areas "B", "C", "D", "E" and "F" will be utilized for Company, Platoon or Squad exercises. Track vehicles, engineering support and aviation support can be utilized in most of these areas.

c. Area "D" has steep slopes which can be utilized as ski slopes during winter training.

d. These training areas offer a variety of terrain. Each training area has open pasture, wooded land with moderate to steep slopes. During periods of annual training or field training exercises, all of the training areas can be utilized in conjunction with each other. Generally, training will be conducted at a platoon level (44 men). An example of this is a company at the site for a field exercise (154-185 men), but this company has four platoons which would be operating in different portions of a training area.

2. Training Exercises.

a. Small unit tactical training examples: patrol exercises, hasty defense exercises and field command post exercises.

b. Training in field sanitation for individuals and units with field dispensaries or field kitchens.

c. Training tank crews and personnel carrier drivers in driving skills on tracked vehicle trails and in the tank maneuver area.

d. Training in individual tasks. Examples: light and noise control in combat and individual movement at night.

e. Exercises to include the above while bivouaced in the training area.

f. Training air crews to insert and extract small patrols up to platoons. A maximum of four helicopters landing at predetermined landing zones would be used.

g. Training in the maintenance of all types of equipment (in the cantonment area).

h. Operation and maintenance of the cantonment area for support of this site.

i. Training exercises for site improvements and site maintenance. Examples: road maintenance, low water crossing construction and firebreak construction.

3. Ranges.

The proposed ranges for the Marseilles Training Site will include 30 foot Soft Earth Berm and Target Frame Holders for: 75-point 1000 inch Rifle Range and 25-point Combat Pistol Range, 4-point Machine Gun Range, 2-point Tank and Recoilless Rifle Subcaliber Moving Targets Range, Hand Grenade Range, and Ammo Storage Bunker (Magazine) and Security Enclosure. Appendix A identifies the number of rounds per range projected usage at the small arms range.

4. Support Facilities (Figure 3).

The relatively flat southern end of the site has been selected as the cantonment area and range location. The cantonment area will be comprised of an Armory, Barracks (11 buildings), Custodian Quarters, Range Keepers Quarters, Battalion Headquarters, Supply and Ration Breakdown, Mess Hall, Company Supply and Administration, Dispensary, Battalion Maintenance

Shelter (with wash rack), UTES (with wash rack and fueling facilities), five Trailers (already available, but not in final location) and Pads, 200 Person Latrine, and Vehicle Off-Road Parking Lots. Tabulated below are approximate sizes of the required building facilities:

FUNCTION AND SIZE OF FACILITIES

<u>Facility</u>	<u>Size</u>	<u>Square Feet</u>
Armory	200-Person	23,625
Barracks	Two 40-Person Sr NCO & Officer Nine 80-Person Enlisted	77,770
Battalion Hq	N/A	2,820
Bn Supply & Ration Breakdown	N/A	2,820
Mess Hall	800-Person	10,940
Co Supply & Administration	4-Unit	7,105
Dispensary	N/A	5,900
UTES	4 Bays	7,900
Custodian Quarters	Single Family	1,500
Range Keeper Quarters	Single Family	1,500
Latrine	200-Person	1,545
Bn Maintenance Shelter	N/A	2,350

5. Units and Functions Supported.

a. Upon completion of the Marseilles Training Area project, all Illinois National Guard troops in the northern half of the State will conduct small arms range firing, weekend training and selected periods of annual training at that site. The total authorized strengths exceed 8,000 troops representing a wide variety of unit types and functions.

b. The Marseilles Training Site can be developed to concurrently accommodate multi-function training tasks at varying time frequencies

(weekend/annual training). Appendix B identifies the units to be supported by the Marseilles Training Site. Appendix C categorizes the support units by function. Appendix D indicates the estimated troop densities for various types and frequencies of training utilization.

6. Roads and Firebreaks.

a. An internal road system will be developed to move tracked and wheeled vehicles on the site (Figure 4). These roads will also serve as firebreaks.

b. In addition to the roads, other portions of the site will be used as firebreaks. As noted on Figure 4, most of the firebreaks are areas to be mowed; trees will be removed as noted. Firebreaks will be for site protection.

III. ALTERNATIVES CONSIDERED.

A. No alternatives were considered. This is the only site available by the MNIL.

B. The site, analyzed in terms of Illinois National Guard needs, is rated good to excellent. The site is readily accessible to a majority of the Illinois National Guard units for weekend training. The various degrees of topographic relief and natural cover provide an excellent site for field exercises. The relatively flat southern end of the site along the township road has been selected for the permanent camp and firing ranges.

C. Troops can move from the permanent camp, or from their home stations, directly to the field for field training exercises, range firing, night maneuvers and bivouac.

D. The site will be conducive to the joint use program by the Illinois National Guard and the Department of Conservation.

IV. ENVIRONMENTAL SETTING.

A. Climate.

1. LaSalle County has a continental climate, typical of northern Illinois, with hot summers and cold winters. Low-pressure areas and associated weather fronts bring frequent changes in temperatures, humidity, cloudiness and wind direction during much of the year.

2. Annual precipitation averages 33 inches. The winter months, November through March, are the driest, averaging less than two inches of precipitation per month. Spring and summer months, April through July, are usually the wettest months, averaging nearly four inches of precipitation per month. Summer precipitation occurs mostly as brief showers or thunderstorms which are occasionally accompanied by hail or damaging winds. More than half the annual precipitation normally falls during the growing season from May through September.

3. Annual snowfall averages 25 to 27 inches. More than 20 inches has fallen in a single month on several occasions.

4. Summers are warm, but hot periods are seldom prolonged. Cool air invasion from the north occurs frequently enough in the summer to prevent long stagnation of hot, humid air masses. July is the warmest month.

B. Air Quality.

1. Existing Conditions.

a. The Marseilles Training Site is located in Air Quality Control Region 71 (North Central Illinois Intra State) and has air quality better than National Ambient Air Quality Standards (NAAQS) for total suspended particulates, sulfur dioxide, nitrogen dioxide and carbon monoxide. LaSalle County is in a nonattainment status for ozone (Geographic Designations of Attainment Status of Criteria Pollutants, IL EPA, 25 March 1980). As defined by Emergency Revision to Agency's Nonattainment Area Rules, IL EPA,

9 September 1981, this site will not be a "major source". Additionally, the U.S. EPA has proposed a rule making change, at the request of the State of Illinois, to make LaSalle County an attainment area for ozone, Federal Register, Vol. 47, No. 140, page 31590.

b. The current use of 20 civilian motor vehicles, 20 military wheeled vehicles, and 18 military tracked vehicles has not made a significant impact to air quality.

c. Open burning has been limited to landscape waste and has been in accordance with State of Illinois, Air Pollution Control Regulations, Rule 503 (c).

2. Impacts.

a. During the construction phase, fugitive dust and vehicle exhaust emissions from workers' vehicles, earthmoving equipment, vehicular traffic on unpaved roads, and construction of paved areas may cause short-term degradation of the existing air quality (particulates and carbon monoxide). Dust generated by local traffic on unpaved roads would be the primary source of increased particulates at these proposed sites. It is expected that construction vehicle engines would be equipped with emission control devices required by EPA for the year of manufacture and that these engines would be in accordance with the manufacturer's specification and applicable Federal, State and local standards. It is anticipated that known meteorological conditions in the area would disperse particulates and other air pollutants throughout the construction areas, minimizing any potential adverse impact on the existing air quality. Proposed new emission sources would include:

- (1) 100 Civilian Motor Vehicles
- (2) 96 Military Wheeled Vehicles
- (3) 47 Tracked Vehicles

(4) 22 Heating Plants (Largest plant less than 2.5 million BTU/hour input.)

(5) Two POL Underground Storage Tanks

(a) One each, 10,000 gallon (Diesel)

(b) One each, 10,000 gallon (Mogas)

(6) One POL Transfer Tank Truck/Trailer

(7) Six Helicopters

b. Civilian and military motor vehicles operations at the proposed site during unit training assemblies and during the five day work week are expected to make slight emission contributions to air pollution in the proposed area. ARNG motor vehicles would be equipped with emission control devices required by EPA during the year of manufacture. ARNG vehicle engines will be maintained in accordance with the manufacturer's specifications and applicable Federal, State and local standards.

c. The proposed heating systems utilizing heating oil or propane would be subject to the State air pollution control regulations. If these systems are designed for heat input exceeding 50 million BTU per hour, a construction and operating permit would be required. No heating system will be this large.

d. Petroleum product storage tanks and distribution systems are subject to State air pollution control regulations governing evaporative loss (vapor emission). Vapor emission control devices, to prevent release of volatile organic compounds into the atmosphere, are not required for this site.

C. Noise.

1. Existing Conditions.

a. Noise levels in the vicinity of the Marseilles Training Site have not been measured, although they are estimated to be in the vicinity of ALDN 55.

b. Currently, noise is generated by small group training, tank training and helicopter operations. The impact from this noise has not been significant. Tank training does not take place during the deer season. The site manager has received one complaint about noise from a helicopter, but the caller did not give him enough information for him to investigate the complaint fully. Currently, helicopters enter and exit the site on the south and east sides of the training area to avoid the maximum number of farmsteads. While off the site, 500 feet above ground level is the minimum altitude.

2. Impacts.

a. Noise will be generated by two activities: construction and unit training. Noise associated with the construction and utilization of the proposed ranges is addressed in Reference C.

b. Noise will occur from parking and maintenance areas, but these periods will be short and insignificant. Individual and small group training will create noise, but this will be limited to troop movement. This noise will also be insignificant.

c. The only significant noise levels will be from tank training (maneuvering) and helicopter training. Wildlife will go through a short adjustment period, but will not be significantly impacted. The only exception to this would be during deer season; therefore, tank maneuvering and helicopter training will not take place during the deer season. Helicopter operations could be a nuisance to the local population, but this will be minimized by laying out landing zones and flight patterns in a manner like the current operations to isolate helicopters from the public sector. Night flights will be less than ten percent of the flights.

D. Physical Setting.

1. Physiography and Geology.

a. The Marseilles Training Site is located in LaSalle County, which consists mostly of prairie and is generally rolling and well drained. The surface soils in the upland areas are generally black topsoil underlain by a yellow marly clay. Streams have very little bottom land. The valleys are deep and narrow wherever they have been cut into the underlying rocks below the glacial drift. Bold bluffs are prevalent along streams.

b. The Illinois River cuts through the central part of the county, its riverbed being low in relation to the gently rolling land around it. The Marseilles Training Site is predominantly on the bluff area terrain along the south side of the Illinois River.

c. The most characteristic geologic bedrock feature of LaSalle County is the abundance of folds. The most significant fold is the LaSalle Anticline, which extends diagonally across the county. The central line of the anticline may be seen where the Pecumsaugan emerges from the bluffs and flows into the Illinois Valley. To the north this axis can be easily traced until it disappears under the glacial drift in Section 22 and 23 of Dimmick Township.

d. The predominant bedrock formations exposed in LaSalle County are the coal measures and the St. Peters sandstone. St. Peters sandstone directly underlies the glacial drift throughout the northern parts of the county (about one third of the county). Coal measures occupy a similar position over nearly all the rest of the county. The Pennsylvanian aged coal measures are sedimentary deposits consisting of alternating cyclothem of sandstone, siltstone, shale, coal, limestone and claystone.

2. Topography.

The site has slopes ranging from 1 to 30 percent with the majority of the steep slopes in the 20 percent range. These slopes occur

along the South Kickapoo Creek, which drains the site north to the Illinois River. The slopes flatten out as one moves back from the South Kickapoo Creek. The southern end of the site along the township road is relatively flat. Topography is shown on Figures 2 and 4.

3. Soils.

a. Existing Conditions.

(1) The soils in LaSalle County were formed from the materials deposited during the Illinoisan and Wisconsin glacial periods. Generally, the surficial soil deposits developed in windblown loessial soils of Wisconsinan age and fall into four major groups as follows:

(a) Upland Prairie Soils.

These soils, situated on relatively flat topography, developed under prairie vegetation and are typically high in organic matter, thus excellent for agricultural purposes. Erosion is slight, but internal drainage is generally poor particularly on the more level portions of the soils.

(b) Upland Timber Soils.

These soils (developed under timber vegetation) are generally found along moderately developed streams and drainage courses in sloping and rolling topography. They contain less organic matter and are more susceptible to erosion than the Upland Prairie Soils. The soils in this group offer good internal drainage and in many cases are still forested.

(c) Terrace Soils.

These soil deposits, found along major creeks and streams, were formed as running water deposited transported glacial outwash in the major drainage ways. They are generally composed of either silt or gravel sized material. In some areas, these deposits are favorable for commercial sand and gravel operations.

(d) Swamp and Bottom Land Soils.

These alluvial soils are found in the flood plains of the Illinois and Fox Rivers. Topographically, the land occupied by these soils is subject to periodic flooding. The soils are fine-grained, often highly organic and support bearing values are typically low. In general, these lands are not too suitable for urban uses.

(2) The Marseilles Training Site has three general types of soils: Upland Prairie Soils, Upland Timber Soils and Terrace Soils. The Upland Prairie Soils are located on the flatter areas of the site. This constitutes a small portion of the site located on the south side. The upper horizon of these soils are high in organic matter and presently in agricultural use. Erosion tendency is slight, but internal drainage is usually poor on areas of minimal slope. The Upland Prairie Soils support adequate grass and shrub cover to maintain an ideal training environment.

(3) The Upland Timber Soils are found along the slopes of the South Kickapoo Creek. The degree of slope ranges from moderate to severe. These soils drain fairly well, but are susceptible to erosion due to the steepness of slope. The Upland Timber Soils on site presently support various types of hardwoods and grasses in the open areas.

(4) The Terrace Soils are located along the South Kickapoo Creek and related side drainage ways. These soils are made up of various silts and gravels and are periodically flooded. The Terrace Soils support a variety of vegetation that is often poorly established due to periodic flooding and poor water retention of the soil.

(5) For a complete technical discussion of the soils of LaSalle County, see Reference L.

(6) The only area that has increased erosion is the tank trails. There are three small areas which have increased erosion due to surface drainage across the tank trail. These areas will be corrected by the placement of culverts. Additionally, these trails will be developed further by covering with gravel or crushed stone.

b. Impacts.

(1) Construction of proposed facilities at the Marseilles Training Site could concentrate runoff and increase erosion. Proper erosion control practices would be employed during construction to mitigate any adverse impacts. The use of ground cover at the earliest possible date, as well as grading to counteract changes in flow, would also reduce the erosion impact to minimal levels.

(2) Since the road system and tank maneuver area have a higher erosion potential than other training areas, additional erosion control measures will be initiated in these areas to mitigate erosion potential. Roads will be properly maintained with green belts and adequate drainage systems. Particular care will be taken at water crossings, if required, in order to minimize stream siltation. The tank maneuver area (Figure 5) was selected because of its relatively slight slope and the large green belt to the west (the general direction of the natural drainage). To protect this area it may be necessary to seed/reseed portions of the training area. The most probable seeding program would be either winter wheat or fall grasses. These grasses will provide a fast growing ground cover during periods of high precipitation.

(3) Ideally, training with tracked vehicles should occur on training areas characterized by lower slope angles. Training should also be concentrated during the drier seasons of the year.

E. Natural Resources.

1. General.

a. The resourcebase, analyzed in terms of a wildlife area, would be rated fair to good. The soils are not the richest in terms of supporting food crops of wildlife habitat material. The diversity of land form and cover will lend itself to management of various upland game species.

b. The agricultural areas have and will be established in a variety of grasses, shrubs, and limited tree cover which will provide cover, nesting, and food for various game species.

c. Access is available on three sides of the site with a possibility on the fourth side. Diversified access points will be beneficial for uniform hunting use and management considerations.

2. Vegetation.

a. Existing Conditions.

(1) The site has heavily grazed or logged woodlands of ravines, overgrown and grazed oak savanna, heavily grazed or overgrown open pasture and remnants of hill prairies.

(2) The prairie soils of the south portion are covered by heavily grazed pasture or croplands.

(3) The upland timber soils contain both woodlands and open fields. The ravine woods of the western part are mesic with red oak, sugar maple and basswood. Scattered remnants of hill prairie exist where there have been disturbances from grazing or logging. Plants occurring there include brown-eyed Susan Rudbeckia hirta, finger coreopsis Coreopsis palmata, and wild bergamot Monarda fistulosa.

(4) The level upland woods were apparently oak savanna (groves of bur oak with intermixed prairie) that are now overgrown with a shrubby understory due to grazing and the absence of periodic fires.

(5) Open fields which were presumably cleared of trees are now pastures of introduced grasses (mostly timothy and redbud). Shrubs, particularly hawthorne Crataegus Sp., are becoming established in the fields. Some scattered prairie species such as prairie dock, whorled milkweed Asclepias verticillatus, and mountain mint Pycnanthemum Sp. are also present.

(6) The IDOC has not identified any threatened or endangered species.

(7) IDOC has leases for about 50 acres (varies from year to year) of cash crops, 90 acres of hay leases, and plants various plots of wildlife food. Figure 5 is an aerial view of the site.

b. Impacts.

(1) Vegetation in the construction areas would be destroyed. The damage to plants from increased vehicle emissions, foot traffic and training exercises is unknown, but expected to be minimal as no adverse effects are noted with current training.

(2) The site will be most beneficial to the Guard in a natural condition with the various types of vegetation present so that a variety of training exercises can be conducted. Proposed plantings will be of natural grasses, legumes and shrubs with a minimum of isolated row crops. This will limit any potential maneuver damage by the Guard during training.

(3) Bivouac areas will be rotated to prevent adverse impacts due to long-term use. The training site manager will closely monitor the bivouac areas. When signs of overuse and damage appear, the

areas will be removed from use until recovery has taken place. Additionally, the bivouac and training areas will be protected by restricting vegetative cuttings, weapons emplacements and foxholes.

3. Wildlife.

a. Existing Conditions.

(1) The Department of Conservation will manage the site as a State Wildlife Area with major emphasis on upland game. The majority of use by the Department of Conservation is expected from November to March during the various hunting seasons. Access areas are planned for all sides of the site, which will provide an even distribution of hunter use and game utilization. The site will also be utilized for demonstrations of wildlife management techniques to various interested groups so that these techniques can be practiced on private land. Wildlife photography and general wildlife enjoyment will be encouraged.

(2) Numerous native wildlife species inhabit the area on a year round or seasonal basis. Some of the species that inhabit the area include the white-tailed deer, cottontail rabbit, fox squirrel, wood duck, and numerous natural heritage (nongame) species such as the American kestrel, eastern chipmunk, thirteen-lined ground squirrel, red fox and opossum.

(3) Thru consultation with the IDOC, there is no indication that any Federal or State recognized threatened or endangered species use the site as habitat or foraging.

b. Impacts.

(1) The areas selected for construction of facilities will minimize the need to remove or otherwise destroy vegetation, which may be suitable for wildlife, since the sites are largely grass covered with few significant trees and other vegetation. However, the proposed construction

of facilities at the Marseilles Training Site will decrease browsing and nesting acreage and cover for wildlife. Increased activity and noise generated from construction may also cause wildlife to leave the immediate vicinity.

(2) The loss of the grass areas where the range and cantonment area will be constructed will be mitigated by the expansion of grass/legume areas which are in old field succession. The ILARNG will help IDOC with this improvement.

(3) The retention of natural cover in the training areas not only meets the IDOC's wildlife habitat management objectives, but is also extremely desirable to the ILARNG in providing a realistic military training environment. In the past, small acreage areas have been farmed on the site as wildlife food plots. This practice will be continued as a food source for the enhancement of the wildlife on the site.

(4) Initially, noise from range firing and troop training is expected to have an impact on wildlife. However, by restrictive cross country vehicular movement, coordinating traffic on the road systems, and ensuring that training exercises are sensitive to the noise impacts on wildlife, the actual noise impact should be minor and short-term.

(5) The general maintenance of the grounds may cause some short-term effects to the habitat, but this maintenance is for the long-term benefit of habitat. An example of this is mowing of firebreaks; a reduced habitat quality because of the mowing (although some species, i.e. doves, do put this type of habitat to use) is offset by long-term protection offered by firebreaks.

(6) The areas that will have trees removed for roads and firebreaks will cause an increased edge effect that will be beneficial to

some species of wildlife. The loss of full canopy will not be great enough to significantly degrade the habitat of those species which require full canopy.

F. Land Use.

1. Existing Conditions.

a. Adjacent to Marseilles Site.

(1) Agriculture and related activities are the predominant land use of LaSalle County. In general, the prime agricultural land in the county is located north of the Illinois River and west of the Fox River, and in the southwest panhandle area of the county. The Marseilles Training Site is not included in these areas.

(2) Present land use in the immediate upland areas surrounding the Marseilles Training Site is devoted almost exclusively to agriculture, with the land adjacent to most of the drainage ways in a wooded condition. The cities of Marseilles, Seneca, Streator and Ottawa are the closest urban centers which provide a diversity of land use such as residential, trade and services, manufacturing and resource extraction. Assuming a continuation of the major emphasis on agriculture and the absence of expanding industry on rapidly growing cities, little population or land use change is expected in LaSalle County.

(3) Commonwealth Edison's LaSalle County Nuclear Power Station, currently under construction, is located approximately two miles south of the Marseilles Site. Commonwealth Edison has provisions for camping, picnicing and fishing adjacent to its cooling lake. A pipeline and transmission line corridor extends four miles from the power plant site to the pumping station on the Illinois River. A second pipeline for blow down water will connect the cooling lake and Illinois River. These lines will be located to the east of the Marseilles Training Site. Four 345 KV transmission circuits

will be connected to Commonwealth Edison's existing transmission system. Two of the circuits will terminate at the Plano transmission substation and the other two will terminate at the East Frankfort transmission substation. Both transmission lines (from the nuclear power station to the respective substations) will be routed to the east of the Marseilles Training Site.

(4) There are two major roads which border the Marseilles Training Site; highway #36 to the north and highway #30 to the west. Each of the highways have two gravel roads leading to the interior of the Marseilles Training Site. Access to the ILARNG cantonment area will be via a township road along the southern boundary of the training site. All roads adjacent to the site will remain under present jurisdiction, however, all interior roads will be the ILARNG's responsibility.

(5) An active gravel pit operation is located in the north central section of the Marseilles Training Site. This leased area is overseen by the IDOC, and the MNIL has no direct activities with the gravel pit.

b. Within Marseilles Site.

(1) Assuming a continuation of the major emphasis on agriculture and the absence of expanding industry or rapidly growing cities, little population or land use change is expected in LaSalle County.

(2) The Marseilles Site is drained by the South Kickapoo Creek. The side slopes of the creek are in a wooded condition with the remainder of the site either farmed or in old field succession.

(3) The property has suffered the same dilemma that other State properties have experienced during land acquisition, and this is one of illegal dumping. The difficulty here is that there are gravel roads leading to the interior of the site where dumping can take place undetected. This situation has been reduced with the completion of land acquisition.

(4) Many of the agricultural fields are scheduled for planting in a permanent grass cover crop that would provide a stabilized condition for the wildlife management program. Some fields will be leased by IDOC for crop production (estimated at about 80 acres). The grass cover will also serve the National Guard training mission for these particular areas. The crop production areas will be nonuse areas for the MNIL. Commonwealth Edison has a 138,000 volt aerial transmission line that traverses the site from east to west. The line will not present any development difficulties; in fact, it may be utilized as a firebreak.

2. Impacts.

a. For the training areas to be useful to the MNIL and IDOC, it must remain in a natural condition. To ensure the natural condition is not destroyed will require various restrictions on some activities and a maintenance program. The maintenance program will be for the road system and tank maneuver area.

b. The training area will be divided into sections "A" thru "F" (Figure 2). Generally, each area can be used for several types of the individual and group training. The purpose of these six areas is to provide a management tool to provide for a rotation of training into different areas of the site to prevent the overuse of one area of the site.

c. The proposed cantonment area is currently in grass. This area will be about 33 acres and will be removed from the wildlife habitat.

d. The use of the training areas with bivouac sites will only have short-term impacts from troop movements. The tank maneuver area (Figure 5) will have moderate use and cause some soil compaction; this will cause a moderate reduction in biomass.

G. Waste Disposal.

1. Solid Wastes.

a. Existing Conditions.

(1) Ongoing illegal dumping by civilians has been greatly reduced and all illegal dump sites will be closed out. The solid wastes associated with these sites will be disposed of in accordance with Federal, State and local solid waste disposal practices. IDOC is currently studying the best method of disposal.

(2) Currently, 2.0 tons of solid wastes are generated per month and these wastes are disposed of in an approved landfill.

b. Impacts.

(1) Waste materials generated by the demolition of old structures, construction of new structures and general site cleanup will be disposed of in a State approved landfill.

(2) Vegetative cuttings, generated by firebreak and road construction, will be utilized for brush pile construction to provide cover for wildlife. Exact locations will be coordinated with IDOC. Cuttings not acceptable for brush piles will be disposed of as landscape waste per State of Illinois Air Pollution Control Regulations, Rule 503 (c).

(3) The proposal would generate approximately 1.5 tons per day (four lbs./day/person) of nonhazardous wastes (paper, cardboard, food, etc.) at peak usage. This material would be collected at intervals by a contractor and disposed of in a State approved disposal facility.

2. Hazardous Wastes.

a. Existing Conditions.

No Federal or State approved hazardous waste facilities exist at the Marseilles Training Site.

b. Impacts.

Hazardous substances such as electrolyte batteries, battery acid, used oil, lubricants, solvents, etc., would be stored and disposed of

in accordance with Federal, State and local regulations. Treatment, storage and disposal of any hazardous waste generated as a result of construction and operation of the training facility will be regulated by the Resource Conservation and Recovery Act (RCRA). Specifically, pursuant to RCRA Regulations 40 CFR 260-267, the following rules apply:

(1) For all facilities generating hazardous wastes, EPA will be notified and an identification number obtained.

(2) If hazardous waste would be stored for longer than 90 days or disposed of at any of the proposed sites, a permit application for a hazardous waste facility would be submitted prior to construction. Such a facility would be required to comply with applicable hazardous waste facility design standards in order to obtain a permit.

H. Water Resources.

1. Surface Hydrology.

a. Existing Conditions.

(1) The Illinois, Fox and Vermillion Rivers are important surface water resources in LaSalle County. Surface water resources for the Marseilles Training Site are contributed by the South Kickapoo Creek, which flows in a northerly direction through the center of the Marseilles Training Site. In addition to the natural drainage, springs provide a continuous source of water for the creek. Several farm ponds are located throughout the site providing water and habitat to the wildlife. The topography along the South Kickapoo Creek and around the farm ponds does not lend itself to wetlands development except for some small areas in the creek bed.

(2) The current tank trails have three locations which require culverts to control surface drainage. These impacts are limited, but will be corrected.

b. Impacts.

(1) This project will not impact the small areas of wetlands at Marseilles Training Site.

(2) The road system/tank trails and firebreaks will cause increased soil erosion while under construction, but this will be minimal. The firebreaks will be seeded at the earliest possible date to stop erosion. The roads and tank trails will be placed to avoid steep slopes and to take advantage of green belts. When steep slopes are encountered, proper erosion control will be used to reduce sediment flow to the South Kickapoo Creek.

(3) During construction of the facilities at the site, excavating and grading will have a short-term erosion impact. The use of ground cover at the earliest possible date and grading to counteract changes in flow should reduce the erosion impact to the South Kickapoo Creek.

2. Water Quality.

a. Existing Conditions.

(1) The Illinois Water Pollution Control Rules and Regulations identify the general standards for water quality.

(2) Specific water quality data is not available for South Kickapoo Creek, therefore, the actual water quality status of the creek is unknown.

b. Impacts.

During the construction and operational phases of the Marseilles Training Site, appropriate measures will be taken to ensure that the water quality in South Kickapoo Creek is not degraded. Proper erosion controls will be initiated to reduce turbidity and adequate waste water treatment facilities will be installed, and permitted if required.

3. Ground Water Hydrology.

a. Existing Conditions.

(1) Ground water in LaSalle County is prevalent in the St. Peter and other deeper sandstones at depths ranging from near the surface to over 2,000 feet. Much water for municipal and domestic use is taken from shallow wells (depths of about 50 to 500 feet). In general, the county has an adequate ground water supply of water for all uses.

(2) The surface drainage of the Marseilles Training Area is geologically in its youthful stage and is relatively well defined. Down cutting is still an active process. Internal drainage of the surficial soil materials is poor. The high silt and clay content of the loessial surface soils prohibit rapid drainage, and a perched water table exists at the base of the loess where the more impermeable till material is encountered. During wetter seasonal periods, ground water rises to very near the ground surface.

(3) There is no ground water quality data available at the present time, nor has there been a determination made as to the pumpage rates from the one existing well at the cantonment site.

(4) There are eight other wells scattered on the site, but will not be used by ILARNG as water sources for troop training.

b. Impacts.

(1) There is not anticipated to be any adverse impacts on ground water quality or quantity by the utilization of the proposed Marseilles Training Site.

(2) There appears to be a sufficient quantity of ground water to meet the proposed training activities. Should the existing well not provide sufficient capacity, an additional well would be drilled without adversely impacting on the ground water of the area.

4. Drinking Water.

a. Existing Conditions.

(1) Water needs may be provided by a single well; however, the capacity of this well has not been determined nor have water quality samples been collected and analyzed to determine compliance with the Safe Drinking Water Act.

(2) Potable water is currently brought to the site by the using units.

b. Impacts.

(1) Based on the estimated maximum personnel utilizing the Marseilles Training Site at one time, 40,000 gallons of water per day will be utilized during training cycles. Should it be determined that the existing well would not provide the anticipated peak water needs, an additional well will be drilled. 4,700 LF of water line and two 10,000 gallon water storage tanks will be constructed to satisfy the water needs of the Marseilles Training Site.

(2) Water analysis from the existing well will determine the need to provide water treatment prior to distribution.

5. Waste Water.

a. Existing Conditions.

(1) Portable latrines are currently used by units training at Marseilles and are maintained by contract.

(2) Tank washing is currently limited, and when it does occur, it is with water only. The waste water then flows toward a farm pond onsite. A temporary means of sediment control is needed until a permanent facility is built (estimated in 1985).

b. Impacts.

(1) Waste water from the cantonment area will be initially treated by three septic tank systems. In the training areas, portable

latrines or septic privies will be used. Effluent from wash racks will be treated by oil/sediment traps prior to discharge. As development continues, it is anticipated that a sewage treatment plant will be built. Should treatment of the ground water be required, resulting in a discharge of waste water, this waste water will be treated prior to discharge. The maximum amount of waste water would be about 38,000 gallons per day. Most of this would be human wastes.

(2) All point source discharges from the Marseilles Training Site would have applicable discharge permits and associated waste treatment facilities prior to initiating the discharges.

6. Spill Plans.

a. Existing Conditions.

There are no POL or hazardous materials stored at the proposed Marseilles Training Site.

b. Impacts.

Army regulations implementing the Clean Water Act require installations having certain nontransportation related onshore and offshore oil storage facilities to prepare and maintain a Spill Prevention Control and Countermeasure Plan (SPCC) to prevent and control the discharge of oil and hazardous substances before they occur. Further, an Installation Spill Contingency Plan (ISCP) is required to identify responsibilities, procedures and resources to be employed in the event that a spill does occur.

I. Cultural Resources.

1. Existing Conditions.

a. Very little of the Marseilles Area has been surveyed. There is, however, one known site within it. The area has a very high probability of containing additional archeological sites. Up and down river from the

area in the same type terrain are a number of important sites. This region was heavily used by both prehistoric and historic Indians. A survey has been identified in the Environmental Pollution Prevention, Control and Abatement Report (RCS DD-M(SA) 1383) and is scheduled for FY 83.

b. Although the survey of the site has not been started, it is planned to start in the spring of 1983. It will have a complete survey of the areas to have construction and the rest of the site will have a 10 percent survey to develop models to determine probabilities of additional site locations. The results of the survey should be complete before construction would start (earliest estimated date is October 1983).

2. Impacts.

Notwithstanding the results of the proposed archeological survey, which will identify sites of cultural significance, there are no known or suspected archeological or historical resources located on the proposed construction site which are or may be eligible for inclusion on the National Register. In the event that artifacts or remains are uncovered during construction and not identified as a result of the survey, work will be halted and the State Historic Preservation Officer (SHPO) will be requested to evaluate the find. Work will proceed only with the concurrence of the SHPO.

J. Socio-Economic Resources.

1. Existing Conditions.

a. LaSalle County has a population of 112,033 (1980 census) with the population concentrated in the urban areas. The county has an area of 1,150 square miles for a population density of 97.42 persons per square mile. The majority of the population is in the 20-59 year old group with the next largest segment in the senior citizen group (60+ age group). There is an excess of housing in the county with 2,400 units being vacant (1980 census).

The mean value for owner occupied housing in the county is \$46,000.

b. The major sources of income for the county come from the following industries/businesses: manufacturing, net all trade and services.

c. The nearest urban area to the proposed training site is Marseilles, located north of the Illinois River. Located to the south of the training area is the Commonwealth Edison LaSalle Nuclear Power Station No. 1. To the east and west are lightly populated agricultural areas.

d. For Brookfield, Fall River, Grand Rapids and Manlius Townships, which contain the proposed training site or are adjacent to the training site, the mean household income was \$18,300 while the county mean was \$15,580 (source, 1980 census).

2. Impacts.

a. The construction phase of the cantonment area will generate local employment and sales of goods and services. The latest estimate of building and range costs (construction by contract) was over 6.0 million dollars. Other construction will be used as training exercises by engineering units, which will create a demand for locally purchased construction material. The Marseilles Training Site will employ an estimated 25 people when completed. Various goods and services will be purchased from the local economy in order to operate the site.

b. Overall, the establishment of the Marseilles Training Site will have a positive effect on the local economy.

K. Energy Resources.

1. Existing Conditions.

a. Three power companies and one municipally-owned power plant provide LaSalle County with electric power. These electrical utility companies are Illinois Power Company, Commonwealth Edison, Cedar Point Light and Water Company and the Peree Municipal Plant.

b. Commonwealth Edison is in the construction phase of a nuclear power station south of Marseilles Training Site which will increase electrical production capabilities for the northern Illinois region. LaSalle County has a good supply of electric power.

c. The gas supply to LaSalle County is distributed by Northern Illinois Gas Company and Illinois Power. The companies buy gas from mid-continent and gulf regions. The natural gas companies in LaSalle County are confronted with the same problems concerning availability and price controls as are companies throughout the nation.

2. Impacts.

The proposed training site construction and operation would cause a long-term increase in consumption of electrical energy and petroleum products, which are readily available in the region. Estimated usage of unleaded gasoline is 15,000 gallons per year and diesel fuel usage is estimated at 19,000 gallons per year. The electrical and fuel oil/propane usage has not been estimated because the MNIL does not have data on energy usage of some types of facilities.

V FINDING OF NO SIGNIFICANT IMPACT.

A. Description of the Proposed Action.

The Illinois Military and Naval Department (MNIL) and the Illinois Department of Conservation (IDOC) will participate in the joint use of the Marseilles Training Site land. The Illinois Army National Guard (ILARNG) will utilize the site as a permanent training encampment with the construction of an armory, various buildings, training areas and ranges to support weekend and limited annual training exercises by different units of the ILARNG throughout most of the year. The IDOC is managing and developing the site as a State wildlife area for the benefit and enhancement of the natural resources and enjoyment of the citizens of Illinois.

B. Environmental Assessment.

The analysis of the environmental impacts of ongoing and proposed activities at the Marseilles Training Site is documented in the Environmental Assessment entitled "ILLINOIS ARMY NATIONAL GUARD ENVIRONMENTAL ASSESSMENT MARSEILLES TRAINING SITE". The environmental assessment determined that erosion control measures would be employed during the construction phase to mitigate any adverse impacts. Noise generated by aircraft and training activities may result in some short term adjustment period, but will be insignificant. Additional erosion control measures will be initiated along road systems and tank maneuver areas to mitigate erosion potential. While vegetation will be destroyed by construction proposed in the cantonment area, bivouac and training areas will be left in a natural condition and closely monitored. Impacts on the water resources will be limited to erosion control. There is not anticipated to be any adverse impacts on ground water. All point source discharges to surface waters would have applicable waste treatment and discharge permits. Construction at the site would not begin until the proposed archeological survey has been completed. Overall, the establishment of the Marseilles Training Site

will have a positive effect on the local economy. There are no indications that implementing this action would violate any Federal, State or local environmental laws or regulations.

C. Finding of No Significant Impact.

A careful review of the Environmental Assessment has concluded that ongoing and proposed activities at the Marseilles Training Site do not have a significant impact on the quality of the natural or human environment. The requirements of the National Environmental Policy Act and the Council on Environmental Quality Regulations have been satisfied and an Environmental Impact Statement will not be prepared.

Public comment has been invited on the Environmental Assessment and the Finding of No Significant Impact. All written substantive comments received within 14 days of the published notice will be made a part of the Environmental Assessment.

VI. AGENCIES CONSULTED.

A. Illinois Department of Conservation: Dr. Margaret Kimball Brown; William G. Farrar; Dick R. Little; and Michael J. Sweet.

B. Illinois Department of Public Health.

C. Illinois Environmental Protection Agency: Candy R. Morin and Francis Sue Murphy.

D. Illinois Military and Naval Department; Plans, Operations and Training: COL Roger L. Hayes; LTC Alvin K. Smith and 1LT Robert J. Bouldin.

E. Soil Conservation Service, U. S. Department of Agriculture.

F. National Guard Bureau, Environmental Resources Branch: Hugo C. Biermann; Gerald K. Hicks; Patrick J. Kelly and Christina U. Ramsey.

VII. REFERENCES.

- A. Council on Environmental Quality (CEQ), Regulations for Implementing the National Environmental Policy Act, 40 CFR 1500-1508.
- B. Horwitz, E. L., Coordinated by Council on Environmental Quality, Our Nation's Wetlands, 1978.
- C. Illinois Army National Guard, Environmental Impact Assessment, Marseilles Small Arms Range, 1 March 1982.
- D. Illinois Environmental Protection Agency, Emergency Revision to Agency's Nonattainment Area Rules, 9 September 1981.
- E. Illinois Environmental Protection Agency, Geographic Designations of Attainment Status of Criteria Pollutants, 25 March 1980.
- F. LaSalle County Regional Planning Commission, Land Use Element, April 1978.
- G. National Guard Bureau, Letter, OAC-ARI-E, 13 October 1981, Implementation of the National Environmental Policy Act (NEPA).
- H. Severinghaus, W. D. and M. C. Severinghaus, "Effect of Tracked Vehicle Activity on Bird Populations", Environmental Management, Vol. 6, No. 2, pages 163-169.
- I. State of Illinois, State of Illinois Air Pollution Control Regulations, pursuant to their adoption through August 1980 and as amended thru 8 October 1981.
- J. State of Illinois Military and Naval Department, Marseilles Training Area Master Plan, 2 February 1980.
- K. State of Illinois Department of Conservation, Marseilles State Wildlife Area Master Management Plan, undated.
- L. U. S. Department of Agriculture, Soil Conservation Service and the University of Illinois Agricultural Experiment Station, Soil Survey: LaSalle County, Illinois, May 1972.
- M. U. S. Department of Agriculture, Soil Conservation Service, Important Farm Lands: LaSalle County, Illinois, (2 map sheets), March 1977.
- N. U. S. Department of the Army, Environmental Consideration of Army Actions (AR 200-2), 1 September 1981.
- O. U. S. Department of the Army, Training Land (TC 25-1), 4 August 1978.
- P. U. S. Environmental Protection Agency, "Designations of Areas for Air Quality Planning Process Attainment Status Designations: Illinois", Federal Register, 21 July 1982, Vol. 47, No. 140, pages 31588-31590.

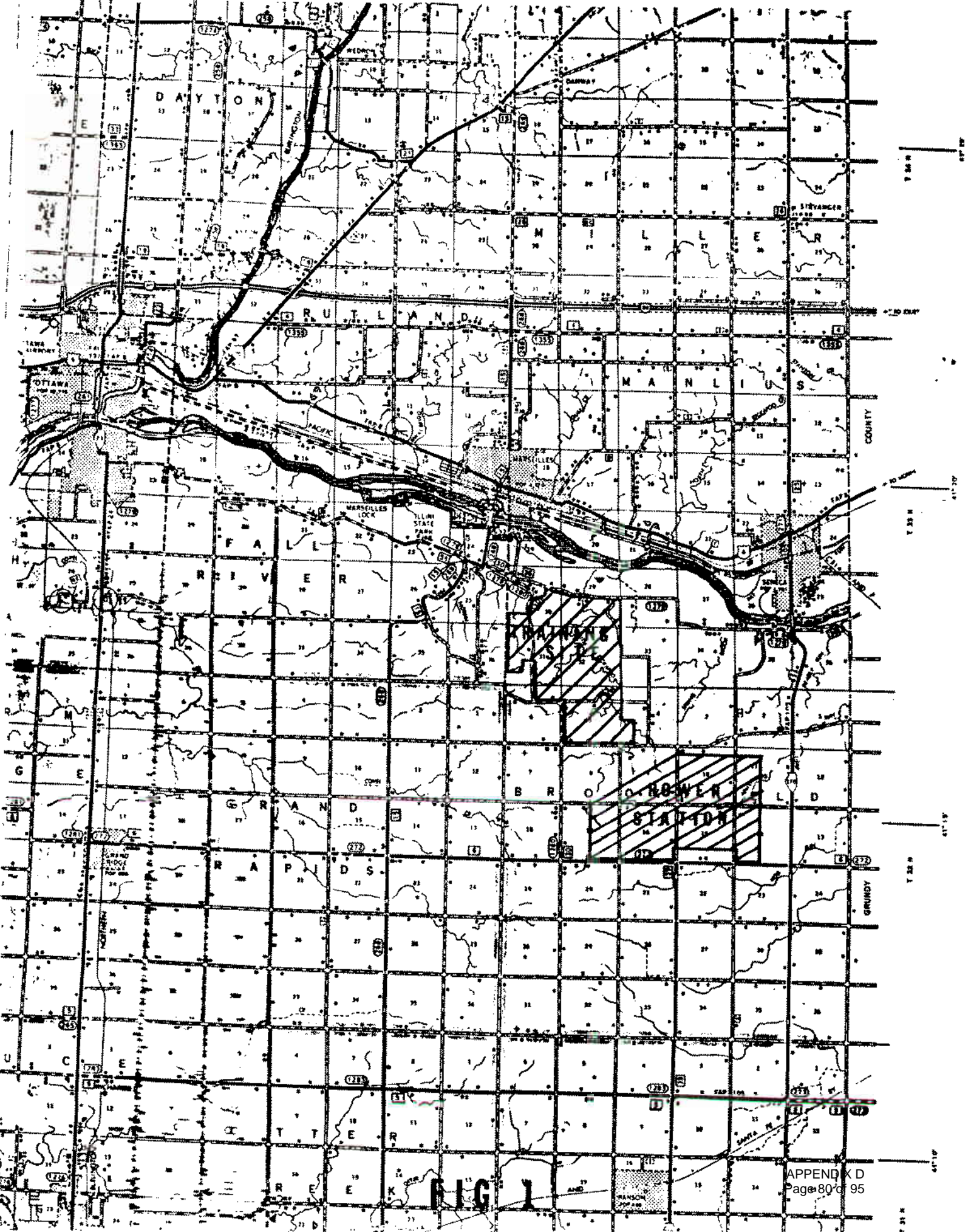


FIG 1

APPENDIX A

MARSEILLES SMALL ARMS RANGE PROJECTED USAGE

<u>RANGE</u>	<u>ROUNDS/DAY</u>	<u>DAYS/YEAR</u>	<u>WEAPON CALIBER</u>	<u>TYPE AMMO</u>
Tank Main Gun	110	37	7.62 mm	Ball
Field Firing	2,625	39	5.56 mm	Ball & Tracer
Combat Pistol	2,400	39	.38 & .45 CAL	Ball
25 Meter MG	1,410	39	7.62 mm, .38 & .45 CAL	Ball & Tracer
Grenade	40	39	40 mm	Training Practice

Estimated percentage of rounds of each type to be fired at night (2200 to 0700) is less than 10%.

APPENDIX B

UNITS SUPPORTED - MARSEILLES

UNIT SUPPORTED	LOCATION	TDA, TOE or MTOE	AUTHORIZED STRENGTH AS OF 1 FEB 83
STARC (-), IL ARNG	Springfield	NGWBATAA	329
IL Mil Acad	Springfield		
139th PA Det	Springfield	45-500HNG01	13
144th Army Band	Springfield	12-107HNG01	45
Det 1, STARC, IL ARNG	Chicago	NGWBATAA	40
1903d Trans Co (Acft Maint)	Chicago	55-459HNG05	130
Det 1, 1903d Trans Co	Decatur	55-459HNG05	79
44th Spt Cen RAO	Chicago	29-408GNG04	81
HHC, 33rd MP Bn	Chicago	19-316HNG01	110
233d MP Co (-)	Springfield	19-77HNG01	118
Det 1, 233d MP Co	Chicago	19-77HNG01	46
933d MP Co	Chicago	19-97HNG01	127
HHD, 108th Med Bn	Chicago	8-126HNG01	39
508th Med Co	Chicago	8-128HNG01	123
708th Med Co	Chicago	8-127HNG01	97
808th Med Co	Chicago	8-620HNG02	20
HHD, 133d Sig Bn	Chicago	11-16HNG51	43
Co C, 937th Sig Bn	Chicago	11-415HNG01	165
Co D, 937th Sig Bn	Chicago	11-415HNG01	165
HHD, 1144th Trans Bn	Springfield	55-16HNG01	49
1544th Trans Co	Paris	55-67HNG04	128
1644th Trans Co	Chicago	55-18HNG01	184
1744th Trans Co	Chicago	55-19HNG02	88
HHC, 232nd S&S Bn	Springfield	29-146HNG02	70
126th S&S Co	Quincy	29-147HNG01	114
258th S&S Co	Kewanee	29-147HNG01	114
3637th (-) Maint Co	Springfield	29-208HNG01	187
Det 1, 3637th Maint Co	Beardstown	29-208HNG01	75
HHC (-), 33rd Inf Bde	Chicago	7-102HNG01	195
Det 1, HHC	Chicago	7-102HNG01	50
Trp E, 106th Cav	Rock Falls	17-107HNG54	147
233rd Engr Co (-)	Joliet	5-107HNG01	198
Det 1, 233rd Engr Co	Springfield	5-107HNG01	32
HHD, 108th Spt Bn	Chicago	29-135HNG02	135
Co A	Chicago	29-135HNG02	131
Co B	Chicago	29-135HNG02	111
Co C	Chicago	29-135HNG02	135
Co D	Chicago	29-135HNG02	150
733rd Ord Det	Chicago	9-555HNG04	6
HHB, 2d Bn, 122d FA	Chicago	6-185HNG01	236
Btry A	Chicago	6-185HNG01	81
Btry B	Chicago	6-185HNG01	81
Btry C	Chicago	6-185HNG01	81
Svc Btry	Chicago	6-185HNG01	54

UNIT SUPPORTED	LOCATION	TDA, TOE or MTOE	AUTHORIZED STRENGTH AS OF 1 FEB 83
HHC, 1st Bn, 131st Inf	Chicago	7-15HNG04	137
Co A	Woodstock	7-15HNG04	155
Co B (-)	Chicago	7-15HNG04	95
Det 1, Co B	Waukegan	7-15HNG04	60
Co C	Chicago	7-15HNG04	155
Cbt Spt Co	Chicago	7-15HNG04	127
HHC, 1st Bn, 178th Inf	Chicago	7-15HNG04	137
Co A (-)	Chicago	7-15HNG04	84
Det 1, Co A	Chicago Heights	7-15HNG04	71
Co B	Chicago	7-15HNG04	155
Co C	Chicago	7-15HNG04	155
Cbt Spt Co	Chicago	7-15HNG04	127
HHC, 2d Bn, 129th Inf	Joliet	7-15HNG04	137
Co A (-)	Elgin	7-15HNG04	81
Det 1, Co A	Sycamore	7-15HNG04	74
Co B	Rockford	7-15HNG04	155
Co C	Kankakee	7-15HNG04	155
Cbt Spt Co (-)	Dixon	7-15HNG04	48
Det 1, Cbt Spt Co	Freeport	7-15HNG04	79
HHC, 66th Inf Bde	Decatur	7-42HNG02	102
Det 1, HHC, Spt Cmd	Decatur	29-2HNG02	3
Det 1, Co A, 47th Avn Bn	Decatur	57-55HNG05	16
Co C (-), 47th Avn Bn	Decatur	57-55HNG05	108
Det 1, Co C, 47th Avn Bn	Chicago	57-55HNG05	48
Det 1, Co D, 47th Avn Bn	Decatur	57-55HNG05	18
Trp B (-), 1-194th Cav	Ottawa	17-105HNG01	145
Co B, 204th Med Bn	Springfield	8-35HNG01	74
Co B, 682d Engr Bn	Lawrenceville	5-155HNG01	135
Co B, 747th Maint Bn	Urbana	29-15HNG01	113
Det 1, Co G, 747th Maint Bn	Urbana	29-15HNG01	14
HHC, 2d Bn, 123d FA	Rock Island	6-155HNG03	211
Btry A	Galva	6-155HNG03	79
Btry B	Macomb	6-155HNG03	79
Btry C (-)	Monmouth	6-155HNG03	21
Det 1, Btry C	Galesburg	6-155HNG03	58
Svc Btry	Rock Island	6-155HNG03	55
HHC, 1st Bn, 123d Inf	Bloomington	7-15HNG04	137
Co A (-)	Peoria	7-15HNG04	110
Det 1, Co A	East Peoria	7-15HNG04	45
Co B (-)	Bloomington	7-15HNG04	110
Det 1, Co B	Delavan	7-15HNG04	45
Co C	Danville	7-15HNG04	155
Cbt Spt Co (-)	Pontiac	7-15HNG04	66
Det 1, Cbt Spt Co	Streator	7-15HNG04	61
Total			8,797

APPENDIX C

FUNCTION OF SUPPORTED UNITS - MARSEILLES

UNIT FUNCTION	UNIT	TDA, TOE or MTOE	AUTHORIZED STRENGTH AS OF 1 FEB 83
Cavalry Troop	E-106	17-107HNG54	147
	B-1-194	17-105HNG01	145
Engineer Company	233	5-107HNG01	230
	B-682	5-155HNG01	135
Infantry Battalion	1-131	7-15HNG04	729
	1-178	7-15HNG04	729
	2-129	7-15HNG04	729
	1-123	7-15HNG04	729
Artillery Battalion	2-122	6-185HNG01	533
	2-123	6-155HNG03	503
Transportation Company	1144-HHD	55-16HNG01	49
	1544	55-67HNG04	128
	1644	55-18HNG01	184
	1744	55-19HNG02	70
Command Headquarters	44 Spt Cen RAO	29-408GNG01	81
	33 (-) Inf Bde	7-102HNG01	195
	66 Inf Bde	7-42HNG02	102
Military Police Company	33-HHC	19-316HNG01	110
	233	19-77HNG01	164
	933	19-97HNG01	127
Medical Company	B-108 Spt	29-135HNG02	111
	108-HHD	8-126HNG01	39
	508	8-128HNG01	123
	808	8-620HNG02	20
	708	8-127HNG01	97
	B-204	8-35HNG01	74
Signal Company	133-HHD	11-16HNG51	43
	C-937	11-415HNG01	165
	D-937	11-415HNG01	165
Support Company	232-HHC	29-146HNG02	70
	126 S&S	29-147HNG01	114
	258 S&S	29-147HNG01	114
	C-108 Spt	29-135HNG02	135

UNIT FUNCTION	UNIT	TDA, TOE or MTOE	AUTHORIZED STRENGTH AS OF 1 FEB 83
Maintenance Company	3637	29-208HNG01	262
	D-108 Spt	29-135HNG02	150
	B-747	29-15HNG01	113
	Det 1, Co G, 747	29-15HNG01	14
Aviation Unit	C-47	57-55HNG05	156
	Det 1, D-47	57-55HNG05	18
	1903d	55-459HNG05	209
	Det 1, HHC, 33 Inf Bde	7-102HNG01	50

APPENDIX D

ESTIMATED TROOP DENSITIES - MARSEILLES

FREQUENCY	TROOP DENSITY	TROOP UNIT	ACTIVITIES	
Typical Weekend	729	Inf Bn	Tactical Training- Range Firing	
Frequent Weekend	147	Cav Troop	Tactical Training- Subcaliber Range- Track Vehicle	
	230	Engr Co	Driving Course Engineer Tasks	
Occasional Weekend	184	Trans Co	Troop Lifts- Difficult/Precision Driving Course	
	729	Inf Bn	Tactical Training	
	164	MP Co	Traffic Control Problems-Range Firing	
	156	Avn Unit	Spt Airmobile Opns- Range Firing	
	195	Cmd Hdqts	Control Opns-OJT	
	729	Inf or FA Bn	Tactical Training- Range Firing	
	135	Spt Unit	Mission Oriented Training	
	150	Maint Unit	Maint Opns-Mission Oriented Training	
	123	Med Unit	Mission Oriented Training	
	156	Avn Element	Spt Airmobile Opns- NOE Proficiency	
Other Weekend Usage			Bde/Bn Size FTX ILARNG: Flyover- FAC Ground Control Operations USAR Units: Range Facilities Preconditioning Tng- Units participating in winter training. Individuals preparing for NWTC, AK.	
	Typical Annual Training Period	729	Inf Bn	Tactical Training- Range Firing
		114	Spt Co	Mission Oriented Training
	Occasional Annual Training Period	81	Cmd Hdqts	Control FTX-OJT
		165	Sig Co	Mission Oriented Training
		164	MP Co	Traffic Control- Bivouac Training
		230	Engr Co	Engr Tasks
		114	Spt Co	Mission Oriented Training

Exhibit 7

Emergency Contacts

Exhibit 7

EMERGENCY CONTACTS

IDNR

- 1) Ted Love
Site Superintendent
Illini State Park
2660 East 2350th Road
Marseilles, Illinois 61341
Office: AC: 815/795-2448

- 2) Greg Kelly
Assistant Regional Land Manager
2612 Locust Street
Sterling, Illinois 61081
Office: AC: 815/625-2968
Home: AC: 815/288-4799
Pager: AC: 815/834-4553

- 3) Jim Modglin
Regional Land Manager
2612 Locust Street
Sterling, Illinois 61081
Office: AC: 815/625-2968
Home: AC: 815/772-4262
Pager: AC: 815/394-6139
Cell Phone: AC: 815/978-5999

MILITARY

- 1) CW2 Mike Schenk
Facility Site Manager
Marseilles Training Headquarters
Building
2543 North 23rd Road
Marseilles, Illinois 61341

- 2) Dennis Celletti
Colonel, IL ARNG
Director Plans, Operations and
Training
Department of the Army
1301 North MacArthur Boulevard
Springfield, Illinois 62702-2399
Office: AC: 217-761-3572
Pager: AC: 1-800-559-0154

- 3) Gary Widner
Colonel
Department of the Army
1301 North MacArthur Boulevard
Springfield, Illinois 62702-2399
Office: AC: 217/761-3760

**USACE LICENSE AGREEMENT IS CURRENTLY BEING
RENEWED.**

**A COPY OF THE NEW AGREEMENT WILL BE INCLUDED IN
THE FINAL INRMP.**

APPENDIX C

AGENCY AND PUBLIC COORDINATION

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AGENCY AND PUBLIC COORDINATION

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December 14, 2005

SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

USDA-Natural Resources Conservation Service
Ottawa Service Center
1691 North 31st Road
Ottawa, IL 61350-9640

To Whom It May Concern:

The National Guard Bureau (NGB) and the Illinois Army National Guard (ILARNG) are updating the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA). This INRMP is required by Army policy to reflect the mutual agreement of the U.S. Fish and Wildlife Service (USFWS) and the Illinois Department of Natural Resources (IDNR). The INRMP will also contain an Environmental Assessment (EA) in full compliance with the National Environmental Policy Act (NEPA) of 1969, as amended. The purpose of the INRMP is to document the policies and desired future direction of ILARNG's natural resource programs at this training site.

The ILARNG and Illinois Department of Natural Resources (IDNR) are jointly responsible for the prudent management and use of 2,850 acres comprising the MTA, which is located approximately two miles south of the City of Marseilles and approximately 78 miles southwest of Chicago. The Marseilles site is under a joint land use agreement between the Department of Military Affairs of Illinois (DMAIL) and the IDNR. DMAIL uses the MTA for field training during the spring, summer, and fall months, and for cantonment and range firing year round. IDNR uses the site for wildlife propagation, forestry and prairie restoration, and pre-coordinated outdoor recreational opportunities year round, and for upland game hunting during the late fall and winter months. During the hunting season, field training is not conducted except in the Northern Use Area with the exclusion of 10 days for deer season. The site is also known as the Marseilles Fish and Wildlife Area.

The MTA is adjacent to and south of the Illinois River Valley. The northern boundary lies near the bluff overlooking the broad, flat floodplain to the north. The area is covered with prairie and mid-successional forested areas. Six predominant habitats occur at the MTA: managed/disturbed areas, upland and lowland forest, food plots managed by the IDNR, restored prairie and grasslands, scrub-shrub, and aquatic. Aquatic habitats include South Kickapoo Creek, several unnamed intermittent and perennial streams of Kickapoo Creek, three small ponds, two small lakes and one



December 14, 2005

SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Mr. Tom Worthington
U.S. Fish and Wildlife Service
Regional Office
Bishop Whipple Federal Building
1 Federal Drive
Fort Snelling, MN 55111

Dear Mr. Worthington:

The National Guard Bureau (NGB) and the Illinois Army National Guard (ILARNG) are updating the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA). This INRMP is required by Army policy to reflect the mutual agreement of the U.S. Fish and Wildlife Service (USFWS) and the Illinois Department of Natural Resources (IDNR). The INRMP will also contain an Environmental Assessment (EA) in full compliance with the National Environmental Policy Act (NEPA) of 1969, as amended. The purpose of the INRMP is to document the policies and desired future direction of ILARNG's natural resource programs at this training site.

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December 14, 2005

SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Mr. Richard Nelson, Field Supervisor
U.S. Fish and Wildlife Service
Rock Island Ecological Services Field Office
4469 48th Avenue Court
Rock Island, IL 61201

Dear Mr. Nelson:

The National Guard Bureau (NGB) and the Illinois Army National Guard (ILARNG) are updating the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA). This INRMP is required by Army policy to reflect the mutual agreement of the U.S. Fish and Wildlife Service (USFWS) and the Illinois Department of Natural Resources (IDNR). The INRMP will also contain an Environmental Assessment (EA) in full compliance with the National Environmental Policy Act (NEPA) of 1969, as amended. The purpose of the INRMP is to document the policies and desired future direction of ILARNG's natural resource programs at this training site.

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December 14, 2005

SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Mr. Joel Brunsvold, Director
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702-1271

Dear Mr. Brunsvold:

The National Guard Bureau (NGB) and the Illinois Army National Guard (ILARNG) are updating the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA). This INRMP is required by Army policy to reflect the mutual agreement of the U.S. Fish and Wildlife Service (USFWS) and the Illinois Department of Natural Resources (IDNR). The INRMP will also contain an Environmental Assessment (EA) in full compliance with the National Environmental Policy Act (NEPA) of 1969, as amended. The purpose of the INRMP is to document the policies and desired future direction of ILARNG's natural resource programs at this training site.

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December 14, 2005

SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Illinois Department of Natural Resources
Region I Office
2317 East Lincolnway
Sterling, IL 61081

To Whom It May Concern:

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December 14, 2005

SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Mr. Ken Litchfield
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702

Dear Mr. Litchfield:

The National Guard Bureau (NGB) and the Illinois Army National Guard (ILARNG) are updating the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA). This INRMP is required by Army policy to reflect the mutual agreement of the U.S. Fish and Wildlife Service (USFWS) and the Illinois Department of Natural Resources (IDNR). The INRMP will also contain an Environmental Assessment (EA) in full compliance with the National Environmental Policy Act (NEPA) of 1969, as amended. The purpose of the INRMP is to document the policies and desired future direction of ILARNG's natural resource programs at this training site.

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SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Mr. Tim Hickman
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702

Dear Mr. Hickman:

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SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Mr. Randy Timmons
Illinois Department of Natural Resources
Forestry – Hogan Elevator
P.O. Box 860
124 West William
Seneca, IL 61360

Dear Mr. Timmons:

The National Guard Bureau (NGB) and the Illinois Army National Guard (ILARNG) are updating the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA). This INRMP is required by Army policy to reflect the mutual agreement of the U.S. Fish and Wildlife Service (USFWS) and the Illinois Department of Natural Resources (IDNR). The INRMP will also contain an Environmental Assessment (EA) in full compliance with the National Environmental Policy Act (NEPA) of 1969, as amended. The purpose of the INRMP is to document the policies and desired future direction of ILARNG's natural resource programs at this training site.

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SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Mr. Todd Bittner
Illinois Department of Natural Resources
Starved Rock State Park
P.O. Box 509
Utica, IL 61373

Dear Mr. Bittner:

The National Guard Bureau (NGB) and the Illinois Army National Guard (ILARNG) are updating the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA). This INRMP is required by Army policy to reflect the mutual agreement of the U.S. Fish and Wildlife Service (USFWS) and the Illinois Department of Natural Resources (IDNR). The INRMP will also contain an Environmental Assessment (EA) in full compliance with the National Environmental Policy Act (NEPA) of 1969, as amended. The purpose of the INRMP is to document the policies and desired future direction of ILARNG's natural resource programs at this training site.

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SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Mr. Ted Love
Illinois Department of Natural Resources
Marseilles FWA
2660 East 2350th Road
Marseilles, IL 61341

Dear Mr. Love:

The National Guard Bureau (NGB) and the Illinois Army National Guard (ILARNG) are updating the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA). This INRMP is required by Army policy to reflect the mutual agreement of the U.S. Fish and Wildlife Service (USFWS) and the Illinois Department of Natural Resources (IDNR). The INRMP will also contain an Environmental Assessment (EA) in full compliance with the National Environmental Policy Act (NEPA) of 1969, as amended. The purpose of the INRMP is to document the policies and desired future direction of ILARNG's natural resource programs at this training site.

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SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Ms. Maggie Carson
Illinois Environmental Protection Agency
Bureau of Land
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Dear Ms. Carson:

The National Guard Bureau (NGB) and the Illinois Army National Guard (ILARNG) are updating the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA). This INRMP is required by Army policy to reflect the mutual agreement of the U.S. Fish and Wildlife Service (USFWS) and the Illinois Department of Natural Resources (IDNR). The INRMP will also contain an Environmental Assessment (EA) in full compliance with the National Environmental Policy Act (NEPA) of 1969, as amended. The purpose of the INRMP is to document the policies and desired future direction of ILARNG's natural resource programs at this training site.

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SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Ms. Joan Muraro
Illinois Environmental Protection Agency
Bureau of Water
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Dear Ms. Muraro:

The National Guard Bureau (NGB) and the Illinois Army National Guard (ILARNG) are updating the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA). This INRMP is required by Army policy to reflect the mutual agreement of the U.S. Fish and Wildlife Service (USFWS) and the Illinois Department of Natural Resources (IDNR). The INRMP will also contain an Environmental Assessment (EA) in full compliance with the National Environmental Policy Act (NEPA) of 1969, as amended. The purpose of the INRMP is to document the policies and desired future direction of ILARNG's natural resource programs at this training site.

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SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Ms. Anne Haaker
Deputy State Historic Preservation Officer
Illinois Historic Preservation Agency
Preservation Services
#1 Old State Capitol Plaza
Springfield, IL 62701-1507

Dear Ms. Haaker:

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SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Illinois Natural History Survey
607 East Peabody Drive
Champaign, Illinois 61820

To Whom It May Concern:

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SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Mr. E. Donald McKay, III, Chief Scientist
Illinois State Geological Survey
615 East Peabody Drive
Champaign, IL 61820

Dear Mr. McKay:

The National Guard Bureau (NGB) and the Illinois Army National Guard (ILARNG) are updating the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA). This INRMP is required by Army policy to reflect the mutual agreement of the U.S. Fish and Wildlife Service (USFWS) and the Illinois Department of Natural Resources (IDNR). The INRMP will also contain an Environmental Assessment (EA) in full compliance with the National Environmental Policy Act (NEPA) of 1969, as amended. The purpose of the INRMP is to document the policies and desired future direction of ILARNG's natural resource programs at this training site.

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SUBJECT: Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area, La Salle County, Illinois

Mr. Allen H. Wehrmann
Illinois State Water Survey
Groundwater Science Section
2204 Griffith Drive
Champaign, IL 61820

Dear Mr. Wehrmann:

The National Guard Bureau (NGB) and the Illinois Army National Guard (ILARNG) are updating the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA). This INRMP is required by Army policy to reflect the mutual agreement of the U.S. Fish and Wildlife Service (USFWS) and the Illinois Department of Natural Resources (IDNR). The INRMP will also contain an Environmental Assessment (EA) in full compliance with the National Environmental Policy Act (NEPA) of 1969, as amended. The purpose of the INRMP is to document the policies and desired future direction of ILARNG's natural resource programs at this training site.

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Misganaw Demissie
Illinois State Water Survey
Watershed Science Section
2204 Griffith Drive
Champaign, IL 61820

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0.7-acre wetland on the southwest portion of the site. Surrounding land use is comprised mainly of agriculture with increasing residential development to the east. The Exelon nuclear power station, is southeast of the site and has a slight impact on local climate due to the artificial heating of the lake. No known federal or state listed endangered or threatened species is known to occur at the MTA. There is no designated critical habitat at this site.

The ILARNG has hired AMEC Earth & Environmental, Inc. to facilitate the revision of this INRMP. Accordingly, AMEC is in the process of coordinating with natural resources management agencies and other interested parties to identify environmental resources, issues, constraints, and opportunities at the MTA. The ILARNG has conducted a number of detailed environmental, biological, and cultural resources surveys over the last several years and has a wealth of information on hand about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. We also have the information provided by many of you for the 2001 INRMP. For this revision we are looking for any new or additional information, new natural resource topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional concern, or any other information that your agency thinks would be of value to this effort. We are interested in information on environmental issues within the vicinity of the MTA and working with land use planning and natural resources management agencies to fit into a regional or landscape approach to natural resources management as much as possible. Any data that your agency provides will be evaluated and used to help update the INRMP as appropriate. Some suggested informational topics are listed below.

- Regional natural resources issues of concern;
- Local or regional environmental or natural resources management initiatives;
- Any potential environmental issues at, or in the vicinity of, the property;
- Surface and groundwater resources, including streams, wetlands, floodplains, open water features, and local aquifers;
- Soils data, including lists of both hydric soils and Prime and Unique Farmland Soils (National Resources Conservation Services (NRCS) only);
- Federally or state listed threatened or endangered species, or any species proposed for such listing, or critical habitat for such species that may occur within a one-mile radius around the project area;
- Parks, nature preserves, conservation areas, designated wild or scenic rivers, migratory bird habitats, special wildlife issues, and other natural resource issues of concern;
- Any additional environmental, cultural, or socioeconomic information or concern your agency may have with regard to the referenced site.

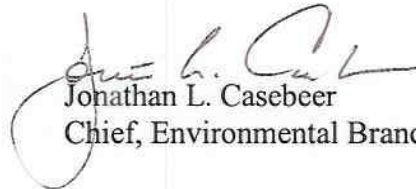
The ILARNG has requested information from a number of agencies (see enclosed list). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may assist us in preparing this INRMP, please either contact us or forward this letter for their review, and include applicable returned comments with your response.

We look forward to and welcome your participation in this INRMP revision process. Providing information as requested above on or before January 20, 2006 will enable us to complete this phase of the project within the scheduled timeframe. Please send your correspondence directly to AMEC at the following address.

Jennifer Pyzoha Warf
AMEC Earth & Environmental, Inc.
659 High Street, Suite 201
Worthington, Ohio 43085
Jennifer.Pyzoha@amec.com

If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (614) 430-0487 or the undersigned at (217) 761-3794 or jonathan.casebeer@us.army.mil.

Sincerely,


Jonathan L. Casebeer
Chief, Environmental Branch

Enclosure



10 March 2006

Re: Native American Consultation for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA), La Salle County, Illinois

Name
Tribe
Street Address
City, State Zip

Dear Representative,

The National Guard Bureau and the Illinois Army National Guard (ILARNG) is updating its Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA). This INRMP is required by Army Policy to reflect the mutual agreement of the U.S. Fish and Wildlife Service (USFWS) and the Illinois Department of Natural Resources (IDNR). The INRMP will also contain an Environmental Assessment (EA) in full compliance with the National Environmental Policy Act (NEPA) of 1969, as amended. The purpose of the INRMP is to document the policies and desired future direction of ILARNG's natural resource programs at this training site.

The ILARNG is responsible for the prudent management and use of 2,850 acres comprising the MTA, which is located approximately two miles south of the City of Marseilles and approximately 78 miles southwest of Chicago. The Marseilles site is under a joint land use agreement between the Department of Military Affairs of Illinois (DMAIL) and the IDNR. This land is owned by the State of Illinois. ILARNG uses the MTA for field training during the spring, summer, and fall months, and for cantonment and range firing year round. IDNR uses the site for wildlife propagation, forestry and prairie restoration, and outdoor recreational opportunities year round, and for upland game hunting during the late fall and winter months. During the hunting season, field training is not conducted. The site is also known as the Marseilles Fish and Wildlife Area.

The MTA is adjacent to and south of the Illinois River Valley. The northern boundary lies near the bluff overlooking the broad, flat floodplain to the north. The area is covered with prairie and mid-successional forested areas. Six predominant habitats occur at the MTA: managed/disturbed areas, upland and lowland forest, food plots managed by the IDNR, restored prairie and grasslands, scrub-shrub, and aquatic. Aquatic habitats include South Kickapoo Creek, several unnamed intermittent and perennial streams of Kickapoo Creek, four small ponds, and one 0.7-acre wetland on the southwest portion of the site. Surrounding land use is comprised mainly of agriculture with increasing residential development to the east. No known federal or state listed endangered or threatened species is known to occur at the MTA.

The lands we manage are among those that may have been the ancestral homes or hunting grounds of the people. Consequently, we look forward to having you join us as a consulting party as we revise and develop the INRMP. With your advice and guidance, we hope to initiate and maintain an ongoing cooperative relationship between your tribe and the Illinois Army National Guard.

If you desire, my Cultural Resources Manager, Jonathan Casebeer, can meet personally with you or your designated representative to outline areas of concern and provide you with further information. He can be reached at (217) 761-3790 or email at jonathan.casebeer@us.army.mil.

Sincerely,

RANDAL E. THOMAS
Brigadier General, ILARNG
The Adjutant General

CC: Jonathan Casebeer

MEMORANDUM OF RECORD
Native American Consultation for 2008-2012 INRMP

Tribe or Nation	Contact Person	Title	Address	City	State	Zip	Correspondence Letter Mailed	Response
Forest County Potawatomi, Executive Council	Honorable Harold Frank	Executive Officer	P.O. Box 340	Crandon	Wisconsin	54520	10 March 2006	None
Hannahville Indian Community Council	Honorable Kenneth Meshiguad	Tribal Chairperson	N14911 Hannahville B 1 Road	Wilson	Michigan	49896-9728	10 March 2006	None
Pokagon Band of Potawatomi Indians	Honorable John Miller	Tribal Chairman	901 Spruce Street	Dowagiac	Michigan	49047	10 March 2006	None
Citizen Potawatomi Nation	Honorable John A. Barrett, Jr.	Chief	1601 South Gordon Cooper Drive	Shawnee	Oklahoma	74801	10 March 2006	None
Prairie Band Potawatomi Nation	Honorable Badger Wahwasuck	Tribal Chairman	16281 Q Road	Mayetta	Kansas	66509	10 March 2006	None
Huron Potawatomi	Honorable Laura Spurr	Tribal Chairperson	2221 1 ½ Mile Road	Fulton	Michigan	49052	10 March 2006	None



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Rock Island Field Office
4469 48th Avenue Court
Rock Island, Illinois 61201
Phone: (309) 793-5800 Fax: (309) 793-5804

IN REPLY REFER
TO:

FWS/RIFO

January 13, 2006

Mr. Jonathan L. Casebeer
Department of Military Affairs
1301 North MacArthur Boulevard
Springfield, Illinois 62702-2399

Dear Mr. Casebeer:

This is in response to your letter of December 14, 2005, requesting our comments on the updating of the Integrated Natural Resource Management Plan (INRMP) for the Marseilles Training Area (MTA), La Salle County, Illinois.

Per Section 7(c) of the Endangered Species Act of 1973, as amended, and the implementing regulations, Federal action agencies are required to obtain information from the Fish and Wildlife Service whether listed species may be present in the area of a proposed action.

Our data indicate that the species on the enclosed list may occur in the county of your proposed action. Descriptions of the habitat requirements are included with the list. If your project and the surrounding areas do not support suitable habitat for listed species, it is appropriate to conclude they are "not present". If suitable habitat is found in the area of your project, please contact this field office for further assistance in determining if species may be present. In some instances surveys may be recommended to help make this determination.

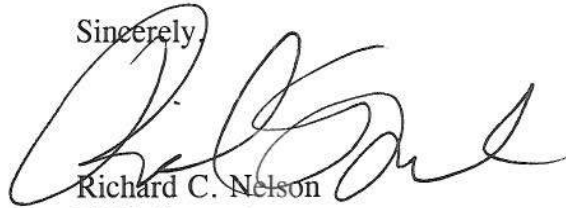
These comments provide technical assistance only and do not constitute the report of the Secretary of the Interior on the project within the meaning of Section 2(b) of the Fish and Wildlife Coordination Act, do not fulfill the requirements under Section 7 of the Endangered Species Act, nor do they represent the review comments of the U.S. Department of the Interior on any forthcoming environmental statement.

Mr. Jonathan L. Casebeer

2

If you have any questions regarding our comments, please contact Kristen Lundh of my staff at (309) 793-5800 ext. 215.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard C. Nelson". The signature is fluid and cursive, with a large initial "R" and "C".

Richard C. Nelson
Field Supervisor

Enclosure

S:\Office Users\Kristen\Technical Assistance\Section 7
\2006\Illinois\La Salle DMA Illinois 1-9-05.doc

Habitat Descriptions for Federal Threatened and Endangered Species in La Salle County, Illinois

The threatened **bald eagle** (*Haliaeetus leucocephalus*) is listed as wintering in La Salle County. During the winter, this species feeds on fish in the open water areas created by dam tailwaters, the warm water effluents of power plants, and municipal and industrial discharges, or in power plant cooling ponds. The more severe the winter, the greater the ice coverage and the more concentrated the eagles become. They roost at night in groups in large trees adjacent to the river in areas that are protected from the harsh winter elements. They perch in large shoreline trees to rest or feed on fish. There is no critical habitat designated for this species. The eagle may not be harassed, harmed, or disturbed when present nor may nest trees be cleared.

The endangered **Indiana bat** (*Myotis sodalis*) is known to occur in La Salle County. Indiana bats migrate seasonally between winter hibernacula and summer roosting habitats. Winter hibernacula include caves and abandoned mines. Females form nursery colonies under the loose bark of trees (dead or alive) and/or cavities, where each female gives birth to a single young in June or early July. A single colony may utilize a number of roost trees during the summer, typically a primary roost tree and several alternates. The species or size of tree does not appear to influence whether Indiana bats utilize a tree for roosting provided the appropriate bark structure is present.

During the summer, the Indiana bat frequents the corridors of small streams with riparian woods as well as mature upland forests. It forages for insects along stream corridors, within the canopy of floodplain and upland forests, over clearings with early successional vegetation (old fields), along the borders of croplands, along wooded fencerows, over farm ponds, and in pastures.

Suitable summer habitat in Illinois is considered to have the following characteristics within a ½ mile radius of a project site:

- 1) forest cover of 15% or greater;
- 2) permanent water;
- 3) one or more of the following tree species: shagbark and shellbark hickory that may be dead or alive, and dead bitternut hickory, American elm, slippery elm, eastern cottonwood, silver maple, white oak, red oak, post oak, and shingle oak with slabs or plates of loose bark;
- 4) potential roost trees with 10% or more peeling or loose bark

If the project site contains any habitat that fits the above description, it may be necessary to conduct a survey to determine whether the bat is present. In addition, a search for this species should be made prior to any cave-impacting activities. If habitat is present or Indiana bats are known to be present, they must not be harmed, harassed, or disturbed, and this field office should be contacted for further assistance.

The **prairie bush clover** (*Lespedeza leptostachya*) is listed as threatened and considered to potentially occur statewide in Illinois based on its historical records and habitat distribution, but is not listed as currently occurring in La Salle County. It occupies dry to mesic prairies with gravelly soil. There is no critical habitat designated for this species. Federal regulations prohibit any commercial activity involving this species or the destruction, malicious damage, or removal of this species from Federal land or any other lands in knowing violation of State law or regulation, including State criminal trespass law. This species should be searched for whenever prairie remnants are encountered.

The **prairie bush clover** (*Lespedeza leptostachya*) is listed as threatened and considered to potentially occur statewide in Illinois based on its historical records and habitat distribution, but is not listed as currently occurring in La Salle County. It occupies mesic to wet grassland habitats. There is no critical habitat designated for this species. Federal regulations prohibit any commercial activity involving this species or the destruction, malicious damage, or removal of this species from Federal land or any other lands in knowing violation of State law or regulation, including State criminal trespass law. Growth of the prairie fringed orchid begins in May and flowering occurs in July. This species should be searched for whenever wet prairie remnants or other wet meadows are encountered.



Illinois Department of Natural Resources

One Natural Resources Way • Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

Rod R. Blagojevich, Governor

Sam Flood, Acting Director

February 8, 2006

Jonathan L. Casebeer
Dept. Of Military Affairs
1301 North MacArthur Blvd.
Springfield, IL 62702-2399

Dear Mr. Casebeer:

The Department of Natural Resources (IDNR) welcomes the opportunity to participate with the Military in updating the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA). The IDNR offers the following information and comments relative to your letters of November 22 and December 14, 2005.

At the Springfield planning meeting in November of 2005, the update to the Integrated Natural Resource Management Plan was presented to us as a five year management plan for the natural resources at the site. IDNR staff reiterated our position at the meeting that the Memorandum of Understanding (MOU) between the Military and the IDNR remains the governing document for resource management of the site. Item #9 of the MOU states "IDNR shall retain control over the natural resources management, protection, and restoration of the total site, similar to management of all IDNR properties following policy and procedure, excluding the Cantonment Area and Parcel 2 described in paragraph 3 but not the twenty acre area described as Parcel 1."

The IDNR respects the Military's obligation to develop and update the INRMP for the MTA, but believes the INRMP must be considered supplemental and subservient to the MOU. It is imperative that the relationship between the IDNR and the Military, as spelled out in the MOU, is accurately portrayed in the INRMP, especially as it relates to the stewardship of the natural resources at the site.

The INRMP sample we received for the Sparta training area states that the INRMP, a 5-year document, is the primary tool for management of the natural resources. IDNR's project planning cycle, however, is on an annual basis, with project implementation done according to available personnel or funding. The INRMP update could provide an opportunity for the Department to depart from its annual planning process at MTA, especially if it includes specific project objectives and helps to secure continued federal funding to accomplish those objectives. The INRMP process for the MTA and the resulting document should also reflect the goals of the recently signed tripartite agreement between the Department of Defense, the U.S. Fish and Wildlife Service and the International Association of Fish and Wildlife Agencies (signed 31 Jan 2006). This agreement states specifically that "The INRMP must be prepared in cooperation with the FWS and the State fish and wildlife agency, and reflect the mutual agreement of the parties concerning conservation, protection and management of fish and wildlife resources on military lands". Even though the MTA is on leased lands, the IDNR embraces the stated purpose of the 2006 MOU and the responsibilities of each party.

Another issue that needs to be addressed in the INRMP is the fact that the IDNR receives financial support through the Federal Aid in Wildlife Restoration program to develop habitat and manage its hunting programs at the MTA. These funds are authorized through a grant agreement (W-76-D) with the U.S. Fish and Wildlife Service. That agreement and its plan need to be included in the INRMP. Some of the items in the current INRMP may contradict the W76 D plan and the programs we have established at the site. Resource projects identified in the 5-year INRMP need to be consistent with those in the W-76-D plan. Ted Love, IDNR's site manager at Marseilles, will provide these details under separate cover.

With respect to your questions about natural resource concerns and/or changes in rare floral or faunal listings, our Staff in the Office of Realty and Environmental Planning report that there have not been any changes in our data base records since the last INRMP was done. All T&E, wetland, and archaeological/cultural issues have remained the same. Though not new occurrences, the following Illinois Natural Area Inventory sites are brought to your attention:

Within the Marseilles Training Area itself:

Marseilles Hill Prairie (INAI #1520, Category I for high quality glacial drift hill prairie) this is recognized as a glacial drift hill prairie.

Within 1 mile of the Marseilles Training Area:

*Illinois River - Marseilles (INAI #1446, Category I for Moxostoma valenciennesi - which is the state endangered fish, Greater Redhorse)

*LaSalle Lake (INAI #1689, Category VI for unusual concentration of birds - major waterfowl wintering area)

A relatively new resource now available for your consultation and use in the preparation of the updated INRMP is Illinois' Comprehensive Wildlife Conservation Plan and Strategy, which can be accessed at <http://dnr.state.il.us/orc/Wildliferesources/theplan/>. This plan provides a wealth of information about the distribution and abundance of wildlife species and habitat types, especially those that demonstrate the greatest conservation need. The plan outlines specific conservation goals and strategies to achieve those goals. The INRMP should be compatible with this statewide plan and contribute to the stated objectives.

A breeding bird census was conducted at MSFWA in 1995 by Dr. Dale Berkenholtz. Given the preponderance of avian fauna that breed at MSFWA that are also species of conservation concern, and the time passed since it was completed, a replication of Berkenholtz's study is recommended and should be part of the INRMP.

Following is a list of the resource-related projects offered by our site manager and field biologists/foresters for your consideration for inclusion in the INRMP. Once specific projects have been identified in the INRMP, the project list will need to go through the IDNR's Comprehensive Environmental Review Process (CERP). Since the Military will be conducting an Environmental Assessment in conjunction with INRMP, the EA can form the basis for the CERP review. Each project should have a general description along with a map identifying exactly where the project will be conducted. Projects receiving clearance through the CERP must be started within two years or another CERP is required. Questions regarding the CERP process can be directed to Ken Litchfield in Springfield at 217-785-9078.

Marseilles Hill Prairie, Illinois Natural Areas Inventory Site # 1520

Management goal: Protect, maintain, and restore high-quality hill prairie natural community and associated fauna. Restore degraded savanna natural community; maintain and enhance habitat for turkey and species of conservation concern: red-headed woodpecker, field sparrow, blue-winged warbler, bobwhite quail, Bell's vireo, and yellow-breasted chat to increase populations.

- Maintain designated protected status: no vehicle maneuvers, no earth disturbance, foot training only, etc.
- Maintain INAI posting.
- Conduct prescribed burns.* IDNR Natural Heritage Biologist Burn Boss. Season: spring or fall. Schedule: 3 of 5 years. Maintain fall mowed firebreak on south boundary.
- Control exotic, invasive herbaceous vegetation.
- Control exotic, invasive woody vegetation.
- Restore degraded hill prairies and savanna communities via selective tree and brush removal.

Remnant hill prairies, moderate quality

Management goal: Maintain and restore hill prairie natural community and associated fauna.

- Conduct prescribed burns. Season: spring or fall. Schedule: 3 of 5 years. Utilize existing roads, trails, fields, and natural breaks as firebreaks.
- Control exotic, invasive herbaceous vegetation.
- Control exotic, invasive woody vegetation.
- Restore degraded hill prairies and savanna communities via selective tree and brush removal.

Grassland communities

Management goal: Maintain and enhance habitat for grassland fauna to increase populations of turkey, pheasant, and quail and species of conservation concern: savanna, field, and grasshopper sparrows. Maintain and restore degraded remnant prairies.

- Conduct prescribed burns. Season: spring or fall. Schedule: 50% annually. Utilize existing roads, trails, fields, and natural breaks as firebreaks.
- Control exotic, invasive herbaceous vegetation.
- Control exotic, invasive woody vegetation.
- Establish or expand additional grassland habitats. Convert poor quality old field habitats or cool-season dominated grasslands to native grassland communities.

Shrub, scrub, savanna & successional habitats

Management goal: Maintain and enhance habitat for shrubland and savanna fauna to increase populations of turkey, pheasant, and quail and species of conservation concern: red-headed woodpecker, field sparrow, blue-winged warbler, bobwhite quail, Bell's vireo, and yellow-breasted chat.

- Conduct prescribed burns. Season: spring or fall. Schedule: 30-50% annually. Utilize existing roads, trails, fields, and natural breaks as firebreaks.
- Control exotic, invasive herbaceous vegetation.
- Control exotic, invasive woody vegetation.
- Selective brush removal/thinning to maintain successional habitats.
- Establish or expand additional shrubland and savanna habitats. Convert poor quality old field habitats or cool-season dominated grasslands to native shrubland and savanna communities.
- Thin successional, overstocked woodlands through timber stand improvement.

Upland forests

Management goal: Maintain and enhance habitat for woodland fauna to increase populations of forest interior birds and species of conservation concern: Acadian flycatcher, wood thrush, worm-eating warbler, ovenbird, Kentucky warbler, broad-winged hawk, and yellow-billed cuckoo, whip-poor-will, chimney swift, common nighthawk, northern flicker, quail, and red-headed woodpecker.

- Conduct prescribed burns. Season: spring or fall. Schedule: 30 % annually. Utilize existing roads, trails, fields, and natural breaks as firebreaks.
- Control exotic, invasive herbaceous vegetation.
- Control exotic, invasive woody vegetation.
- Establish or expand additional upland forest habitats. Convert poor quality old field habitats or cool-season dominated grasslands to upland forests when conducive to DMAIL training mission.
- Thin successional, overstocked woodlands through timber stand improvement.
- Protect existing forest blocks from further fragmentation and habitat degradation.

Ravine and riparian forests

Management goal: Maintain and enhance habitat for woodland fauna to increase populations of forest interior birds and species of conservation concern: Acadian flycatcher, wood thrush, worm-eating warbler, ovenbird, Kentucky warbler, broad-winged hawk, and yellow-billed cuckoo, whip-poor-will, chimney swift, common nighthawk, northern flicker, quail, and red-headed woodpecker.

- Protect existing forest blocks from further fragmentation and habitat degradation. Maintain overstory/canopy. Maintain dense, native shrub understory habitats, particularly adjacent to watercourses .
- Conduct prescribed burns. Season: spring or fall. Schedule: 10-30 % annually. Utilize existing roads, trails, fields, and natural breaks as firebreaks.
- Control exotic, invasive herbaceous vegetation.
- Control exotic, invasive woody vegetation.

Gravel pit

Management goal: reclaim site to provide improved wildlife habitat, public recreation, and training opportunities.

- Stabilize highwall and other steep slopes by regrading, recontouring, &/or native habitat establishment. Protect adjacent habitats from associated erosion and head-cutting.
- Control exotic species including Phragmites.

Other Considerations

- A comprehensive prescribed burning program is needed for the entire site utilizing existing roads, trails, fields, and natural breaks as firebreaks.
- Trees killed through Timber Stand Improvement projects could be cut for use by the ILARNG for various rough construction purposes including shallow bunkers, protection barriers, cribbing, support poles, etc.
- Given the suitability of riparian habitats at MSFWA and its proximity to a known Indiana Bat hibernaculum, in addition to the planned TSI work, follow-up work to mist-net bats should be conducted.

Natural Resource Monitoring

In order to identify if the resource management goals are being met for the prescribed management activities, a more comprehensive monitoring program is recommended. This monitoring program is also warranted in order to identify other ecological changes, new or developing threats, and significant changes to the sites flora and fauna (e.g. new sensitive species, population declines, etc.). Permanent plots to sample (and later re-sample) to quantify the structure and composition of the vegetation within each of the natural communities present at MSFWA should be installed.

Site Improvements

Gravel for training/hunter parking lot at Gate 60.....approx. 500 ton.....
Gravel for training/hunter parking lot at Gate 85.....approx. 250 ton.....
Gravel for training/hunter parking lot at Gate 50.....approx. 250 ton.....
Gravel for training/hunter parking lot at Gate 52.....approx. 250 ton.....
Gravel for training/hunter parking lot at Gate 30.....approx. 250 ton.....
Gravel for training/hunter parking lot at Gate 20.....approx. 250 ton.....

Sign posts for signs delineating training areas, channel type w/pre drilled holes, galvanized, approximately 8' tall.....350 total.

Fencing, barb wire, t- type fence posts, treated round corner posts with braces to secure parking areas.....

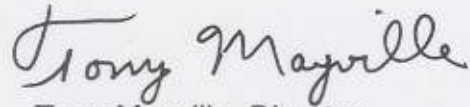
12 - 18' farm gates to secure parking lots.....

24 - 12' treated 6"x6" posts for gates at parking lots.....

20' x 40' split faced block building w/furnace & electric service for a security check in station/seed materials storage for resource enhancement @ Gate 60

Thank you for giving us an opportunity to provide early comments on the INRMP process. We look forward to reviewing the specifics in the preliminary draft.

Sincerely,

A handwritten signature in black ink that reads "Tony Mayville". The signature is written in a cursive, slightly slanted style.

Tony Mayville, Director
Office of Land Management

TM:TH;hh

cc: Jennifer Pyzoha Warf - AMEC

IDNR staff:
Tom Flattery
Tim Hickmann
Ted Love
Mike Conlin
Ken Litchfield
Jim Modglin
Tom Beissel
Matt Siemert
Randy Timmons
Diane Tecic
Todd Bittner
Dan Sallee

Pyzoha, Jennifer E

From: McKay, E. Donald [mckay@isgs.uiuc.edu]
Sent: Thursday, January 05, 2006 5:16 PM
To: Pyzoha, Jennifer E
Cc: David Malone; Shilts, William
Subject: Information regarding the Marseilles Training Area, La Salle County, Illinois
Follow Up Flag: Follow up
Flag Status: Red

Dear Ms. Warf:

Thank you for the letter dated Dec. 14, 2005, from Jonathan L. Casebeer to the Illinois State Geological Survey, soliciting input on Environmental Planning Consultation and Coordination for the Integrated Natural Resources Management Plan (INRMP) for the Marseilles Training Area (MTA), La Salle County, Illinois.

Regarding your request, we can pass along to you information about recently completed and published 1:24,000-scale geologic maps that include the MTA and may have some value to your effort. ISGS did not prepare these maps, but we provide the service of posting the geologic maps on our web site. The maps were prepared under the EDMAP element of the National Cooperative Geologic Mapping Program, which is overseen by the United States Geological Survey (USGS). Authors are Timothy A. Walls and Dr. David Malone. Dave is Professor and Chairman of the Geology Department at Illinois State University, Bloomington, IL. Tim was his student.

The two new maps are (1) Surficial Geology and (2) Aquifer Sensitivity of the Marseilles 7.5-minute Quadrangle. Both can be downloaded as .pdf files from the ISGS web site at the following url link:
http://www.isgs.uiuc.edu/online-maps/edmap/marseilles_7_5.htm

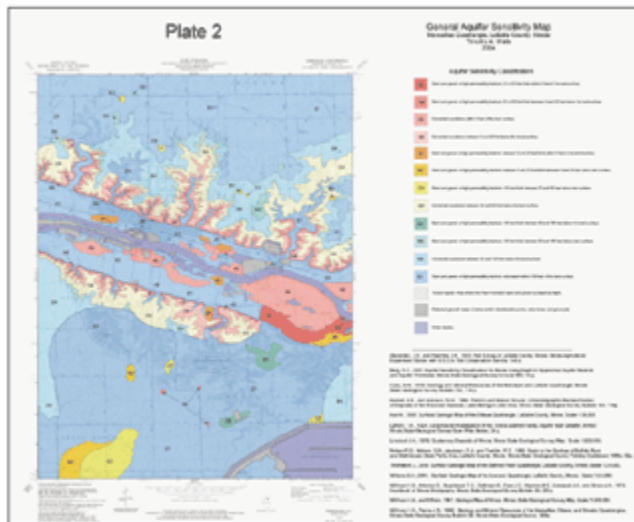
I include an image of the download page below, FYI. If we can be of further assistance, please contact me.

Sincerely,

Don McKay

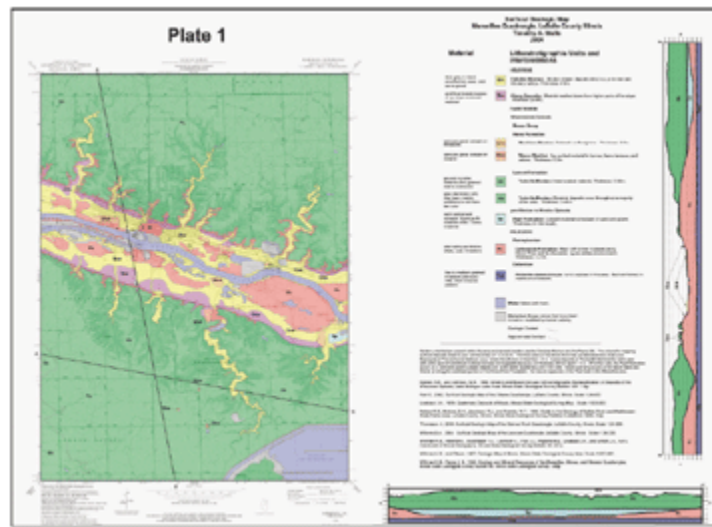
E. Donald McKay III, PhD, RPG
Chief Scientist
Illinois State Geological Survey
Champaign, IL 61820
217/333-0044
217/244-7004 fax

IL-EDMAP 5 Marseilles-AS



Theme: Aquifer Sensitivity
Authors: Timothy A. Walls and David Malone
Faculty Advisor: Dr. David Malone
Description: 30" x 37" map sheet; includes map and legend
Year Completed: 2004
File size/format : 21.9 mb/pdf 6.0

IL-EDMAP 6 Marseilles-SG



Theme: Surficial Geology
Authors: Timothy A. Walls and David Malone
Faculty Advisor: Dr. David Malone
Description: 30" x 41" map sheet; includes map, legend, and cross sections (2)
Year Completed: 2004
File size/format : 15.6 mb/pdf 6.0



Illinois Historic Preservation Agency

1 Old State Capitol Plaza • Springfield, Illinois 62701-1507 • (217) 782-4836 • TTY (217) 524-7128

217/785-4997

LASALLE COUNTY
Marseilles
Training Area

PLEASE REFER TO:
IHPA LOG #950628003PLS
ISM Society
2797.4 acres 33 sites

March 14, 1996

Mr. Jon Casebeer
Department of Military Affairs
Facilities Division
1301 North MacArthur Boulevard
Springfield, Illinois 62702-2399

Dear Sir:

The Phase I survey and assessment of the archaeological resources appears to be adequate. Thirty three archaeological sites were located during the Phase I survey. All but two of these sites (11-Ls-260 and 11-Ls-509 which are either eligible or potentially eligible for listing on the National Register of Historic Places) are determined not to be eligible for listing on the National Register of Historic Places and no further work will be required.

None of the 64 isolated finds are eligible for listing on the National Register of Historic Places.

We have determined that site 11-Ls-260 is eligible for listing on the National Register of Historic Places under criteria A and D. In addition to being eligible for listing on the National Register this site is afforded protection under Illinois' Human Skeletal Remains Protection Act, 20 ILCS 3440 (copy enclosed). Avoidance of this site is strongly recommended. If avoidance by current or future planned projects is not possible then further consultation will be required prior to any effect on site 11-Ls-260.

Site 11-Ls-509 is potentially significant and, consequently, may be eligible for listing on the National Register of Historic Places. If any current or future planned project can not avoid the site, then Phase II archaeological test investigations of site 11-Ls-509 to evaluate the significance of this site will be necessary prior to construction.

IF A PROJECT IS NECESSARY, THEN A COPY OF THIS LETTER SHOULD BE PROVIDED TO THE PROFESSIONAL ARCHAEOLOGICAL CONTRACTOR WHOSE SERVICES ARE OBTAINED TO CONDUCT THE INVESTIGATIONS TO ENSURE THAT THEIR REPORT IS CONNECTED WITH YOUR PROJECT PAPERWORK.

If you have any questions please contact Joseph S. Phillippe, Staff Archaeologist at 217/785-1279.

Sincerely,

Anne E. Haaker
Deputy State Historic
Preservation Officer

AEH:JSP

cc: Dr. Michael D. Wiant



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Rock Island Field Office
4469 48th Avenue Court
Rock Island, Illinois 61201
Phone: (309) 793-5800 Fax: (309) 793-5804

IN REPLY REFER
TO:

FWS/RIFO

November 16, 2006

Mr. Jonathan L. Casebeer
Department of Military Affairs
1301 North MacArthur Boulevard
Springfield, Illinois 62702-2399

Dear Mr. Casebeer:

This is in response to your letter dated October 18, 2006, requesting our comments on the preliminary draft Integrated Natural Resources Management Plan (INRMP) and Environmental Assessment (EA) for the Marseilles Training Area (MTA). Approximately 2,550 acres of the MTA is under a joint land use agreement between the Department of Military Affairs of Illinois and the Illinois Department of Natural Resources. We have the following comments.

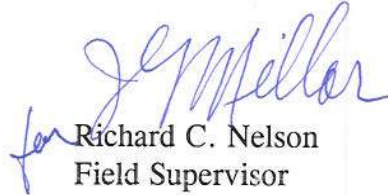
Our initial January 13, 2006, letter responding to your request for threatened and endangered species information did not include the following species which may be present in LaSalle County, Illinois:

The **decurent false aster** (*Boltonia decurrens*) is listed as threatened and known to occur in LaSalle County, Illinois (Illinois River floodplain). It is also considered to potentially occur in any county bordering the Illinois River and the counties bordering the Mississippi River between the mouths of the Missouri River and the Ohio River, and known to occur in Madison and St. Clair Counties. It occupies disturbed alluvial soils in the floodplains of these rivers. There is no critical habitat listed for this species in Illinois.

The **eastern prairie fringed orchid** (*Platanthera leucophaea*) is listed as threatened and may potentially occur in any Illinois county based on historical records and habitat distribution. It occupies wet grassland habitats. There is no critical habitat designated for this species. Federal regulations prohibit any commercial activity involving this species or the destruction, malicious damage, or removal of this species from Federal land or any other lands in knowing violation of state law or regulation, including state criminal trespass law. This species should be searched for whenever wet prairie remnants are encountered.

Please add these species to sections 9.4 and 17.4, pages 70 and 127, respectively. These comments provide technical assistance only and do not constitute the report of the Secretary of the Interior on the project within the meaning of Section 2(b) of the Fish and Wildlife Coordination Act, do not fulfill the requirements under Section 7 of the Endangered Species Act, nor do they represent the review comments of the U.S. Department of the Interior on any forthcoming environmental statement. If you have additional questions or concerns, please contact Heidi Woeber of my staff.


Sincerely,



for Richard C. Nelson
Field Supervisor

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to: Jon Casebeer
from: Ted Love 
date: 1/30/07
subject: IDNR Comments on the INRMP Draft

reference:

1. Throughout the INRMP there are comments/statements such as;
 - a. Executive Summary, paragraph 1, "This revised Integrated Natural Resources Management Plan (INRMP) has been developed for the use by the National Guard Bureau and the Illinois Army National Guard (ILARNG) as the *primary* tool for managing natural resources at the ILARNG's 2,850-acre Marseilles Training Area (MTA)."
 - b. Section 1, 1.1, "This revised Integrated Natural Resources Management Plan (INRMP) has been developed for the use by the National Guard Bureau and the Illinois Army National Guard (ILARNG) as the *primary* tool for managing natural resources at the ILARNG's 2,850-acre Marseilles Training Area (MTA)."
 - c. Section 2, 2.1, "The primary purpose of natural resources management at the MTA is to support the military training mission. With regard to accomplishment of the military mission, the overall goal is to provide quality natural resources as a critical training asset upon which to accomplish the mission of the ILARNG at the MTA."

The INRMP has been presented to IDNR as a funding document necessary to the Military Mission of Training at the MFWA/MTA. Discussions have been held in which IDNR has questioned the inference that the INRMP puts the responsibility and obligation of resource management at the MFWA/MTA under the auspices of the Military through statements such as those above and others. In those discussions IDNR has been assured that is not the intent. We have been told that the INRMP says what it needs to say to get the funding.

Past history at this site has taught us that oral agreements and understandings are fine for the moment they are made. However as time passes and the individual players change intent becomes cloudy and problems ensue.

Therefore, rather than quibble about individual statements and the interpretation of certain statements that could be read one way or another I put forth the following solution.

An amendment to the MOU be made that would replace the wording in in Item 9 of the MOU.

It would state, "IDNR, as the landowner, shall retain control over the natural resources management, protection, and restoration, of the total site, according to all Administrative Rules, Laws, Policies and Procedures, that govern IDNR's management of all of its other properties, excluding the Cantonment Area and Parcel 2 as described in paragraph 3 but not the twenty acre parcel described as Parcel 1. IDNR shall further retain the administration of the recreational use of the entire site, excluding the Cantonment Area and Parcel 2 described in paragraph 3 but not the twenty acre parcel described as Parcel 1. Both parties recognize the existence of other management documents and plans, such as the INRMP, the TSI Plan, the Burn Plan, and others. It is mutually understood that all of those documents and their subsequent revisions, are subordinate to the MOU and do not alter IDNR's control as is spelled out above"

We appreciate the Military's goals in the INRMP in regards to the resources and laud their mission of protecting the resource while still providing necessary training to the soldier. However as it has been said good fences make good neighbors, we believe that the mutual understanding that the MOU supercedes all other documents in the management of the site needs to be put in writing in that document. If we are not able to put the above amendment in the MOU then we will go back and go line by line through the INRMP and change any part that might lead to a misunderstanding about where the role of resource management and recreation administration resides before we approve the INRMP. .

2. The references to the TSI plan and the Burn plan in the document lead one to believe that these documents are finished and approved by IDNR. It has been my understanding that given the diversity of areas at the MFWA/MTA we have agreed to test pilot areas at the MFWA/MTA using the SIU plan with modifications spelled out by the ORC staff. Once those pilot areas are done and the results are reviewed, we will take that template and with mutually agreed upon changes, will apply that template to the next area. It has been my understanding that we all agreed that we cannot take a boilerplate plan and use it in all areas. Since funding is necessary for the TSI and the TSI is dependent upon the Burn Plan I do not see how admitting where we are truly at would jeopardize funding. The effort to do the best for the resource while providing better training areas should be recognized. After all isn't that the core of the INRMP? We have yet to see how the IDNR new tree policy will impact the TSI plan. The TSI is a work in progress, and as a resource management plan it has to be approved by IDNR as the resource manager of the site.
3. IDNR's CERP process is spelled out in Section 10, 2. Projects are submitted with a detailed scope of work, including equipment to be used, materials to be used, method used, time of year, and delineation of project physical bounds. Our agreement at the initial meeting on this revision was that if the Military wanted the Environmental Assessment to be signed off on as the CERP then each project needed to contain the above specifics. It was also agreed that if after the project was approved, and it was not completed within the two year life of the approval then it had to be resubmitted. If any of the above details of the project change, or the resource itself changes, ie; the appearance of a significant species, prior to the completion of the project then that project has to be re-evaluated through the CERP process. If nothing had changed the CERP would be re-approved. This is how the EA and CERP process should be spelled out in the INRMP. If project specifics cannot be provided that far in advance then the projects cannot be approved until a CERP is done and those specifics are provided. We are held to these policies ourselves, and at all of our other sites. We do not have the authorization to waive them for the Military at the MFWA.

4. It must be understood that one of the main tools or plans that IDNR uses at the Marseilles site to manage the resources is the W76D plan. This plan lists projects and guidelines to improve the wildlife habitat at the site. This plan is the driving force behind the W76D Program which is a federally funded program that provides the only monies that IDNR receives for the operation of the site. IDNR operates the Marseilles State Fish & Wildlife Area for the hunting programs. The hunting programs are funded by the W76D plan. As a result the W76D Plan is a very large part of our resource management at the site. The INRMP cannot hinder the W76D plan. Each of the projects in the W76D Plan will go through the CERP process and be discussed at the annual POW meeting with the Military. Once they clear those hurdles they will be implemented. They will not be stopped because they do not agree with the INRMP. The amendment of the MOU, spelled out in Item #1 will sufficiently cover this concern.
5. All issues related to IPM as are mentioned in the INRMP will have to be approved by IDNR on all areas excluding the Cantonment Area and the area designated as Parcel 2, including mechanical controls, cultural controls, biological controls, and chemical controls. The IPM Plan also will not hinder the resource management activities of IDNR.
6. While we welcome the inclusion of the local community and scout groups, etc., through the Public Outreach project, in the development of the natural resources it is also necessary to maintain a consistency of effort. It must be understood that any work done by such groups must also go through the CERP process and such projects must be approved by IDNR as the manager of the resources. It also must be understood that IDNR and the Military are the two joint users of the site as is spelled out in the MOU. Activities by other groups must not interfere with programs of either of these two joint site users. Recreational activities on the site must also go through IDNR as the Administrator of recreation at the site. This of course excludes the Cantonment Area and Parcel 2 as spelled out in the MOU. That being said we are fortunate to have Environmental Specialist Ryan Getz at the site. Through Ryan we will be able to get some resource projects done that were not possible before. We have already been able to establish bird monitoring through a volunteer group that work with Ryan. This same group will do some butterfly monitoring also. This is an example of how through good communication we can further the improvement of the resources at the MTA/MFWA.

The following items deal with more specific issues.

7. The boundary of the Northern Use Area is wrong on the map labeled figure #2. The eastern portion of the south boundary is too far south. After it goes past the gravel pit area it goes north to the road/trail and then east. It even mentions this in the MOU.
8. All tree/vegetation removal or planting, such as is mentioned on Page 95, must follow the guidelines of IDNR policies, especially the Tree Cutting policy. Cutting and planting must be tracked through the Regional Forester.
9. On page 102 the INRMP states "A Proposed Rule will allow the incidental taking of migratory birds by DoD in the course of military readiness activities." It goes on to explain the authority of the rule. I found and included the Section mentioned. After reading this I feel we need to address this. According to the way I read this rule, a soldier may take any migratory bird, not necessarily a game bird, say a bald eagle or a snowy owl, if he is doing

any training activity or even if he is at the site training, but not actually performing a training activity at the time. We absolutely do not allow this at any of our other sites and I don't think we should allow this at the MFWA.

READINESS ACTIVITIES.

(a) INTERIM AUTHORITY FOR INCIDENTAL TAKINGS.—During the period described in subsection (c), section 2 of the Migratory Bird Treaty Act (16 U.S.C. 703) shall not apply to the incidental taking of a migratory bird by a member of the Armed Forces during a military readiness activity authorized by the Secretary of Defense or the Secretary of the military department concerned.

(b) IDENTIFICATION OF MEASURES TO MINIMIZE IMPACT OF ACTIVITIES.—During the periods described in subsections (c) and (d), the Secretary of Defense shall, in consultation with the Secretary of the Interior, identify measures—

- (1) to minimize and mitigate, to the extent practicable, any adverse impacts of authorized military readiness activities on affected species of migratory birds; and
- (2) to monitor the impacts of such military readiness activities on affected species of migratory birds.

(c) PERIOD OF APPLICATION FOR INTERIM AUTHORITY.—The period described in this subsection is the period beginning on the date of the enactment of this Act and ending on the date on which the Secretary of the Interior publishes in the Federal Register a notice that—

- (1) regulations authorizing the incidental taking of migratory birds by members of the Armed Forces have been prescribed in accordance with the requirements of subsection (d);
- (2) all legal challenges to the regulations and to the manner of their promulgation (if any) have been exhausted as provided in subsection (e); and
- (3) the regulations have taken effect.

(d) INCIDENTAL TAKINGS AFTER INTERIM PERIOD.—(1) Not later than the expiration of the one-year period beginning on the date of the enactment of this Act, the Secretary of the Interior shall exercise the authority of that Secretary under section 3(a) of the Migratory Bird Treaty Act (16 U.S.C. 704(a)) to prescribe regulations to exempt the Armed Forces for the incidental taking of migratory birds during military readiness activities authorized by the Secretary of Defense or the Secretary of the military department concerned.

(2) The Secretary of the Interior shall exercise authority under paragraph (1) with the concurrence of the Secretary of Defense.

(e) LIMITATION ON JUDICIAL REVIEW.—An action seeking judicial review of regulations prescribed pursuant to this section or of the manner of their promulgation must be filed in the appropriate Federal court by not later than the expiration of the 120-day period beginning on the date on which such regulations are published in the Federal Register. Upon the expiration of such period and the exhaustion of any legal challenges to the regulations pursuant to any action filed in such period, there shall be no further judicial review of such regulations or of the manner of their promulgation.

Deadline.

Deadline.

Regulations.

Federal Register,

publication.

16 USC 703 note.

116 STAT. 2510 PUBLIC LAW 107-314—DEC. 2, 2002

(f) MILITARY READINESS ACTIVITY.—(1) In this section the term "military readiness activity" includes—

- (A) all training and operations of the Armed Forces that relate to combat; and

(B) the adequate and realistic testing of military equipment, vehicles, weapons, and sensors for proper operation and suitability for combat use.

(2) The term does not include-

(A) the routine operation of installation operating support functions, such as administrative offices, military exchanges, commissaries, water treatment facilities, storage facilities, schools, housing, motor pools, laundries, morale, welfare, and recreation activities, shops, and mess halls;

(B) the operation of industrial activities; or

(C) the construction or demolition of facilities used for a purpose described in subparagraph (A) or (B).

10. Section 14.4.4 Nuisance Wildlife and Wildlife Diseases - remove the line "Food plots managed by the IDNR will not be planted with crops attractive to deer." Since deer will eat almost anything, and a pine tree could be construed to be attractive to deer, and this is in direct contradiction to the W76D Plan it must be removed.
11. Section 14.7 Military Mission Requirements - rewrite the lines "Concealment for hunters and troops training is reduced in areas containing food plots. Additional trees in these areas will be planted to enhance concealment." to read *Concealment for hunters and troops conducting training is reduced in some areas containing food plots. Per the W76D Plan trees/shrubs will be planted around the perimeters of these fields to enhance concealment.*
12. In the list of Implementation Projects on page 141 project 10 calls for stabilization of the high wall at the gravel pit and planting of native plants to stabilize the slope. Project 9 calls for the development of a reclamation plan for the gravel pit. Neither project calls for the integration of these two projects and I did not read anywhere that the projects had to be done in order. So conceivably we could have a project that stabilized the high wall in a manner that was not consistent with the reclamation plan if project 10, gets done before project 9. This is why we need the projects to go through the CERP process so we know the details of each of the projects.

Part 3

13. Page 75/line 24 - Addition - All trees spaded outside the Cantonment Area will have to be located on a map. This map will need to be attached to a CERP request for review.
14. page 75/line 29A - Addition - A new IDNR Tree Cutting Policy is being implemented in 2007. This new policy requires that, in general, trees will need to be replaced (replanted) when cut or killed on IDNR lands. It also requires that the cut trees as well as the replacements be documented with the Regional Forester's office. The complete document pertaining to this is found in the IDNR's Policy and Procedure Manual - Tree Cutting Policy - under Chapter 5, Subchapter D Forests, Section 5D-4 Tree Cutting. All projects involving tree cutting or killing will have to satisfy the requirements of this new policy and procedure. This policy will need to be consulted for the specific details pertaining to forest resource management at MTA.
15. Page 95/line 7 - District Forester with IDNR will mark trees at MTA, however current staff shortages and prioritization of workloads w/in the Forestry Division may severely limit the amount of available time to carry out such markings.
16. Page 95/line 9 - ' for logs and firewood to be used by IDNR or for training and maintenance needs by ILARNG.'

17. Page 95/line 19A - Identify , mark, and fell trees that are deemed safety hazards, especially along roads, parking lots, around training structures, and within tree fall reach of bivouac areas for the safety of IDNR users and ILARNG personnel.
18. Page 95/line 38 - Low forked, crooked, leaning, and root sprung
19. page 95/line 42 - (In general,, we might want to stay away from the notion of 'harvest', and stick to 'cuts'. Might be more productive to use the notion of 'regeneration cuts' instead. Might rewrite the paragraph something like this...?)
20. Cutting : Cutting and removing trees is used as a silvicultural practice to achieve various objectives. Cuttings can be used to stop or impede the spread of insects or disease (clearcuts or sanitation cuts), to reduce the number of trees in overstocked stands (thinning cuts), to remove undesirable trees due to species (weeding cuts), to utilize material that has sustained substantial damage due to some environmental factor such as wind, ice, flood, insects, etc. (salvage cuts), to regenerate a stand area to other species (clearcut, shelterwood cut, seedtree cut), or to clear an area for a non-forest use (clearcut). Site condition and overall strategy for managing a particular stand are considered to determine the type of cut to use, if any, to reach the stand goal. Young stands should be evaluated for this every 10 years due to their vigorous growth. As stands mature, this cycle can be repeated less frequently.
21. page 96/line 11 - (In general, it might be nice to discuss the importance of the MTA as part of the overall forested corridor of the Illinois River Valley. Reducing fragmentation also helps in maintaining connectivity of the forested bluffs along the Illinois River Valley. Connected forested drainages along the major river corridors of such rivers in Illinois as the Fox, Kankakee, Des Plaines, Illinois, Mississippi all contribute to the safer migration of many of the small forest interior birds and neo-tropical migrants. Large forested blocks along these routes contribute to the breeding habitat for area sensitive species.)
22. Page 115/line 36 - ...dormant season. Follow up spraying in late summer of sprouts with Krenite has proven effective. Results are not typically seen until the spring following spraying when plants that looked green in the fall do not flush out in spring.
23. Page 123/line 35 - 'Long-horned beetle' should be changed to 'Asian Long-horned Beetle (ALB)'
24. page 123/ line 36 - An exotic, non-native long-horned ... ALB...
25. page 123/line 37/38 - This pest was found in the Chicago area several years ago. USDA efforts to suppress and eradicate this pest appear to be successful. Currently the USDA is monitoring and has not been able to detect any remaining live population in Illinois. (You should strike the sentence 'While this pest...pest.)
26. Page124/line 25A - Protection of the MTA would include a ban on bringing any firewood onto the site. The use of ash tree planting stock should be avoided. Posters should be placed in check stations and training facilities to aid in the identification of EAB on the site. Early detection of EAB is key to slowing the spread of this devastating pest. Cutting strategies and chemical treatments will be developed jointly between the IDNR, ILARNG, Illinois Department of Agriculture, and the USDA Forest Service. IDOA and USDA FS are the leads in Illinois for the fight against this pest in the quarantined areas.
27. Part A, pge. 1; Burn Plans are approved annually per unit. Comprehensive Burn Plan was inadequate and not approved, due to inadequate proposed firebreaks.
28. Section 1.3, pge. 5; add *per the MOU Item #9 INDR maintains control over Natural Resource Management, Protection and Restoration.*
29. Section 1.4, pge. 6, line 26; add *and Illinois Department of Natural Resources, Regulation, and Policies.*

30. Section 3.2, pge. 16, line 42; add *and annual Plan of Work*.
31. Section 1.5, pge. 11, line 20; Subject to INDR approval. This Agreement does not supercede the MOU, Item #9.
32. Section 2.3, pge. 15, line 12; add *IDNR Policies and Regulations*.
33. Section 2.4, page 15; coordinate implementation with IDNR.
34. Figure #3, legend; Hill Prairie Natural Area is designated as "No digging/No foot traffic". This should be No Vehicle Traffic.
35. Section 6.5, pge. 32, line 19-25; Note the Hill Prairie Area is designated an Illinois Natural Area Inventory Site and is to be protected, managed, and restored as such.
36. Section 7.3.1, pge. 40, line 37-38; Species approval by IDNR Required.
37. Section 9.0, pge. 61, line 15, Native and Restored Prairie and Grassland.
38. Section 9.1.2, pge. 68, line 12-19; Designated as an Illinois Natural Inventory Site.
39. Section 9.2.1; Please send a copy of Tim Carter's Bat Survey. IDNR did not receive a copy of this.
40. Section 9.2.2, The State Threatened Henslow's Sparrow was documented at MTA this summer and is now a Recognized Element Occurrence at MTA. A copy of the EO Report was sent to Captain Davis in 2006. Please add this/revise 9.2.2 and 9.4 accordingly.
41. Section 9.4, pge. 71, line 20; Category 2, not 1.
42. Section 9.4, pge 71, line 23; Waterfowl, not wildfowl.
43. Section 10.2, pge 75, Tsi approval subject to jointly approved scope of work for each compartment for contractual TSI projects.
44. Section 10.2, pge 75; ING was previously notified by DNR that the selected or proposed burn unit configuration (Groninger and Ruffner, 2004) was not acceptable, which remains so now. Alternatives for some units have been proposed by ING and approved though annual site burn plans by IDNR. Additional proposed unit configuration alternatives are attached.
45. Section 10.2, pge 75, line 44; Add *invasive brush and exotic species, and is supportive of IDNR goals*.
46. Section 13.1, pge 93, line 3-7; MTA contains diverse habitats including old fields, prairies, warm season grass plantings, savanas, shrub/scrub, mid and mid/late successional upland and ravine forests, wetlands, and fields.
47. Section 13.2; IDNR policy to be stated here.
48. Section 13.3, pge 93, line 35; Eradication is not feasible, goal should be "control".
49. Section 13.4.1, pge 94; Mesic upland forests - north and east facing ravines and hillsides were not nor should be restored to savanna. Sugar Maple is a dominant species for this community.
50. Section 13.4.1.1, line 41; I (Todd Bittner) do not concur with this statement. Not justified.
51. Section 13.4.1.2, lines 1-2; Why not facilitate restoration with tree and shrub planting in these areas.
52. Section 13.4.2, lines 4-8; Is an Illinois Natural Area Inventory Site.
53. Section 13.4.2, lines 14-15; Mowing program proposal for grasslands and prairie subject to IDNR approval, and to be annually proposed at joint POW meetings.
54. Section 13.4.2, lines 16-19; Native species within scrub/shrub habitats will be maintained/enhanced. Non-native trees and brush will be controlled.
55. Section 13.4.2, line 21; Species selection to be approved by IDNR.
56. Section 13.4.2, line 24; Mowing program subject to IDNR approval.
57. Section 13.4.2, line 26; You cannot limit IDNR herbicide use.
58. Section 13.4.2, line 28; Do not concur with mowing dates. What locations specifically are proposed for mowing? Bivouac areas?

59. Section 13.4.3, line 31; Per IDNR approval annually and per IDNR Policy on Prescribed Fire Use, Chapter 5, Subchapter D, Section 5 D-2.
60. Section 13.4.3, lines 32-38; Burn units per the Fire and Vegetation Management Plan will not be approved by IDNR. Alternate burn unit configuration and fire breaks are attached.
61. Section 13.4.3, line 42; ILARNG Staff will not necessarily conduct all prescribed burns. IDNR and ILARNG will agree annually which agency will be the lead for each burn. (ie. Burn boss)
62. Section 13.4.3, pge 100, line 3; Prescribed Burn dates are set by IDNR policy.
63. Section 13.4.3, pge 100, lines 1-11, IDNR approved burn plans for each burn unit required annually.
64. Section 13.4.3, pge 100; Roads and range fan boundary clearings are not "natural" fire breaks, but are maintained or artificial fire breaks.
65. Section 13.4.3, pge 101, line 21; IDNR is to be contacted in the event of an escaped wildfire.
66. Section 13.4.3; Incorporate IDNR Prescribed Fire Policy information into INRMP Document here.
67. Section 13.5 A permanent vegetation plot monitoring program is needed to assess ecological changes from prescribed burn program and was requested by IDNR in 02/08/06 DNR memo to ING for INRMP inclusion. This was not apparently included in the Draft INRMP document.
68. Section 13.7, pge 101, lines 7-10; The site is becoming encroached with undesirable woody species , including sugar maple and exotic species, which are reducing accessibility of the site for troop training.
69. Section 14.3, lines 5-12; Add, *Protect, manage, and restore, natural areas, endangered species, and species of conservation concern, and their associated habitats.*
70. Section 14.4.2, line 38; Only the high quality part of the Hill Prairie is 3.8 acres. The total INAI Area is 40.0 acres, and small moderate quality remnant hill prairies are present, scattered across the site.
71. Section 14.4.2, pge 109, line 6; Per IDNR Burn Policy and annually approved Burn Plans.
72. Section 14.4.2, line 7, Not limiting IDNR use of herbicides.
73. Section 14.4.2, lines 9-11, Per IDNR Burn Policy and annually approved Burn Plans- no more than 50% of a given natural community type may be burned annually.
74. Section 14.4.2, lines 12-15, Mowing and cutting trees and brush from 4/15 - 8/15 requires DNR approvals.
75. Section 14.5, pge 105, line 5; What surveys are planned?
76. Section 16.4.1, Table 11; Canada Thistle is a noxious weed.
77. Section 16.4.1, Table 11; INPC Exotics guidelines are updated since 1990 version and are available at dnr.state.il.us/inpc/management_guidelines.htm. These include bush honeysuckle sp. which should be added to Table 11 for MTA Priority. Would also suggest adding Multiflora Rose and Illinois noxious weed Canada Thistle as a MTA priority.
78. Section 16.3, lines 12-21; Natural Control (e.g. prescribed fire).
79. Section 16.4, pge 113, lines 9-17; IDNR coordination required prior to implementing and eradication/control program.
80. Section 16.4.1, pge 114, lines 1-8; Says 6 species are a priority but only lists 4.
81. Section 16.4.1.1, pge 114, line 32; Only a small portion of the MTA was surface mined. This statement in the INRMP is misleading.
82. Section 16.4.1; All species on INPC Control Guidelines should be listed, use updated management guidelines when available. Many species have more recent guidelines than 1990 versions.

83. Section 16.4.1.2, lines 31-36; Black Locust control requires 100% Roundup herbicide application to cut stumps, not 20%.
84. Section 16.4.1.3; Bush Honeysuckle is presently a problem and is inhibiting training. Control measures are warranted presently.
85. Section 16.4.1.4; Prescribed burning control for Canada Thistle is not affective. Spot foliar herbicide application is the most reliable control method.
86. Section 16.4.1.5; Late Spring prescribed burns to fescue may adversely effect nesting grassland birds.
87. Section 16.4.1.8; Use of Picloram (Tordon) herbicide is not approved by IDNR for MTA. Consider using Clopyracid Herbicide.
88. Section 16.4.1.9; Habitat herbicide is licensed for aquatic use and is very effective controlling phragmites when mixed with Roundup /Rodeo.
89. Section 16.4.1.10; Poison Ivy control. IDNR requires specific treatment areas and methods be proposed, reviewed, and approved annually for all poison ivy herbicide control efforts.
90. Section 16.4.1.14; Crown Vetch- refer to new INPC management guidelines for this species control efforts. Burning is ineffective and herbicide application is the only effective control. Control for this species should be a priority.
91. Section 17.1; ING was notified by IDNR 10/2006 that a population of Henslow's Sparrow (State threatened) was documented at MTA. Ryan Getz and Eric Davis were notified, and information on avoidance, management, protection, were outlined in correspondence and subsequent meetings with IDNR and ING personnel.
92. Section 17.4; DNR was not provided a copy of the 2005 Bat Survey.
93. Section 17.4, pge 127, lines 4-6, Specific management practices for Henslow Sparrow at the MTA need to be developed and incorporated into the INRMP.
94. Section 17.4.1, pge 127, line 19; Bald Eagles are documented nesting in LaSalle County, both on the Illinois and Fox rivers.
95. Section 17.4.2: Was the Carter Study in 2001 or 2005? Both dates are used.
96. Table 12 pge 140, #6; List of herbicides does not match previous sections.
97. EA - 4.2.4: Add Henslow Sparrow.
98. EA; All requested changes made to INRMP document need to be similarly made to the EA.

We understand the Military Mission at the MFWA/MTA and hope they understand our goals and the policies , rules, etc., that we must operate under. The two missions of the two Agencies while being similar in a lot of ways will have their differences. Through communication and understanding we can work together in spite of those differences. We appreciate the projects and funding for the natural resources that the Military is planning. However we have to proceed in a manner consistent with our Policy & Procedures and Rules. We have in place a very good working relationship with the Military at the site and both Agencies have accomplished a lot and benefitted from this relationship. We look forward to continuing to work with the Military to resolve the issues noted above.

cc: Tim Hickman
 Rich Lewis
 Randy Timmons
 Ken Clodfelter

Jim Modglin
 Todd Bittner
 Scott Jacoby
 file



Comment #	The comment refers					pdINRMP/pdEA Comments - Marseilles Training Area	Reviewer	Office of Reviewer	Action Taken by State to Address the Comment AND LOCATIONS OF CHANGES IN THE DOCUMENT:
	Chapter	Section	Page	Paragraph	Line				
IDNR Comments Begin									
1	ES, 1, 2	ES, 1.1, 2.1			<p>1. Throughout the INRMP there are comments/statements such as;</p> <p>a. Executive Summary, paragraph 1, "This revised Integrated Natural Resources Management Plan (INRMP) has been developed for the use by the National Guard Bureau and the Illinois Army National Guard (ILARNG) as the primary tool for managing natural resources at the ILARNG's 2,850-acre Marseilles Training Area (MTA)."</p> <p>b. Section 1, 1.1, This revised Integrated Natural Resources Management Plan (INRMP) has been developed for the use by the National Guard Bureau and the Illinois Army National Guard (ILARNG) as the primary tool for managing natural resources at the ILARNG's 2,850-acre Marseilles Training Area (MTA)."</p> <p>c. Section 2, 2.1, "The primary purpose of natural resources management at the MTA is to support the military training mission. With regard to accomplishment of the military mission, the overall goal is to provide quality natural resources as a critical training asset upon which to accomplish the mission of the ILARNG at the MTA.</p>		IDNR	MOU changes are not a part of the INRMP process. The INRMP repeatedly mentions and defines the role of the IDNR as the site natural resource manager. No change has been made.	
					<p>The INRMP has been presented to IDNR as a funding document necessary to the Military Mission of Training at the MFWA/MTA. Discussions have been held in which IDNR has questioned the inference that the INRMP puts the responsibility and obligation of resource management at the MFWA/MTA under the auspices of the Military through statements such as those above and others. In those discussions IDNR has been assured that is not the intent. We have been told that the INRMP says what it needs to say to get the funding. Past history at this site has taught us that oral agreements and understandings are fine for the moment they are made. However as time passes and the individual players change intent becomes cloudy and problems ensue. Therefore, rather than quibble about individual statements and the interpretation of certain statements that could be read one way or another I put forth the following solution.</p>		IDNR		
					<p>An amendment to the MOU be made that would replace the wording in Item 9 of the MOU. It would state, "IDNR, as the landowner, shall retain control over the natural resources management, protection, and restoration, of the total site, according to all Administrative Rules, Laws, Policies and Procedures, that govern IDNR's management of all of it's other properties, excluding the Cantonment Area and Parcel 2 as described in paragraph 3 but not the twenty acre parcel described as Parcel 1. IDNR shall further retain the administration of the recreational use of the entire site, excluding the Cantonment Area and Parcel 2 described in paragraph 3 but not the twenty acre parcel described as Parcel 1. Both parties recognize the existence of other management documents and plans, such as the INRMP, the TSI Plan, the Burn Plan, and others. It is mutually understood that all of those documents and their subsequent revisions, are subordinate to the MOU and do not alter IDNR's control as is spelled out above"</p>		IDNR		
2				<p>2. The references to the TSI plan and the Burn plan in the document lead one to believe that these documents are finished and approved by IDNR. It has been my understanding that given the diversity of areas at the MFWA/MTA we have agreed to test pilot areas at the MFWA/MTA using the SIU plan with modifications spelled out by the ORC staff. Once those pilot areas are done and the results are reviewed, we will take that template and with mutually agreed upon changes, will apply that template to the next area. It has been my understanding that we all agreed that we cannot take a boilerplate plan and use it in all areas. Since funding is necessary for the TSI and the TSI is dependent upon the Burn Plan I do not see how admitting where we are, truly at would jeopardize funding. The effort to do the best for the resource while providing better training areas should be recognized. After all isn't that the core of the INRMP? We have yet to see how the IDNR new tree policy will impact the TSI plan. The TSI is a work in progress, and as a resource management plan it has to be approved by IDNR as the resource manager of the site.</p>		IDNR	The burn plan is referenced in Section 13.4.3 as tentative pending IDNR approval as well as Section 13.11. TSI is pending IDNR approval and is referenced in 13.3. This is also referenced Section 10.1		

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	Chapter	Section	Page	Paragraph	Line				
3	10	2				3.IDNR's CERP process is spelled out in Section 10, 2. Projects are submitted with a detailed scope of work, including equipment to be used, materials to be used, method used, time of year, and delineation of project physical bounds. Our agreement at the initial meeting on this revision was that if the Military wanted the Environmental Assessment to be signed off on as the CERP then each project needed to contain the above specifics. It was also agreed that if after the project was approved, and it was not completed within the two year life of the approval then it had to be resubmitted. If any of the above details of the project change, or the resource itself changes, ie; the appearance of a significant species, prior to the completion of the project then that project has to be re-evaluated through the CERP process. If nothing had changed the CERP would be re-approved. This is how the EA and CERP process should be spelled out in the INRMP.		IDNR	EA project lists are already set up to satisfy all CERP requirements. INRMP project list were never meant to satisfy CERP, the EA project list satisfies CERP. Will resubmit through CERP if > 2 years. Appendix G has been updated to provide additional information on the location and scheduling of proposed forest and fire projects. The project location figure and any additional project description text from the EA has been added to the INRMP as well (Figure 9).
						If project specifics cannot be provided that far in advance then the projects cannot be approved until a CERP is done and those specifics are provided. We are held to these policies ourselves, and at all of our other sites. We do not have the authorization to waive them for the Military at the MFWA.		IDNR	
4						All issues related to IPM as are mentioned in the INRMP win have to be approved by IDNR on all areas excluding the Cantonment Area and the area designated as Parcel 2, including mechanical controls, cultural controls, biological controls, and chemical controls. The IPM Plan also will not hinder the resource management activities of IDNR.		IDNR	It has been covered extensively that IDNR is the natural resource manager of the site. Please Note: We need IDNR's pounds of active ingredient used per year at MTA for reporting to NGB. Also with the IL Dept of AG, areas need to be marked or specified off limits due to herbicide instructions on label. We do not want our individuals walking through freshly applied sites.
5						While we welcome the inclusion of the local community and scout groups, etc., through the Public Outreach project, in the development of the natural resources it is also necessary to maintain a consistency of effort. It must be understood that any work done by such groups must also go through the CERP process and such projects must be approved by IDNR as the manager of the resources. It also must be understood that IDNR and the Military are the two joint users of the site as is spelled out in the MOU. Activities by other groups must not interfere with programs of either of these two joint site users. Recreational activities on the site must also go through IDNR as the Administrator of recreation at the site. This of course excludes the Cantonment Area and Parcel 2 as spelled out in the MOU.		IDNR	Understood, any projects will have to go through CERP and coordinated with the MOU.
						Through Ryan we will be able to get some resource projects done that were not possible before. We have already been able to establish bird monitoring through a volunteer group that work with Ryan. This same group will do some butterfly monitoring also. This is an example of how through good communication we can further the improvement of the resources at the MTA/MFWA.		IDNR	This is a benefit that this extra environmental funded position provides to facilitate actions at the site.
6						The boundary of the Northern Use Area is wrong on the map labeled figure #2. The eastern portion of the south boundary is too far south. After it goes past the gravel pit area it goes north to the road/trail and then east. It even mentions this in the MOU.		IDNR	Map in the INRMP is correct this is drawn from the legal language in the MOU. This area is shown in a similar fashion in Figure 9 (IDNR's Marseilles FWA Hunting Map).

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7			95			All tree/vegetation removal or planting, such as is mentioned on Page 95, must follow the guidelines of IDNR policies, especially the Tree Cutting policy. Cutting and planting must be tracked through the Regional Forester.		IDNR	We have included several references to the IDNR Tree Cutting Policy (as well as the Prescribed Burn Policy) throughout both the INRMP and EA documents. In addition, a copy of these policies have been added to the Appendix titled Laws, Regulations, etc....
8			102			On page 102 the INRMP states "A Proposed Rule will allow the incidental taking of migratory birds by DoD in the course of military readiness activities. " It goes on to explain the authority of the rule. I found and included the Section mentioned. After reading this I feel we need to address this. According to the way I read this rule, a soldier may take any migratory bird, not necessarily a game bird, say a bald eagle or a snowy owl, if he is doing any training activity or even if he is at the site training, but not actually performing a training activity at the time. We absolutely do not allow this at any of our other sites and I don't think we should allow this at the MFWA.		IDNR	With the signing of the 2003 Defense Authorization Act, Congress exempted the Armed Forces military readiness activities from the incidental take of migratory birds under the Migratory Bird Treaty Act until the Secretary of Interior developed regulations authorizing such take. This new ruling (which became in effect 28 Feb 2007) is in response to this previous Act. The USFWS believes that the regulations set forth under 50 CFR 21.15 (Authorization of Take Incidental to Military Readiness Activities) will provide more protection and management for migratory birds than the exemption allowed under the 2003 Defense Authorization Act. Also, please note that there are specific conditions set forth in this new ruling that must be met for such incidental take to occur (see Section 14.2). The Armed Forces will still be required to comply with NEPA, the ESA of 1973, and other related laws and regulations.
9	14	4.4				Section 14.4.4 Nuisance Wildlife and Wildlife Diseases- remove the line "Food plots managed by the IDNR will not be planted with crops attractive to deer." Since deer will eat almost anything, and a pine tree could be construed to be attractive to deer, and this is in direct contradiction to the W76D Plan it must be removed.		IDNR	This sentence has been removed.
10	14	7				Section 14.7 Military Mission Requirements - rewrite the lines "Concealment for hunters and troops training is reduced in areas containing food plots. Additional trees in these areas will be planted to enhance concealment." to read Concealment for hunters and troops conducting training is reduced in some areas containing food plots. Per the W76D Plan trees/shrubs will be planted around the perimeters of these fields to enhance concealment.		IDNR	These sentences have been revised using your suggested text.

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11			141			In the list of Implementation Projects on page 141 project 10 calls for stabilization of the high wall at the gravel pit and planting of native plants to stabilize the slope. Project 9 calls for the development of a reclamation plan for the gravel pit. Neither project calls for the integration of these two projects and I did not read anywhere that the projects had to be done in order. So conceivably we" could have a project that stabilized the high wall in a manner that was not consistent with the reclamation plan if project 10, gets done before project 9. This is why we need the projects to go through the CERP process so we know the details of each of the projects.		IDNR	We concur. We have consolidated these two projects (Projects 9 and 10) into one Mine Reclamation project (Project 9) to avoid any future confusion or inconsistencies.
12			75		24	Page 75/line 24 - Addition - All trees spaded outside the Cantonment Area \\till. have to be located on a map. This map will need to be: attached to a CERP request for review.		IDNR	We concur. The following text has been added under Project 1 in Section 10.1. "If any trees are to be spaded outside the Cantonment Area, the location of this action will be illustrated on a map and attached to a CERP request for IDNR review prior to conducting any work."
13			75		29	page 75/line 29A - Addition - A new IDNR Tree Cutting Policy is being implemented in 2007. This new policy requires that, in general, trees will need to be replaced (replanted) when cut or killed on IDNR lands. It also requires that the cut trees as well as the replacements be documented with the Regional Forester's office, The complete document pertaining to this is found in the IDNR's Policy and Procedure Manual- Tree Cutting Policy - under Chapter 5, Subchapter D Forests, Section 5D-4 Tree Cutting. All projects involving tree cutting or killing will have to satisfy the requirements of this new policy and procedure. This policy will need to be consulted for the specific details pertaining to forest resource management at MTA.		IDNR	This information has been incorporated into Section 10.1 under Project 1 per your suggestion. Also, please refer to the response to Comment #7.
14			95		9	Page 95/line 9 - ' for logs and firewood to be used by IDNR or for training and maintenance needs by ILARNG.'		IDNR	This text has been included as part of the 6th management bullet under Section 13.4.1
15			95			Page 95/line 19A - Identity, mark, and fell trees that are deemed safety hazards, especially along roads, parking lots, around training structures, and within tree fall reach of bivouac areas for the safety of IDNR users and ILARNG personnel.		IDNR	This management strategy has been added as bullet under Section 13.4.1 per IDNR's request.
16			95		38	Page 95/line 38 - Low forked, crooked, leaning, and root sprung		IDNR	Text (3rd bullet under 13.4.1.1) has been revised per IDNR's suggestion.
17			95		42	page 95/line 42 - (In general" we might want to stay away from the notion of 'harvest' , and stick to 'cuts'. Might be more productive to use the notion of 'regeneration cuts' instead. Might rewrite the paragraph something like this...?) Cutting : Cutting and removing trees is used as a silvicultural practice to achieve various objectives. Cuttings can be used to stop or impede the spread of insects or disease (clearcuts or sanitation cuts), to reduce the number of trees in overstocked stands (thinning cuts), to remove undesirable trees due to species (weeding cuts), to utilize material that has sustained substantial damage due to some environmental factor such as wind, ice, flood, insects, etc. (salvage cuts), to regenerate a stand area to other species (clearcut, shelterwood cut, seedtree cut), or to clear an area for a non-forest use (clearcut). Site condition and overall strategy for managing a particular stand are considered to determine the type of cut to use, if any, to reach the stand goal. Young stands should be evaluated for this every 10 years due to their vigorous growth. As stands mature, this cycle can be repeated less frequently.		IDNR	IDNR's recommended text for "cutting" has been added and the text from the previous document has been removed.
18			96		11	page 96/line 11 - (In general, it might be nice to discuss the importance of the MTA as part of the overall forested corridor of the Illinois River Valley. Reducing fragmentation also helps in maintaining connectivity of the forested bluffs along the Illinois River Valley. Connected forested drainages along the major river corridors of such rivers in Illinois as the Fox, Kankakee, Des Plaines, Illinois, Mississippi all contribute to the safer migration of many of the small forest interior birds and neo-tropical migrants. Large forested blocks along these routes contribute to the breeding habitat for area sensitive species.)		IDNR	As suggested, we have included this additional information in the 4th paragraph under Section 13.4.1.2.

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19			115		36	Page 115/line 36 - ...dormant season. Follow up spraying in late summer of sprouts with Krenite has proven effective. Results are not typically seen until the spring following spraying when plants that looked green in the fall do not flush out in spring.		IDNR	This additional text has been added to the first paragraph under Recommended Management (section 16.4.1.2)
20			123		35	Page 123/line 35 - 'Long-horned beetle' should be changed to 'Asian Long-horned Beetle (ALB)'		IDNR	Has been revised.
21			123		36	page 123/ line 36 - An exotic, non-native long-horned... ALB...		IDNR	Has been revised.
22			123		37-38	page 123/line 37/38 - This pest was found in the Chicago area several years ago. USDA efforts to suppress and eradicate this pest appear to be successful Currently the USDA is monitoring and has not been able to detect any remaining live population in Illinois. (You should strike the sentence 'While this pest...pest.)		IDNR	Per IDNR's suggestion, the sentence the sentence "While this pest..." has been removed and replaced with the recommended text.
23			124		25	Page 124/line 25A - Protection of the MTA would include a ban on bringing any firewood onto the site. The use of ash tree planting stock should be avoided. Posters should be placed in check stations and training facilities to aid in the identification of EAR on the site. Early detection of EAB is key to slowing the spread of this devastating pest. Cutting strategies and chemical treatments will be developed jointly between the IDNR, ILARNG, Illinois Department of Agriculture, and the USDA Forest Service. IDOA and USDA FS are the leads in Illinois for the fight against this pest in the quarantined areas.		IDNR	The information provided by IDNR has been incorporated into Section 16.4.2.3. Please note that the ILARNG currently has EAB posters and handouts in Range Control and Maintenance Building.
24	1	3	5			Section 1.3, page. 5; add per the MOU Item #9 INDR maintains. control over Natural Resource Management, Protection and Restoration.		IDNR	A paragraph denoting the IDNR's responsibilities per the MOU has been added to Section 1.3.
25	1	4	6		26	Section 1.4, pge. 6, line 26; add and Illinois Department of Natural Resources, Regulation, and Policies.		IDNR	Text has been inserted.
26	3	2	16		42	Section 3.2, pge. 16, line 42; add and annual Plan of Work.		IDNR	Text has been inserted.
27	1	5	11		20	Section 1.5, pge. 11, line 20; Subject to INDR approval. This Agreement does not supersede the MOD, Item #9.		IDNR	An additional bullet has been added under Section 1.5.1 that states: "IDNR approval per the Marseilles MOU"
28	2	3	15		12	Section 2.3, pge. 15, line 12; add IDNR Policies and Regulations.		IDNR	Text has been inserted.
29	2	4	15			Section 2.4, page 15; coordinate implementation with IDNR.		IDNR	Text has been incorporated as a separate action bullet under Section 2.4
30						Figure #3, legend; Hill Prairie Natural Area is designated as "No digging/No foot traffic". This should be No Vehicle Traffic.		IDNR	The legend in Figure #3 has been revised per your request.
31	7	3.1	40		37-38	Section 7.3.1, pge. 40, line 37-38; Species approval by IDNR Required.		IDNR	Text has been inserted.
32	9		61		15	Section 9.0, pge. 61, line 15, Native and Restored Prairie and Grassland.		IDNR	Text has been revised.
33	9	1.2	68			Section 9.1.2, pge. 68, line 12-19; Designated as an Illinois Natural Inventory Site.		IDNR	Text has been inserted.
34	9	2.1				Section 9.2.1; Please send a copy of Tim Carter's Bat Survey. IDNR did not receive a copy of this.		IDNR	ILARNG has sent copies to IDNR Endangered Species personnel. An additional copy will be sent to Tim Hickman for further distribution.

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35	9	2.2				Section 9.2.2, The State Threatened Henslow's Sparrow was documented at MTA this summer and is now a Recognized Element Occurrence at MTA. A copy of the EO Report was sent to Captain Davis in 2006. Please add this/revise 9.2.2 and 9.4 accordingly;	IDNR	Section 9.2.2 and 9.4 have been updated to include the State Threatened Henslow's Sparrow and Northern Harrier. In addition, Ch 17 has been updated and management strategies have been incorporated for these species.	
36	9	4	71		20	Section 9.4, pge. 71, line 20; Category 2, not 1.	IDNR	Text has been revised.	
37	9	4	71		23	Section 9.4, pge 71, line 23; Waterfowl, not wildfowl.	IDNR	Text has been revised.	
38	10	2	75		44	Section 10.1, pge 75, line 44; Add invasive brush and exotic species, and is supportive of IDNR goals.	IDNR	Text has been inserted.	
39	13	1	93			Section 13.1, pge 93, line 3-7; MTA contains diverse habitats including old fields, prairies, warm season grass plantings, savannas, shrub/scrub, mid and mid/late successional upland and ravine forests, wetlands, and fields.	IDNR	Text has been incorporated into the 1st paragraph under Section 13.1	
40	13	2				Section 13.2; IDNR policy to be stated here.	IDNR	The Policies have been included within Section 13.2. See Response to Comment #7 (IDNR).	
41	13	3	93		35	Section 13.3, pge 93, line 35; Eradication is not feasible, goal should be "control".	IDNR	Concur, we have revised wording.	
42	13	4.1	94			Section 13.4.1, pge 94; Mesic upland forests.- north and east facing ravines and hillsides were not nor should be restored to savanna. Sugar Maple is a dominant species for this community.	IDNR	Concur, we have incorporated your text into this section.	
43	13	4.1.1				Section 13.4.1.1, line 41; I (Todd Bittner) do not concur with this statement. Not justified.	IDNR	Concur, this bullet has been removed.	
44	13	4.1.2				Section 13.4.1.2, lines 1-2; Why not facilitate restoration with tree and shrub planting in these areas.	IDNR	Text has been inserted into Bullet #2 under Section 13.4.1.2	
45	13	4.2				Section 13.4.2, lines 4-8; Is an Illinois Natural Area Inventory Site.	IDNR	This is now noted in the text.	
46	13	4.2			14-15	Section 13.4.2, lines 14-15; Mowing program proposal for grasslands and prairie subject to IDNR approval, and to be annually proposed at joint POW meetings.	IDNR	Text has been inserted.	
47	13	4.2			16-19	Section 13.4.2, lines 16-19; Native species within scrub/shrub habitats will be maintained/enhanced. Non-native trees and brush will be controlled	IDNR	The last sentence within this paragraph has been revised using IDNR's suggested wording.	
48	13	4.2			21	Section 13.4.2, line 21; Species selection to be approved by IDNR.	IDNR	Text has been inserted.	
49	13	4.2			24	Section 13.4.2, line 24; Mowing program subject to IDNR approval.	IDNR	Concur, text has been inserted.	
50	13	4.2			28	Section 13.4.2, line 28; Do not concur with mowing dates. What locations specifically are proposed for mowing? Bivouac areas?	IDNR	The 2nd to last bullet now reads "Prairie grasses will be mowed before 15 April and/or after 15 August to protect breeding and nesting birds subject to IDNR approval."	

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51	13	4.3			32-38	Section 13.4.3, lines 32-38; Bum units per the Fire and Vegetation Management Plan will not be approved by IDNR. Alternate burn unit configuration and fire breaks are attached.	IDNR	It has been noted in this section as well as under Project 2 (Section 10.1) that burn units are currently being altered with oversight by IDNR.	
52	13	4.3			42	Section 13.4.3, line42; ILARNG Staff will not necessarily conduct all prescribed burns. IDNR and ILARNG will agree annually which agency will be the lead for each burn. (ie. Burn boss).	IDNR	The 2nd bullet now reads " Use trained ILARNG and IDNR staff...."	
53	13	4.3	100		3	Section 13.4.3, pge 100, line 3; Prescribed Bum dates are set by IDNR policy.	IDNR	The dates have been revised to "1 October through 30 April" per the IDNR policy. See Response #7 (IDNR) for additional information.	
54	13	4.3	100			Section 13.4.3, pge 100, lines 1-11, IDNR approved bum plans for each burn unit required annually.	IDNR	A bullet has been added that states: Obtain approval annually for each site specific prescribed burn plan.	
55	13	4.3	100			Section 13.4.3, pge 100; Roads and range fan boundary clearings are not "natural" fire breaks, but are maintained or artificial fire breaks.	IDNR	Concur, text has been revised.	
56	13	4.3	101		21	Section 13.4.3, pge 100, line.21; IDNR is to be contacted in the event of an escaped wildfire.	IDNR	Concur, text has been revised.	
57	13	4.3				Section 13.4.3; Incorporate IDNR Prescribed Fire Policy information into INRMP Document here.	IDNR	IDNR Prescribe Fire Policy has been reference (see 1st bullet in this section). Also, refer to the Response to Comment #7 (IDNR).	
58	13	5				Section 13.5 A permanent vegetation plot monitoring program is needed to assess ecological changes from prescribed bum program and was requested by IDNR in 02/08/06 DNR memo to INO for INRMP inclusion. This was not apparently included -in the Draft INRMP document.	IDNR	In order to include this program within the INRMP, IDNR will need to provide a detailed scope of work to the ILARNG so that we can request \$\$ from NGB-ARE	
59	13	7	101			Section 13.7, pge 101, lines 7-10; The site is becoming encroached with undesirable woody species, including sugar maple and exotic species, which are reducing accessibility of the site for troop training.	IDNR	Text has been inserted.	
60	14	3				Section 14.3, lines 5'-12; Add, <i>Protect, manage, and restore, natural areas, endangered species, and species of conservation concern, and their associated habitats.</i>	IDNR	The ILARNG addresses these goals in general context, but are IDNR goals as the Natural Resources Managers of the site. This was not added as an extra bullet.	
61	14	4.2			38	Section 14.4.2, line 38; Only the high quality part of the Hill Prairie is 3.8 acres. The total WAI Area is 40.0 acres, and small moderate quality remnant hill prairies are present, scattered across the site.	IDNR	Text has been revised.	
62	14	4.2				Section 14.4.2, lines 9-11, Per IDNR Bum Policy and annually approved Bum Plans- no more than 50% of a given natural community type maybe burned annually.	IDNR	Text has been inserted.	
63	16	4.1				Section 16.4.1, Table 11; Canada Thistle is a noxious weed.	IDNR	Table has been revised as suggested.	
64	16	4.1				Section 16.4.1, Table 11; INPC Exotics guidelines are updated since 1990 version and are available at dnr.state.il.us/inpc/management_guidelines.htm . These include bush honeysuckle sp. which should be added to Table 11 for MTA Priority. Would also suggest adding Multiflora Rose and Illinois noxious weed Canada Thistle as a MTA priority.	IDNR	Species have been noted as IDNR priority species. References have been updated	

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65	16	3				Section 16.3, lines 12-21; Natural Control (e.g. prescribed fire).		IDNR	Has been incorporated as a separate bullet.
66	16	4	113			Section 16.4, pge 113, lines 9-17; IDNR coordination required prior to implementing and eradication/control program.		IDNR	Text has been inserted.
67	16	4.1				Section 16.4.1, pge 114, lines 1-8; Says 6 species are apriority but only lists 4.		IDNR	Has been changed to 4 species.
68	16	4.1.1	114		32	Section 16.4.1.1, pge 114, line 32; Only a small portion of the MTA was surface mined. This statement in the INRMP is misleading.		IDNR	Concur, removed text regarding surface mining disturbance.
69	16	4.1				Section 16.4.1; All species on INPC Control Guidelines should be listed, use updated management guidelines when available. Many species have more recent guidelines than 1990 versions.		IDNR	Updated guidelines have been incorporated.
70	16	4.1.2			31-36	Section 16.4.1.2, lines 31-36; Black Locust control requires 100% Roundup herbicide application to cut stumps, not 20%.		IDNR	This section has been revised per the updated VMG. Roundup is no longer the recommended herbicide, but rather Garlon 3A.
71	16	4.1.3				Section 16.4.1.3; Bush Honeysuckle is presently a problem and is inhibiting training. Control measures are warranted presently.		IDNR	Text has been inserted at the end of Section 16.4.1.3
72	16	4.1.4				Section 16.4.1.4; Prescribed burning control for Canada Thistle is not affective. Spot foliar herbicide application is the most reliable control method.		IDNR	The recommended method for control under Section 16.4.1.4 has been revised using IDNR's suggested method.
73	16	4.1.5				Section 16.4.1.5; Late Spring prescribed burns to fescue may adversely effect nesting grassland birds.		IDNR	Have removed reference to late spring and have included a sentence under Recommended Management with this suggested text.
74	16	4.1.8				Section 16.4.1.8; Use of Picloram (Tordon) herbicide is not approved by IDNR for MTA. Consider using Clopyracid Herbicide.		IDNR	Has been changed to crossbow herbicide
75	16	4.1.9				Section 16.4.1.9; Habitat herbicide is licensed for aquatic use and is very effective controlling phragmites when mixed with Roundup / Rodeo.		IDNR	IDNR's recommendations have been incorporated. All references to Rodeo were removed as it is no longer available. Additional text that has been added includes: "Herbicides will be mixed and/or applied only in accordance with the product label." and "In addition, covering phragmites with filter fabric will be used as an additional control method."
76	16	4.1.10				Section 16.4.1.10; Poison Ivy control. IDNR requires specific treatment areas and methods be proposed, reviewed, and approved annually for all poison ivy herbicide control efforts.		IDNR	Understood, any projects will have to go through IDNR review.

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	Chapter	Section	Page	Paragraph	Line				
77	16	4.1.1 4				Section 16.4.1.14; Crown Vetch- refer to new INPC management guidelines for this species control efforts. Burning is ineffective and herbicide application is the only effective control. Control for this species should be a priority.	IDNR	Text has been revised to indicate this species is a priority species that needs to be controlled at MTA. Control methods have been revised per IDNR's recommendations and the latest guidance document.	
78	17	1				Section 17.1; ING was notified by IDNR 10/2006 that a population of Henslow's Sparrow (State threatened) was documented at MT A. Ryan Getz and Eric Davis were notified, and information on avoidance, management, protection, were outlined in correspondence and subsequent meetings with IDNR and ING personnel.	IDNR	See Response to Comment #35 (IDNR).	
79	17	4				Section 17.4; DNR was not provided a copy of the 2005 Bat Survey.	IDNR	See Response to Comment #34 (IDNR).	
80	17	4	127			Section 17.4, pge 127, lines 4-6, Specific management practices for Henslow Sparrow at the MTA need to be developed and incorporated into the INRMP.	IDNR	See Response to Comment #35 (IDNR).	
81	17	4.2				Section 17.4.2: Was the Carter Study in 2001 or 2005? Both dates are used.	IDNR	2001	
82			140			Table 12 pge 140, #6; List of herbicides does not match previous sections.	IDNR	Herbicides referenced under Project #6 have been revised to match those referenced in Section 16.	
83						EA - 4.2.4: Add Henslow Sparrow.	IDNR	Has been incorporated into the EA as well.	
84						EA; AU requested changes made to INRMP document need to be similarly made to the EA.	IDNR	Changes to the INRMP have been cross checked and incorporated into the EA as applicable.	
USFWS Comments Begin									
1						Update Section 9.4 and 17.4 to include decurrent false aster and the eastern prairie fringe orchid (federally threatened species). These were not included in our 13 January 2006 consultation letter.	USFWS	These species have been incorporated into these sections.	

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APPENDIX D

ENVIRONMENTAL ASSESSMENT

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FINAL

**ENVIRONMENTAL ASSESSMENT
FOR
CONSTRUCTION AND OPERATION
OF RANGES AND OTHER
TRAINING FACILITIES
AT THE
MARSEILLES TRAINING CENTER
LA SALLE COUNTY, ILLINOIS**



ILLINOIS ARMY NATIONAL GUARD

**DEPARTMENT OF MILITARY AFFAIRS
1301 NORTH MACARTHUR BLVD.
SPRINGFIELD, IL 62702**

SEPTEMBER 2010

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ENVIRONMENTAL ASSESSMENT ORGANIZATION

This Environmental Assessment (EA) evaluates the potential environmental, socioeconomic, and cultural effects of the proposed construction and operation of ranges and other training facilities at the 2,850-acre Marseilles Training Center (MTC) and the proposed 220-acre property adjacent to the MTC by the Illinois Army National Guard (ILARNG).

As required by the National Environmental Policy Act of 1969 (NEPA; 42 United States Code [USC] 4321 *et seq.*), the Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and 32 CFR Part 651 (Environmental Analysis of Army Actions, Final Rule), the potential effects of the Proposed Action and Alternatives are analyzed. This EA will facilitate the decision process regarding the Proposed Action and its alternatives, and is organized as follows:

EXECUTIVE SUMMARY: Describes the Proposed Action; summarizes environmental, cultural, and socioeconomic consequences; and compares potential effects associated with the three considered alternatives.

SECTION 1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION: Summarizes the purpose of and need for the Proposed Action, provides relevant background information, and describes the scope of the EA.

SECTION 2.0 DESCRIPTION OF THE PROPOSED ACTION: Describes the Proposed Action.

SECTION 3.0 ALTERNATIVES CONSIDERED: Presents alternatives for implementing the Proposed Action.

SECTION 4.0 AFFECTED ENVIRONMENT: Describes the existing environmental, cultural, and socioeconomic setting of the MTC.

SECTION 5.0 ENVIRONMENTAL CONSEQUENCES: Identifies individual and cumulative potential environmental, cultural, and socioeconomic effects of implementing the Proposed Action and alternatives, and identifies proposed mitigation measures.

SECTION 6.0 COMPARISON OF ALTERNATIVES AND CONCLUSIONS: Compares the environmental effects of the considered alternatives and summarizes the significance of individual and expected cumulative effects of these alternatives.

SECTION 7.0 REFERENCES: Provides bibliographical information for cited sources.

SECTION 8.0 GLOSSARY: Defines terms used in the EA.

SECTION 9.0 LIST OF PREPARERS: Identifies document preparers and their areas of expertise.

SECTION 10.0 AGENCIES AND INDIVIDUALS CONSULTED: Lists agencies and individuals consulted during EA preparation.

APPENDICES:

- APPENDIX A. MTC Land Use Agreements
- APPENDIX B. Agency, Native American, and Public Correspondence
- APPENDIX C. Regulatory Framework
- APPENDIX D. MTC Site Usage
- APPENDIX E. La Salle County Comprehensive Plan – Proposed Land Use Planning

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ENVIRONMENTAL ASSESSMENT SIGNATURE PAGE

LEAD AGENCY: National Guard Bureau (NGB)

COOPERATING AGENCIES: None

TITLE OF PROPOSED ACTION: Proposed Construction and Operation of ranges and other training facilities at Marseilles Training Center

AFFECTED JURISDICTION: Marseilles Training Center (MTC), La Salle County, Illinois

POINT OF CONTACT: CPT Joseph Poquette, Illinois Army National Guard (ILARNG), Marseilles Training Center, 1700 Army Road, Marseilles, IL 61341. Telephone: (815) 750-6507

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DOCUMENT DESIGNATION: Final Environmental Assessment

ABSTRACT: The NGB and ILARNG propose to develop and operate ranges and other training facilities at the 2,850-acre MTC to provide the requisite training facilities for in-state training for ILARNG units. This Environmental Assessment (EA) addresses the potential environmental, socioeconomic, and cultural impacts of this proposal and its alternatives. The Proposed Action is needed to ensure the ILARNG provides complete training facilities for its units, ensure attainment and maintenance of a full readiness posture, and meet mission training objectives with sufficient land area as defined in Training Circular (TC) 25-1. The Proposed Action would ensure the continued and long-term viability of the MTC as a training center capable of providing the land and resources necessary to support the ILARNG's and other military users' assigned training missions.

This EA evaluates the individual and cumulative effects of the Proposed Action (develop and operate ranges and other training facilities at the MTC) and the No Action Alternative with respect to the following criteria: geographic setting and land use and cover; air quality; noise; topography, geology, and soils; water resources, biological resources, cultural resources, socioeconomics; environmental justice; infrastructure; and hazardous and toxic materials/wastes.

The evaluation performed in this EA concludes there would be no significant adverse impact, either individually or cumulatively, to the local environment or quality of life associated with implementing the Proposed Action, provided the best management measures specified in this EA are implemented.

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EXECUTIVE SUMMARY

Proposed Construction and Operation of Ranges and Other Training Facilities at the Marseilles Training Center, La Salle County, Illinois

This Environmental Assessment (EA) has been prepared to identify, document, and discuss the possible environmental, cultural, and socioeconomic impacts associated with the proposed construction and operation of ranges and other training facilities at the Marseilles Training Center (MTC). This EA provides the necessary information to properly and fully assess the potential effects of proposed construction and operation of these facilities as required under the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code [USC] 4321 *et seq.*); the President's Council of Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] 1500-1508); and 32 CFR Part 651.

OVERVIEW OF PROJECT PURPOSE AND NEED

The Proposed Action encompasses 15 proposed projects to meet ILARNG's training requirements that include the proposed MTC range projects identified in the 2009 Range Complex Master Plan (RCMP) Annual Review and Update, training support facility development projects, and training area maintenance projects. Component projects are listed in **Table ES-1** below. Proposed projects would be implemented between 2010 and 2016. Because projects would be implemented over an extended period of time, the ILARNG will review this NEPA analysis, in consultation with National Guard Bureau's Environmental Office (ARNG-ILE), prior to project execution to ensure no substantial changes have occurred to environmental resources or regulatory requirements since the completion of this EA. If changes have occurred the ILARNG will prepare an updated NEPA analysis in the form of a Supplemental EA or tiered Categorical Exclusion. This original EA would be utilized as the foundation for the updated analysis and supplemental NEPA analyses would focus on those issues that have changed.

Project No.	Description
IL-1	Modified Record Firing (MRF) Range <i>Expansion / Zero Range Relocation</i>
IL-2	Urban Assault Course (UAC)
IL-3	Live Fire Breach Facility (LFBF)
IL-4	Grenade Launcher Range <i>Relocation</i>
IL-5	Live Fire Shoot House (LFSH)
IL-6	United States Army Corps of Engineers (USACE) Land License to IL ARNG
IL-7	Construct Gravel Training Road
IL-8	Vehicle Wash Rack
IL-9	Loading Docks
IL-10	Military Operations on Urban Terrain (MOUT) After Action Review (AAR) Facility
IL-11	Simulations Building
IL-12	Trail Maintenance
IL-13	Low Water Stream Crossing Maintenance

Project No.	Description
IL-14	Bivouac Area Maintenance
IL-15	Resurfacing of Primary Roads

The purpose of the Proposed Action is to provide the requisite training facilities at the MTC for in-state marksmanship and live-fire weapons training for ILARNG units. The ILARNG currently conducts this type of training at installations where space is available, primarily in the states of Wisconsin, Indiana, Tennessee, and Missouri.

The action is needed to ensure the ILARNG provides complete training facilities for its units, ensure attainment and maintenance of a full readiness posture, and meet mission training objectives with sufficient land area as defined in Training Circular (TC) 25-1. The Proposed Action is also needed to ensure the continued and long-term viability of the MTC as a training center capable of providing the land and resources necessary to support the ILARNG's and other military users' assigned training missions. Implementation of the Proposed Action would support higher quality, mission-essential training activities at the MTC, while limiting the need for out-of-state travel. The ILARNG estimates site utilization could eventually increase by approximately 15 percent over current levels (approximately 88,000 man-days per year), or to roughly 100,000 man-days per year as result of the Proposed Action (ILARNG, 2010).

OVERVIEW OF CONSIDERED PROJECT ALTERNATIVES

This EA evaluates the individual and cumulative effects associated with the proposed construction and operation of ranges and other training facilities at the MTC with respect to the following criteria: geographic setting and land use and cover; air quality; noise; topography, geology, and soils; water resources, biological resources, cultural resources, socioeconomics; environmental justice; infrastructure; and hazardous and toxic materials/wastes. This EA examines in-depth three alternatives, the Preferred Action Alternative, the Build Alternative and the No Federal Action Alternative, defined as follows.

- Alternative 1: Preferred Action Alternative – The 15 proposed projects identified in **Section 2.0** would be implemented as described. This is the ILARNG's Preferred Action Alternative because it effectively provides the best combination of land and resources to sustain quality military training and maintain and improve the units' readiness postures. The Alternative 1 configuration for the shoot house (Project IL-5) and new training road (Project IL-7) would be constructed. Under the Preferred Action Alternative, an additional 220 acres of land would be licensed from the USACE (Project IL-6).
- Alternative 2: Build Alternative – Only 14 of the 15 proposed projects identified in **Section 2.0** would be implemented as described. This alternative would still provide the land and resources necessary to sustain quality military training and maintain and improve the units' readiness postures. The Alternative 2 configuration for the shoot house (Project IL-5) and new training road (Project IL-7) would be constructed. This alternative does not include Project IL-6.
- Alternative 3: No Federal Action Alternative – The Proposed Action would not be implemented. Current installation operations would continue. This alternative would limit the capability of the ILARNG to carry out its assigned mission to provide

adequate training facilities, and would not meet the purpose of or need for the Proposed Action. This alternative was retained to provide a comparative baseline analysis as required under Federal law. Required training would continue to be conducted by the ILARNG at installations where space is available, primarily in the states of Wisconsin, Indiana, Tennessee, and Missouri. This would continue to cause ILARNG units to risk not meeting Standards in Training Commission (STRAC) requirements, and to use excessive training time for travel, potentially resulting in an inability to meet training proficiency standards.

CONCLUSION

The Proposed Action is not anticipated to result in *significant adverse* effects. Therefore, no specific mitigation measures are proposed in this EA to reduce potential significant adverse effects to *less-than-significant* levels. The National Guard Bureau (NGB) and ILARNG will maintain their stewardship posture by implementing the Best Management Practices (BMPs) discussed in **Section 5.0** for each resource area.

The evaluation performed in this EA concludes there would be no significant adverse impact, either individually or cumulatively, to the local environment or quality of life associated with the implementation of the Preferred Action Alternative. This EA's analysis determines, therefore, an Environmental Impact Statement (EIS) is unnecessary for implementation of the Preferred Action Alternative, and that a Finding of No Significant Impact (FNSI) is appropriate. Positive impacts to onsite land use, soils, water quality, biological resources, and infrastructure, and the local socioeconomic environment would be anticipated. No impacts to on-site recreational use would occur. This EA recommends implementation of the Preferred Action Alternative.

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APPENDIX B.	Agency, Native American, and Public Correspondence
APPENDIX C.	Regulatory Framework
APPENDIX D.	MTC Site Usage
APPENDIX E.	La Salle County Comprehensive Plan – Proposed Land Use Planning

ACRONYMS AND ABBREVIATIONS

AAR	After Action Review	EIS	Environmental Impact Statement
AIRFA	American Indian Religious Freedom Act	EO	Executive Order
AIMSS	Advance Infantry Marksmanship Strategies and Standard	EPCRA	Emergency Planning and Community Right-to-Know Act
ARNG-ILE	National Guard Bureau Environmental	E&S	Erosion and Sedimentation
APRPA	Archaeological and Paleontological Resources Protection Act	FEMA	Federal Emergency Management Agency
ARFORGEN	Army Force Generation	FICUN	Federal Interagency Committee on Urban Noise
AR	Army Regulation	FIRM	Flood Insurance Rate Map
ARNG	Army National Guard	FM	Field Manual
ARPA	Archeological Resources Protection Act	FMTV	Family of Medium Tactical Vehicles
ARTEP	Army Training and Evaluation Program	FNSI	Finding of No Significant Impact
ATSC	Army Training Support Center	FOB	Forward Operating Base
BCT	Brigade Combat Team	FPPA	Farmland Protection Policy Act
BMP	Best Management Practice	FWA	Fish and Wildlife Area
BNOISE2	Blast Noise Impact Assessment	GIS	Geographic Information System
BRAC	Base Realignment and Closure	HEMTT	Heavy Expanded Mobility Tactical Truck
CAA	Clean Air Act	HMMWV	High-Mobility Multipurpose Wheeled Vehicle
CATS	Combined Arms Training Strategies	HRPA	Historic Resources Preservation Act
CEQ	Council for Environmental Quality	HSRPA	Human Skeletal Remains Protection Act
CFR	Code of Federal Regulations	HTMW	Hazardous and Toxic Materials and Waste
CO	Carbon monoxide	HUT	Human Urban Target
ComEd	Excelon Commonwealth Edison	IAA	Inter-Agency Agreement
CPQC	Combat Pistol Qualification Course	IAC	Illinois Administrative Code
CPT	Captain	IAW	In Accordance With
CS	2-chlorobenzlidene malononitrile	ICRMP	Integrated Cultural Resources Management Plan
DA	Department of the Army	IDES	Illinois Department of Employment Security
DA HQ	Department of the Army Headquarters	IDNR	Illinois Department of Natural Resources
DA PAM	Department of the Army Pamphlet	IDT	Inactive Duty Training
dB	Decibel	IENMP	Installation Environmental Noise Management Plan
dba	A-weighted Decibels	IEPA	Illinois Environmental Protection Agency
dBp	Peak Sound Level	IHPA	Illinois Historic Preservation Agency
DCEO	Department of Commerce and Economic Opportunity	IICEP	Intergovernmental and Interagency Coordination for Environmental Planning
DFIRM	Digital Flood Insurance Rate Map	ILARNG	Illinois Army National Guard
DMAIL	Department of Military Affairs of Illinois	ILCS	Illinois Compiled Statutes
DoD	Department of Defense	INRMP	Integrated Natural Resources Management Plan
DoDI	Department of Defense Instruction		
EA	Environmental Assessment		

ISGS	Illinois State Geological Survey	PM _{2.5}	Particulate matter less than or equal to 2.5 micrometers
ISM	Illinois State Museum		
ITAM	Integrated Training Area Management	RCMP RCRA	Range Complex Master Plan Resource Conservation and Recovery Act
JANUS	Joint Army Navy Uniform Simulation	ROCA	Range Operations and Control Area
LFBF	Live Fire Breach Facility		
LFSH	Live Fire Shoot House	ROD	Record of Decision
LMTV	Light Medium Tactical Vehicle	ROW	Right-of-Way
LOS	Line of Site	RRPB	Requirements Review and Prioritization Board
LURS	Land Use Requirements Study		
LWSC	Low Water Stream Crossing	RTLTP	Range Training and Land Program
MFR	Memorandum for Record		
mm	Millimeter	SARNAM	Small Arms Range Noise Assessment Model
MOGAS	Motor gasoline		
MOU	Memorandum of Understanding	SDZ	Surface Danger Zone
MOSQ	Military Occupational Specialty Qualifications	SHPO	State Historic Preservation Office
MOUT	Military Operations on Urban Terrain	SIT SMCT	Stationary Infantry Target Soldiers Manual of Common Tasks
MRF	Modified Record Firing		
MTC	Marseilles Training Center	SO ₂	Sulfur dioxide
MTP	Military Training Plan	SOP	Standard Operating Procedure
NAGPRA	Native American Graves Protection and Repatriation Act	SPCCP	Spill Prevention Control and countermeasure Plan
NAAQS	National Ambient Air Quality Standards	SRTA	Short Range Training Ammunition
NEPA	National Environmental Policy Act	STA	Sparta Training Area
NGB	National Guard Bureau	STP	Soldier Training Publication
NHPA	National Historic Preservation Act	STRAC	Standards in Training Commission
NOA	Notice of Availability	Sullivan	Sullivan International Group, Inc.
NO _x	Nitrogen oxides	TC	Training Circular
NPDES	National Pollutant Discharge Elimination System	TP	Training Practice
NRCS	Natural Resources Conservation Service	TRADOC	Training and Doctrine Command
NWI	National Wetland Inventory	TSCA	Toxic Substances Control Act
O ₃	Ozone	TTP	Tactics, Techniques & Procedures
ONMP	Operational Noise Management Program	TY	Training Year
ORAP	Operational Range Assessment Program	USACE	United States Army Corps of Engineers
P2	Pollution Prevention	USAPHC	United States Army Public Health Command
PAO	Public Affairs Officer	USC	United States Code
Pb	Lead	USDA	United States Department of Agriculture
PEA	Programmatic Environmental Assessment	USEPA	United States Environmental Protection Agency
PEIS	Programmatic Environmental Impact Statement	USFWS	United States Fish and Wildlife Service
PL	Public Law		
PM	Particulate Matter	UTES	Unit Training Equipment Site
POI	Program of Instruction	UTO	Universal Target Outlets
POL	Petroleum, Oil, and Lubricants	VOC	Volatile Organic Compound
PTS	Perino Technical Services		
PM ₁₀	Particulate matter less than or equal to 10 micrometers		

1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

1.1.1 Overview

This Environmental Assessment (EA) evaluates the proposal of the National Guard Bureau (NGB) and the Illinois Army National Guard (ILARNG) to develop and operate ranges and other training facilities at the 2,850-acre Marseilles Training Center (MTC). This EA evaluates the proposed MTC range projects included in the ILARNG's Training Year (TY) 2009 Range Complex Master Plan (RCMP). The RCMP is reviewed and updated annually. In addition to new range development, the Proposed Action also includes leasing additional land, road and facility construction/operation, and training area maintenance.

The Proposed Action is intended to provide ranges meeting current range requirements as set forth in Training Circular (TC) 25-8, *Training Ranges*. Providing these ranges would serve the wartime mission and combat readiness goals of the ILARNG, as evaluated in the current RCMP. Details of the Proposed Action are provided in **Section 2.0**.

The MTC is located in LaSalle County in northern Illinois approximately 2 miles south of the City of Marseilles and approximately 78 miles southwest of Chicago (**Figure 1**). Approximately 2,550 acres of the MTC is owned by the State of Illinois and utilized by two State agencies under a Memorandum of Understanding (MOU) between the Department of Military Affairs of Illinois (DMAIL) and the Illinois Department of Natural Resources (IDNR). The remaining 300 acres of the MTC land are owned by Excelon Commonwealth Edison (ComEd). This land is leased to the U.S. Army Corps of Engineers (USACE) Louisville District (**Figure 2**). DMAIL has a license agreement with USACE to conduct training activities within this 300-acre area. The two land use agreements are included in **Appendix A**. All proposed projects within this EA would be consistent with these agreements. Projects occurring within the portion of the training site used by both DMAIL and IDNR (i.e., joint use area) would be coordinated with IDNR in accordance with the MOU.

1.1.2 Background

The Proposed Action is part of the Army Transformation that began in 1999. The Secretary of the Army and the Army Chief of Staff articulated a vision about people, readiness, and transformation of the Army to meet challenges emerging in the 21st century, and the need to respond more rapidly to different types of operations requiring military action (Department of the Army [DA], 1999). A Final Programmatic Environmental Impact Statement (PEIS) addressing program-level impacts of the transformation program was completed in February 2002. In April 2002, the Army issued a Record of Decision (ROD) reflecting its intent to transform the Army.

Army Force Generation (ARFORGEN) is the structured progression of increased unit readiness over time resulting in recurring periods of availability of trained, ready, and cohesive units. These units are prepared for operational deployment in support of Combatant Commanders' or civil authorities' requirements. Units are task organized in modular expeditionary forces, tailored for mission requirements. They are sustainable, and have the capabilities and depth required to conduct the full range of operations in a persistent conflict. Operational requirements drive the

ARFORGEN training and readiness process. These same requirements support the prioritization and synchronization of resourcing, recruiting, organizing, staffing, equipping, training, sustaining, sourcing, mobilizing, and deploying cohesive units more effectively and efficiently (DA, 2007).

The NGB completed its Programmatic Environmental Assessment (PEA) for Modularization of Army National Guard (ARNG) Forces in May 2005. Creation of modular forces continues the Army's ongoing transformation process designed to provide the Nation with combat forces that are more responsive, deployable, agile, versatile, lethal, survivable, and sustainable (NGB, 2005).

The ILARNG's 2009 RCMP Annual Review and Update identifies required range training facilities – either existing but not modernized, or not available – at the two primary ILARNG training sites, including the MTC. Requirements are based on: 1) recent changes in the ILARNG's operational structure and units due to Transformation; and 2) the requirements to meet the training cycles of the ARFORGEN model as it applies to the State of Illinois. Requirements are a function of the Combined Arms Training Strategies (CATS) and Standards in Training Commission (STRAC) resourced training requirements developed and approved by Training and Doctrine Command (TRADOC) and the Army Training Support Center (ATSC). The Update also considers requirements of Brigade Combat Team (BCT) units that train at the State's live-fire facilities.

1.2 Purpose and Need

The purpose of the Proposed Action is to provide the requisite training facilities at the MTC for in-state training for ILARNG units, including those within its five major commands (33rd Infantry Brigade Combat Team, 108th Sustainment Brigade, 404th Chemical Brigade, 65th Troop Command, and Joint Forces Headquarters), and other military units¹. The proposed ranges would provide in-state marksmanship and live-fire weapons training.

The Proposed Action is needed to ensure the ILARNG provides complete training facilities for its units, ensure attainment and maintenance of a full readiness posture, and meet mission training objectives with sufficient land area as defined in TC 25-1. With presently available training facilities, local units are forced to travel greater than 25 percent of available Inactive Duty Training (IDT) weekend time to conduct much of the required training. The ILARNG currently does not have a breach facility, a shoot house or an Urban Assault Course (UAC) within the state. Additionally, most of the ILARNG's basic marksmanship training is currently conducted at other state training facilities, such as Fort McCoy, Camp Atterbury, Fort Campbell, and Fort Leonard Wood. This travel time frequently violates Department of Defense Instruction (DoDI) 1215.18, *Reserve Component Member and Participation*, which establishes a reasonable travel distance as 100 miles or 3 hours for the unit for IDT. The aforementioned sites are located at substantially greater distances than this allowance.

The Proposed Action is also needed to ensure the continued and long-term viability of the MTC as a training center capable of providing the land and resources necessary to support the ILARNG's and other military users' assigned training missions. Implementation of the Proposed Action would support higher quality

¹ The new ranges would be available to all ARNG units, as well as other Department of Defense (DoD) and civilian users as scheduling permits.

mission-essential training activities at the MTC, while limiting the need for out-of-state travel. The ILARNG estimates MTC utilization could eventually increase by approximately 15 percent over current levels (approximately 88,000 man-days per year), or to roughly 100,000 man-days per year as result of the Proposed Action (ILARNG, 2010).

Requirements for the 15 MTC development and maintenance projects comprising the Proposed Action are listed in **Table 1**. The proposed ranges are listed in the 2009 RCMP Annual Review and Update in priority order. This order is maintained in **Table 1**. Priority order was determined in the RCMP based on the overall need for a particular range as dictated by current mission, staff, and training requirements. The RCMP is reviewed annually and updated as needed. All remaining non-range projects are listed in no particular order.

Table 1. Proposed MTC Development/Maintenance Projects and Training Requirements			
Project No.	Project	Anticipated Implementation Date	Training Requirement
Range Development Projects			
IL-1	Modified Record Firing (MRF) Range Expansion / Zero Range Relocation	2015	80 percent of all ARNG and USAR Soldiers are required to zero and qualify IAW FM 3-22.9 once annually. Requirement Documents: DA PAM 350-38, FM 3-22.9
IL-2	Urban Assault Course (UAC)	2015	Units are strongly encouraged to conduct urban operations training. Training in defensive and offensive operations in an urban environment is required. The targeted Military Occupational Specialties for urban operations training are Infantry, Engineers, Military Police, and Cavalry. Requirement Documents: DA PAM 350-38, TC 90-1, TC 25-8, 21B & 31B MOSQ Re-Class POI, FM 3-0, FM 3-06, FM 3-06.11, ARTEP 7-8 MTP, FM 3-22.9
IL-3	Live Fire Breach Facility (LFBF)	2011	See IL-2
IL-4	Grenade Launcher Range Relocation	2011	80 percent of ARNG and USAR Soldiers are required to Zero and Day Qualify on M-203 IAW FM 3-23.31 once annually. Requirement Documents: DA PAM 350-38, FM 3-23.31, STP 21-1 SMCT
IL-5	Live Fire Shoot House (LFSH)	2016	See IL-2
Training Support Facility Development Projects			
IL-6	USACE Land License to ILARNG	Dependent on the renewal of the Exelon ComEd and USACE agreement	The ILARNG's LURS for the MTC identifies a training land shortfall for ILARNG units that impact their ability to perform mission-essential tasks, complete critical missions, and meet pre-mobilization training requirements. In particular, the LURS determined the ILARNG has a light maneuver land shortfall of 6,013 acres at the MTC. This land license would reduce this shortfall by approximately 220 acres. Furthermore, leasing additional land would provide a buffer to residential encroachment within the vicinity of MTC's eastern boundary, ensuring the long-term viability of range facilities within the southeastern portion of MTC.

Table 1. Proposed MTC Development/Maintenance Projects and Training Requirements			
Project No.	Project	Anticipated Implementation Date	Training Requirement
IL-7	Construct Gravel Training Road	Dependent on the renewal of the Exelon ComEd and USACE agreement	An access road is needed along the eastern boundary of the MTC to connect the northern portion of the site (Training Areas 103E) to the ranges within the Cantonment Area.
IL-8	Vehicle Wash Rack	2013	General training support. The new wash rack would facilitate better maintenance and reduce debris on the surrounding civilian roads.
IL-9	Loading Docks	2014	General training support.
IL-10	Military Operations on Urban Terrain (MOUT) After Action Review (AAR) Facility	2011	Units are strongly encouraged to conduct urban operations training. Training in defensive and offensive operations in an urban environment is required. The targeted Military Occupational Specialties for urban operations training are Infantry, Engineers, Military Police, and Cavalry. Requirement Documents: DA PAM 350-38, TC 90-1, TC 25-8, 21B & 31B MOSQ Re-Class POI, FM 3-0, FM 3-06, FM 3-06.11, ARTEP 7-8 MTP, FM 3-22.9 (don't make them go back to read)
IL-11	Simulations Building	2015	This building would allow the ILARNG to conduct a battalion level war fighter exercise.
Training Area Maintenance Projects			
IL-12	Trail Maintenance	2010	Maintenance of training facilities and training area land by means of damage minimization and rehabilitation is necessary to ensure no net loss in the capability/quality of installation lands to support existing and projected military training/operations at the MTC.
IL-13	Low Water Stream Crossing Maintenance	2011	See IL-12
IL-14	Bivouac Area Maintenance	2010	See IL-12
IL-15	Resurfacing of Primary Roads	2011	See IL-12
AIMSS	Advance Infantry Marksmanship Strategies and Standard	MOSQ	Military Occupational
ARNG	Army National Guard	MTP	Specialty Qualification Military Training Plan
ARTEP	Army Training and Evaluation Program	PAM	Pamphlet
DA	Department of the Army	POI	Program of Instruction
FM	Field Manual	SMCT	Soldier's Manual of Common Tasks
IAW	In accordance with	STP	Soldier Training Publication
LURS	Land Use Requirements Study	TC	Training Circular
		USAR	US Army Reserve

1.3 Scope of the Environmental Assessment

This EA evaluates the potential environmental, cultural, and socioeconomic impacts of the development and operation of proposed ranges and other training facilities at the MTC. A detailed description of the Proposed Action is provided in **Section 2.0**. Screening criteria for evaluating potential alternative actions, and descriptions of alternatives eliminated from detailed study, are provided in **Section 3.0**. This EA provides a detailed comparative analysis of the following alternatives:

- Alternative 1: Preferred Action Alternative – Implement the Proposed Action with the Alternative 1 configuration for the LFSH (Project IL-5) and the new training road (Project IL-7) to fulfill the assigned mission requirements of the ILARNG. Under the Preferred Action Alternative, an additional 220 acres of land would be licensed from the USACE (Project IL-6).
- Alternative 2: Build Alternative – Implement the Proposed Action with the Alternative 2 configuration for the LFSH (Project IL-5) and the new training road (Project IL-7) to fulfill the assigned mission requirements of the ILARNG. This alternative does not include Project IL-6.
- Alternative 3: No Federal Action Alternative – Continue with operations as currently conducted and do not implement the Proposed Action.

Resource categories described in **Section 4.0** and evaluated in **Section 5.0** include: land use and cover; air quality; noise; topography, geology, and soils; ground and surface water resources; biological resources, including vegetation, wildlife, wildlife habitat, plant communities, protected species, and wetlands; cultural resources; socioeconomic environment and human health and safety, including children's health and safety risks; environmental justice; infrastructure; and hazardous and toxic materials and wastes. This EA also considers the cumulative effects of this Proposed Action when added to other past, present, and reasonably foreseeable actions within the region.

As specified under National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321 et seq.) and Council of Environmental Quality (CEQ) regulations (40 Code of Federal Regulations (CFR) 1500-1508), a monetary cost-benefit analysis is not required as part of the EA. The Proposed Action and its alternatives have been developed based on military training needs and mission requirements. As such, no quantitative financial assessment has been performed as part of this EA. However, economic factors that result in socioeconomic impacts to involved military installations and their surrounding regions of influence are addressed in this document, as required under NEPA.

1.4 Decision to be Made

The decision to be made is whether, having taken potential environmental effects into account, the ILARNG should develop and operate the proposed ranges and other training facilities at the MTC and, if appropriate, carry out mitigation measures that will reduce effects on resources. The NGB, working with the ILARNG, will ultimately decide if the Proposed Action is funded and implemented.

1.5 Public and Agency Involvement

1.5.1 Public Involvement/Scoping

As specified under NEPA; 42 USC 4321 et seq. and the NEPA implementing regulations promulgated by the CEQ, 32 CFR 651 (Environmental Analysis of Army Actions, Final Rule), and the guidance provided in the NGB NEPA Handbook (NGB, 2006), public participation is a significant component of the EA process. The ILARNG, as the proponent of the Proposed Action, will publish and distribute the Draft EA for a 15-day public comment period, as announced by a Notice of Availability (NOA) published in a local newspaper of general circulation. When the Draft EA is distributed to the public, copies of the Draft EA and important reference documents will also be made available for public review at community libraries near Marseilles, Illinois. The State Public Affairs Officer (PAO) will be responsible for reviewing notices for distribution within the local newspaper, and will be the primary contact for local news media inquiries. The ILARNG environmental branch will be responsible for receiving comments resulting from the 15-day public comment period. An additional 15-day public review period will be held for the Final EA and draft Finding of No Significant Impact (FNSI).

1.5.2 Agency Participation

Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) is a federally-mandated process for informing and coordinating with other governmental agencies regarding Federal Proposed Actions. Through the IICEP process, the ILARNG notifies relevant Federal, state, and local agencies and allows them sufficient time to make known their environmental concerns specific to a Proposed Action. Comments and concerns submitted by these agencies during the IICEP process are subsequently incorporated into the analysis of potential environmental impacts conducted as part of the EA. This coordination fulfills requirements under Executive Order (EO) 12372 (superseded by EO 12416, and subsequently supplemented by EO 13132), which requires Federal agencies to cooperate with and consider state and local views in implementing a Federal proposal. It also constitutes the IICEP process for this EA.

Section 10.1 contains a list of agencies contacted regarding the Proposed Action. These agencies include, but are not limited to, the United States Fish and Wildlife Service (USFWS); United States Environmental Protection Agency (USEPA); Natural Resources Conservation Service (NRCS); IDNR; and the Illinois Historic Preservation Agency (IHPA). Data on local species of special concern, threatened and endangered species, soils, water resources, and other data pertinent to environmental resources within the MTC or its vicinity were requested and used in developing this EA. Copies of all IICEP correspondence, including sample data request letters and all received agency responses, are included in **Appendix B**.

1.5.3 Native American Consultation

The ILARNG has considered the *Annotated Department of Defense (DoD) Policy on American Indians and Alaska Natives* (dated 27 October 1999), EO 13175, and the DoDI 4710.02 (DoD Interactions with Federally Recognized Tribes). The ILARNG will conduct formal consultation with federally recognized Native American tribes. These entities were invited by the ILARNG to participate as Sovereign Nations per EO 13175 (Consultation and Coordination with Indian Tribal Governments) in both the EA and the National Historic Preservation Act (NHPA) Section 106 process.

Consultations with these tribes were conducted by the ILARNG in accordance with the protocol set forth in the NGB (2006) NEPA Handbook.

Consultation was initiated in October 2008 with six federally recognized Native American tribes having potential ancestral ties to the Marseilles, Illinois area. These groups were identified based on the ILARNG Integrated Cultural Resources Management Plan (ICRMP), consultation, personal correspondence and research by the ILARNG Cultural Resources Manager. Copies of letters submitted to these federally recognized Native American tribes and their responses are included in **Appendix B**. The ILARNG will prepare a memorandum for record (MFR) of Native American consultation efforts during the NEPA process and include this memorandum in **Appendix B**.

1.6 Related National Environmental Policy Act Reviews

The ILARNG's *Integrated Natural Resources Management Plan (INRMP) and EA for the Marseilles Training Area 2001-2006* was completed in 2001. The INRMP for the 2008-2013 period was revised in 2007, with associated NEPA review (ILARNG, 2007a). In 2005, the ILARNG erected a temporary MOUT comprised of conex boxes located on a 2-acre gravel area. Modifications to the temporary MOUT were addressed in a REC dated 15 April 2010 (ILARNG, 2010a).

1.7 Regulatory Framework

This EA has been prepared under the provisions of, and in accordance with, NEPA, the CEQ Regulations Implementing the Procedural Provisions of NEPA (Sec. 1502.9 Draft, final, and supplemental statements), 40 CFR Parts 1500-1508, and 32 CFR 651. In addition, the document has been prepared as prescribed in the June 2006 NGB NEPA Handbook (NGB, 2006). A summary of regulations relevant to resource areas analyzed in this EA is included as **Appendix C**.

2.0 DESCRIPTION OF THE PROPOSED ACTION

2.1 Proposed Projects

The Proposed Action encompasses 15 proposed projects to meet ILARNG's training requirements that include the proposed MTC range projects identified in the 2009 RCMP Annual Review and Update, training support facility development projects, and training area maintenance projects. Development and evaluation of alternative sites, screening criteria for site selection, and specific range customization and configuration are presented in **Section 3.0**.

Proposed projects would be implemented between 2010 and 2016. Because projects would be implemented over an extended period of time, the ILARNG will review this NEPA analysis, in consultation with National Guard Bureau's Environmental Office (ARNG-ILE), prior to project execution to ensure no substantial changes have occurred to environmental resources or regulatory requirements since the completion of this EA. If changes have occurred the ILARNG will prepare an updated NEPA analysis in the form of a Supplemental EA or tiered Categorical Exclusion. This original EA would be utilized as the foundation for the updated analysis and supplemental NEPA analyses would focus on those issues that have changed.

2.1.1 Ranges

The proposed MTC range projects are listed in **Table 2** and illustrated in **Figures 3, 4, 5 and 7**. Priority order was determined based on the overall need for a particular range as dictated by current mission, staff, and training requirements. Action alternatives identified in this EA were identified and considered based on this prioritization.

The area of land required to implement the Proposed Action depends on the selected range configuration. Ranges consist of two primary components: the physical range footprint, consisting of the firing positions, targetry, and support structures (i.e., as specified in TC 25-8); and the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Ranges can be configured to overlap or have common areas, including the SDZs and the range support structure areas (see **Section 2.1.1.1**). The land requirement (see **Table 2**) to construct the 5 proposed range projects with no overlapping is approximately 2,897 acres, which would be operationally inefficient and physically too large for the MTC to accommodate, given the areas involved and other ongoing, mission-essential training activities at the installation. The ILARNG conducted a siting analysis to evaluate various range configuration alternatives. The analysis and feasible alternative configurations are discussed in **Section 3.0**.

Many of the proposed ranges require a set of range support structures, known as the standard Range Operations and Control Area (ROCA). Associated ROCA facilities by range type are identified in TC 25-8. A ROCA is the center for control and operation of the range, training exercises, administrative services, and support facilities. Downrange target and simulation equipment are operated from the ROCA, and activities are monitored for scoring and performance data review. The data are collected and distributed to the participants for an After Action Review (AAR). The ILARNG proposes to use existing ROCA facilities to the extent possible to reduce cost, increase efficiency, and reduce land requirements associated with this proposal.

Existing ROCA facilities at the MTC are located immediately south of the range complex (see **Figure 4**).

Table 2. Proposed Range Development Plan Projects and Land Requirements					
Range Project / Anticipated Implementation Date			Description	Approximate Acreage	
				Range	with SDZ
IL-1	MRF Range Expansion / Zero Range Relocation	2015	<p>The existing 7-lane MRF would be expanded to a 14-lane MRF to meet STRAC throughput requirements for M4/M16 qualification. The existing Zero Range would be relocated slightly eastward to accommodate the MRF expansion. The project would include relocating the existing tower, removing the east berm and building a north berm over the expanded area, adding power and data requirements for the additional seven lanes.</p> <p>The 14-lane MRF is used to train and test individual soldiers on the skills necessary to identify, engage, and defeat stationary infantry targets for day/night qualification requirements with M-16 & M-4 rifles. This range combines the capabilities of Automated Field Fire, Automated Record Fire, and Automated Night Fire to reduce land and maintenance requirements and increase efficiencies.</p>	25 (MRF) 1 (Zero)	915 (MRF) 784 (Zero)
IL-2	UAC	2015	<p>The UAC is used to train individual soldiers, squads, and platoons on tasks necessary to operate within a built-up/urban area. The facility contains 5 stations: Station 1 - Individual & Team Trainer; Station 2 - Squad & Platoon Trainer; Station 3 - Grenadier Gunnery Trainer; Station 4 - Urban Offense/Defense Trainer; Station 5 - Underground Trainer. With the exception of Station 3, the facility is not intended for live fire training.</p> <p>All targets are fully automated, and the event-specific target scenario is computer-driven and scored from the range operations center. Targetry in Stations 1, 2 and 4 are precision human urban targets (HUT) that have reconfigurable plug and play capability. Targetry Requirements: Station 1 - 6 interior precision HUT; Station 2 - 10 interior precision HUT; Station 3 - 13 total targets: 6 non-precision exterior targets; Station 4 - 10 precision Stationary Infantry Targets (SIT); 7 non-precision facade targets; Station 5 - no instrumentation required.</p>	3	778
IL-3	LFBF	2011	<p>The LFBF is used to train soldiers semi-annually on the technical aspects of breaching techniques. It is also used to train Tactics, Techniques & Procedures (TTP) and explosive techniques not trained on any other type of facility.</p> <p>The range will be Army standard with eight lanes for door breaching, eight lanes of window breaching, and four lanes of wall breaching. No targetry is required for this range.</p>	8	405

Table 2. Proposed Range Development Plan Projects and Land Requirements					
Range Project / Anticipated Implementation Date			Description	Approximate Acreage	
				Range	with SDZ
IL-4	Grenade Launcher Range Relocation	2011	<p>The existing range will be relocated slightly westward to accommodate the proposed LFBF (IL-2).</p> <p>This facility is used to train and test soldiers on the skills necessary to engage and defeat stationary target emplacements with the M-203 40mm Grenade Launcher. Primary features include four Individual Firing Stations. No automation is required for this facility. All targets/facades are fixed at required distances. Targetry is at ground level, not requiring ground disturbance, so environmental considerations would be minimal. Zero targets are at least 2 meters high and 2 meters wide. The Zero target is clearly marked with a large, contrasting "Z." Targets are made of long-lasting, durable material that can withstand constant use with little maintenance. Salvaged, cleaned oil drums filled with sand make excellent semi-permanent target material for this range.</p>	4	12
IL-5	LFSH	2016	<p>The shoot house provides the leader with a facility to train and evaluate the unit during a live fire exercise. Units are trained and evaluated on their ability to move tactically (enter and clear a room; enter and clear a building), engage targets, conduct breaches, and practice target discrimination.</p> <p>Primary features of a standard LFSH include a facility divided into 8 rooms and 2 corridors for a minimal net training capability of 1,700 square feet; 14 single Universal Target Outlets (UTO), 4 double UTO, and 10 Human Urban Targets. All targets are fully automated, and the event-specific target scenario is computer-driven and scored from the range operations center. The range operating system is fully capable of providing immediate performance feedback to the using participants. All targetry are life-like precision targets that have reconfigurable plug-and-play capability.</p> <p>The ILARNG proposes a zero-SDZ shoothouse, which means all projectiles would be contained within the building (no SDZ is required). If this is not feasible due to funding constraints, a Short Range Training Ammunition (SRTA) SDZ is proposed as an alternative.</p>	Alt 1 =<1 Alt 2 =<1	Alt 1 = 0 Alt 2 = 0
Total Potential Land Requirement				<42	2,897
<p>The actual land requirement depends on range configuration. Ranges can be configured to overlap - notably SDZ areas. The ILARNG's configuration analysis and alternative configurations are discussed in Section 3.0.</p>					

2.1.1.1 Surface Danger Zones

A SDZ is a mathematically-predicted area that a projectile will impact upon return to earth, either by direct fire or ricochet. The SDZ is the area extending from a firing point to a distance downrange based on the projectiles fired and weapon system used. The SDZ has specific dimensions for the expected caliber or the weapon being fired, so that all projectile fragments are contained in this area. The standard dimensions for SDZs are found in DA PAM 385-63, *Range Safety*. The SDZ for a range must be contained within the controlled boundaries of a training site for the range to be considered buildable and usable without a special waiver. The ILARNG proposes to configure ranges to allow common SDZs as much as possible without causing training conflicts (i.e., to allow proposed ranges to be used simultaneously, to the maximum extent possible). In addition, the ILARNG proposes ranges with SDZs that are fully contained within the MTC boundaries. The existing and proposed MTC range SDZs are illustrated in **Figures 2** and **3**, respectively.

2.1.1.2 Weapons and Ammunition

The types of ammunition anticipated to be fired on the proposed ranges are listed in **Table 3**.

Range Project		Weapon(s)	Ammunition
IL-1	MRF Range <i>Expansion / Zero Range Relocation</i>	Rifles: M-4, M-16	Bullets: 5.56 mm ball (linked and individual)
IL-2	UAC	Grenade Launcher: M-203 Rifles: M-4, M-16	Grenades: M-385 (40 mm TP) Practice bodies & fuses Bullets: 5.56 mm ball (linked and individual)
IL-3	LFBF	Shotguns Shape Charges (≤ 2 lb) Grenades (manual placement)	Shotgun shells, Detonation Charges, C4 explosive Grenades: M-385 (40 mm TP)
IL-4	Grenade Launcher Range <i>Relocation</i>	Grenade Launcher: M-203	Grenades: M-385 (40 mm TP)
IL-5	LFSH	Rifles: M-16, M-4	5.56 mm ball (linked and individual) Grenades: M-84 stun
TP	Training Practice (inert)		
Ball	General-purpose cartridge with primer, ball, full powder charge		
Caliber	Bullet diameter in hundredths of an inch (U.S.) or mm (metric)		
Linked	Ammunition loaded in flexible, linked strips for machine gun use		
mm	millimeter		

2.1.1.3 Night Lighting

Lighting requirements vary by range, and are prescribed in TC 25-8 and Army range design manuals. Red lenses or red lamps would be provided when required – in addition to standard lighting – to prevent interference with specialized equipment used during night training operations. Lighting within the various ROCAs and along range baselines could have both red and white lighting. White light is required for

range set-up, emergencies, and clean-up. Red light is required during night training, so as to avoid hindering soldiers' night vision. Lighting would be designed to minimize the potential for lighting adjacent, non-range areas, and be contained within the confines of the MTC and not observable from off-Post areas.

2.1.2 Training Land and Support Facilities

The ILARNG's Proposed Action includes leasing additional land from the USACE and the construction and operation of several new training support facilities at the MTC. The proposed projects are listed in **Table 4** and illustrated in **Figure 3, 5, and 6**. Design and construction could begin as early as 2010 for these facilities.

Table 4. Proposed Training Support Facility Development Projects and Land Requirements		
Range Project	Description	Approximate Acreage
IL-6	USACE Land License to ILARNG	Alt 1 = 220 Alt 2 = 0
IL-7	Construct Gravel Training Road	Alt 1 = 6 Alt 2 = 6
IL-8	Vehicle Wash Rack	<1
IL-9	Loading Docks	<1
IL-10	MOUT AAR Facility	<1
IL-11	Simulations Building	<1

2.1.3 Training Area Maintenance

The Proposed Action includes several road and training land maintenance projects to ensure no net loss in the capability/quality of the MTC training lands (**Figure 3**). These projects are described in **Table 5**. Maintenance projects would be ongoing and could begin as early as 2010.

Range Project		Description	Approximate Amount
IL-12	Trail Maintenance	<p>This project includes regrading and maintaining eroded areas along MTC trails. Improper drainage has impacted some areas, resulting in severe rutting on many trails. Rehabilitation of these trails will provide an overall benefit to soils, water resources, and aquatic habitat resources.</p> <p>Equipment that will be used in implementing the Road and Trail Maintenance Project will include, but not limited to: hand tools, loppers, chainsaws, brush cutters (weed eater mounted), Bobcat work machine, tractors, graders, front end loaders, all terrain vehicles (ATVs), wood chipper, and a stump grinder.</p>	14.7 miles
IL-13	Low Water Stream Crossing Maintenance	<p>A low water stream crossing (LWSC) is a structure that provides access across a stream during normal flow but may be periodically closed as a result of flooding. LWSCs can provide low cost alternatives to bridges or culverts for areas with low traffic volumes such as training roadways at the MTC. They are particularly suitable across streams that are sometimes dry or with low normal depth of flow.</p> <p>This project entails maintaining existing low water crossings at the MTC. LWSC will be designed in accordance with the Illinois Urban Manual developed by NRCS for project # 7 Construct Gravel Training Road. Maintenance will include erosion control measures as needed, and repair of existing crossings using similar materials (e.g., large diameter rock or other analogous items).</p>	4 crossings
IL-14	Bivouac Area Maintenance	<p>This project includes various activities to control the spread of already established invasive species within MTC bivouac areas, and prevent establishment of additional undesirable species. Invasive species targeted in this project include, but are not limited to, poison ivy (<i>Toxicodendron radican</i>), black locust (<i>Robinia pseudocacia</i>), musk thistle (<i>Carduus nutans</i>), phragmites (<i>Phragmites australis</i>), and autumn olive (<i>Elaeagnus umtollata</i>).</p> <p>Activities would include using prescribed fire within some of these areas as well as mechanical and chemical removal as the last resort. Mechanical removal would include mowing and using a FECON attachment on a Bobcat for brush removal.</p>	660 acres
IL-15	Resurfacing of Primary Roads	<p>This project includes resurfacing the existing primary road network at the MTC. Roads would be resurfaced based on their existing surface type (e.g., asphalt, gravel). However, some roads may go to oil and chip surface.</p>	9.4 miles

2.2 Construction

Land improvement activities would include land clearing, road improvements, fencing, making general site improvements, and extending utilities to serve the project areas. All projects entailing construction include IL-1 through IL-5 and IL-7 through IL-11 (see **Tables 2** and **4**). While Project IL-12 (**Table 5**) is considered a maintenance project because these are existing features at the MTC, rehabilitation of these features, in some cases, may require minor construction or the complete replacement of existing structures (i.e., replace old LWSC with a new LWSC).

The Environmental Branch and Facilities & Engineering will review all projects designs to determine if an Illinois Environmental Protection Agency (IEPA) National Pollutant Discharge Elimination System (NPDES) permit is required. If so, the environmental branch will prepare or review a Notice of Intent in order to obtain the USEPA's General Permit for Storm Water Discharge Associated with Construction Activities. Design and construction could begin as early as 2010, and would generally proceed as funding becomes available. IEPA permits normally take three months to obtain.

Access to the ranges and new training support facilities would be provided by crushed stone roadways, which extend from existing MTC roads, to minimize new impervious surfaces. Access roadways would be designed to support vehicles anticipated to use these facilities, and would meet site-specific soil conditions. Maintenance roads would also be constructed of crushed stone, located around range perimeters to provide access to target emplacements for installation and maintenance operations. These roads would be designed to meet site-specific engineering requirements as part of the formal design process conducted after this NEPA process is complete. In general, it is anticipated that very little road construction would be needed because the proposed project locations occur within the developed portions of the MTC.

Utilities to be provided under the Proposed Action would include sewer, electric, and communication services (see **Tables 2** and **4**). Existing utility lines occur within the vicinity of the proposed projects requiring these services.

2.3 Operation and Projected Facility Usage

Operation of the ranges and other facilities would be conducted in accordance with DMAIL Regulation 350-11, Training at MTC, dated 1 April 2007, concerning safety and environmental stewardship.

The new ranges would be available to all ARNG units, as well as other DoD and civilian users as scheduling permits. For the most part, units currently training at the MTC would be the same units using the new ranges. Anticipated ILARNG range usage would be dependent on training requirements of each unit to meet STRAC standards for each weapon system used on the proposed ranges. Excess range capacity would be available for scheduling and training by others through standard ILARNG scheduling procedures. A list of current MTC users is provided in **Appendix D**, along with summaries of historic usage by customer (i.e., ARNG, other DoD, and Non-DoD), and in terms of total man-days per year throughput from 1997 through 2008.

The ILARNG estimates that, with the new ranges, site utilization could eventually increase by approximately 15 percent over current levels (approximately 88,000

man-days per year), or to roughly 100,000 man-days per year as result of the Proposed Action (ILARNG, 2010b).

Vehicle Use: Vehicle use related to the proposed ranges would involve troop and equipment transport activities. Troop and equipment transport would occur within the MTC boundaries and between the MTC and home unit locations. Both military and personal vehicles would be used. Military vehicles could include the High-Mobility Multipurpose Wheeled Vehicle (HMMWV), the Heavy Expanded Mobility Tactical Truck (HEMTT), 5-ton capacity Family of Medium Tactical Vehicles (FMTV), the five-ton capacity Light Medium Tactical Vehicle (LMTV), and military tractor trailers. No Stryker² vehicle training or use is proposed at the MTC.

The actual number of vehicles would depend on the mix of drivers and military vehicles. Total traffic volumes of MTC-related users may increase by 15 percent over current conditions in the vicinity of MTC, and would occur during both daytime and nighttime hours. Approximately 1 percent of this traffic would be expected to occur during nighttime hours (ILARNG, 2010b).

² Stryker is a family of eight-wheeled all-wheel-drive armored combat vehicle.

3.0 ALTERNATIVES CONSIDERED

NEPA, CEQ regulations, and 32 CFR 651 require all reasonable alternatives to be rigorously explored and objectively evaluated. Alternatives eliminated from detailed study must be identified along with a brief discussion of the reasons for eliminating them. For purposes of analysis, an alternative was considered "reasonable" only if it would enable the ILARNG to accomplish the primary mission of providing land, facilities, and resources at the MTC to meet the purpose of and need for the Proposed Action. "Unreasonable" alternatives would not enable the ILARNG to meet the purpose of and need for the Proposed Action.

3.1 Screening Criteria

During development of the 2009 RCMP Annual Review and Update, the ILARNG used the "*comparison of non-quantitative benefit*" technique to evaluate potential alternatives for each of the proposed ranges and develop a decision matrix. The ILARNG selected this method because it has historically been used by decision makers to evaluate the impacts or effectiveness of alternative courses of action when detailed cost estimates, environmental impacts, or other strategic planning considerations are not fully known or developed (ILARNG, 2007b). The ILARNG used four major attributes. Each attribute in the decision matrix was weighted by a factor consistent with the Range Training and Land Program (RTLTP) Requirements Review and Prioritization Board's (RRPB)'s relational values as outlined in Army Regulation (AR) 210-21. The four attributes (and their weighting factors) are as follows:

- 1) Mission Support: the potential mission support impacts of the alternative based on the known or expected capability to provide standardized and realistic training (40 percent)
- 2) Environmental Stewardship: the potential environmental impacts of the alternative (25 percent)
- 3) Economic Feasibility: the potential economic feasibility impacts of the alternative based on the expected command level needed to resource the alternative (15 percent)
- 4) Productivity Enhancement: the potential productivity enhancement of the alternative based on known or expected cost-benefit savings for the ILARNG base operating and maintenance budget (20 percent)

Results of this analysis indicated maintaining the status quo was not a reasonable alternative for any of the required ranges because of inferior mission support. Modernization/New Construction is the ILARNG's preferred scenario for the ranges identified in the RCMP and proposed for the MTC.

In addition to the alternatives analysis conducted as part of the RCMP update process, the ILARNG applied the following criteria to screen and evaluate possible alternatives for the 15 development/maintenance projects discussed in **Section 2.0** of this EA. The ILARNG identified a suitable alternative would meet the majority, if not all, of the following criteria:

- 1) Be located within an existing ILARNG facility, preferably on property owned by the ILARNG
- 2) Avoid excessive travel times and cost for ILARNG units to be trained

- 3) Be within reasonable distance to populated areas in adjacent states to facilitate regional usage
- 4) Retain all standard SDZs within the installation's boundaries
- 5) Achieve a shared impact area with the existing range SDZs to the extent possible
- 6) Be proximate to existing, related facilities, including the roadway network, and buildings (i.e., logistical considerations)
- 7) Have reasonable access to electric and telephone utilities
- 8) Be within areas with few existing known environmental constraints, notably wetlands and streams
- 9) Have a sufficient amount of relatively level land, preferably previously disturbed or cleared
- 10) Be compatible with other current and approved future uses on site
- 11) Ensure no net loss in the capacity of the installation to support the military mission
- 12) Comply with existing laws, regulations, EOs, Army policy, and IDNR policy

After an examination of the existing ARNG facilities, the ILARNG identified the MTC met all of the selection criteria needed to accommodate the required TC 25-8 standard ranges and other proposed training support facilities. The MTC already contains existing range facilities and SDZs. Adding this training capability onsite would add minimally to various units' travel time and cost. Nine of Illinois' 11 metropolitan areas, representing over three-fourths of the State's population, are within 100 miles of the MTC.

3.2 Evaluated Alternatives

3.2.1 Alternative 1: Preferred Action Alternative

Under this alternative, the 15 proposed projects identified in **Section 2.0** would be implemented as described. This is the ILARNG's Preferred Action Alternative because it best meets the screening criteria set forth in **Section 3.1**. It effectively provides the best combination of land and resources to sustain quality military training and maintain and improve the units' readiness postures. Components of the Preferred Action Alternative have been sited within the MTC to minimize and/or avoid potential impacts to known environmental resources (see **Figure 3**).

Under the Preferred Action Alternative, the ILARNG would acquire an additional 220 acres of training land through a USACE land license (Project IL-6). Project IL-6 would provide a buffer between the MTC Cantonment Area and residential areas to the east of the installation.

The new training road (Project IL-7) would be constructed within this new land license area. Constructing this new road in the new land license area poses less environmental constraints in comparison to constructing it in the current eastern boundary of the training site. The potential need for stream crossings would be reduced in this area, and no modification of forested land would be required.

Under this alternative, the LFSH (Project IL-5) would be constructed in the northwestern portion of the MTC within the existing MOUT area (see **Figure 5**). This

location is preferred because it would facilitate easy access for training purposes, as soldiers could move directly from training in the MOUT area to the LFSH. Utilities and road infrastructure are already in the area.

Under the Preferred Action Alternative, the proposed projects would occur within previously disturbed or developed areas. Approximately 42 acres of land could be disturbed during construction activities. An additional 190 acres of MTC land would be designated as range SDZ during range operation. Maintenance projects would occur throughout the MTC (see **Section 2.1.3**).

3.2.2 Alternative 2: Build Alternative

Under this alternative, only 14 of the 15 proposed projects identified in **Section 2.0** would be implemented as described. Under the Build Alternative, the ILARNG would not acquire an additional 220 acres of training land through a USACE land license (Project IL-6). The new training road (Project IL-7) would be constructed along the eastern MTC boundary.

Under this alternative, the LFSH (Project IL-5) would be constructed in the northeastern portion of the Cantonment Area within the range complex area (see **Figure 4**). Due to its close proximity to the existing range complex, this location would also facilitate efficient training activities. Because the LFSH is proposed for construction in 2016 at this time, there is the possibility of unforeseen operational or facility management changes that could occur in the future. Therefore, the ILARNG chose to retain a second alternative location for the LFSH in this NEPA analysis.

The proposed projects would all occur within previously disturbed or developed areas with the exception of the proposed new training road (IL-7) location, which is currently wooded. Approximately 42 acres of land could be disturbed during construction activities. An additional 190 acres of MTC land would be designated as range SDZ during range operation. Maintenance projects would occur throughout the MTC.

The Build Alternative would still provide the land and resources necessary to sustain quality military training and maintain and improve the units' readiness postures. Components of the Build Alternative have also been sited within the MTC to minimize and/or avoid potential impacts to known environmental resources (see **Figure 3**).

3.2.3 Alternative 3: No Action Alternative

Under this alternative, the Proposed Action would not be implemented. Current installation operations would continue. This alternative would limit the capability of the ILARNG to carry out its assigned mission to provide adequate training facilities, and would not meet the purpose of or need for the Proposed Action. This alternative was retained to provide a comparative baseline analysis as required under Federal law.

Required training would continue to be conducted by the ILARNG at installations where space is available, primarily in the states of Wisconsin, Indiana, Tennessee, and Missouri. This would continue to cause ILARNG units to risk not meeting STRAC requirements, and to use excessive training time for travel, potentially resulting in an inability to meet training proficiency standards.

3.3 Alternatives Eliminated From Further Consideration

3.3.1 Change the Operational Structure and Procedures

This scenario modifies the ILARNG operational structure and units to be compatible with existing training site capabilities. These types of decisions are the responsibility of Department of the Army Headquarters (DA HQ) and NGB force structure decision makers. ILARNG operational structure and units are configured in accordance with Army Transformation and ARFORGEN requirements. For these reasons, the alternative was not carried forward for analysis.

3.3.2 Use of Other ILARNG Training Sites

Through applying the site screening criteria and subsequent analysis described in **Section 3.1**, the ILARNG determined no other suitable location within the State of Illinois is currently available to satisfy the purpose of and need for this Proposed Action. ILARNG has two large training sites: Sparta Training Area (STA) and MTC. The ILARNG would like to maintain the STA as a maneuver training area only. In addition, the STA is located in the far southwestern portion of the state, approximately 275 miles (approximately 5 hours) from the MTC. This would continue to cause ILARNG units to use excessive training time for travel, potentially resulting in an inability to meet training proficiency standards.

3.3.3 Construction of New Training Site

This alternative was examined, but eliminated, because the DoD is eliminating and/or consolidating many installations throughout the U.S. as a primary component of Base Realignment and Closure (BRAC). Overall, it was determined sufficient existing DoD property is not available within the DoD Real Property inventory to accommodate additional ranges without acquiring additional real property. The ILARNG determined, in accordance with DoD directives and vision, establishing a new training site was neither feasible nor necessary, as sufficient land area is available at the MTC to accommodate the required ranges,.

3.3.4 Reduced Number/Scale of Ranges

The potential for a reduced-scale alternative was considered and evaluated as part of the RCMP Update Planning analysis described in **Section 3.1**. The Preferred Action Alternative represents the optimum, and minimum, range development necessary to meet the purpose of and need for the Proposed Action. Eliminating proposed ranges would not meet the ILARNG's specified training requirements. Reducing the size of proposed ranges would not meet the standards outlined in TC 25-8. For these reasons, a reduced-scale alternative was determined infeasible and was not further considered.

4.0 AFFECTED ENVIRONMENT

This section specifically describes current baseline conditions within the MTC (**Figure 2**), with emphasis on those resources potentially impacted by the Proposed Action and alternatives. **Section 5.0**, Environmental Consequences, identifies potential direct, indirect, and cumulative effects of the identified project alternatives on each of the issue areas presented in this section.

4.1 Location Description

The 2,850-acre MTC is located in LaSalle County, Illinois approximately 2 miles south of the City of Marseilles and approximately 78 miles southwest of Chicago (**Figure 1**). Approximately 2,550 acres of the MTC is owned by the State of Illinois and utilized by two State agencies under a MOU between the Department of DMAIL and the IDNR. The remaining 300 acres of the MTC land are owned by Excelon ComEd. This land is leased to the USACE Louisville District (**Figure 2**). DMAIL has a license agreement with USACE to conduct training activities within this 300-acre area. The two land use agreements are included in **Appendix A**.

The site has a continental climate, typical of northern Illinois, with hot summers and cold winters. Annual precipitation averaged 35.7 inches between 1971 and 2000, while annual snowfall averaged 24.3 inches (NRCS, 2008).

4.2 Land Use and Cover

4.2.1 Historical Land Use

The land was mainly used for timber, grazing, and agriculture prior to the ILARNG and IDNR taking over the site in 1980. No historical data on logging practices are available, but it is estimated the area was last logged between 1935 and 1950.

A 210-acre area in the north-central portion of the MTC was leased through the IDNR for mining sand, gravel, and other similar materials. Spicer Gravel Company, Inc. held the most recent mining lease for this area. The lease Spicer Gravel was operating under was purchased from Garrow Gravel Service, Inc. in 1997. Garrow Gravel Service mined the area for approximately 20 years prior to Spicer Gravel taking over the lease. Spicer Gravel terminated their lease in 2002.

4.2.2 Current Land Use and Cover

The MTC is adjacent to and south of the Illinois River Valley. The area is covered with prairie and mid-successional forested areas. The MTC is comprised mainly of undeveloped grounds, which include upland and lowland forests, food plots, restored prairie and grasslands, scrub-shrub areas, and surface water features. Surface water features include South Kickapoo Creek, several unnamed intermittent and perennial tributaries of Kickapoo Creek, four small ponds, and one 0.7-acre wetland in the southwest portion of the site. All developed and maintained grounds are located within the Cantonment and MOUT areas (**Figure 2**). Land cover types are summarized in **Table 6**.

Land Cover Type	Area
Forest	1,950 acres
Grassland	540 acres
Gravel mining area (includes quarry lakes)	70 acres
Agriculture	120 acres
Lakes, ponds, and wetlands	20 acres
Improved grounds	150 acres
Other Features (area included in land-cover types, above)	Length
Main roads	20 miles
Trails	10 miles
Streams	69 miles

ILARNG, 2007a

DMAIL uses the MTC for field training during the spring, summer, and fall months, and for Cantonment and range firing year round. IDNR uses the site for wildlife propagation, prairie restoration, and outdoor recreational opportunities year round, and for upland game hunting during the late fall and winter months. IDNR also manages five agricultural fields totaling approximately 120 acres as wildlife food plots. Field training is not conducted during the hunting season. The site is also known as the Marseilles Fish and Wildlife Area (FWA) (DMAIL and IDNR, 1999).

Military training is restricted to the Cantonment area and Northern Use Area (**Figure 2**) during the winter months. The Cantonment area land is part of the joint land use area; however, the ILARNG has sole use of the approximate 274-acre Cantonment area year round. The Cantonment area is used for National Guard activities only. This area is the permanent site of the National Guard Armory, site manager residence, Unit Training Equipment Site (UTES), indoor simulation range, vehicle maintenance facility, wash rack, fuel island, vehicle parking lots, ammunition supply point, a range complex, and various support buildings. The Northern Use area is available for training year round with the exception of firearm deer season weekends and Mondays through Thursdays between 1 October and 10 January as outlined in the MTC MOU (**Appendix A**). The ILARNG has jurisdiction year round on the approximate 300-acre area licensed through the USACE on the eastern boundary of the 2,850-acre property (**Figure 2**).

The MTC is divided into 14 training areas (**Figure 2**). Training activities are assigned to training areas based on availability, range activities, and whether the physical attributes of the training area suit the training mission. Types of training at the MTC include patrolling, surveillance, terrain navigation, small weapons firing, dismounted movement techniques, service support establishment, track vehicle operation, engineering support, and aviation support. The ILARNG units use the site for individual duty training, weekend training, and annual training. A variety of police and other government agencies also use the ranges and training areas at the MTC. MTC usage data for TY 1997 through 2008 is included in **Appendix D**.

Approximately 670 acres of the MTC are currently used for bivouacking (**Figure 3**), which involves establishing temporary field quarters for as little as one or as many as

several platoons or companies. Temporary bivouac infrastructure can consist of vehicle parking, tents, portable latrines, and potable water.

A range complex comprising approximately 70 acres was constructed at the MTC in 1984/1985. The ranges are located in the Cantonment Area along the south boundary road near the east end of the property. The complex consists of six ranges. The range complex includes support facilities for parking, latrines, target storage building, range control towers, a flagpole, and an observation tower. Approximately 920 acres of forested area in the central section of the MTC is devoted to a range fan. The range fan area is off limits to all activities while the range complex is in use (**Figure 2**).



Range Complex Area facing North



Cantonment Area in Southwestern Portion of the MTC

4.2.3 Surrounding Land Use

No formal land use or zoning requirements are in place in the vicinity of the MTC. Surrounding land use is mainly agricultural with increasing residential development to the east. Exelon's nuclear LaSalle Generating Station is approximately 1 mile south of the Cantonment Area. The nuclear power plant is located adjacent to La Salle Lake, a large reservoir. The Illinois River's lock and dam in the City of Marseilles is located approximately 2 miles north of the site. The Illini State Park is located approximately 1 mile northwest of the MTC. As of spring 2006, wind turbines were constructed both west and south of the MTC (**Figure 1**).



**Wind turbines adjacent to the MTC
along N 23rd Road**



**Aerial view of the Center of the MTC
looking Northwest**

4.3 Air Quality

4.3.1 Ambient Air Quality

The ambient air quality in an area can be characterized in terms of whether or not it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS). The Clean Air Act (CAA), as amended, requires the USEPA to set NAAQS for pollutants considered harmful to public health and the environment. NAAQS are provided for six principal pollutants, called "criteria pollutants" (as listed under Section 108 of the CAA): carbon monoxide (CO); lead (Pb); nitrogen oxides (NO_x); ozone (O₃); particulate matter (PM), divided into two size classes of 1) aerodynamic size less than or equal to 10 micrometers (PM₁₀), and 2) aerodynamic size less than or equal to 2.5 micrometers (PM_{2.5}); and sulfur dioxide (SO₂)

Areas are designated by the USEPA as "attainment," "nonattainment," "maintenance," or "unclassified" with respect to the NAAQS. Regions in compliance with the standards are designated as "attainment" areas. A "nonattainment" status is designated in areas where the applicable NAAQS are not being met. Areas that have been classified as "nonattainment" but are now in compliance can be redesignated "maintenance" status if the state completes an air quality planning process for the area. Areas for which no monitoring data is available are designated as "unclassified," and are by default considered to be in attainment of the NAAQS.

The General Conformity Rule (40 CFR Part 51, Subpart W) requires Federal agencies to prepare written Conformity Determinations for Federal actions in or affecting NAAQS in non-attainment areas, except when the action is covered under the Transportation Conformity Rule or when the action is exempted because the total increase in emissions is insignificant, or a de minimis amount. Air quality in La Salle County is designated "in attainment" for all criteria pollutant NAAQS (USEPA, 2008). Therefore, a conformity analysis is not required for this project.

The primary regulatory authority for air quality in Illinois is the IEPA – Bureau of Air. The MTC does not contain any State-permitted air emissions sources.

4.3.2 Sensitive Receptors

There are few sensitive receptors for air pollutants due to the MTC's rural nature. Sensitive receptors include, but are not limited to, asthmatics, children, and the elderly, as well as specific facilities, such as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, and childcare centers.

Sensitive receptors within one mile of the MTC boundary include several residences approximately 0.5 mile from the northern and eastern installation boundaries. No other schools, hospitals, daycare facilities, nursing homes, or other highly sensitive receptors are located within one mile of MTC boundaries.

4.4 Noise

4.4.1 Background

Noise is generally defined as unwanted sound. It can be any sound that is undesirable because it interferes with communications or other human activities, is intense enough to affect hearing, or is otherwise annoying. Noise may be intermittent or continuous, steady, or impulsive. Human response to noise varies, depending on the type of the noise, distance from the noise source, sensitivity, and time of day. The areas surrounding the site are mostly rural with residences east of the MTC. Sensitive areas with respect to noise are the same as those listed for air quality (see **Section 4.3.2**).

Land use guidelines identified by the Federal Interagency Committee on Urban Noise (FICUN) are used to determine compatible levels of noise exposure for land use planning and control (FICUN, 1980). Chapter 14 of AR 200-1 implements Federal regulations associated with environmental noise from DA activities. The decibel (dB) is the accepted unit of measurement for noise level, and it uses a logarithmic scale. The A-scale decibel (dBA) is an adjusted dB that corresponds to the range of normal human hearing. One of the metrics used by the DA to quantify the noise environment at DA installations is Peak sound level (dBP), which is the maximum instantaneous sound level of an event. The dBP is neither weighted nor time integrated, and is used to further define noise zones. Another metric used in defining noise zones is the Day-Night Average Sound Level (DNL). The DNL represents sound levels measured by totaling and averaging levels during a 24-hour period. People are usually more sensitive to sound levels at night based on low background sound levels; therefore, a 10 dB "penalty" is added to operations occurring between the hours of 10:00 PM and 7:00 AM. Thus, one nighttime sound event is equivalent to 10 daytime events of the same level.

AR 200-1 Section 14-4 defines land use compatibility concerning environmental noise for DA activities. A summary of expected noise levels for three general defined noise zones are presented in **Table 7**.

Table 7. Noise Limits for Land Use Compatibility				
Noise Zone	Population Highly Annoyed	Noise Sensitive Land Use	Small Arms and Transportation Average Daily Sound Level	Small Arms Peak
Zone I	<15%	Acceptable	<65 dBA	<87 dBP
Zone II	15%-39%	Normally Not Recommended	65-75 dBA	87-104 dBP
Zone III	>39%	Not Recommended	>75 dBA	>104 dBP

4.4.2 Current Noise Environment

The United States Army Public Health Command (USAPHC) developed a statewide noise management plan for all ILARNG's facilities in 2002. The Operational Noise Management Program (ONMP) is the primary tool the ARNG uses to analyze noise impacts and land use compatibility. The ONMP develops studies to identify noise contours with both location and intensity described. Management practices are then implemented to isolate and minimize noise based on the results of the study.

Training is integral to the mission of the ILARNG at the MTC, and the ILARNG is involved in activities required for the combat readiness of the personnel involved. Examples of anticipated noise-producing activities at the MTC include:

- Construction activities;
- Firing small arms up through 0.50 caliber machine guns;
- Helicopters;
- General troop training; and
- Use of authorized, military and privately owned vehicles.

The predominant offsite source of ambient noise in the site vicinity is roadway traffic and wind turbines (**Figure 1**).

A study was conducted by the USAPHC in December 2008 to assess existing operational noise at the MTC (USAPHC, 2009). The USAPHC developed noise contours for the existing small caliber ranges using its Small Arms Range Noise Assessment Model (SARNAM). The SARNAM is a computerized tool that enables calculation and display of noise contours for small arms ranges. Noise contours show predicted noise levels in the vicinity of the MTC to provide guidance on land uses in those areas (see **Table 7**).

Land east and south of the MTC is predominantly agricultural and undeveloped. A few scattered residences occur east of the MTC. As illustrated in **Figure 8**, the Zone II noise contour extends less than approximately 3,500 feet and 500 feet beyond the southern and eastern boundaries, respectively. The Zone III noise contour extends up to approximately 650 feet from the southern boundary (USAPHC, 2009). No residences occur within the existing small caliber Zone II or Zone III noise contours. However, approximately two residences are situated along the outer eastern edge of the Zone II contour.

USAPHC also assessed the potential complaint risk for noise generated during use of the Grenade Launcher Range (referred to as Range E). Based on the location of this range within the range complex, noise levels were determined to be barely audible at the MTC boundary. Therefore, the risk of a noise complaint associated with this range is very low.

No mitigation measures for noise are currently in place. Ranges can be used 24 hours a day. No range noise complaints have been received. Approximately 1 percent of vehicle travel to and from the MTC is estimated to occur at night. No noise complaints have been received concerning military or privately owned vehicles related to the MTC.

MTC has received noise complaints due to helicopters. Approximately three helicopters fly to and from the MTC on average per month. Approximately two days per year MTC experiences flights of up to eight helicopters at a time. Helicopter landing sites are selected on a mission-specific basis. Six 20-foot by 40-foot concrete, helicopter pads are located in the Cantonment Area. The last helicopter noise complaint was more than two years ago (ILARNG, 2008). The air corridor route has been shifted and is no longer in the vicinity of nearby sensitive receptors (e.g., residences), which may account for the drop off in complaints (**Figure 1**).

4.5 Topography, Geology, and Soils

The topographic relief at the site is associated principally with the South Kickapoo Creek, a major drainage way that bisects most of the site. The South Kickapoo and other intermediate unnamed streams at the MTC exhibit steep gradients with narrow, steep valleys. The site topography varies from a maximum elevation of about 740 feet in the upland areas to a minimum elevation of about 500 feet at the base of the bluff of the Illinois River Valley on the north end of the site. The site does not consist of a uniformly sloping plain, but is highly dissected in the transition from the higher upland area to the lower controlling elevation of the Illinois River Valley (ILARNG, 2007a).

The underlying bedrock at the MTC consists of sandstone, siltstone, shale, coal, limestone, and claystone. Bedrock outcrops occur in major drainage ways where the glacial drift has been eroded away and the stream has incised the bedrock. Available mapping information from the Illinois State Geological Survey (ISGS) indicates no underground coal mining has occurred under the MTC, although coal mining has occurred in the surrounding areas (ILARNG, 1994).

Soils information for the MTC is available through the NRCS (2008). Twenty soil map units occur within the MTC boundaries. Approximately 81 percent of the soils at the MTC have a severe to very severe erosion potential. Other soil management concerns include low moisture holding capacity and excess water hazards, which include poor soil drainage, wetness, high water tables, and overflow. Only 30 acres (1 percent) of the property are classified as hydric soils. Approximately 824 acres are characterized as prime farmland, and an additional 42 acres are classified as prime farmland if drained. Soil map units within the range and supporting facility construction footprints are summarized in **Table 8**.

Table 8. Soil Map Units within Proposed Project Area					
Soil Type	SiteCover (Acres) *	Slope (%)	Prime Farmland	Hydric	Limitations
Bryce silty clay	3.2	0 to 2	Yes ₁	Yes	Water Hazard (moderate)
Chatsworth silty clay loam	9.0	7 to 50	No	No	Soil erosion (very severe)
Frankfort silt loam	0.6	2 to 4	Yes ₂	No	Soil erosion (severe to very severe)
Nappanee silt loam	20.6	2 to 7	Yes ₃	No	Soil erosion (severe to very severe)
Proctor silt loam	0.3	4 to 7	Yes	No	Soil erosion (severe)
Rutland silt loam	0.6	2 to 7	Yes ₄	No	Water Hazard (moderate to severe)
St. Clair silt loam	4.1	7 to 18	No	No	Soil erosion (severe to very severe)
Cut and Fill	22.9	NA	NA	NA	NA

* Approximate acreage includes proposed construction project footprints only
 NA –Not Applicable
 1 – Prime Farmland, if drained
 2 – Prime Farmland, if slopes are 2 to 4 (~0.5 acre)
 3 – Prime Farmland, if slopes are 2 to 4 (~7.3 acres)
 4 – Prime Farmland, if slopes are 2 to 5 (~0.6 acre)

Source: NRCS, 2008

Approximately 19 percent (11.9 acres) of the proposed construction footprints are comprised of prime farmland and/or prime farmland if drained. Bryce silty clay is the only hydric soil types within the proposed construction areas (**Figure 9**). Less than 1 acre of the construction footprints contains hydric soils. The proposed construction areas are classified as disturbed/maintained grounds, and no known wetlands occur in them.

4.6 Water Resources

4.6.1 Surface Waters

The MTC is located within the Upper Illinois River Basin. The Upper Illinois River Basin drains approximately 10,950 square miles, which includes metropolitan Chicago and portions of Indiana and Wisconsin. Approximately 91 percent of the basin is drained by three principal rivers: the Kankakee, the Des Plaines, and the Fox. The Kankakee and Des Plaines Rivers join near Morris, Illinois to form the Illinois River approximately 25 miles east of the MTC (USGS, 1998). The MTC is adjacent to and south of the Illinois River Valley (**Figure 1**).

Five small ponds and two lakes are located within the MTC. The ponds range in size from less than 0.1 acres to 0.9 acres. The two lakes, located in the northern portion of the training site, were formed as a result of the gravel mining operation. The larger lake is approximately 12.1 acres and the smaller lake is approximately 2.4 acres (**Figure 10**).

Only one wetland (0.7 acre) was delineated at the MTC during a previous wetland survey (NRCS, 1997). It is located along the southwestern boundary just north of the

Cantonment Area; none of the project footprints are in the vicinity of this wetland. This wetland was determined to meet all three wetland criteria (hydrology, soils, and vegetation). No National Wetland Inventory (NWI) wetlands occur within the proposed construction footprints (**Figure 10**).

South Kickapoo Creek, a tributary of the Illinois River, is the major stream draining the MTC. Several tributaries of South Kickapoo Creek, including many perennial streams, are found throughout the installation. South Kickapoo Creek flows from south to north and discharges into the Illinois River approximately 3,000 feet downstream of the MTC. Stream segments within the MTC were classified using the Strahler Method of stream hierarchy (**Figure 10**). The Strahler Method assigns the most upstream segment of a stream as Level 1. Once a Level 1 stream segment converges with another Level 1, it then becomes a Level 2, and so forth. According to a 2003 flood study, the MTC contains Level 1 through Level 5 stream segments (AMEC, 2004).

Approximately 895 linear feet of stream (Level 1) occur within the proposed M203 grenade launcher range (IL-4) and LFBF (IL-3) footprints. Streams (Level 1 and 2) occur in proposed road construction footprints (IL-7). Both Stream Level 1 and 2 would be characterized as ephemeral streams. No other surface water features occur within the proposed range or supporting facility construction areas (**Figure 10**).

Perino Technical Services (PTS) conducted a limited survey of water quality on South Kickapoo Creek, the two lakes, and in one of the larger ponds located in the northern portion of the training area. These surveys were conducted in the summer and fall of 1995. No conclusions on surface water quality could be made for these features because the data were so limited (PTS, 1996). A copy of the report is on file in the Facilities Division of DMAIL.

4.6.2 Floodplains

Floodplains are generally low areas adjacent to streams, rivers, or lakes prone to flooding. The Federal Emergency Management Agency (FEMA) identifies flood-prone areas on Flood Insurance Rate Maps (FIRMs). FIRMs are primarily based on historic, meteorological, hydrologic, and hydraulic data. Open-space conditions, flood control works, and development are also taken into account in creating FIRMs. Base flood areas, or the 100-year floodplain, are delineated on FIRMs. An area within the 100-year floodplain has a 1 percent chance of flooding each year or a 26 percent chance of flooding over a 30-year period. The MTC is not located within the 100-year or 500-year floodplains based on the Digital Flood Insurance Rate Map (DFIRM) - 17099C0575E, dated 7 September 2001.

4.6.3 Groundwater

Groundwater in the region is supplied by two aquifer systems: a surficial aquifer and the underlying Pennsylvanian Aquifer. The surficial aquifer is composed of Quaternary sediment deposits that consist mainly of unconsolidated sand and gravel extending less than 100 feet below the ground surface. Groundwater in the surficial aquifer is typically hard with high iron concentration. Well yields from the surficial aquifer in this area are typically less than 100 gallons per minute, but can exceed 500 gallons per minute (Lloyd and Lyke, 1995).

The Pennsylvanian aquifer, which lies beneath the surficial aquifer, is composed of consolidated sandstone and some limestone of Pennsylvanian age. Groundwater

moves through fractures in the limestone. The surficial aquifer replenishes this aquifer. The Pennsylvanian aquifer has typically been found to yield 1 to 100 gallons per minute; however, well yields are 10 gallons per minute on average. Smaller well yields are usually found in areas composed of sand lenses surrounded by fine grained deposits (e.g., till) within inter-stream areas. The water is moderately hard within freshwater portions of the Pennsylvanian aquifer, with a median dissolved solids concentration of slightly greater than 500 milligrams/liter with concentrations increasing with depth (Lloyd and Lyke, 1995).

Groundwater in La Salle County is prevalent within the sandstone layers at depths ranging from near the surface to more than 2,000 feet below the ground surface. A large portion of water for municipal and domestic use is taken from shallow wells. Existing wells at the MTC vary in depth from about 250 to 400 feet and produce about 9 to 10 gallons per minute. In general, the county has an adequate supply of groundwater for all uses (ILARNG, 1994).

The high silt and clay content of the loessial surface soils prohibit rapid drainage, and a perched water table exists at the base of the loess where the more impermeable till material is encountered. Perched groundwater appears very near the ground surface during wetter seasonal periods. Specific groundwater quality data is not available for the MTC (ILARNG, 1994).

4.7 Biological Resources

4.7.1 Flora

During the vascular plant inventory, 489 vascular plant species were identified (Jones, 1996). Approximately 15 percent of the identified species are invasive species. No state or federal endangered species were identified at the MTC.

Six predominant habitats are present at the MTC: managed and disturbed areas, upland and lowland forest, agricultural fields managed by the IDNR, restored prairie and grasslands, scrub-shrub, and aquatic (e.g., streams, ponds and lowlands) (PTS, 1996). Habitat types are described below and illustrated in **Figure 11**.

- **Managed/Disturbed Areas** - Includes areas used frequently for military activities; with a long-term presence of human activity; and land not managed as natural habitats.
- **Forest** - Three types of forest communities are found at the MTC: dry-mesic upland forest (68 percent), mesic upland forest (18 percent), and mesic floodplain forest (14 percent). Forested areas are primarily comprised of immature oak-hickory stands
- **Prairie and Grassland** - Two types of prairie communities are found at the MTC: dry-mesic prairie and glacial drift hill prairie. Dry-mesic prairies within the MTC were characterized as low quality because they are early successional and severely disturbed. The hill prairies located at MTC range from moderate to high quality. The glacial drift hill prairie area (35 acres) in the northeast corner of the MTC was designated as an Illinois Natural Area Inventory site.

- Scrub-shrub - Scrub-shrub areas are successional fields scattered throughout the MTC in recently disturbed areas. They are usually located in the transition areas between forests and grasslands.
- Agricultural Fields - The IDNR manages five fields totaling approximately 123 acres for wildlife habitat. These fields are primarily managed as habitat for Mourning Dove. These fields are planted with sunflower and millet (*Echinochloa sp.*). Corn is planted around the perimeter of the fields. Approximately half of the sunflower, all of the corn, and all of the sorghum are left standing as a winter food source (PTS, 1996).
- Aquatic Habitats – Aquatic habitats include the South Kickapoo Creek and its tributaries, several ponds and lakes, and a variety of ephemeral pools and a 0.7 acre wetland (see **Section 4.6.1**).

The proposed range and training support facility construction project areas are located within disturbed/managed areas or grassland habitats, with the exception of a portion of the proposed LFBF (IL-3). The proposed LFBF project footprint is comprised of approximately 4 acres of forested/scrub-shrub habitat with the remaining area grassland. This area is dominated by invasive species, predominantly autumn olive (*Elaeagnus umbellata*) (ILARNG, 2010b). In addition, if the Alternative 2 (Build Alternative) configuration of the new training road (IL-7) were constructed, it would traverse approximately 4.4 acres of forested habitat (**Figure 11**).

4.7.2 Fauna

A faunal species survey, excluding birds, was conducted in the spring, summer, and fall of 1995 (PTS, 1996). The avian survey was conducted separately during April, May, and June of 1995 (Birkenholz, 1995). A mist net survey for bats was conducted in 2001 (Carter, 2001). A total of 21 species of mammals (including three bat species), nine species of amphibians, and three species of reptiles were identified (Carter, 2001; PTS, 1996). A total of 111 avian species were positively identified, which includes 71 species with the potential to breed on site. The remaining species are either not likely to breed on site or are considered migrants (McKee, 2006).

4.7.3 Special Status Species

The USFWS administers the Endangered Species Act of 1973 as amended. This law provides federal protection for species designated as federally endangered or threatened. An endangered species is "in danger of extinction throughout all or a significant portion of its range," and a threatened species "is likely to become an endangered species within the foreseeable future" (USFWS, 1988). Special status species are listed as threatened or endangered, are proposed for listing, or are candidates for listing by the state and/or federal government.

No federally listed species have been observed during previous flora and fauna surveys at the MTC (ILARNG, 2007a) and no critical habitat exists at the MTC. **Table 9** lists the federally endangered species observed in La Salle County, Illinois. The northern harrier (*Circus cyaneus*) and Henslow's sparrow (*Ammodramus henslowii*) are the only state-listed threatened or endangered species observed previously at the MTC (ILARNG, 2007a). The northern harrier and Henslow's sparrow are state-listed endangered and threatened species, respectively.

Table 9. Federally Threatened and Endangered Species Observed in La Salle County, Illinois			
Common Name	Scientific Name	State Listing	Federal Listing
Decurrent false aster	<i>Boltonia decurrens</i>	LT	T
Eastern prairie fringed orchid	<i>Platanthera leucophaea</i>	LE	T
Indiana bat	<i>Myotis sodalis</i>	LE	E
Prairie bush clover	<i>Lespedeza leptostachya</i>	LE	T
FEDERAL STATUS E = Endangered = Danger of extinction throughout range T = Threatened = Likely to become endangered in foreseeable future throughout range ILLINOIS STATUS LE = Endangered - includes any species in danger of extinction as a breeding species in Illinois LT = Threatened - includes any breeding species likely to become a state endangered species within the foreseeable future in Illinois			

Source: USFWS, 2009; IDNR, 2008

A mist netting survey was previously conducted at the MTC. No federally endangered Indiana bats were captured during the bat survey. According to this study, the habitat at the MTC is not ideal to support Indiana bat populations. The forest is relatively young and there are few dead or dying trees with exfoliating bark (Carter, 2001).

The prairie bush clover was not observed during 1995 floral inventories. The USFWS states this species is typically found in prairie remnants. High quality prairie remnants occur in the northeastern portion of the MTC; however prairie bush clover has not been observed during previous surveys. No proposed projects occur within this area.

4.8 Cultural Resources

4.8.1 Overview

Cultural resources are historic properties as defined by the NHPA, cultural items as defined by the Native American Graves Protection and Repatriation Act (NAGPRA), archaeological resources as defined by the Archaeological Resources Protection Act (ARPA), sacred sites as defined by EO 13007 to which access is afforded under the American Indian Religious Freedom Act (AIRFA), and collections and associated records as defined by 36 CFR 79. NEPA requires consideration of "important historic, cultural, and natural aspects of our natural heritage." Consideration of cultural resources under NEPA includes the necessity to independently comply with the applicable procedures and requirements of other federal and state laws, regulations, EOs, presidential memoranda, and ARNG guidance.

The principal federal law addressing cultural resources is the NHPA of 1966, as amended (16 USC Section 470), and its implementing regulations (36 CFR 800). The regulations, commonly referred to as the Section 106 process, describe the procedures for identifying and evaluating historic properties. Historic properties are those properties listed on or eligible for listing on the NRHP. Agencies are required to consult with the State Historic Preservation Office (SHPO) as part of the Section 106 process. The term "historic properties" refers to cultural resources that meet specific criteria for eligibility for listing on the NRHP. Historic properties need not be formally listed on the NRHP. Section 106 does not require preservation of historic

properties, but ensures the decisions of federal agencies concerning treatment of these places result from meaningful considerations of cultural and historic values and of the options available to protect the properties. However, Federal agencies are required under the NHPA to consult with stakeholders and develop reasonable mitigation when their actions will adversely affect historic properties. The Proposed Action is an undertaking as defined by 36 CFR 800.3, and is required to comply with the requirements of Section 106.

Archeological resources on Federal lands are protected under the ARPA (ARPA, Public Law [PL] 96-95). Native American human remains, burials, and associated burial goods on federal lands or federally controlled lands are protected under Section 3 (c) of the NAGPRA (NAGPRA, PL 101-601) and its implementing regulations (43 CFR Part 10). These regulations also require Federal officials to take reasonable steps to determine whether a planned activity may result in excavation of human remains, funerary objects, sacred objects, or objects of cultural patrimony from Federal lands (43 CFR Part 10.3[c][1]).

The Illinois Human Skeletal Remains Protection Act (HSRPA; 20 Illinois Compiled Statutes [ILCS] 3440, 17 Illinois Administrative Code [IAC] 4170) requires a permit before anyone may disturb human remains, markers, and contents where burials are more than 100 years old, and are not in a registered cemetery. This applies to both public and private lands. Violations may result in criminal sanctions. The Illinois State Museum (ISM) is in charge of curating all artifacts discovered on state property. No human remains have been discovered on DMAIL property to date.

The DoDI 4710.02 (*DoD Interactions with Federally Recognized Tribes*) provides guidance for interacting and working with Federally recognized American Indian and Alaska Native governments or tribes. This Instruction implements *Annotated DoD American Indian and Alaska Native Policy* (27 Oct 99), which governs compliance with EO 13175 (Consultation and Coordination with Indian Tribal Governments) and Presidential Memoranda for *Heads of Executive Departments and Agencies on Government-to-Government Relations with Native American Tribal Governments* (29 April 1994). The DoD policy outlines DoD trust obligations, communication procedures with tribes on a government-to-government basis, consultation protocols, and actions to recognize and respect the significance tribes ascribe to certain natural resources and properties of traditional cultural or religious importance. The policy requires consultation with Federally recognized tribes for proposed activities that could significantly affect tribal resources or interests.

The ILARNG ICRMP, prepared in consultation with the IHPA³, provides detailed guidelines and procedures to enable the ILARNG to meet legal responsibilities for identification, evaluation, and treatment of historic properties under its jurisdiction in accordance with applicable Federal and state regulations affording protection to cultural resources (ILARNG, 2002).

4.8.2 Archaeological Resources

The ISM conducted detailed cultural resource inventories for the entire 2,850-acre site at the MTC in 1983 and 1995. A total of 97 archeological sites were documented within the MTC. A total of 83 of these sites are prehistoric in age, 5 are mixed historic and prehistoric, and 9 are historic sites. The vast majority of these archeological sites, 75 sites, contain small artifact assemblages (1 to 4 artifacts).

³ The IHPA is the State Historic Preservation Office in the State of Illinois.

Seven of the sites have medium assemblages of artifacts (4 to 14), and 15 sites have a large assemblage of artifacts (>15). Six of the archeological sites were considered historically significant and potentially eligible for the NRHP. After IHPA's review of these findings, it was determined only two of the six areas would require additional work should future land modifications impact them (ILARNG, 2002). No further work is required for the remainder of the MTC. The IHPA concurred with the 2,850-acre Phase I survey findings on 14 March 1996 (see **Appendix B**).

None of the potentially eligible sites for the NRHP occur within the proposed project footprints or their SDZs. Therefore, per the 13 November 2008 concurrence letter, no further work is required within the proposed project areas. These particular sites are located in the far northern portion of the MTC, and are restricted to foot traffic only. No digging or vehicle traffic is allowed in these areas (ILARNG, 2007a).

An archaeological survey has not been conducted previously in the proposed 220-acre license area (Project IL-6). Once it has been determined Project IL-6 would be implemented, the ILARNG will conduct an archaeological survey of this area and consult with IHPA prior to implementing development and/or training activities.

4.8.3 Architectural Resources

No architectural resources are located within the Proposed Action area. No buildings/structures over 50 years in age, historic districts, or historic properties occur within the MTC or within the immediate vicinity of MTC.

4.8.4 Native American Consultation

The ILARNG is conducting formal consultation with Federally recognized Native American tribes as required under DoDI 4710.02. The ILARNG has considered the *Annotated DoD American Indian and Alaska Native Policy*, EO 13175, AR 200-1, and guidance in DA PAM 200-4 during this process. The following six federally recognized tribes were identified as having potential ancestral ties to the Marseilles, Illinois area:

- Citizen Potawatomi Nation
- Forest County Potawatomi
- Hannahville Indian Community Council
- Huron Potawatomi
- Pokagon Band of Potawatomi Indians
- Prairie Band Potawatomi Nation

These entities were invited to participate as Sovereign Nations per EO 13175 (Consultation and Coordination with Indian Tribal Governments) in both the EA and the NHPA Section 106 process. Consultations with these tribes were conducted in accordance with the protocol set forth in the NGB (2006) NEPA Handbook.

No responses have been received to date. Copies of letters submitted to these Federally recognized Native American tribes and their responses are included in **Appendix B**. A MFR is also included in **Appendix B**, which summarizes consultation efforts by the ILARNG.

4.9 Socioeconomics

The following subsections identify and describe the socioeconomic environment surrounding the MTC. Presented data provide an understanding of the socioeconomic factors that have developed the area. Socioeconomic areas of discussion include the local demographics, regional and local economy, local housing, and local recreation activities. Data used in preparing this section was collected from the 2000 Census of Population and Housing (U.S. Census Bureau, 2000), Illinois Department of Commerce and Economic Opportunity (DCEO), and Illinois Department of Employment Security (IDES).

4.9.1 Population

The population of La Salle County was 106,913 in 1990 and 111,509 in 2000 - an increase of 4.3 percent. The 2007 population of La Salle County was 112,616, ranking 16th in the state. The City of Marseilles had a population of 4,811 in 1990 and 4,894 in 2007, an increase of approximately 1.7 percent. The State of Illinois had an overall increase of 8.6 percent, much less than the overall 13.2 percent increase in U.S. population over the 1990 to 2000 period (U.S. Census Bureau, 1990 and 2000). The information presented in **Table 10** indicates the population in La Salle County will increase by nearly 20 percent between 2010 and 2030, which is slightly greater than the overall state (14.0 percent growth) and U.S. (17.7 percent growth).

Year	State of Illinois	La Salle County
2010	13,279,091	118,385
2015	13,748,695	124,277
2020	14,316,487	131,155
2025	14,784,968	137,954
2030	15,138,849	141,615
Projected Change, 2010-2030 (%)	14.0%	19.6%

Source: Illinois DCEO, 2008

4.9.2 Regional Economy

The civilian labor force in 2000 was 86,868 in La Salle County and 3,730 in Marseilles. Regional economic information is provided in **Table 11**. The top three industry types in the region are: (1) educational, health, and social services; (2) manufacturing; and (3) retail trade. These industries employ approximately 51 percent of the civilian labor force in Marseilles. The top three employers in La Salle County include public schools, hospitals, and ComEd.

Per capita and median household income statistics from the 2000 U.S. Census indicate that La Salle County and Marseilles is lower than the state average. However, poverty levels were still lower than the State of Illinois.

La Salle County has an unemployment rate of 8.2 percent, which is the 25th highest in Illinois (102 counties total). The overall state unemployment rate is 7.3 percent, with the highest unemployment rate in Franklin County at 11.7 percent (IDES, 2008).

Area	Number of Households	Median Household Income	Per Capita Income	Percent of Population Below Poverty Level	Unemployment Rate (%) April 2007
State of Illinois	4,591,779	46,590	23,104	10.7	7.3
La Salle County	43,346	40,308	19,185	9.1	8.2
Marseilles	1,920	38,432	17,793	4.8	--

Sources: 2000 U.S. Census Bureau, Profile of Selected Economic Characteristics; IDES, 2008

MTC provides full time permanent employment to about 40 personnel and temporary employment (a few weeks to 12 months) to about 40 personnel. MTC provided annual support in TY 2008 for approximately 87,000 soldier-days of training for National Guard, reserve, and active component troops; along with approximately 1,500 soldier-days for non-DoD agency training. MTC has the capability to billet and support two battalions. There are also enough bivouac sites to accommodate multiple battalion level operations. During the summer, troops conducting annual training use the facilities for 10 to 15 days at a time, with a fluctuation of troops at the MTC for the remainder of the summer. This training occurs intermittently throughout the year. However, most training takes place on weekends.

4.9.3 Housing

Owner occupancy rates in Marseilles are similar to county and state rates, while the median home value is 10 and 66 percent less than La Salle County and the State of Illinois, respectively. **Table 12** presents selected housing characteristics for the areas surrounding the project site.

Area	Housing Units Available	Occupied (%)	Owner-Occupied (%)	Median Value	Median Home Mortgage	Renter-Occupied (%)	Median Contract Rent
State of Illinois	4,885,615	94.0	53.8	\$130,800	\$1,198	32.4	\$605
La Salle County	46,438	93.5	64.8	\$87,000	\$873	24.3	\$474
Marseilles	2,033	93.2	67.5	\$79,000	\$848	24.5	\$474

Source: 2000 U.S. Census Bureau, Profile General Demographic Characteristics and Selected Housing Characteristics

4.9.4 Schools

No primary education facilities are located within a one-mile radius of the MTC. Schools in the vicinity are located north of the Illinois River in the cities of Ottawa and Seneca, approximately 4-5 miles from the MTC (**Figure 1**).

According to the 2000 U.S. Census statistics, La Salle County and Marseilles have a lower percentage of individuals with a post-secondary degree compared with the

State of Illinois. However, the percentage of individuals with a high school diploma or higher is nearly the same for the city, county and state. **Table 13** provides 2000 statistics of educational attainment for persons 25 years and older for areas peripheral to the MTC.

Area	No Diploma (%)	High School Graduates (%)	Post-Secondary Graduates (%)
State of Illinois	18.6	81.4	32.1
La Salle County	18.6	81.4	20.2
Marseilles	18.5	81.3	13.1

Source: 2000 U.S. Census Bureau, Profile of Selected Social Characteristics

4.9.5 Shops and Services

Commercial shops and services are available in the cities of Marseilles, Seneca, and Ottawa, approximately 4 to 15 miles away, as well as throughout the county and the surrounding area. Commercial areas within the vicinity of the MTC are located the north of the Illinois River and along Interstate 80 (**Figure 1**).

4.9.6 Recreational Facilities

The MTC is also known as the Marseilles FWA. The IDNR administers a hunting program at the MTC in the late fall and winter months, in accordance with State laws and regulations and the MTC MOU (**Appendix A**). Field training is not conducted in the joint use areas during the hunting season. Other recreational opportunities are coordinated between the ILARNG and IDNR on a case-by-case basis. The training site is not open for public use except to hunters. No fishing access is allowed at the MTC during any time of the year, and no fishing program is planned in the future.

The MTC is available for the public on a limited basis, including use of the Cantonment Area by nonprofit organizations, natural resource education activities, and for wildlife viewing. IDNR and the Environmental Branch of DMAIL have designed programs to inform the public of the value of natural resource conservation to advance public relations and increase environmental awareness among MTC public users. These programs include education methods such as personal communications, public wildlife demonstrations and professional talks, and community nature activities. The DMAIL resource management personnel are responsible for relaying information on natural resource conservation to MTC ILARNG personnel. This information is presented in an MTC Standard Operating Procedure (SOP).

4.9.7 Public and Occupational Health and Safety

Public safety and enforcement of laws and regulations are provided primarily by ILARNG and IDNR at the MTC. Local law enforcement within the vicinity of the MTC includes the Marseilles City Police Department who responds to situations as needed. The Marseilles Voluntary Fire Department supplies local emergency support for the general area.

The Community Hospital of Ottawa, located approximately 10 miles from the MTC, is the nearest hospital for local residents and ILARNG personnel. Other hospitals within 15 miles of the MTC include St. Mary's Hospital in Streator, IL and Morris Hospital in

Morris, IL. MTC has a small medical clinic for ILARNG personnel, which is periodically staffed and operated during significant training exercises.

4.9.8 Protection of Children

Because children may suffer disproportionately from environmental health risks and safety risks, EO 13045 (Protection of Children from Environmental Health Risks and Safety Risks) was issued on 21 April 1997. EO 13045 was intended to prioritize identification and assessment of environmental health risks and safety risks that may affect children and to ensure Federal agencies' policies, programs, activities, and standards address environmental and safety risks to children.

The proposed site is bounded mainly by undeveloped land with some scattered residences mainly to the east. The MTC Site Manager and his family, which includes five children ranging from 3 to 16 years of age, reside on-Post, but outside the security fence surrounding the MTC. No other child care centers, schools, parks, or other concentrations of children exist on or within the MTC vicinity. The percentage of the population under age 18 is slightly lower within Marseilles and La Salle County in comparison to the State of Illinois (see **Table 14**).

Area	Total Population	Population Under 18	% Population under 18
State of Illinois	12,419,293	3,245,451	26.1
La Salle County	111,509	28,052	25.2
Marseilles	4,655	1,161	24.9

Source: 2000 U.S. Census Bureau www.census.gov

4.10 Environmental Justice

EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations), dated 11 February 1994, requires Federal agencies to identify and address disproportionate adverse effects of their programs, policies, and activities on minority and low-income populations. Potential environmental justice considerations are determined by comparing demographic and economic characteristics (minority population composition and poverty rates) within the study area to the same characteristics in the surrounding region.

4.10.1 Geographic Distribution of Minority Populations

Based upon the 2000 U.S. Census, populations in La Salle County and Marseilles are comprised of 5.0 and 2.1 percent minorities, respectively, which is significantly lower than the overall Illinois percentage of 26.5 percent minorities. **Table 15** presents regional demographics by race for the areas surrounding the proposed site. The major reported ancestries for Marseilles include: German (24.0 percent), Irish (20.3 percent), English (12.5 percent), Italian (11.2 percent), Norwegian (8.5 percent), and 'Other' ancestries (8.3 percent) (U.S. Census Bureau, 2000 Census).

Table 15. Regional Population by Race

Area	All Individuals	White (%)	African-American (%)	American Indian and Alaska Native (%)	Asian or Pacific Islander (%)	Other Race (%)	Hispanic or Latino*
State of Illinois	12,419,293	73.5	15.1	0.2	3.4	5.8	12.3
La Salle County	111,509	95.0	1.5	0.2	0.5	1.7	5.2
Marseilles	4,655	97.9	0.1	0.2	0.3	0.6	1.9

* Persons of Hispanic or Latino origin may be of any race

Source: U.S. Census Bureau, 2000 Census, Profile of General Demographic Characteristics

4.10.2 Geographic Distribution of Low-Income Populations

The Census Bureau defines a "poverty area" as a Census tract where 20 percent or more of the residents have incomes below the poverty threshold, and an "extreme poverty area" as one with 40 percent or more below the poverty level. In 2000, Marseilles' poverty rate was estimated at 4.8 percent and La Salle County's poverty rate was estimate at 9.1 percent (see **Table 11**). The State of Illinois' poverty rate was estimated at 10.7 percent. Neither Marseilles nor La Salle County meets the definition of a poverty area at this time (U.S. Census Bureau, 2000).

4.11 Infrastructure

4.11.1 Utilities

The MTC obtains potable water and wastewater treatment through the City of Marseilles' water and sewer municipal lines. All wastewater is discharged through the Marseilles Sanitary District. In addition, the armory has its own potable water well. There are seven water wells at the MTC, which vary in depth from about 250 to 450 feet. Well yields are approximately 9 to 10 gallons per minute (ILARNG, 2007a). Waste disposal is contracted through licensed contractors. Electric and communication services are provided by Exelon and Marseilles Telephone Cooperative, respectively.

Existing sewer, water, electric, and communication service lines occur within the vicinity of the proposed project areas requiring these services, with the exception of Project IL-5 (Alternative 2).

4.11.2 Transportation

Transportation within the MTC is limited to the internal road network. A majority of the internal roads outside the Cantonment Area are hard-packed gravel surfaced, while some of the interior trails are unimproved dirt roads. Bituminous or aggregate surface roadways are located within the Cantonment Area.

No aviation facilities exist at the site. Helicopter landing sites are selected on a mission-specific basis. Six 20-foot by 40-foot concrete helicopter pads are located in the Cantonment Area.

Surrounding area roads include I-80 (approximately 5 miles north of the MTC), U.S. Highway 6, and County Highway 15 (intersecting in Marseilles approximately 2 miles north), and County Highway 6 (approximately 2 miles south of the MTC). Roads immediately surrounding the installation to the north and west, respectively, are North 2553rd Road and East 2450th Road, which becomes East 25th Road.

4.12 Hazardous and Toxic Materials/Wastes

Hazardous and toxic materials or substances are generally defined as materials or substances that pose a risk (through either physical or chemical reactions) to human health or the environment. Regulated hazardous substances are identified through a number of Federal laws and regulations. The most comprehensive list is contained in 40 CFR 302, and identifies quantities of these substances that, when released to the environment, require notification to a Federal government agency. Hazardous wastes, defined in 40 CFR 261.3, are considered hazardous substances. Generally, hazardous wastes are discarded materials (solids or liquids) not otherwise excluded by 40 CFR 261.4 that exhibit a hazardous characteristic (i.e., ignitable, corrosive, reactive, or toxic), or are specifically identified within 40 CFR 261. Petroleum products are specifically exempted from 40 CFR 302, but some are also generally considered hazardous substances due to their physical characteristics (especially fuel products), and their ability to impair natural resources.

The ILARNG maintains a statewide Pollution Prevention (P2) Plan and a Spill Prevention Control and countermeasure Plan (SPCCP). These plans identify potential sources of pollution, best management practices (BMPs) to limit this potential, and procedures to respond to pollution events. The ILARNG statewide P2 Plan was updated in 2009. The SPCCP Plan for the MTC was updated in February 2009.

Vehicle maintenance operations at the MTC generate very small quantities of hazardous waste consisting primarily of petroleum, oil, and lubricants (POL), used filters, and limited solvents. Two underground storage tanks (USTs) and two aboveground storage tanks (ASTs) occur in the MTC Cantonment Area. Eight natural gas tanks occur at the MTC; they occur in the Cantonment Area (seven tanks) and MOUT area (one tank).

Two munitions storage buildings are located in the MTC Cantonment Area. Only small arms munitions, 2-chlorobenzylidene malononitrile (CS) gas, signal flares, and smoke ammunition are stored at the MTC. No explosives or weapons are stored on the facilities.

Ongoing small-arms training activities have occurred within the Cantonment Area for more than 20 years. Spent ammunition has accumulated over time within the range footprints and SDZ. Lead slugs can be buried up to about 6 inches in the soil and some slugs and casings can occur on the surface. As a result, there is potential for lead to accumulate in surface soil and to be transported off-site.

A study was conducted in 2006 to investigate lead concentrations within the MTC range complex area because this is typically the primary munitions constituent of concern for small arms range. Soil sampling for this study was conducted within Ranges B and C (**Figure 2**). Project IL-1 (MRF Range Expansion and Zero Range Relocation) is proposed within the current Range B and C footprints. Project IL-2, IL-4, and IL-5 would also occur within the existing range complex (**Figure 3**).

Results from the soil study indicated concentrations up to 8,700 parts per million within this range area (Sullivan International Group, Inc. [Sullivan], 2006). In

comparison, the USEPA action level for lead in residential soils is 400 parts per million. However, it should be noted this area is located within the range complex area within the MTC cantonment area and no residential areas are in the immediate vicinity. In addition, from a stand point of mobility, lead and copper have the lowest mobility because they have relatively low solubility in soils (Fabian and Watts, 2005). Of particular concern are soils with low pH values (i.e., acidic conditions). The ideal soil pH value for shooting ranges is between 6.5 and 8.5 (USEPA, 2001). Approximate pH ranges for soils within the current and proposed range footprints and SDZ are shown in **Table 16**. Soils within the range complex and SDZ tend to be within the ideal range, but in some cases may be slightly acidic.

The ILARNG utilizes appropriate BMPs from the *Army Small Arms Training Range Environmental Manual* (Fabian and Watts, 2005) to prevent or minimize lead or other contaminant migration off-site. The selected BMPs are based on the type of range and ammunition used, site-specific conditions, and range design features, and include applicable range maintenance procedures. All ranges are periodically evaluated and monitored in accordance with the Army's Operational Range Assessment Program (ORAP). Examples of BMPs to prevent lead migration may include, but are not limited to, establishing and sustaining vegetative cover, inspection and maintenance, soil amendments (e.g., lime for acidic soils), storm water management measures, soil erosion control measures, establishment of berms, operational use (e.g., stagger firing lane use), or lead removal.

Soil Types (most abundant to least)	Approximate % Coverage	Depth (inches)	pH
Nappanee silt loam, 0-7 percent slopes	37	0 - 9	5.1 - 7.3
Chatsworth silty clay loam, 7-50 percent slopes	35	0 - 20	6.1- 8.4
Ross loam, 0-2 percent slopes	12	0 - 32	6.1- 7.8
Frankfort silt loam, 2-7 percent slopes	2	0 - 8	5.6 - 7.3
Bryce silty clay, 0-2 percent slopes	1	0 - 13	5.6- 7.8
St. Clair silt loam, 7-18 percent slopes	1	0 - 5	5.1 - 7.3
Cut and Gravel areas	14	NA	NA

Source: NRCS, 2008

5.0 ENVIRONMENTAL CONSEQUENCES

This section describes the potential direct, indirect, and cumulative effects of implementing the Proposed Action or Alternatives, as well as BMPs that would reduce the level of identified impacts. The ILARNG considers BMPs integral to implementation, and they are not considered separate from the Proposed Action. Definitions of key terms used throughout **Section 5.0** and a summary of the regulatory framework for NEPA subject areas are included as **Appendix C**.

5.1 Land Use

5.1.1 Preferred Action Alternative

Under the Preferred Action Alternative, *no significant adverse effects* to on- or off-post land use or land cover would be anticipated.

Implementation of the Preferred Action Alternative would facilitate and enhance existing training activities at the MTC. Land use impacts would be minimal and would be similar in nature to existing conditions. The new USACE land license (IL-6) would increase available training land as well as provide a buffer for potential residential encroachment to the east. This would therefore result in *minor, long-term positive* land use impacts by improving the training use, capability, and value of these areas.

No significant on-Post land use impacts are anticipated as a result of the proposed construction projects, as components of the Preferred Action Alternative have been specifically sited to maximize the training value and use of the installation without use conflicts. If properly designed and constructed maintenance projects (IL-12 through IL-15) would provide *long-term positive* land use impacts by ensuring the sustainability of MTC lands on which the ILARNG depends for training. Under the Preferred Action Alternative, on-Post building function and architecture impacts are not anticipated. Historic context issues related to this area are addressed in **Section 5.7**.

No conflict with existing or proposed off-Post land use is anticipated. Night lighting at the proposed ranges occasionally required for training would not affect adjacent land uses. Proposed ranges and other development projects requiring night lighting would be constructed within the developed portions of the MTC. Additionally, light would be attenuated by existing vegetation, the distance to off-post land uses, and design to direct light away from off-Post areas. Potential noise impacts to off-Post land uses are discussed in **Section 5.3.1**.

Implementation of the Preferred Action Alternative is not anticipated to produce significant indirect impacts to off-Post land uses. There is no need for additional off-Post housing currently or an increase in permanent occupancy of areas adjacent to the installation. The services required to support this training increase would be provided by existing or planned infrastructure and land uses.

The MTC mission to provide sufficient lands to support required military training would be achieved under the Preferred Action Alternative. Up to approximately 42 acres of land could be disturbed within the construction footprints. Disturbance, in the form of land cover changes, would occur at the firing points, target/berm locations, ROCA and other support facilities, access roads, parking areas, underground utility corridors, and equivalent facilities. Lines of sight (LOS) from the

firing lines to the targets would also need to be achieved via clearing, where appropriate. The ILARNG would minimize clearing and earthwork to the maximum extent possible to minimize disturbance and associated construction costs.

The majority of the area disturbed within the construction footprints would generally be returned to their current conditions, which include disturbed/maintained land and grassland (**Figure 11**). However, from a land cover perspective, the Preferred Action Alternative would effectively convert less than 10 acres of land to improved surfaces (for structures, parking areas, and roads). The majority of this land is currently classified as disturbed/managed land within the proposed project footprints. The proposed LFBF (IL-3) is comprised of forested/scrub-shrub land and open grassland areas. This area is dominated by invasive species, particularly autumn olive. After construction of the LFBF (see **Figure 7**), cleared areas will be planted with warm season grasses to promote native prairie habitat. Tree clearance would be avoided to the extent feasible. Given the limited amount of clearing relative to the total land area of the MTC, coupled with the fact that nearly all of these areas have been previously disturbed (e.g., agricultural use or developed/maintained grounds), a *minor, long-term adverse* impact to land cover would be anticipated.

An indirect designation of an additional 190 acres as range SDZs on a temporary basis would occur when the ranges are in operation. When the ranges are not in operation, these SDZ areas would be available for other training or recreational uses. All proposed SDZs are located within the MTC boundaries. No land cover impacts would occur within the range SDZs.

Under the Preferred Action Alternative, no land cover changes are anticipated as a result of the proposed maintenance projects (IL-12, IL-13, IL-14, and IL-15) or within the SDZs. Additionally, the designation of approximately 190 acres of additional range SDZ at the MTC would limit additional development during the operational life of these ranges.

5.1.2 Build Alternative

Impacts to land cover and land use would be similar to the Preferred Action Alternative (see **Section 5.2.1**). Approximately 4.4 acres of forested land would be modified as a result of Project IL-7 (new training road) under the Build Alternative. *Long-term positive* impacts associated with the new USACE land license (IL-6) would not be recognized.

5.1.3 No Federal Action Alternative

Under the No Federal Action Alternative, the Proposed Action would not be implemented and training area maintenance projects would not be conducted, which could result in more costly rehabilitation projects in the future. No changes in land use or land cover would occur. However, failure to provide required training ranges and support facilities would negatively impact the long-term viability of the MTC as a training center and its future land use, resulting in a *potentially significant long-term adverse* land use impact.

5.2 Air Quality

5.2.1 Preferred Action Alternative

Air emissions generated from the Preferred Action Alternative would have *less-than-significant (minor) direct, short-term and long-term adverse impacts* to the existing air quality environment around the MTC. Implementation of this Alternative would

allow additional training activities to be conducted at the MTC, with a commensurate increase in local fugitive air emissions.

Direct impacts would include minor short-term and long-term increased air emission levels as a result of: 1) construction activities; 2) operation of proposed ranges and other support facilities; 3) maintenance activities; and 4) travel to and from the MTC. Air pollutant generating sources present during construction activities would be associated primarily with standard large-scale construction equipment. A minor increase in fugitive dust and vehicular engine emissions would be expected.

The ILARNG would ensure dust control associated with construction of the proposed ranges is conducted in accordance with the NRCS (2002) Illinois Urban Manual. To minimize the potential for adverse air quality impacts, the ILARNG would implement procedures for ensuring consistent usage of the following typical dust control BMPs, as applicable:

- Use appropriate dust suppression methods during on-site construction activities, and if necessary, during dry weather training activities. Available methods include application of water (fresh water only), soil stabilizers, or vegetation; use of enclosures, covers, silt fences, or wheel washers; and suspension of earth-movement or disturbance activities during high wind conditions.
- Require a speed of less than 15 miles per hour for construction equipment on unpaved surfaces.
- Use electricity from established electrical power sources instead of generators whenever possible.
- Use low volatile organic compounds (VOC) architectural materials, supplies, and equipment.
- Repair and service construction equipment to prevent excess emissions.
- Shut down heavy equipment when not needed.
- Clean excess soil from heavy equipment and trucks leaving the construction zone to prevent off-site transport.

The ILARNG would regularly monitor all construction and operational activities within the MTC, and particularly during extended periods of dry weather. In addition, the ILARNG would ensure that operation of facilities at the MTC anticipated to produce airborne dust is conducted using the dust control BMPs identified above to minimize potential for air quality impacts. This information will be incorporated into construction contracts and MTC SOPs.

Implementation of the Preferred Action Alternative could have relatively *minor, short-term, occasional adverse* impacts to air quality as a result of prescribed burning activities associated with bivouac area maintenance (Project IL-14). Potential adverse effects will be minimized by coordinating all prescribed burns with the IDNR and ensuring only certified individuals participate. Prescribed burning could decrease the chance of wildfires, which generally produce more smoke than prescribed burns.

5.2.2 Build Alternative

Impacts of the proposed Build Alternative would be similar to the Preferred Action Alternative (see **Section 5.3.1**). However, the additional training land (Project IL-6)

along the eastern boundary of the MTC would not be acquired, and therefore a buffer between training activities and potential residential encroachment would not be recognized.

5.2.3 No Federal Action Alternative

Under the No Federal Action Alternative, *no significant adverse* air quality impacts would occur.

5.3 Noise

5.3.1 Preferred Action Alternative

Under the Preferred Action Alternative, *less-than-significant (minor), short-term and long-term, adverse* effects to the local noise environment would be anticipated.

Implementation of the Preferred Action Alternative would increase training activities at the MTC, and would consequently increase noise-generating activities. In addition, construction of the Preferred Action Alternative would temporarily create noise during the construction phase. Given the distance between proposed construction sites and sensitive receptors (i.e., residences are >1,000 feet from proposed projects with the exception of Project IL-7), coupled with the short duration of these activities conducted during normal business hours, these construction noise impacts are anticipated to be minor, short-term, and adverse, but less than significant.

Construction – Construction would generally occur between the hours of 7:00 AM and 5:00 PM. No nighttime construction activity is expected. Construction activities would temporarily increase ambient noise levels. Any disturbance to wildlife from noise would be temporary.

Noise impacts would depend on distance from the construction area, type and number of pieces of equipment operating simultaneously, duration of equipment operation, and time of day. Construction equipment typically generates noise levels of 80 to 90 dBA per piece at a distance of 50 feet. Where several pieces of equipment are operating at the same time, relatively high construction noise levels can be noted at distances of 400 to 800 feet from the construction site. Significant levels of construction noise are rarely noted more than 1,000 feet from construction sites. The following BMPs would be used to limit noise impacts during construction:

- Limit, to the extent possible, construction and associated heavy truck traffic between 9:00 PM and 7:00 AM. This measure would reduce noise impacts during sensitive night-time hours.
- Shut down noise-generating heavy equipment when it is not needed.
- Maintain noisy equipment per manufacturer's recommendations.
- Encourage construction personnel to operate equipment in the quietest manner practicable (for example, speed restrictions, air-brake restrictions, engine speed restrictions, etc.).
- These noise-reducing measures would be briefed to the contractor at the construction kick-off meeting. The ILARNG's on-site construction manager would be responsible to bring noise issues, if they arise, to the ILARNG for resolution.

This information will be incorporated into construction contracts and MTC SOPs.

Traffic – As a result of the Preferred Action Alternative, it is anticipated that site usage will increase from approximately 88,000 man-days per year to 100,000 man-days per year (ILARNG, 2010b). Therefore, vehicular traffic is anticipated to increase by up to 15 percent. Vehicular noise associated with increased traffic would not impact the residences along E 2650th Road, as all military convoys are required to come into the MTC from the west. Per DMAIL 350-11, all military vehicles must travel from County Highway to N 23rd Road (aka Army Road) due to road weight limits and agreements with the township (**Figure 1**). Residences along County Highway 30 near the northwestern corner of the MTC may experience a minor increase in traffic. However, noise impacts are anticipated to be less than significant to these residences, given the area is a relatively rural, lightly trafficked area and the residences' general distance from the main roadway (i.e., greater than 100 feet from roadway).

Weapons Use – Increased noise from proposed range operations was assessed by USAPHC. The USAPHC developed noise contours for the proposed small caliber ranges using its SARNAM. As illustrated in **Figure 12**, the Zone II noise contour extends less than approximately 3,500 feet and 2,750 feet beyond the southern and eastern boundaries, respectively. The Zone III noise contour extends less than approximately 670 feet along the southern boundary. Several residences occur within the proposed small caliber range Zone II noise contour. No residences occur within Zone III. Per AR 200-1, noise sensitive land uses, such as housing, schools, and medical facilities, are not normally recommended for Noise Zone II (USAPHC, 2010). Therefore, implementation of the Preferred Action Alternative could potentially result in *minor, long-term* noise impacts to those residences within the Zone II noise contour.

No change in noise levels are anticipated to result from relocating the Grenade Launcher Range (Project IL-4) slightly eastward. The grenade launcher would be audible at the boundary, but would have a low risk of generating noise complaints (USAPHC, 2010).

Due to the design of the proposed LFSH and UAC Stations 1, 2 and 4, noise contours can not be created, but SARNUM can be used to predict individual levels and the distance Zone II levels could occur. Weapon firing would occur inside the LFSH. A building of this type would be expected to provide up to 25 dB noise level reduction on the exterior of the building. Based on proposed shotgun activity occurring inside the LFSH, the USAPHC estimated Zone II noise levels would extend up to approximately 670 feet from the building. UAC Stations 1 and 2 have an open roof design, therefore, these structures provide little to no noise level reduction on the exterior of the building. Noise approaching Zone II levels would extend approximately 670 feet from these buildings for 5.56 mm blank round activity. No noise impacts off-Post would result from the proposed LFSH or UAC Stations 1 and 2 (USAPHC, 2010).

The UAC Station 4 building would be expected to provide up to 25 db noise level reduction on the exterior of the building. Ammunition would include 5.56 mm and 7.62 mm blank rounds. Based on predicted noise levels, Zone II levels would extend up to approximately 2,665 feet for 7.62 mm blank activity occurring outside the building and approximately 670 feet for activities inside the building. Zone II levels would extend beyond the MTC boundary; however, they would be contained within the existing small caliber noise contours (see **Figure 12**) (USAPHC, 2010).

UAC Station 5 provides training for subterranean operations. Although noise levels cannot be predicted for underground activity, it is unlikely Zone II levels would extend beyond the facility itself due to the design and probable noise level reduction associated with the tunnels (USAPHC, 2010).

The USAPHC developed peak noise contours (PK15 [met] and PK50 [met]⁴) for the proposed LFBF (Project IL-5) based on the potential weight and type of explosives utilized using the Blast Noise Impact Assessment (BNOISE2) program (USAPHC, 2010). Peak levels can vary greatly depending on weather conditions. Two peak contours for unfavorable (PK15 [met]) and neutral weather conditions (PK50 [met]) were developed for each potential activity (i.e., 0.25, 0.5, 1, and 5 lb charges). As illustrated in **Figure 13** and **14**, activity from the proposed LFBF has the potential to generate complaints. The 0.25 lb, 0.5 lb, and 1 lb C-4 charges have a moderate to low risk of generating noise complaints. For 1 lb charges, this moderate risk area extends beyond the boundary in all directions under unfavorable weather conditions. There are scattered residences within the moderate complaint risk area. Under unfavorable weather conditions, the high complaint risk area extends beyond the eastern boundary for 1 lb charges. Noise sensitive land uses do not appear to occur in the high risk area for 0.25 lb and 0.5 lb charges according to the current aerial. However, there may be some residences in the 1 lb charge high risk area. The 5 lb C-4 charges have a moderate to high risk of generating noise complaints. The moderate risk area extends into Marseilles and Seneca. The high risk area extends beyond the boundary during unfavorable weather conditions and contains residential land uses.

The number of charges detonated in a year does not produce an annual average noise contour for the proposed LFBF. The projected annual utilization at the breach facility is not expected to exceed 50 charges with the majority of these charges at 0.25 lb. Based on the Army Range Requirements Model and the DA Pamphlet 350-38 the ILARNG anticipates an average of twenty (20) 0.25 lb and five (5) 1 lb charges per year. The lack of land use compatibility contours indicates annual average noise levels are compatible with the surrounding land uses even though noise complaints could occur. Because the use of this facility would be limited to individual events, *adverse* effects to residences would be anticipated to be *less-than-significant*.

To minimize adverse noise impacts associated with LFBF activity, the ILARNG will not exceed 5 pounds for a single charge. The MTC Range Control will monitor weather conditions. During unfavorable weather conditions, the use of 5 lb charges will be suspended. For all other charges, the MTC Range Control will avoid operating the range with light demolitions during unfavorable weather conditions to the extent possible (i.e., dependent on priority level of the training mission).

The Explosives Research Group developed a technique for predicting the effects of existing weather conditions on noise propagation (University of Utah, 1958). They

⁴ PK15 (met) is the peak sound level, factoring in the statistical variations caused by weather, that is likely to be exceeded only 15 percent of the time (i.e., 85 percent certainty that sound will be within this range). This "85 percent solution" gives the installation and the community a means to consider the areas that at times may be impacted by training noise. The PK15 (met) would occur under unfavorable weather conditions that enhance sound propagation (e.g., wind blowing towards nearby residences or a cloudy day). This peak contour is a good tool to use to indicate areas that may at times be exposed to high noise levels from individual events.

The PK50 (met) is the peak sound level that would be expected 50 percent of the time. These levels would be seen during neutral weather conditions.

have developed a series of good and bad firing conditions that are summarized below.

- Good conditions for firing
 - Clear skies with billowy cloud formations, especially during warm periods of the year.
 - A rising barometer immediately following a storm
- Bad conditions for firing
 - Days of steady winds of 5-10 miles per hour with gusts of greater velocities (>20 miles per hour) in direction of residences close by.
 - Clear days on which layering of smoke or fog are observed.
 - Cold, hazy or foggy mornings.
 - Days following a day when large extremes of temperature (greater than 36 degrees Fahrenheit) between day and night are noted.
 - Generally high barometer readings with low temperatures.

The ILARNG would abide by the recommendations outlined within the August 2002 Installation Environmental Noise Management Plan (IENMP) and the Operational Noise Consultation, No. 52-EN-0D3E-10, Operational Noise Contours for Marseilles Training Area, Illinois, 1 April 2010 developed by the USAPHC. The ILARNG would continue to work with local government agencies and communities identifying potential noise and land use incompatibility and addressing possible noise issues, including restricting development of residences or other sensitive receptors along the MTC boundaries. The ILARNG routinely communicates with the neighboring residents for a variety of activities. They will look into formalizing this process (i.e., developing a public notification system through the PAO, particularly for 5 lb C-4 charge activities).

5.3.2 Build Alternative

Noise impacts under the proposed Build Alternative would be similar to the Preferred Action Alternative (see **Section 5.3.1**). The additional training land (Project IL-6) along the eastern boundary of the MTC would not be acquired, and therefore a buffer between training activities and potential residential encroachment would not occur. Based on proposed shotgun activity occurring inside the LFSH, the USAPHC estimated Zone II noise levels would extend up to approximately 670 feet from the building (USAPHC, 2010). The LFSH (Alt 2) may be audible near the eastern boundary, but would have a low risk of generating noise complaints.

5.3.3 No Federal Action Alternative

Implementation of the No Federal Action Alternative would have no effects on the current local noise environment. Training and operations at the MTC would continue under current conditions at current locations and levels.

5.4 Geology and Soils

5.4.1 Preferred Action Alternative

Under the Preferred Action Alternative, *no significant adverse effects* to topography, geology, or soils would be anticipated.

Implementation of the Preferred Action Alternative would require minimal cutting and filling, but major changes in topography and drainage patterns would not be expected. *No impacts* to geology or bedrock (i.e., deep excavation) are proposed or anticipated. No geologic hazards are apparent in the project area, and would not be expected to impact human health as a result of project implementation. Based on currently available data, no significant active faults are known at this time to extend through the project site subsurface geology. As such, no impacts associated with seismic hazards are identified. No significant impacts to mineral resources are anticipated, as the Proposed Action would not involve the commercial extraction of mineral resources, nor affect mineral resources considered important on a local, state, national, or global basis.

During range and facility construction (including utility connection installation), short-term erosion and sedimentation impacts would be possible due to removal of vegetative cover, disturbance of the soil surface, and/or compaction. Subsequently, local soils would be more susceptible to short-term erosion by wind and surface runoff. The ILARNG would prepare a detailed, site-specific Erosion and Sedimentation (E&S) Control Plan to address all earth-disturbance aspects of the Proposed Action, including all project components. The E&S Control Plan would include BMPs such as specific guidelines and engineering controls to mitigate anticipated erosion and resultant sedimentation impacts from establishing and operating the proposed facilities. These measures would include:

- Installing and monitoring erosion-prevention measures (BMPs) such as silt fences and water breaks, sedimentation basins, filter fences, sediment berms, interceptor ditches, straw bales, rip-rap, and/or other sediment control structures; re-spreading stockpiled topsoil; and seeding/revegetating areas temporarily cleared of vegetation.
- Retaining forest vegetation and riparian vegetation to the maximum extent possible.
- Planting and maintaining soil-stabilizing vegetation on disturbed areas other than bare earth training areas.
- Using native vegetation to revegetate disturbed soils.
- Complying with the ILARNG statewide P2 Plan and SPCCP for MTC and ensure all ILARNG field staff members are trained in MTC spill response.

Approximately 10.1 acres of prime farmland and/or prime farmland if drained soil occur within the proposed construction footprints. The Preferred Action Alternative would render such soils inaccessible for farming use. However, as there is no current use of the soils for farming at the MTC (nor any proposal for such activity), no loss of active farmland would result from implementing the Preferred Action Alternative. Where construction would impact prime farmland, the ILARNG would document impacts to these soil resources by completing the United States Department of Agriculture (USDA) Farmland Conservation Impact Rating Form. This form would be submitted to the local NRCS office, and the ILARNG would follow procedural requests associated with this form in accordance with the Farmland Protection Policy Act (FPPA; 7 CFR 658).

Under the Preferred Alternative, the ILARNG will follow appropriate BMPs from the Army Small Arms Training Range Environmental Manual to prevent or minimize lead or other contaminant migration off-site (Fabian and Watts, 2005). The selected BMPs would be limited to the minimum required based on the type of range and

ammunition used, site-specific conditions, and range design features, and will include applicable range maintenance procedures. All ranges will be periodically evaluated and monitored in accordance with the Army's ORAP.

Prior to the development and operation of the proposed vehicle wash rack (Project IL-8), the ILARNG Environmental Branch would review the final project design and determine in coordination with State and local agencies if permits (e.g., NPDES discharge permit) would be required for operation of this facility.

Under the Preferred Action Alternative, *long-term positive* soil impacts from the proposed maintenance projects (IL-12, IL-13, and IL-15) are anticipated. Road, trail, and LWSC maintenance is necessary to maintain military training areas in usable condition. Threats to the military mission, as characterized by removal of and/or lack of accessibility to available training lands and other resources include undermining of or poorly maintained roads, increased vehicle wear and tear, topsoil loss, and impacts to streams and aquatic habitats as a result of soil erosion and sedimentation.

5.4.2 Build Alternative

Impacts under the proposed Build Alternative would be similar to the Preferred Action Alternative (see **Section 5.4.1**). However, the impact to prime farmland and/or prime farmland would be approximately 0.8 acre less under the Build Alternative.

5.4.3 No Federal Action Alternative

Implementation of the No Federal Action Alternative would have *no effect* on the current geology, topography, and soils at the MTC. The MTC would remain as described in **Section 4.0**. However, the *long-term positive* soil impacts from the proposed maintenance projects would not be recognized, and could lead to *adverse* impacts associated with soil erosion.

5.5 Water Resources

5.5.1 Preferred Action Alternative

Under the Preferred Action Alternative, *no significant adverse effects* to water resources would be anticipated.

Implementation of specific BMPs and adherence to Regulatory Requirements would be required for implementation of the Preferred Action Alternative. The ILARNG would comply with the terms of the NPDES General Permit for Surface Water Discharge Associated with Construction Activity. The ILARNG will use BMPs during construction, as discussed in **Section 5.4.1**. Long-term surface water protection will be accomplished by implementing BMPs and the MTC SPCCP, and by maintaining vegetative cover.

Potential impacts to ground and surface water resources are possible from inadvertent releases of contaminants, such as fuel and other petroleum products, other fluids from vehicles used on the range, and sediment from soil disturbance during construction. **Section 5.11** discusses potential pollution impacts (i.e., from chemicals, fuels, etc.) attributable to the Preferred Action Alternative, and identifies BMPs that render potential impacts to *less-than-significant* levels.

The potential impacts from range operations and munitions, as well as implementation of range BMPs to minimize these impacts, are discussed in **Section**

5.4.1. The types of ammunition used on the proposed ranges, coupled with implementation of range BMPs, are not expected to result in surface or groundwater impacts. Potential sources of surface water and groundwater contamination are evaluated and monitored as part of the ORAP. No new groundwater extraction wells are proposed as a result of implementing the Preferred Action Alternative; therefore, there would be no impacts to groundwater supply.

As a result of the Preferred Action Alternative, no effect to floodplains or wetlands is anticipated. The MTC is not located within the 100-year or 500-year floodplains, and no wetlands occur within or in the vicinity of the proposed project locations (see **Section 4.6**).

Approximately 895 linear feet of stream (Level 1) occur within the proposed LFBF (IL-3) and M203 Grenade Launcher range (IL-4) footprints. However, the ILARNG anticipates impacts to these ephemeral streams (non-regulated streams) can be avoided during range design. Under the Preferred Action Alternative, Project IL-7 may require a couple of stream crossings. Because project design and configuration have not been established or confirmed for these projects, it is not known at this time if streams would be impacted. However, due to the limited amount of streams in the project footprints, their location within them, and overall design flexibility, the ILARNG anticipates stream impacts can be avoided for Projects IL-3, IL-4 and IL-7. Tree clearing within the riparian corridors of these streams will also be avoided. The Environmental Branch will coordinate with the facility designers during this process. During the final engineering design phase, the ILARNG Environmental Branch will determine if the project will impact regulated streams. The ILARNG would reassess impacts and any changes to federal and state waterways permitting requirements. If applicable, the ILARNG would obtain permits from the USACE and/or IEPA (as appropriate) prior to initiating any ground-disturbing activities. If impacts are greater than 0.1 acre or 300 linear feet, compensatory mitigation may be required. Required mitigation would be determined in consultation with the appropriate agencies (e.g., USACE and IEPA) during the Section 404 and 401 joint permitting effort. The ILARNG would implement any required mitigation prior to project implementation. In the event minor stream impacts cannot be completely avoided, impacts to water resources would be reduced through implementation of BMPs and any required mitigation measures identified by the agencies with jurisdiction over them. Therefore, adverse impacts to water resource are anticipated to be minor.

The proposed maintenance projects, particularly Project IL-13 (LWSC Maintenance), would provide *long-term positive* impacts to water resources by reducing soil erosion and sedimentation.

5.5.2 Build Alternative

Water resources impacts under the proposed Build Alternative would be similar to the Preferred Action Alternative with the exception of Project IL-7 (see **Section 5.5.1**). However, in comparison to the Preferred Action Alternative, the Build Alternative for the new training road along the eastern boundary of the MTC (Project IL-7) would require multiple LWSCs.

5.5.3 No Federal Action Alternative

The MTC would remain as described in **Section 4.0**. Implementation of the No Federal Action Alternative would have no effects on the current ground water resources at the MTC. The *long-term positive* impacts to surface water resources

from the proposed maintenance projects would not be recognized, and could lead to *adverse* impacts associated with increased soil sedimentation. Additionally, the new wash rack would not be constructed, which would lead to further use of the existing inadequate wash rack at the MTC.

5.6 Biological Resources

5.6.1 Preferred Action Alternative

Under the Preferred Action Alternative, *no significant adverse effects* to biological resources would be anticipated.

5.6.1.1 Flora

Implementation of the Preferred Action Alternative would change the type of use and/or increase the frequency of use on approximately 42 acres of existing training land (see **Section 5.1.1**). Trees, brush, and regrowth would be cleared as needed from the proposed construction footprints and utility line connections. These changes would produce impacts on existing biological resources. Proposed new facilities have been sited to the extent possible on previously disturbed sites to avoid impacts to on-site biological resources. Vegetative communities adjacent to the construction footprints would be minimally impacted. These adjacent areas may receive some increased foot traffic, but it would not be expected to be enough to negatively impact the plant community. Overall, impacts to on-site vegetative resources would be negligible given the abundance of forest resources still extant across the MTC.

Native species will be used to the extent practicable when revegetating land disturbed by construction, and the majority of the range footprints would be managed as grasslands, as feasible. Utility line connections would generally follow existing disturbed ROW, and would not result in substantial additional disturbance.

Short-term impacts of the proposed projects would include temporary disturbances to adjacent vegetative communities. Adjacent vegetative communities would return to pre-construction conditions following construction.

Long-term impacts to vegetation from proposed range and facility operation would be minor and managed in accordance with existing ILARNG land management practices under the INRMP and Integrated Training Area Management (ITAM) program.

Proposed maintenance projects, such as bivouac area maintenance (Project IL-14), would provide *long-term benefits* to flora and military training capability at the MTC. Maintaining and improving native habitat conditions by controlling the spread of invasive species would improve habitat conditions at the MTC. Invasive species have the potential to form dense strata within the forest, which could interfere with on-the-ground training activities. Controlling these less desirable species ensures the sustainability of the MTC lands. The proposed LFBF (Project IL-3) would require invasive species removal as well. In addition, the ILARNG intends to plant native warm season grasses to restore native prairie habitat within the area of the proposed LFBF (IL-3), which would provide *long-term beneficial* impacts to MTC flora.

5.6.1.2 Fauna

Wildlife in the proposed project areas would sustain *less-than-significant (minor), direct and indirect, short- and long-term, beneficial and adverse impacts*, associated with habitat conversion and construction activities. Wildlife would be expected to

vacate the immediate areas during construction activities. Some individuals of the less mobile species (i.e., small mammals, reptiles, amphibians) could be lost during construction. These impacts would likely be negligible, because the proposed construction footprints are located within previously disturbed/developed areas. The relatively small areas of disturbance and large areas of undeveloped land make expected impacts to wildlife *less than significant*. The increased human presence in the areas, elevated noise levels, and night lighting would affect some species more than others.

A continuing, *long-term benefit* to the MTC fish and wildlife resources would be expected as a result of the proposed maintenance projects. Road and LWSC would reduce sedimentation in MTC water resources, while bivouac maintenance would improve overall habitat on site.

The MTC is also known as the Marseilles FWA. IDNR uses the site for wildlife propagation, prairie restoration, and outdoor recreational opportunities year round, and for upland game hunting during the late fall and winter months. Migratory birds are attracted to the area. The ILARNG is responsible under the Migratory Bird Treaty Act, 50 CFR 21, and EO 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds) to promote and protect migratory birds. The proposed range development projects have the potential to have a *minor adverse* impact to migratory birds due to incidental take from training activities, while proposed maintenance projects could result in beneficial impacts. Overall impacts to migratory birds are anticipated to be negligible. Management measures for migratory birds will be conducted in accordance with the MTC INRMP.

5.6.1.3 Special Status Species

Based on USFWS correspondence (see **Appendix B**), there are four federally-listed species known to occur or with the potential to occur in Kankakee County. No federally listed plants or animals or their critical habitat are known to occur within or in the vicinity of the MTC. The Preferred Action Alternative is not anticipated to affect these species because suitable habitat does not occur within the Proposed Action area.

Based on the previous Indiana bat survey, the habitat at the MTC is not ideal to support Indiana bat populations because it is relatively young and has few dead or dying trees with exfoliating bark (Carter, 2001). In addition, no high quality forest habitat is being impacted. Less than 4 acres of forested/scrub-shrub land occur within the project footprints, and it is dominated by invasive species, particularly autumn olive. In addition, the ILARNG intends to avoid tree clearance during range construction to the extent feasible. Due to an overall lack of roosting habitat and the minimal tree clearance required, no effect to the Indiana bat is anticipated. To minimize any potential impact to this species, tree clearing would not be conducted between 15 April and 15 September to avoid incidental take. If trees need to be removed within this time frame and they fit the description of potential roosting habitat as described in the USFWS correspondence letter (see **Appendix B**), the ILARNG will initiate consultation with the USFWS prior to clearing.

While the prairie bush clover has not been observed during previous surveys, high quality prairie habitat does exist in the northeastern portion of the MTC. No effect to this species is anticipated because the Preferred Action Alternative would have no effect on the high quality habitat area where this species could potentially reside.

The northern harrier and Henslow's sparrow are the only state-listed endangered and threatened species observed previously at the MTC. Both of these species prefer grassland habitat. Because the proposed construction footprints occur in the disturbed/maintained areas of MTC, significant impacts to this species are not anticipated. Bivouac area maintenance (Project IL-14), which includes prescribed burning and the mechanical removal of undesirable species to reduce woody encroachment, would benefit these species.

5.6.2 Build Alternative

Impacts under the proposed Build Alternative would be similar to the Preferred Action Alternative (see **Section 5.6.1**). However, Project IL-7 (new training road) under the Build Alternative would require tree clearance in the forested area along the eastern MTC boundary to accommodate the new training road.

5.6.3 No Federal Action Alternative

Under the No Federal Action Alternative, existing forested areas would not be cleared and the proposed ranges and other facilities would not be constructed. No night lighting, noise, or elevated human presence from range operations would occur within the proposed range locations. However, positive impacts associated with the proposed maintenance projects would not be recognized. A potential loss in training lands and impacts to certain wildlife species could occur as a result of invasive species encroachment. Increased soil erosion and sedimentation could lead to impacts on fish and other aquatic organisms.

5.7 Cultural Resources

5.7.1 Preferred Action Alternative

The Preferred Action Alternative is anticipated to have *no effect* on historic structures, archaeological resources, or recorded tribal resources. No historic structures occur within the MTC or in the immediate vicinity, and no archaeological sites have been identified in the Proposed Action area. No impacts to viewshed would occur. None of the potentially eligible sites for the NRHP occur within the proposed project footprints or their SDZs. Therefore, per the 13 November 2008 concurrence letter, no further work is required within the proposed project areas and no affect to historic properties would occur as a result of the Preferred Action Alternative (see **Appendix B**).

An archaeological survey has not been conducted previously in the proposed 220-acre license area (Project IL-6). Once it has been determined Project IL-6 would be implemented, the ILARNG will conduct an archaeological survey of this area and consult with IHPA prior to implementing development and/or training activities.

Native American consultation for this EA was initiated by the ILARNG in accordance with NEPA, NHPA, and DoDI 4710.02 (*DoD Interactions with Federally Recognized Tribes*), which implements the *Annotated DoD American Indian and Alaska Native Policy* (dated 27 October 1999); EO 13175 (*Consultation and Coordination with Indian Tribal Governments*); and AR 200-1. There have been no sacred, religious, cultural or traditional resources identified by the Native American Indian tribes that will be affected by the Preferred Action Alternative. A list of tribes contacted, copies of correspondence letters, and a MFR are included in **Appendix B**.

The ILARNG will follow the BMPs established in Section 2, Part E of the Programmatic Inter-Agency Agreement (IAA) between DMAIL and IHPA (see **Appendix B** for a copy of the complete IAA). If, during an undertaking, archaeological resources are discovered, DMAIL agrees that activities affecting the archaeological resource(s) shall be discontinued at the location of the archaeological resource(s) until consultation with the IHPA is completed pursuant to the Illinois State Agency Historic Resources Preservation Act (HRPA; 20 ILCS 3420/1 *et seq*). Notification to the IHPA shall be made within 48 hours of discovery and shall be the responsibility of DMAIL.

1. DMAIL agrees to establish a system whereby DMAIL personnel supervising DMAIL undertakings on federal, state, or private property (such as military training operations) are made aware of the stipulations of this section of the IAA.
2. DMAIL supervisory personnel will brief all participants in DMAIL undertakings on their responsibilities in reporting any archaeological materials that may be encountered during such undertakings. Supervisors will be responsible for notifying the DMAIL cultural resource liaison at DMAIL as soon as possible should any archaeological material be discovered during an undertaking. Activities impacting newly discovered archaeological sites will be terminated or moved until consultation, evaluation and mitigation, if appropriate.

This IAA shall be a general permit to conduct archaeological and paleontological investigations on state lands owned, managed, and leased by DMAIL as required by the Illinois Archaeological and Paleontological Resources Protection Act (APRPA) in lieu of the issuance of individual permits when the project is being reviewed by the IHPA pursuant to the HSRPA. This does not constitute a general permit under the HSRPA. The DMAIL shall notify all archaeological contractors involved in archaeological investigations, and appropriate DMAIL personnel, on such projects that this permit is in effect. DMAIL shall ensure that all materials and records resulting from the archaeological investigations are curated at the ISM pursuant to APRPA and HSRPA.

5.7.2 Build Alternative

The Build Alternative is anticipated to have *no effect* on historic structures, archaeological resources, or recorded tribal resources. The ILARNG will follow Programmatic IAA in the event of an inadvertent discovery of human remains or cultural items.

5.7.3 No Federal Action Alternative

No change in use or configuration of the installation would occur, and no impacts to cultural resources at the MTC would result.

5.8 Socioeconomics

5.8.1 Preferred Action Alternative

Under the Preferred Action Alternative, no *significant adverse* socioeconomic effects would be anticipated.

The Preferred Action Alternative would result in *minor, long-term positive socioeconomic impacts* by maintaining an enhanced training facility that is more heavily used, subsequently resulting in socioeconomic benefits to the surrounding areas. *Short-term positive* impacts would result from construction activities occurring

on-site, while long-term positive impacts would result from increased personnel visiting the area, primarily for training. Despite this anticipated increase in training, no permanent relocation of military personnel to the area is part of the Preferred Action Alternative. Therefore, socioeconomic impacts to the region would primarily be based on the temporary influx of training personnel, at a minimum requiring services and meals. Consequently, no significant impacts to area schools, permanent housing, or long-term population are anticipated.

Construction of the proposed facilities associated with the Preferred Action Alternative would potentially provide temporary construction jobs in the private sector, thus providing further, *short-term socioeconomic benefit* to the area. The local timber industry would also receive a *short-term positive* impact from harvesting trees in areas to be cleared. However, due to the small acreages involved, no long-term impacts to the civilian labor force are anticipated. Therefore, *minor, short-term positive* socioeconomic impacts associated with construction activities are anticipated for local employment and personal income. Increased construction would indirectly benefit the local economy through spending of business and personal income generated. As such, a *minor, positive impact* to the local economy is anticipated.

Training activities at the MTC would increase by approximately 15 percent from current levels under the Preferred Action Alternative. Additional demand could be placed on police and fire protection services, as well as for medical services, should an accident occur during training activities. However, the installation, in conjunction with local service providers, would have the capacity to meet these demands and no impacts are anticipated.

The MTC Site Manager and his family reside on-Post, but outside of the security fence that surrounds the MTC. No other concentrations of children exist on or off-Post. To ensure the safety of the children on and off Post, the MTC has several control measures in place to restrict access to children, which include installation fencing, signs and security patrols. As such, *no endangerment or adverse effects* to children are anticipated.

No impacts to public health and safety are anticipated. The Preferred Action Alternative would not impact the safety of hunters or other public site users, as the provisions set forth in the MTC MOU would not change. None of the proposed project components are anticipated to have an effect on public health and safety outside of the installation boundary (see **Section 5.3.1** that discusses off-Post noise impacts).

The proposed increase in on-site training activities would not impact the recreational availability of the MTC. The public would continue to have access to the MTC in accordance with the schedule of use outlined in MTC MOU. The IDNR would continue to set hunting schedules, ensure hunter safety, and enforce hunting regulations. The MTC security and Command Post would continue to work cooperatively in monitoring hunting, and provide response and assistance as needed.

5.8.2 Build Alternative

Impacts from the construction and operation of Build Alternative would be similar to the Preferred Action Alternative (see **Section 5.8.1**).

5.8.3 No Federal Action Alternative

Implementation of the No Federal Action Alternative would not affect the current socioeconomic environment around the MTC.

5.9 Environmental Justice

5.9.1 Preferred Action Alternative

Under the Preferred Action Alternative, *no significant adverse* environmental justice effects would be anticipated. No specific concentrations of poverty or minority populations are located in the vicinity. Consequently, no adverse impacts to such disadvantaged segments of the population are anticipated.

Construction of the Preferred Action Alternative is anticipated to result in *minor, short-term positive* socioeconomic impacts. These positive impacts would result through project construction, which would be expected to provide additional opportunities and increases in local employment and personal income. Specifically, new short term jobs may be created in the local construction industry, subsequently providing potential opportunities for unemployed, low-income, or minority groups. As such, an *indirect, short-term positive* environmental justice impact may occur. However, the extent of this benefit would be dependent on the degree to which minority or low-income persons are employed in these activities. The Preferred Action Alternative would result in *minor, long-term positive* socioeconomic impacts by maintaining an enhanced training facility that is more heavily used, resulting in socioeconomic benefits to the surrounding areas. These long-term benefits would be proportionately shared by all population segments surrounding the installation.

5.9.2 Build Alternative

Impacts from the construction and operation of the Build Alternative would be similar to the Preferred Action Alternative (see **Section 5.9.1**).

5.9.3 No Federal Action Alternative

Implementation of the No Federal Action Alternative would not affect environmental justice.

5.10 Infrastructure

5.10.1 Preferred Action Alternative

Under the Preferred Action Alternative, *no significant adverse effects* to the MTC or other area infrastructure would be anticipated.

No significant impacts to electric services, telecommunications, potable water supply, solid waste disposal, or transportation are anticipated. Construction associated with the Preferred Action Alternative would result in an increase in the consumption of utilities, including electricity, potable water, and sanitary sewer discharges. However, the installation, in conjunction with local service providers, would have the capacity to meet these demands and no impacts are anticipated.

Traffic impacts to MTC and regional roadways would be anticipated due to the forecasted increase in installation use induced by the Preferred Action Alternative. Based on current ILARNG projections, total traffic volumes of MTC-related users may increase by 15 percent over current conditions in the vicinity of MTC, and would occur during both daytime and nighttime hours. Approximately 1 percent of this traffic would be expected to occur during nighttime hours. Per DMAIL 350-11, all military vehicles must travel from County Highway to N 23rd Road (aka Army Road) due to road weight limits and agreements with the township. N 23rd Road has been reinforced to withstand military vehicle use from the intersection of N23rd and

County Highway 30 to just east of Gate 15 (i.e., reinforced along southern MTC boundary). Given the MTC is in a relatively rural, lightly trafficked area and military vehicle impacts on road infrastructure have been accounted for, these anticipated increases in traffic are not anticipated to produce a significant impact.

On-Post traffic impacts are anticipated to be beneficial due to the proposed maintenance projects, which include resurfacing the primary road network, repairing LWSCs, and regrading eroded areas on MTC trails.

Implementation of the Preferred Action Alternative would facilitate and enhance existing training activities at the installation. *Long-term beneficial* impacts would result by ensuring the continued and long-term viability of the MTC as a training center capable of providing the land and infrastructure necessary to support the ILARNG's and other military users' assigned training missions. Implementation of the Preferred Action Alternative would support higher quality, mission-essential training activities at the MTC, while limiting the need for out-of-state travel.

5.10.2 Build Alternative

Impacts from the construction and operation of the Build Alternative would be similar to the Preferred Action Alternative (see **Section 5.10.1**).

5.10.3 No Federal Action Alternative

The No Federal Action Alternative would have no effect on area infrastructure or transportation. The *beneficial impacts* to the ILARNG and the overall military community identified in **Section 5.10.1** would not be recognized.

5.11 Hazardous and Toxic Materials

5.11.1 Preferred Action Alternative

Under the Preferred Action Alternative, *no significant adverse* Hazardous and Toxic Materials and Wastes (HTMW) effects would be anticipated.

The overall HTMW impacts associated with implementing the Preferred Action Alternative are expected to be minimal to moderate, and would be kept at *less-than-significant* levels through implementing and adhering to standard BMPs. Implementation of the Preferred Action Alternative would not substantially affect the installation's hazardous materials storage and handling procedures, hazardous waste disposal processes, or pesticide waste program.

Most potential adverse HTMW impacts would result from collective implementation of the Preferred Action Alternative, rather than from any one component. The net increase in construction (short-term) and training (long-term) at the MTC under the Preferred Action Alternative would produce minor increases in handling, storage, use, transportation, and disposal of HTMW. The anticipated increases would include additional vehicle and equipment use, construction of the proposed buildings and facilities, some herbicide use, and construction of the proposed ranges. These activities would result in minor increases in consumption of operating fluids, including fuel, and maintenance materials, such as paint. New facilities would be potential contamination sources for such products as diesel fuel, motor gasoline (MOGAS), oil, antifreeze, lubricants, and lead, among others. Releases over a long period of time could potentially lead to soil, surface water, and/or groundwater contamination, and thus require some form of remediation.

Equipment storage would be in buildings, and is expected to have no adverse impact. There is some potential for adverse impacts when the equipment is in use. Equipment use, fuel storage, and refueling operations have the potential for diesel fuel and MOGAS leakage/spillage. Roadways have the potential for fluid spills in transition from the facility location to training sites. The ILARNG will operate under existing requirements and BMPs outlined in the Marseilles SPCCP (ILARNG, 2009). As such, a *minor, long-term adverse* impact is anticipated.

Facilities that manufacture, process, or otherwise use a toxic chemical in excess of applicable threshold quantities and that have 10 or more employees are subject to certain reporting and recordkeeping requirements per EO 13148 (Greening the Government through Leadership in Environmental Management), 40 CFR 372, Emergency Planning and Community Right-to-Know Act (EPCRA). For each toxic chemical exceeding threshold levels in a calendar year, a Toxic Chemical Release Form must be submitted to the appropriate authorities. In order to identify annual lead emissions associated with small arms training, the MTC will provide the Environmental Branch with ammunition usage data each calendar year. The Environmental Branch will include this information in their annual Tier III report to the USEPA.

The Preferred Action Alternative would entail reconfiguration of the existing range complex to support the proposed ranges. Some of the existing berms would need to be shifted during reconfiguration of these ranges. These berms have more than 20 years of lead accumulated within them. The ILARNG will avoid moving potentially contaminated soil off-range and off-site to minimize adverse HTMW impacts. Potentially contaminated soil would be kept within the existing range area. In order to remain in compliance with HTMW regulations and ensure worker safety, the ILARNG will develop a comprehensive health and safety plan prior to initiating construction or any earth moving activities within the range complex area. As discussed in **Section 5.4.1**, the ILARNG will follow appropriate BMPs from the Army Small Arms Training Range Environmental Manual to prevent or minimize lead or other contaminant migration off-site (Fabian and Watts, 2005).

5.11.2 Build Alternative

Impacts from the construction and operation of the Build Alternative would be similar to the Preferred Action Alternative (see **Section 5.11.1**).

5.11.3 No Federal Action Alternative

Implementation of the No Federal Action Alternative would have no effect with respect to HTMW at the MTC. The MTC would remain as it was described in **Section 4.0**.

5.12 Cumulative Effects

As defined by CEQ regulations in 40 CFR Part 1508.7, cumulative impacts are those that "result from the incremental impact of the Proposed Action when added to other past, present and reasonably foreseeable future actions, without regard to the agency (federal or non-federal) or individual who undertakes such other actions." Cumulative impact analysis captures the effects that result from the Proposed Action(s) in combination with the effects of other actions in the same geographic area. Because of extensive influences both within the Proposed Action areas and outside the boundary, cumulative effects are the most difficult to analyze.

NEPA requires analysis of cumulative environmental effects of a Proposed Action, or set of actions, on resources that may often be manifested only at the cumulative level, such as traffic congestion, air quality, noise, biological resources, cultural resources, socioeconomic conditions, utility system capacities, and others.

The "checklist" analysis methodology set forth in *Considering Cumulative Effects under the NEPA* (CEQ, 1997) was used to fully capture the cumulative effects associated with the Proposed Action. This qualitative cumulative impacts analysis is based on the potential effects of the Proposed Action when added to similar impacts from other projects in the region. The region of influence considered for the cumulative impacts analysis is La Salle County and the cities of Marseilles and Seneca in particular.

5.12.1 Overview of Region

The Illinois and Michigan Canal, constructed in 1848, stretched approximately 100 miles from Chicago to La Salle-Peru in La Salle County. This canal provided a link between the eastern and western portions of the U.S. Many communities formed along the canal route. In La Salle County, these included Seneca, Marseilles, Ottawa, Utica, and La Salle-Peru. The importance of this canal was reduced in 1853 by the development of the Rock Island Railroad's mainline. The canal is now used for recreational purposes (NRCS, 2008). These communities remain relatively small to this day. While La Salle County is the second largest county in land mass, it holds less than 1 percent of the State of Illinois' population. The cities of Seneca and Marseilles, the two nearest communities to the MTC, comprise only 6 percent of the population of La Salle County (U.S. Census Bureau 2007, 1990). Therefore, the area surrounding the MTC could be characterized as relatively unpopulated, with large tracts of undeveloped rural land.

The dominant land use in La Salle County has been agriculture for decades. In 2002, agriculture comprised 85 percent of the county land use (LEAMgroup, 2008). While the number of farms has declined by 40 percent in the past 30 years, this decline has been countered by an increase in average farm size (NRCS, 2008). Thus, total acres farmed have only declined slightly. La Salle County has some of the finest farmland in the U.S. and is one of the leading agricultural counties in Illinois (LEAMgroup, 2008).

La Salle County is the Silica Sand capital of the world. It is the largest cement maker in the state and mines industrial materials all over the county. A relatively new economic movement has been the development of wind farms in the County (LEAMgroup, 2008). One of these wind farms is located directly adjacent to the south and west of the MTC (see **Figure 1**).

La Salle has a well developed roadway system, which includes access to numerous highways (Interstate, U.S. and State) as well as an integrated county highway system of mainly hard-surfaced or graveled roads that connect incorporated and unincorporated areas within the County (NRCS, 2008).

Population growth since the 1940s has increased by two percent per decade historically within the County, and is estimated to increase by 4 percent per decade according to the Illinois DCEO (see **Table 10**).

5.12.2 La Salle County Planning

Reasonably foreseeable future actions within the region of interest are identified in the *2008 La Salle County Comprehensive Plan*, which provides guidance for

development within the County for the next 10 years or more. The Plan identifies several key issues of importance to the County (ranked in order of importance), which include farmland preservation, balancing economic development with open space protection, need for collaboration between cities and the County, protecting green space, encouraging develop near existing development, widening key two-lane highways, and providing opportunities for young people (LEAMgroup, 2008).

The current drivers affecting growth within the County include the development of warehouse facilities, the overall transportation system, abundance of land, and tax increment financing/enterprise zones. Future drivers identified for the County include: (1) a second bridge in Ottawa that would improve access in the central portion of the County from Ottawa to Streator; (2) prairie parkway, a new major interstate in adjoining counties, potentially affecting the area along Route 71; and (3) the proposed Illinois Valley Commuter Rail. The commuter rail would link western La Salle County with the METRA station in Joliet, which links to Chicago. Stops would be provided in Seneca, Marseilles, Ottawa and Utica (LEAMgroup, 2008).

Other future actions identified in the Plan include restoration of the Illinois River system to pre-European settlement ecological health by the USACE and State of Illinois; residential development growth in and around urbanized areas and to some degree within natural areas (e.g., forested areas and along major waterways); commercial development growth along major roadways and intersections along county and state routes; need for increased weight limits on County roads if oversees shipping of grain continues to become more common; increased development of intermodal facilities for trucking, rail and river transportation (i.e., one of these facilities is proposed for the Seneca area (LEAMgroup, 2008).

For additional information, proposed land use change mapping associated with residential, commercial and industrial growth for the County and the Marseilles/Seneca area from County Comprehensive Plan are included in **Appendix E**. As shown in this mapping new development would occur in and around existing urban areas and transportation corridors.

5.12.2.1 Preferred Action Alternative

The Preferred Action Alternative would provide *beneficial impacts* to the ILARNG and the State of Illinois. One of the missions of the ILARNG is to support the Governor by providing trained units and equipment capable of protecting life and property and preserving peace, order, and public safety. Land and facilities are necessary to accommodate training.

No significant adverse cumulative impacts to the environment, induced by the Preferred Action Alternative, are anticipated within the region. Cumulative impacts by resource are described below.

Land Use, Noise and Air Quality – The Preferred Action Alternative would not contribute significantly to cumulative land use change in the Marseilles and La Salle County area. The MTC is already a military training area. The Preferred Action Alternative would change the intensity, not the type, of use. Additional activity at the MTC would be unlikely to foster more than minimal additional development in the local area, because most of the Soldiers' needs would be met through Cantonment area facilities.

In general, the area surrounding the MTC has seen very little development. Land use in the vicinity of the training center includes agriculture, some residences, and

Exelon's nuclear LaSalle Generating Station. Construction of wind turbines to the west and south of the MTC began in spring 2006. There are plans to continue constructing them up to State Highway 23. These wind turbines provide beneficial impacts to the ILARNG by preventing encroachment along the western and southern boundaries of the MTC. In addition, they restrict development of these lands, and in turn reduce the potential for increased impacts to air quality and other resources.

The potential for residential encroachment of MTC's northern and eastern boundaries still exists. Under the Preferred Action Alternative, the new 220-acre USACE land license would provide *beneficial cumulative impacts* to both the MTC and the local region by providing a long-term buffer between training activities and local residences. The MTC would prevent encroachment of its boundaries that could impact the ILARNG's ability to train in the future, and at the same time minimize potential future impacts related to noise for nearby residences.

The ILARNG and MTC would continue to work with local government agencies and communities identifying potential noise and land use incompatibility and addressing possible noise issues of nearby residences or other sensitive receptors along the MTC boundaries. If necessary, the ILARNG and MTC could encourage La Salle County to place restrictions on development adjacent to the MTC. Noise from existing range activity, hunting, and wind turbines is already a part of the local noise environment. Additional proposed wind turbines would contribute to the cumulative noise impacts. Noise from the Proposed Action Alternative range operation would elevate existing noise levels in the immediate area and result in a minor, adverse cumulative impact.

Recent development within the MTC has included utility upgrades along the southeast corner of the Cantonment Area, a Combat Pistol Qualification Course (CPQC) on the western end of the range complex, and a Forward Operating Base (FOB) and MOUT site in the northern portion of the MTC (**Figure 2**). The new training facilities increased training by nearly 80 percent in the past 3 years. Additional future development would be limited, as all structures must be constructed in the Cantonment Area or MOUT site per the MTC MOU between DMAIL and IDNR or in the USACE leased area.

A *minor, short-term and long-term adverse* impact is anticipated as a result of construction activities, and the modification of less than 4 acres of forested/scrub-shrub land to grassland and less than 10 acres to impervious surfaces (e.g., buildings, roads, or parking areas). However, this impact cumulatively is anticipated to be negligible because nearly 70 percent of the 2,850-acre site is currently forested land, and construction in these areas is limited per the MTC MOU and overall county development within the Marseilles area and County are not anticipated to be substantial (see **Appendix E** for proposed area land use mapping). In addition, the areas proposed for disturbance are dominated by invasive species, in particular autumn olive.

Soil and Water Resources – No significant cumulative impact is anticipated. Adherence to permit conditions and implementation of BMPs for soil erosion, sedimentation, and management of spent ammunition would protect regional soil and water resources.

Biological Resources – The Preferred Action Alternative would not contribute noticeably to cumulative pressure on forested land at the MTC as it is nearly 70 percent forested. However, less than 4 acres of forest/scrub-shrub land would be permanently converted for the proposed LFBF. This change would reduce forested habitat and add field/grassland and edge habitat, benefiting some species and not

others. Less than 10 acres of grassland habitat, comprising mostly of maintained/disturbed grounds, would be converted to impervious surfaces (e.g., roads, buildings, parking areas). This reduction in forested and grassland habitat represents less than 1 percent of the MTC, and is considered to be a negligible impact.

Cultural Resources – No cultural resources at the MTC would be affected by the Preferred Action Alternative. No cumulative impacts to known archaeological sites or cemeteries in the area are anticipated.

Socioeconomics – Cumulative net positive impacts to the local socioeconomic environment would be realized through long-term viability of the MTC. However, the Preferred Action alone would be unlikely to foster more than minimal additional development in the local area because most of the Soldiers' needs would be met through Cantonment area facilities. No cumulative disproportionate or adverse impacts to minority or low-income populations are anticipated. There is a potential for minor, positive cumulative benefits to minority or disadvantaged businesses due to set asides and preferences for these types of businesses on Federal and State-funded projects.

Recreation – The Preferred Action Alternative would have no anticipated impact on public access at the MTC. The MTC is also a FWA during certain times of the year, and provides hunting opportunities for the public. The Preferred Action Alternative will have no impact on available hunting land. Schedules for military and IDNR use are outlined in the MOU. There are no plans to change these schedules; therefore, adverse impacts to natural resources and recreational opportunities are not anticipated. The MTC will continue to be managed as an FWA per the MOU.

Traffic and Transportation – The Preferred Action Alternative would have a minor, cumulative effect on traffic in the area, and would cause a minor increase in local traffic volumes. While the project would add to cumulative pressures on traffic and roadways, the MTC is already a training area and MTC traffic between the various training areas already occurs. Increased military traffic on local roads would increase maintenance requirements slightly. Long-term, local roadway improvements could alleviate some of these issues. According to the La Salle County Highway Department (2008), County Highway 30 along the western boundary of the MTC will be resurfaced by 2010, which should provide a beneficial impact for travel to and from the MTC.

The Seneca Bridge Expansion is currently occurring, which would hinder convoy operations and movements to and from the MTC during construction. While *minor, short-term adverse* impacts would occur during bridge work, the overall long-term impacts would be beneficial for regional transportation.

HTMW – The project would not contribute to a significant cumulative increase in HTMW. The ILARNG would adhere to regulatory requirements and implement BMPs to ensure HTMW remain at less *less-than-significant* levels.

5.12.2.2 Build Alternative

Cumulative impacts from the construction and operation of the Build Alternative would be similar to the Preferred Action Alternative (see **Section 5.12.1.1**). However, the *beneficial impacts* of the 220-acre USACE land lease (Project IL-6) would not be recognized.

5.12.2.3 No Federal Action Alternative

Implementation of the No Federal Action Alternative would continue to limit the ILARNG's ability to train and ensure attainment and maintenance of a full readiness posture and meet mission-training objectives. Under the No Federal Action Alternative, no cumulative impacts would occur, as the Proposed Action would not be undertaken.

6.0 COMPARISON OF ALTERNATIVES AND CONCLUSIONS

This EA has evaluated the potential environmental, cultural, and socioeconomic impacts associated with the proposed construction and operation of ranges and other training facilities at the MTC as detailed in **Section 2.0**. Three alternatives were evaluated: Preferred Action Alternative, Build Alternative, and the No Federal Action Alternative.

6.1 Comparison of the Environmental Consequences of the Alternatives

As summarized in **Table 17**, the Preferred Action Alternative and Build Alternative would result in generally minor impacts to the MTC and the local region and population. As identified throughout **Section 5.0**, adverse impacts would be lowered to acceptable levels by implementing resource-specific BMPs, and regulatory requirements, when applied, would reduce the level of identified impacts to acceptable levels.

The No Federal Action Alternative was not found to satisfy the purpose of and need for the Proposed Action. This alternative would neither enable the ILARNG to conduct doctrinally required training in-state nor ensure the continued and long-term viability of the MTC.

Table 17. Summary of Impacts			
Impact Issue	Preferred Action Alternative	Build Alternative	No Federal Action Alternative
Land Use	+ / ○ / ⊗	+ / ○ / ⊗	⊗
Air Quality	○ / ⊗	○ / ⊗	○
Noise	○ / ⊗	○ / ⊗	○
Geology and Soils	+ / ○ / ⊗	+ / ○ / ⊗	⊗
Water Resources	+ / ○ / ⊗	+ / ○ / ⊗	⊗
Biological Resources	+ / ○ / ⊗	+ / ○ / ⊗	⊗
Cultural Resources	○	○	○
Socioeconomics	+	+	○
Recreation	○	○	○
Environmental Justice	+	+	○
Infrastructure	+	+	⊗
Hazardous and Toxic Materials/Wastes	○ / ⊗	○ / ⊗	○
LEGEND:			
○ = No Impact			
⊗ = Significant Long-term Adverse Impact			
○ = Minor Short-term Adverse Impact			
+ = Beneficial Impact			
⊗ = Minor Long-term Adverse Impact			

6.2 Measures

The Proposed Action is not anticipated to result in *significant adverse* effects. Therefore, no specific mitigation measures are proposed in this EA to reduce potential significant adverse effects to *less-than-significant* levels. The NGB and ILARNG will maintain their stewardship posture by implementing the BMPs discussed in **Section 5.0** for each resource area and obtaining the appropriate permits as discussed below.

Follow-on NEPA Analysis

Proposed projects would be implemented between 2010 and 2016. Because projects would be implemented over an extended period of time, the ILARNG will review this NEPA analysis, in consultation with ARNG-ILE, prior to project execution to ensure no substantial changes have occurred to environmental resources or regulatory requirements since the completion of this EA. If changes have occurred the ILARNG will prepare an updated NEPA analysis in the form of a Supplemental EA or tiered Categorical Exclusion. This original EA would be utilized as the foundation for the updated analysis and supplemental NEPA analyses would focus on those issues that have changed.

Proposed Wash Rack

Prior to the development and operation of the proposed vehicle wash rack (Project IL-8), the ILARNG Environmental Branch would review the final project design and determine, in coordination with State and local agencies, if permits (e.g., NPDES discharge permit) would be required for operation of this facility.

Streams

Ephemeral streams (non-regulated) traverse two of the range footprints and occur within the new training road project footprints. The ILARNG, at this time, anticipates these streams can be avoided during facility design due to the limited amount of streams in the project footprints, their location within them, and overall design flexibility. Therefore, at this time, no adverse effects to streams are anticipated. During the final engineering design phase, the ILARNG Environmental Branch will determine if the project will impact regulated streams. The ILARNG would reassess impacts and any changes to federal and state waterways permitting requirements. If applicable, the ILARNG would obtain permits from the USACE and/or IEPA (as appropriate) prior to initiating any ground-disturbing activities. If impacts are greater than 0.1 acre or 300 linear feet, compensatory mitigation may be required. Required mitigation would be determined in consultation with the appropriate agencies (e.g., USACE and IEPA) during the Section 404 and 401 joint permitting effort. The ILARNG would implement any required mitigation prior to project implementation.

National Historic Preservation Act Section 106 Consultation

Per its 13 November 2008 letter to the ILARNG, the Illinois Historic Preservation Agency (IHPA) indicated that the ILARNG has complied with Section 106 consultation for this proposed undertaking. Per the requirement set forth in the IHPA's letter, the ILARNG will seek a renewal of the IHPA clearance in November 2010, two years from the date of initial clearance, prior to implementing projects after November 2010. ILARNG will coordinate this consultation with ARNG-ILE.

6.3 Conclusions

The evaluation performed within this EA concludes there would be *no significant adverse impact*, either individually or cumulatively, to the local environment or quality of life as a result of implementing the Proposed Action. This EA's analysis determines, therefore, an Environmental Impact Statement (EIS) is unnecessary for implementing the Proposed Action, and that a FNSI is appropriate. Positive impacts to onsite land use, the local socioeconomic environment, and onsite infrastructure would be anticipated. This EA recommends implementation of the Preferred Action Alternative.

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8.0 GLOSSARY

100-year Flood Zone/ – A flood event of such magnitude that it occurs, on average, every 100 years; this equates to a 1 percent chance of its occurring in a given year.

500 year Flood Zone – A flood event of such magnitude that it occurs, on average, every 500 years; this equates to a 0.2 percent chance of its occurring in a given year.

Aesthetics – Pertaining to the quality of human perception of natural beauty.

Ambient - The environment as it exists around people, plants, and structures.

Ambient Air Quality Standards - Those standards established according to the CAA to protect health and welfare (Army Regulation [AR] 200-1).

Aquifer - An underground geological formation containing usable amounts of ground water which can supply wells and springs.

Attainment Area - Region that meets the National Ambient Air Quality Standard (NAAQS) for a criteria pollutant under the CAA.

Battalion - A military unit consisting of a headquarters company and three to five functional (combat arms, combat support, or combat service support) companies consisting of approximately 250 to 1,000 persons, depending on the type of unit.

Bedrock - the solid rock that underlies all soil, sand, clay, gravel, and loose material on the earth's surface.

Best Management Practices (BMPs) – Voluntary, methods measures, or practices for reducing environmental impacts, such as pollutants to U.S. waters. BMPs may be imposed in addition to, or in the absence of, effluent limitations, standards, or prohibitions (AR 200-1).

Brigade - A military unit composed of several battalions, augmented by specialized units (up to approximately 5,000 persons, depending on the type of unit).

Commercial land use – land use that includes private and public businesses (retail, wholesale, etc.), institutions (schools, churches, etc), health services (hospitals, clinics, etc.), and military buildings and installations.

Compact - The packing of soil together into a firmer, denser mass, generally caused by the pressure of great weight.

Company - A military unit that is the next smaller unit of a battalion; the most basic administrative and tactical unit (approximately 50 to 200 persons, depending on the type of unit).

Contaminants - Any physical, chemical, biological or radiological substances that have an adverse effect on air, water, or soil.

Council on Environmental Quality (CEQ) - An Executive Office of the President composed of three members appointed by the President, subject to approval by the Senate. Each member shall be exceptionally qualified to analyze and interpret environmental trends to appraise programs and activities of the Federal Government. Members are to be conscious of and responsive to the scientific, economic, social, aesthetic, and cultural needs of the Nation; and to formulate and recommend national policies to promote improvement of the quality of the environment.

Criteria Pollutants - The Clean Air Act (CAA) of 1970 required the United States Environmental Protection Agency (USEPA) to set air quality standards for common and widespread pollutants in order to protect human health and welfare. There are six "criteria pollutants": ozone (O₃), carbon monoxide (CO), sulfur dioxide (SO₂), lead (Pb), nitrogen dioxide (NO₂), and particulate matter.

Cultural Resources - The physical evidence of our Nation's heritage. Included are: archaeological sites; historic buildings, structures, and districts; and localities with social significance to the human community.

Culvert - Drainage that crosses beneath a road.

Cumulative Impact - The impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

dBA - "A-weighted" non-impulse noise measurement in decibels, weighted to match human hearing frequency response.

Decibel (dB) - A unit of measurement of sound pressure level.

Direct Impact - A direct impact is caused by a Proposed Action, and occurs at the same time and place.

Elevation - Raising a building and placing it on a higher foundation so the first or lowest floor is above flood levels.

Emission - A release of a pollutant.

Enclave - A territory or entity surrounded by another territory or entity.

Endangered Species - Any species that is in danger of extinction throughout all or a significant portion of its range.

Environmental Assessment (EA) - A publication that provides sufficient evidence and analysis to show whether a proposed system will adversely affect the environment or be environmentally controversial.

Environmental Impact Statement (EIS) - A document prepared in conjunction with an EA, when the EA determines that a Proposed Action will adversely affect the environment or be controversial. The EIS discloses the impacts of the action.

Erosion - The wearing away of the land surface by detachment and movement of soil and rock fragments through the action of moving water and other geological agents.

Farmland - Cropland, pastures, meadows, and planted woodland.

Fauna - Animal life, especially the animal characteristics of a region, period, or special environment.

Flora - Vegetation; plant life characteristic of a region, period, or special environment.

Floodplain - The relatively flat area or lowlands adjoining a river, stream, ocean, lake, or other body of water that is susceptible to being inundated by floodwaters.

FNSI - Finding of No Significant Impact, a National Environmental Protection Act (NEPA) document.

Fugitive Dust - Particles light enough to be suspended in air that are not caught in a capture or filtering system. For this document, this refers to particles put in the air by moving vehicles and air movement over disturbed soils at construction sites.

Geology - Science that deals with the physical history of the earth, the rocks of which it is composed, and physical changes in the earth.

Glacial Till - The mass of rocks and finely ground material carried by a glacier, then deposited when the ice melted. Creates an unstratified material of varying composition.

Groundwater - Water found below the ground surface. Groundwater may be geologic in origin and as pristine as it was when it was entrapped by the surrounding rock, or it may be subject to daily or seasonal effects depending on the local hydrologic cycle. Groundwater may be pumped from wells and used for drinking water, irrigation, and other purposes. It is recharged by precipitation or irrigation water soaking into the ground. Thus, any contaminant in precipitation or irrigation water may be carried into groundwater.

Hazardous Substance - Hazardous materials are defined within several laws and regulations to have certain meanings. For this document, a hazardous material is any one of the following:

- 1) Any substance designated pursuant to section 311 (b)(2) (A) of the CAA.
- 2) Any element, compound, mixture, solution or substance designated pursuant to Section 102 of Comprehensive Environmental

Response, Compensation and Liability Act (CERCLA)

- 3) Any hazardous material as defined under the Resource Conservation and Recovery Act (RCRA)
- 4) Any toxic pollutant listed under the Toxic Substances Control Act (TSCA).
- 5) Any hazardous air pollutant listed under Section 112 of CAA.
- 6) Any imminently hazardous chemical substance or mixture with respect to which the USEPA Administrator has taken action pursuant to Subsection 7 of TSCA.

The term does not include: 1) Petroleum, including crude oil or any thereof, which is not otherwise specifically listed or designated as a hazardous substance in a above; 2) Natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). A list of hazardous substances is found in 40 Code of Federal Regulations (CFR) 302.4.

Hazardous Waste - A solid waste, which when improperly treated, stored, transported, or disposed of poses a substantial hazard to human health or the environment. Hazardous wastes are identified in 40 CFR 261.3 or applicable foreign law, rule, or regulation (see also solid waste).

Heavy Expanded Mobility Tactical Truck - An eight-wheeled, diesel powered off-road capable truck capable of heavy transport for supply and re-supply of combat vehicles and weapons systems.

Hydric Soil - a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic (oxygen-lacking) conditions that favor the growth and regeneration of hydrophytic vegetation. A wetland indicator.

Inactive Duty Training - Authorized training performed by a member of a Reserve component not on active duty or active duty for training and consisting of regularly scheduled unit training assemblies, additional training assemblies, periods of appropriate duty or equivalent training, and any special additional duties authorized for Reserve component personnel by the Secretary concerned, and

performed by them in connection with the prescribed activities of the organization in which they are assigned, with or without pay. Does not include work or study associated with correspondence courses.

Indirect Impact - An indirect impact is caused by a Proposed Action, but occurs later in time or farther removed in distance, but is still reasonably foreseeable. Indirect impacts may include induced changes in the pattern of land use; population density or growth rate; and related effects on air, water, and other natural and social systems. For example, referring to the possible direct impacts described above, the clearing of trees for new development may have an indirect impact on area wildlife by decreasing available habitat.

Industrial Land Use - Land uses of a relatively higher intensity that are generally not compatible with residential development. Examples include light and heavy manufacturing, mining, and chemical refining.

Installation - A grouping of facilities, located in the same general vicinity, over which the installation commander has authority (AR 200-1).

Jurisdictional wetland - Areas that meet the wetland hydrology, vegetation, and hydric soil characteristics, and have a direct connection to the Waters of the United States. These wetlands are regulated by the United States Army Corps of Engineers (USACE).

Listed Species - Any plant or animal designated as a State or Federal threatened, endangered, special concern, or candidate species.

Long Term Impacts - Direct or indirect impacts resulting from an action in an extended term. In this context, long-term does not refer to any rigid time period and is determined on a case-by-case basis in terms of the environmental consequences of the Proposed Action.

Major Impact - An impact that would be particularly large in magnitude, considering both context and intensity.

Minor Impact - An impact that would be of a smaller scale or would be more readily

mitigated than impacts categorized as major.

Mitigation – Measures taken to avoid, minimize, rectify, reduce, eliminate, or compensate for an adverse environmental impact.

Mobile Sources - Vehicles, aircraft, watercraft, construction equipment, and other equipment that use internal combustion engines for energy sources.

Monitoring – A process of inspecting and recording the progress of mitigation measures implemented.

National Ambient Air Quality Standards (NAAQS) - Nationwide standards set up by the USEPA for widespread air pollutants, as required by Section 109 of the CAA. Currently, six pollutants are regulated by primary and secondary NAAQS: CO, Pb, NO₂, O₃, particulate matter, and SO₂.

National Environmental Policy Act (NEPA) - U.S. statute that requires all Federal agencies to consider the potential effects of Proposed Actions on the human and natural environment.

Nonattainment Area - An area that has been designated by the USEPA or the appropriate State air quality agency as exceeding one or more national or State ambient air quality standards.

Particulates or Particulate Matter - Fine liquid or solid particles such as dust, smoke, mist, fumes, or smog found in air.

Physiographic Province - A portion of the Earth's surface with a basically common topography and common morphology.

Pollutant - A substance introduced into the environment that adversely affects the usefulness of a resource.

Potable Water - Water suitable for drinking.

Prime Farmland - A special category of highly productive cropland recognized and described by the United States Department of Agriculture's Soil Conservation Service and receives special protection under the Surface Mining Law.

Real Property – A building, the land on which it sits, and any permanent

improvements or fixtures made to the property (for example, addition of built-in bookshelves).

Regiment – A military unit usually consisting of a number of battalions or squadrons.

Remediation - A long-term action that reduces or eliminates a threat to the environment.

Sedimentation – Deposition of eroded material in an alternate location by dispersing agents such as water or wind.

Sensitive Receptors - Include, but are not limited to, asthmatics, children, and the elderly, as well as specific facilities, such as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, and childcare centers.

Short Term Impacts – Direct or indirect impacts resulting from an action in the near term. In this context, short-term does not refer to any rigid time period and is determined on a case-by-case basis in terms of the environmental consequences of the Proposed Action.

Significant Impact - According to 40 CFR 1508.27, "significance" as used in NEPA requires consideration of both context and intensity.

- a. Context. The significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the Proposed Action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.
- b. Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action.

Soil - The mixture of altered mineral and organic material at the Earth's surface that supports plant life.

Solid Waste - Any discarded material not excluded by section 261.4(a) or that is not excluded by variance granted under sections 260.30 and 260.3 1.

Surficial aquifer - Comprises all the rocks and sediments from land surface downward to the top of the intermediate confining unit containing usable amounts of ground water which can supply wells and springs.

Threatened species - Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Topography - The relief features or surface configuration of an area.

Toxic Material/Waste - A harmful substance that includes elements, compounds, mixtures, and materials of complex composition.

Waters of the United States include the following: (1) All waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide. (2) All interstate waters including interstate wetlands. (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds; the use, degradation, or destruction of which could affect interstate or foreign commerce.

Watershed - The region draining into a particular stream, river, or entire river system.

Wetlands - Areas that are regularly saturated by surface or ground water and, thus, are characterized by a prevalence of vegetation adapted for life in saturated soil conditions. Examples include swamps, bogs, fens, marshes, and estuaries.

Wildlife Habitat - Set of living communities in which a wildlife population lives.

9.0 LIST OF PREPARERS

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Marty Marchaterre, Senior Environmental Planner. Mr. Marchaterre holds a J.D. and a B.A. in History/Political Science, with more than 17 years of experience in NEPA and environmental studies. His primary technical areas include preparing NEPA documentation and managing natural and cultural resource studies, land use, and socioeconomic studies. Mr. Marchaterre's responsibilities on this EA included Quality Assurance/Quality Control (QA/QC) of the EA.

Jennifer Pyzoha Warf, Project Manager/Environmental Planner. Ms. Warf holds a M.S. in Environmental Studies and a B.S. in Zoology, with more than 9 years of experience in NEPA and natural resource assessment documentation. Ms. Warf's responsibilities for this EA included serving as the project manager, gathering data, coordinating staff, and preparing and reviewing sections of the document, as well as assuring overall project performance.

Dean Barbo, Senior GIS Analyst/Project Manager. Mr. Barbo holds a M.S. in Science of Forestry, with more than 10 years of experience in GIS analysis and environmental studies. Mr. Barbo's responsibility on this EA was assisting in preparing and developing GIS mapping.

10.0 AGENCIES AND INDIVIDUALS CONSULTED

10.1 State and Federal Agencies

State and Federal resource agency consultation was initiated by the ILARNG in October 2008. Copies of all IICEP correspondence, including sample data request letters and all received agency responses, are included in **Appendix B**. Agencies consulted are listed below:

Federal Agencies

USDA-Natural Resources Conservation Service
Ottawa Service Center
1691 N 31st Rd
Ottawa, IL 61350-9640

US Fish and Wildlife Service
Rock Island Ecological Services Field Office
1511 47th Avenue
Moline, IL 61265
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US Environmental Protection Agency
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State Agencies

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Illinois Department of Natural Resources
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2660 E 2350th Road
Marseilles, IL 61341
POC: Mr. Ted Love

Illinois Department of Natural Resources
Office of Realty & Environmental Planning
One Natural Resources Way
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Illinois Environmental Protection Agency
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Illinois Historic Preservation Agency
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#1 Old State Capitol Plaza
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POC: Ms. Anne Haaker, Deputy SHPO

10.2 Native American Consultation

Consultation for the EA was initiated by the ILARNG in October 2008 in accordance with NEPA, NHPA, NAGPRA, and DoDI 4710.02, which implements *DoD American Indian and Alaskan Native Policy*. A list of federally recognized tribes contacted is included below. These entities were invited to participate as Sovereign Nations per EO 13175 in the EA and the NHPA Section 106 process. Consultations with these tribes were conducted in accordance with the protocol set forth in the NGB (2006) NEPA Handbook.

A copy of the Draft EA will be provided by the ILARNG to tribes expressing interest in further consultation. Copies of correspondence and an MFR are included in **Appendix B**.

List of Native American Tribes

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Crandon, WI 54520

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Hannahville Indian Community Council
N14911 Hannahville B 1 Road
Wilson, MI 49896-9728

Honorable John Miller, Tribal Chairman
Pokagon Band of Potawatomi Indians
901 Spruce Street
Dowagiac, MI 49047

Honorable John A. Barrett, Jr., Chief
Citizen Potawatomi Nation
1601 South Gordon Cooper Drive
Shawnee, OK 74801

Honorable Badger Wahwasuck, Tribal Chairman
Prairie Band Potawatomi Nation
16281 Q Road
Mayetta, KS 66509

Honorable Laura Spurr, Tribal Chairperson
Huron Potawatomi
2221 1 ½ Mile Road
Fulton, MI 49052

APPENDIX E

Marseilles Training Area Standard Operating Procedures (SOP)

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NGIL Regulation 350-11

Training

Marseilles Training Center

Headquarters
Illinois Army National Guard
Springfield, IL
14 January 2011

UNCLASSIFIED

Department of Military Affairs
1301 N. MacArthur Blvd.
Springfield, IL 62702-2399


NGIL Regulation 350-11

Effective: 14 January 2011

TRAINING

MARSEILLES TRAINING CENTER

By Order of the Adjutant
General of Illinois


WILLIAM L. ENYART
Major General, ILARNG
The Adjutant General

JOSEPH A. POQUETTE
CPT: MP.
Training Sight Commander

Summary: This regulation prescribes the general policies and procedures governing training activities conducted at Marseilles Training Center. Upon publication and distribution, it supersedes the

former Department of Military Affairs, Illinois, (DMAIL), Regulation 350-11, Change 1, Training, Marseilles Training Center, dated 1 Apr 2007.

Applicability: The provisions of this regulation are applicable to any person, unit, or organization, military or civilian that occupies any portion of MTC. Units/Organizations using ranges or training areas must possess, read, understand and comply with this regulation.

Proponent and exceptions: The proponent for this NGIL Regulation is the ILARNG G3-MTC. All requests for exception to the policies or procedures will be submitted in writing to MTC HQ for review, approval or further processing to higher HQ.

Suggested improvements: Using units and organizations are invited to submit comments and suggestions for improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to MTC HQ, 1700 Army Road, Marseilles, IL 61341

Distribution: This publication is open for public release and is available in hard copy or electronic media via the internet. It is intended for all units, organizations or groups utilizing the ILARNG's Marseilles Training Center.

*This regulation supersedes DMAIL Regulation 350-11 Dated 01 APRIL 2007

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Chapter 1 Introduction

1-1. Purpose and Scope

This regulation sets forth basic Illinois Army National Guard (ARNG) policy and guidance for organizing the Marseilles Training Center (MTC). This regulation will serve as a complement to NGR 5-3 Installation Management and Organization. The primary purpose of this regulation is to establish a basic organizational framework to achieve quality, excellence, and enhanced productivity in all aspects of Training Center management and operations.

1-2. Marseilles Training Center Mission Statement

Provide the necessary personnel and equipment to conduct training, logistical and administrative support for using organizations. On order, conduct sustained operations in support of Federal or State declared emergencies.

1-3. Special Terms and Abbreviations

Special terms and abbreviations used in this document are listed in the glossary.

Chapter 2 Responsibilities

2-1. Illinois Deputy Chief of Staff for Operations / G3

The G3 will exercise staff supervision over operations of all IL training facilities.

2-2. Training Site Commander / Manager

The Training Site Commander / Manager has the overall responsibility for the day-to-day operation of Marseilles Training Center. The Training Site Commander/ Manager supervises the MTC full-time staff, and is the Adjutant General's personal representative for MTC. The decisions of the Training Site Commander /Manager may be more restrictive than the provisions of this regulation. The Training Site Commander/ Manager has the authority to stop training and remove individuals/units from the training site if the situation warrants such action. The Training Site Commander will:

- a. Establish training site policy and procedure in accordance with Army, ARNG, and ILARNG regulations.
- b. Ensure the safe operation of the training center.
- c. Supervise the operations of the training center.
- d. Supervise the logistics of the training center.
- e. Supervise the overall maintenance of the training center
- f. Supervise the financial operations of the training center.
- g. Serves as the liaison between all local communities, civilian users, the Illinois Department of Natural Resources (IDNR), and the Illinois Army National Guard (ILARNG).
- h. Responsible for the scheduling of Range Officers.

2-3. Range Operations Manager

The Training Site Range Operations Manager (ROM) has the responsibility to ensure the Training Site Commanders/ Manager's goals and expectations are being met on all day-to-day operations. The ROM is to supervise the MTC full time staff in the conduct of daily training site operations and ensures command policy and guidance is followed. In the absence of the Training Site Commander/ Manager the ROM assumes those duties listed in paragraph 2-2. Primary Duties include:

- a. Review all SOP's for content and applicability.
- b. Ensure all MTC personnel are operating in accordance to established SOP.
- c. Supervise the daily operations on MTC.
- d. Ensures Training Site Command/ Manager policies and guidance are followed.
- e. Provides recommendations to MTC Training Site Command/ Manager on daily operations.
- f. Assists MTC Training Site Command/ Manager with future planning.
- g. Reviews and follows training site projects, as assigned, to report on daily status.
- f. Works with subordinate supervisors to ensure proper staffing for training events.

2-4. Marseilles Training Center Range OIC

Responsible for the control, operation, and development of safety data for ranges, impact areas, training areas and training support facilities and the integration of safety and training within the training complex. Responsible for the long-term implementation of control, safety and management systems that are based on accident/incident prevention and the efficient and effective support of training in accordance with AR 385-63, DA Pam 385-63, and NGIL 350-11. In the absence of the Training Site Commander/ Manager and the Deputy Commander/ XO, the Range Officer assumes those duties listed in paragraph 2-2 above. Primary Duties Include:

- a. Ensure the safe operation of the MTC training facilities.
- b. Supervises the operations of MTC Range Control.
- c. Establishes, with command guidance, policies and procedures for using unit operations and SOPs for MTC Operations Section and MTC Range Control.
- d. Observe training and provide feedback to the unit leaders, as needed, regarding safety issues.
- e. Write and submit training AARs to the Training Site Commander/ Manager.
- f. Conducts operational planning and development related to ranges and training facilities, to include SDZ computation, facility placement, and safety.

2-5. Marseilles Training Center Operations Officer (MTC-S3)

The MTC-OPS is one of several personnel assigned to the MTC for weekend training. He/She works under the direction of the Training Site Commander/ Manager. In the absence of the MTC Range Control OIC, the M-DAY S-3 Assumes those duties and responsibilities listed in paragraph 2-4. Duties include, but are not limited to:

- a. Ensure the safe operation of the MTC training facilities.
- b. Establishes, with command guidance, policies and procedures for using unit operations and SOPs for MTC Operations Section and MTC Range Control.
- c. Observe training and provide feedback to the unit leaders, as needed, regarding safety issues.
- d. Write and submit training AARs to the Training Site Commander/ Manager.
- e. Conducts operational planning and development related to ranges and training facilities, to include SDZ computation, facility placement, and safety.

2-6. Marseilles Training Center Security

MTC Security personnel have responsibility for security of the installation and for enforcement of installation regulations, especially those involving safety. Therefore, MTC Security personnel have complete access to all areas of the installation at all times in performance of their duties. In areas occupied by a unit or an individual, MTC Security personnel will announce themselves and introduce themselves as members of MTC Security.

- a. The area of jurisdiction is limited to the geographical boundary of MTC. Co 23 West to Co 30 North to River Rd East to the power lines north and south. Co 23 East to Carriage lane North to River Rd.
- b. Security personnel will make on the spot corrections in accordance with NGIL 350-11. Security personnel will report any uncorrected safety infraction to range control.
- c. Security personnel will assist in emergency evacuation and response with emergency personnel while maintaining a security presence. During emergencies, security personnel will provide security at the incident sight.

2-7. Range Control Personnel

MTC Range Control personnel have responsibility for safe conduct of all training on the installation and for enforcement of installation regulations related to training operations. Therefore, MTC Range Control personnel have complete access to all training areas and facilities at all times in performance of their duties. In areas occupied by a unit or an individual, Range Control personnel will announce themselves and introduce themselves as members of MTC Range Control.

- a. Range Control personnel will make on the spot corrections in accordance with NGIL 350-11 and have the authority to suspend unit training as needed to ensure the safety of personnel and equipment. Any such suspension will be reported to MTC HQ.
- b. Range Control is the communications hub of the installation for both internal MTC operational radio network and the Range Control radio network.
- c. Range Control personnel will coordinate emergency evacuation and response with emergency personnel and relay crucial information between responding agencies, MTC Security and the requesting organization. During emergencies, the primary duty of range control is command and control of the evacuation process from the initial MEDEVAC request until the casualty is off MTC grounds.
- d. MTC range control issues and clears all training facilities on the site.

e. Issues and receives equipment signed out to organizations for training support (radios TADSS equipment and ect.).

f. Ensures ranges and automated systems are functioning properly and coordinates any maintenance requirements.

g. Range control personnel conduct the MTC Range Control Safety Briefing and conduct routine safety inspections of training.

h. Range control supports personnel requirements for specialized equipment required for training but not issued to using units, such as the FATS V, HEAT, VCOT, CFFT, ODS and portable target systems.

2-8. Using Units / Organizations

Military units/organizations are responsible for, but not limited to, the following:

a. Employing proper risk management procedures.

b. The proper use of installation equipment and facilities in accordance with NGIL 350-11 and established SOPs.

c. Safeguarding all unit weapons, ammunition and equipment.

d. Proper reporting of any accident/incident.

e. Ensure alcohol policy is adhered to.

f. Ensure the strict compliance of regulatory guidance.

g. Prompt reporting of any cancellations.

h. Submit requests for use of facilities in accordance with NGIL 350-11.

i. Non-military organizations/authorized individuals are responsible for:

(1) Conducting safe training/firing.

(2) The proper use of installation equipment and facilities in accordance with NGIL 350-11 and established SOPs.

(3) Safeguarding all organization weapons, ammunition and equipment.

(4) Proper reporting of any accident/incident.

(5) Ensure alcohol policy is adhered to.

(6) Prompt reporting of any cancellations.

(7) Submit requests for use of facilities in accordance with NGIL 350-11.

2-9. Marseilles Training Center Logistics

MTC Logistics personnel have the responsibility for billeting and supply operations. Therefore, MTC Logistics personnel have complete access to all Training Support Center buildings at all times in performance of their duties. In areas occupied by a unit or an individual, MTC Logistics personnel will announce themselves and introduce themselves as members of the of MTC LOG Staff.

a. MTC LOG Staff issues, clears, and assigns all BAQ and TSC buildings. Primary POC is Housing Officer: 815-750-6503/6501/6503/6517.

b. MTC LOG Staff responsible for supplies for TSC and IT equipment needed for classrooms. MTC LOG is responsible for IDT meals and lodging for MTC Staff only. Primary POC is Supply NCO 815-750- 6517/ 6501/6502/6503.

c. MTC ASP operations. Primary POC is the MTC ASP Manager 815-750-6698.

d. MTC LOG Staff is responsible for Hand receipts and sub-hand receipts for:

(1) Individual Body Armor (IBA's).

(2) Billeting and billeting supplies.

(3) Class Rooms and Audio Visual equipment.

(4) Stand alone computers.

(5) Linens and cleaning supplies.

e. Primary POC is MTC LOG Section at 815-750-6501/6502/6503/6517

f. MTC LOG is responsible for service contracts (Laundry, Janitorial, Propane, & Port-a-Pots). 815-750-6501/6502/6503/6517

2-10. Environmental and Natural Resources

Primary responsibility is to support the military training mission. With regard to accomplishment of the military mission, the overall goal is to provide quality natural resources as a critical training asset upon which to accomplish the mission of the ILARNG at the MTC. Components of this overall goal include:

- a. Ensure no net loss in the capability of installation lands to support existing and projected military training and operations at the MTC.
- b. Maintain quality training lands through range monitoring and damage minimization, mitigation, and rehabilitation.
- c. Minimize training limitations caused by enforcement actions.
- d. Provide technical assistance to the Training Site Commander / Managers and training site personnel to develop projects, secure required permits, conduct field studies, provide Environmental Awareness materials, identify natural and cultural resources, direct the NEPA process, assist with implementing recycling, waste management, and spill prevention control and countermeasure plans, and manage the development and implementation of the Integrated Natural Resource Management Plan (INRMP) for MTC.
- e. Coordinate implementation of the INRMP with the military mission / training requirements and with the IDNR.
- f. Provides training opportunities and experiences for training site personnel and other state employees as they relate to natural resource management.
- g. Serves as the Environmental POC during regular duty hours as outlined in the Spill Reporting Procedures Flow Chart.

Chapter 3 Administration

3-1. General

This chapter provides administrative guidance for units at MTC.

- a. Maps, forms, NGIL 350-11, and various SOPs are available at Range Control and at <http://www.il.ngb.army.mil/departments/POTO/MTC/default.htm>. See also the maps provided in Appendix B.
- b. Open fires and burning without the appropriate permit is prohibited anywhere on the training site.
- c. Procedures for requesting and clearing the Training Support Complex are contained in Appendix M.

3-2. In-Processing

- a. Using unit must have scheduled the use of MTC prior to arrival to MTC (refer to Chapter p. 4 Scheduling)
- b. All units conducting training at MTC must check in no later than 1300 hours at Range Control the day prior to the training event. At this time units will be briefed as to range/training area/facility utilization. All units training at MTC must have a representative with signature authority on a DA Form 1687, see Appendix R.
- c. If a representative fails to check in at Range Control, the training area/range/facility will not be issued to unit. Units unable to have a representative check in prior to 1300 the day prior to the training event, will contact Range Control at least 5 working days prior to the date of training to make alternate arrangements for drawing their facilities.
- d. *The MTC Safety Briefing is conducted at 1300 every Friday for those organizations needing personnel safety certified at MTC. Safety briefings for training events during the week will be coordinated with Range Control as needed.*
- e. No unit is allowed to occupy any training area, range or facility without checking in with Range Control.
- f. NGIL-G3 will be notified of all units that fail to report for training.

3-3. Clearance Requirements

- a. Ranges (see section 7-12)
- b. Training Areas (see section 8-16)
- c. Billeting / Facilities (see section 10-14)
- d. UTES Units that utilize Unit Training Equipment Site (UTES) assets must clear with UTES before departing the training site.

3-4. Convoy Procedures

- a. Convoy access to MTC will be through gate #3. (See map in Appendix B-2).
- b. Convoy planning is a unit responsibility.
- c. Convoy Route Strip Map. (See map in Appendix B-5).
- d. All vehicles in a convoy will enter MTC without stopping on or along the public roadway.
- e. Mud left on public roadways will be reported to Range Control.

3-5. Vehicle Operations

- a. Seat belt usage for all vehicles equipped with operator and passenger restraints is mandatory.
- b. Speed limit on MTC is 20 MPH, 5 MPH when passing troops, Range Control and MTC Security will monitor speed of vehicles, seat belt usage and will advise leadership of personnel found in violation. Off road usage will be in accordance with Chapter 8 of NGIL 350-11.
- c. Units will not conduct blackout driving or tactical movements on the public roads adjacent to MTC. All training areas other than TA 200 (cantonment area) are authorized blackout drive areas.
- d. Night Vision Device Driving Policy – see Appendix P.
- e. Training events are not allowed on public roads at any time.
- f. 1151's issued to units from MTC will not be operated outside the MTC (i.e. public roadways)
- g. All ground vehicle accidents will be reported to either MTC Range Control or Security and are to be reported on NGIL form 15 and DA Form 285-AB-R, JUL 94. See paragraph 9-5 for more information.
- h. POV's are not allowed in the tactical training areas.
- i. The armory parking lot is not an authorized MTC user parking area.
- j. Soldiers operating or riding in tactical vehicles in training areas will wear Kevlar helmet.
- k. MTC Security and Range Control have authority to suspend individual driving privileges for serious or repeated violations of these policies. MTC Security has authority to contact local law enforcement to have individuals ticketed.

3-6. Motorcycle Operations

- a. In accordance with the DODI 6055.4, updated 10 January 2010, all National Guard personnel regardless of duty status will wear approved personal protective equipment (PPE) when driving a motorcycle on or off duty.
- b. All other personnel will wear approved PPE while operating a motorcycle on the grounds of MTC.
- c. Appropriate PPE consists of the following items properly worn as designed:
 - (1) Department of Transportation approved helmet with face shield or impact goggles attached to the helmet.
 - (2) Sturdy over the ankle footwear
 - (3) Long sleeved shirt or jacket
 - (4) Long pants
 - (5) Full fingered gloves of mittens designed for motorcycle use
- d. A brightly colored (day glow orange, yellow, blue) outer garment vest, belt or riding jacket for daytime operation, and retro (rear) reflective upper outer garment for nighttime operation. If wearing a belt it will be worn diagonally across the torso to ensure maximum visibility.
- e. Personnel arriving at MTC operating a motorcycle out of compliance with this policy will be informed of the policy and required to park their motorcycle in the public lot in front of the UTES.
- f. Personnel who are non-compliant on subsequent occasions will be reported to MTC HQ for further action, which may include contact with unit commander / supervisor, temporary or permanent suspension of motorcycle driving privileges on MTC or other action as deemed appropriate to the situation.

3-7. Vehicle Parking

- a. POV parking is authorized in the cantonment area around building A and in front of buildings B, C, and D, at owner's risk.

- b. All parking spaces are clearly marked with yellow lines; vehicles are not authorized to park on the grass or in loading / unloading areas. Vehicles parked in unauthorized locations may be ticketed.
- c. Tactical vehicles including HMMWVs are only authorized to park in the fenced parking lot inside gate #3 (southeast end of the cantonment area) or in other areas designated by MTC headquarters or range control.
- d. Vehicles in cantonment area/range complex will not drive through ditches or on the grass areas, violations of this may result in loss of driving privileges at MTC.
- e. Use of chock blocks for military vehicles is mandatory. (ILARNG Memo, dtd, 11 April 2000).
- f. Petroleum products and petroleum contaminated storm water collected by the use of a 'drip pan' will be disposed of at the UTES maintenance facility from 0900-1500; Mon.-Fri. POC is the UTES Shop Chief at (815) 750-6530.
- g. MTC Security and Range Control have authority to suspend individual driving privileges for serious or repeated violations of these policies. MTC Security and Range Control have the authority to contact local law enforcement to have individuals ticketed.

3-8. Alcohol Policy

- a. Marseilles Training Center has a strictly enforced no alcohol policy in all areas of the installation, at all times. The no alcohol policy includes the Training Support Complex. The senior commander / supervisor of each unit is responsible for enforcing the no alcohol policy. Any alcohol found will be confiscated and the presence of alcohol will be brought to the attention of the unit commander or responsible civilian. All incidents involving alcohol, including its presence, will be relayed to NGIL-G3, through MTC chain of command, without exception. Any subsequent incidents involving alcohol will result in the user or unit being ordered off of MTC grounds. Prior to the unit being allowed access to the installation the unit commander or civilian leader will write, in memorandum format, why they should be allowed access and what measures will be taken to prevent future alcohol related incidents. Email is not acceptable in this instance. This letter will be addressed to: Marseilles Training Center HQ, ATTN Training Site Commander / Manager, 1700 Army Rd., Marseilles IL 61341. This letter will be relayed through the chain of command to NGIL-G3 with MTC HQ endorsements indicating approval or denial, and reasoning.
- b. Those units or organizations wishing to be considered for an exception to this policy will submit a written request for exception to the alcohol policy a minimum of 60 days prior to the proposed date. This letter may be hard copy or email. The letter will state the reason for the request and the proposed alcohol policy containing all measures that the organization will take to monitor, and control alcohol consumption by its members. This letter will be addressed to: Marseilles Training Center HQ, ATTN Training Site Commander, 1700 Army Rd., Marseilles IL 61341.
- c. The request for exception to policy will be relayed through the chain of command to NGIL-G3 with MTC HQ endorsements indicating recommended approval, approval with modifications to the plan, or denial, and reasoning. NGIL-G3 will review the request and submit the request to The Adjutant General of the State of Illinois, with endorsements indicating recommended approval, approval with modifications to the plan, or denial, and reasoning. The Office of The Adjutant General will respond with a final decision, in writing, to all concerned parties.
- d. A recommended alcohol policy can be found in Appendix N of this regulation, for organizations with an approved exception to the policy. Please note that use of the recommended alcohol policy does not alone grant the privilege for alcohol use at MTC, nor does it guarantee that a request will be approved. The recommended policy provides an organization with an outline and with key points of consideration.
- e. The MTC Training Site Commander, MTC Operations Officer, MTC Range Officer, MTC Security Personnel or TAG representatives are authorized to conduct scheduled inspections of vehicles and facilities for alcohol, these individuals will be granted immediate unrestricted access for conducting such inspections. Searches for alcohol may also be carried out by the above individuals when they have reasonable suspicion that alcohol may be present in a given vehicle or facility. Individuals refusing to allow such searches may be ordered off MTC grounds.
- f. Soldiers who violate this policy will be subject to appropriate adverse disciplinary and / or administrative action.

3-9. Violations of NGIL 350-11

- a. Serious or continuous infractions of the policies and procedures contained within this regulation may result in individuals being subject to disciplinary action and/or removal from MTC at the discretion of the Training Site Commander / Manager or designee as outlined in chapter two of this regulation.

b. If an individual or unit is instructed to leave a training area, the unit commander / supervisor will be required to submit a memorandum through unit command channels and through NGIL-G3 for the Assistant Adjutant General –Army, which will include the following:

- c. An explanation of why the individual or unit was removed from a MTC.
- d. What corrective action was taken?
- e. Justify why the individual or unit should be allowed to train at MTC in the future.
- f. What actions will be taken in the future to prevent a similar issue or incident.

g. This memorandum must be received at NGIL-J3 NLT seven (7) days after the incident. The unit, organization or individual will be prohibited from training at MTC until a response letter is provided authorizing future training activities.

h. MTC Range Control personnel have access to all training areas and ranges at all times. Units violating the provisions of this regulation pertaining to training operations or conducting training in an unsafe manner may have training operations suspended by MTC Range Control personnel until action is taken by the unit to correct the violation or safety issue. Repeated safety violations or issues may result in the unit being placed in a safety stand down at the discretion of the Range Officer or senior Range Control NCO on duty. The safety stand down will be lifted when the MTC Range Control representative initiating the stand down is satisfied that the unit has take corrective action to resolve the problem.

i. MTC Security is responsible for the overall security and law enforcement at MTC and has unrestricted access to all areas, buildings and rooms at all times and has authority to enforce all provisions of this regulation.

Chapter 4 Scheduling

4-1. Use Agreement with Illinois Department of Natural Resources (IDNR)

a. The National Guard Illinois (NGIL) shares the use of MTC with the IDNR. Under the provisions of the agreement between the two agencies, the IDNR has exclusive use time from 1 November through the first Thursday following 10 January of each year. NGIL's exclusive use time is from the first Friday following 10 January of each year through 31 October of each year. NGIL has access to the Northern Use Area during IDNR's exclusive use time, except during firearm deer seasons when IDNR has complete use of the site. The Northern Use Area comprises of training areas, 102N, 102E, 103W, and portions of 102S, 104C, and 103E. IDNR retains control of all other areas outside the Northern Use Area on weekends during their exclusive use time. For questions or clarification, contact the MTC Range and Training Area Scheduling NCO at 815-750-6525.

b. Units that wish to use any training area controlled by IDNR during the periods listed above must request to do so through MTC Scheduling via the procedures listed in paragraph 4-5 below.

c. A yearly coordination meeting between IDNR, the MTC Training Site Commander, and NGIL will be held during the first quarter of the training year in order to coordinate for the joint development and management of the site.

4-2. Federal and Non-Federal Use Agreements

a. Processes, periods, and requirements for various classes of users to submit requests for reservation of MTC facilities are contained in tables 4-1 through 4-4 below.

b. Military and Federal organizations will take precedence over non-federal usage of MTC.

c. MTC will be available on a case-by-case basis to non-military organizations (i.e. Department of Corrections, State Police, County Sheriff, City Police, Boy Scouts, etc.).

d. In order to request use of facilities or ranges at MTC, all units or agencies will submit the appropriate MTC Request form(s) (Appendix D) for use of MTC facilities. This form will be submitted a minimum of 90 days prior to the projected date of use.

e. Non-governmental organizations will be in accordance with 32 USC 508, AR 145-2 and AR 210-22, i.e. scouts and JROTC. Authorized groups will submit the appropriate MTC Request form(s) (Appendix D), and provide a copy of current liability insurance with a minimum of 1 million-dollars, in order to utilize MTC facilities. These forms will be submitted a minimum of 90 days prior the projected date of use.

f. Cancellations must be submitted as soon as possible so that the facilities can be made available to other potential users.

g. Requests should be mailed to: Illinois Army National Guard, ATTN: MTC Operations, 1700 Army Road, Marseilles, IL. 61341-9761. Forms may be faxed or emailed, contact MTC Operations for appropriate phone number or email address. The requesting agency/organization will then receive written notification of approval/disapproval of their request. Subsequent to this, the agency/organization will be provided additional correspondence regarding Use Agreements and fees.

Table 4-1
Non Illinois ARNG and All (including Illinois) ANG Users

NLT 90 days before event	Within 10 working days Receipt of Request	Within 60-days of Event	Post Event Actions
<p>Requestor:</p> <ol style="list-style-type: none"> 1. Completes MTC Request Form (Appendix D) 2. Forwards to MTC Scheduling MGR 3. Provides information regarding use of dining facilities 	<p>MTC Scheduling MGR and/or Housing MGR:</p> <ol style="list-style-type: none"> 1. Blocks Billeting Rooms 2. Assigns Classroom and Facilities 3. Assigns Event Number 4. Prepares Written Response to Unit <p>Requestor:</p> <ol style="list-style-type: none"> 1. Prepares MIPR or Government Purchase Card (GPC) 2. Forwards to MTC Accounts MGR (if needed). <p>MTC Accounts MGR:</p> <ol style="list-style-type: none"> 1. Prepares IIC Worksheet. 2. Sends IIC Worksheet and requestor info to PFOIL-CG. 	<p>Requestor:</p> <ol style="list-style-type: none"> 1. Finalizes dining hall/subsistence requirements 2. Provides numbers to Training Center Manager and DOL 	<p>If services rendered are beyond normal base operations; the MTC Accounts MGR:</p> <ol style="list-style-type: none"> 1. Finalizes IIC worksheet reflecting final costs with requestor. 2. Forwards to PFOIL-CG. <p>PFOIL-CG:</p> <ol style="list-style-type: none"> 1. Reconciles IIC's 2. Arranges for transfer of funds.

Table 4-2
Other DoD Users

NLT 90-days Before Event	Within 10-days Receipt of Request	Within 60-days Receipt of Request	Post Event Actions
<p>Requestor:</p> <ol style="list-style-type: none"> 1. Completes MTC Request Form (Appendix D) 2. Forwards to MTC Scheduling MGR 3. Provides information regarding use of dining facilities 	<p>MTC Scheduling MGR and/or Housing MGR:</p> <ol style="list-style-type: none"> 1. Blocks Billeting Rooms 2. Assigns Classroom and Facilities 3. Assigns Event Number 4. Prepares Written Response to Unit <p>MTC Accounts MGR:</p> <ol style="list-style-type: none"> 1. Prepares IIC Worksheet 2. Sends IIC Worksheet and requestor info to PFOIL-CG. 3. Sends IIC estimate to requestor. 	<p>Requestor:</p> <ol style="list-style-type: none"> 1. Prepares and forwards to MTC Accounts MGR; MIPR or Government Purchase Card information. 2. Returns signed MOA/MOU. <p>PFOIL-CG:</p> <ol style="list-style-type: none"> 1. Coordinates w/ NGIL-JA, and USPFO for approval 2. Sends MOA/MOU to requestor for signature, and to MTC Accounts MGR for records. 	<p>MTC Accounts MGR:</p> <ol style="list-style-type: none"> 1. Determines final charges on IIC Worksheet. 2. Invoices User. 3. Receives payment via MIPR or GPC and forwards to PFOIL-CG. <p>PFOIL-CG:</p> <ol style="list-style-type: none"> 1. Reconciles IIC's 2. Prepares to receive transfer of funds

Table 4-3
Other Federal Users

NLT 90-days Before Event	Within 10 working days Receipt of Request	Within 60-days Receipt of Request	Post Event Actions
<p>Requestor:</p> <ol style="list-style-type: none"> 1. Completes MTC Request Form (Appendix D) 2. Forwards to MTC Scheduling MGR 3. Provides information regarding use of dining facilities 	<p>MTC Scheduling MGR and/or Housing MGR:</p> <ol style="list-style-type: none"> 1. Blocks Billeting Rooms 2. Assigns Classroom and Facilities 3. Assigns Event Number 4. Prepares Written Response to Unit <p>MTC Accounts MGR:</p> <ol style="list-style-type: none"> 1. Prepares IIC Worksheet 2. Sends IIC Worksheet and requestor info to PFOIL-CG. 3. Sends IIC estimate to requestor. 	<p>Requestor:</p> <ol style="list-style-type: none"> 1. Prepares and forwards to MTC Accounts MGR payment information. 2. Returns signed MOA/MOU. <p>PFOIL-CG:</p> <ol style="list-style-type: none"> 1. Coordinates w/ NGIL-JA, and USPFO for approval. 2. Sends MOA/MOU to requestor for signature, and to MTC Accounts MGR for records. 	<p>MTC Accounts MGR:</p> <ol style="list-style-type: none"> 1. Determines final charges on IIC Worksheet. 2. Invoices User. 3. Receives payment via Visa or Mastercard, Check, or Automated Clearing House (ACH) and forwards to PFOIL-CG. <p>PFOIL-CG:</p> <ol style="list-style-type: none"> 1. Reconciles IIC's 2. Prepares to receive funds.

Table 4-4
State, Local Government Agencies and Approved Non-Governmental Organizations

NLT 90-Days Before Event	Within 10 working days Receipt of Request	Within 60-days Receipt of Request	Post Event Actions
<p>Requestor:</p> <ol style="list-style-type: none"> 1. Completes MTC Request Form (Appendix D) 2. Forwards to MTC Scheduling MGR 3. Provides information regarding use of dining facilities 4. Provides proof of insurance 	<p>MTC Scheduling MGR and/or Housing MGR:</p> <ol style="list-style-type: none"> 1. Blocks Billeting Rooms 2. Assigns Classroom and Facilities 3. Assigns Event Number 4. Prepares Written Response to Unit <p>MTC Accounts MGR:</p> <ol style="list-style-type: none"> 1. Prepares Non-Federal Cost Worksheet 2. Sends Non-Federal Cost Worksheet and requestor info to PFOIL-CG. 3. Sends Non-Federal Cost Worksheet to requestor. 	<p>Requestor:</p> <ol style="list-style-type: none"> 1. Prepares and forwards to MTC Accounts MGR payment information. 2. Returns signed Intergovernmental Use Agreement <p>PFOIL-CG:</p> <ol style="list-style-type: none"> 1. Coordinates with NGIL-FE, NGIL-JA, USPFO, and obtains TAG Approval. 2. Sends MOA/MOU to requestor for signature, and to MTC Accounts MGR for records 	<p>MTC Accounts MGR:</p> <ol style="list-style-type: none"> 1. Determines final charges on Non-Federal Cost Worksheet. 2. Invoices User. 3. Receives payment via Visa or Mastercard, Cash, Check, or Automated Clearing House (ACH). and forwards to PFOIL-CG. <p>PFOIL-CG:</p> <ol style="list-style-type: none"> 1. Reconciles IIC's 2. Prepares to receive funds.

4-3. Fees For Use

Appendix C specifically addresses costs charged to using organizations associated with special requests or services.

4-4. Long Range Planning

- a. NGIL Circular 350-TY-3 "Training Program" establishes the next training year's Range Schedule Matrix for ILARNG units. Units will refer to this document prior to submission of a request for use of any MTC facility.
- b. The ILARNG training year runs from 1 Oct to 30 Sep annually. The ILARNG conducts a Yearly Training Calendar (YTC) review and checkout with ILARNG units. Only after this meeting will requests from other units or organizations be accepted for the next training year.

4-5. Facility Requests

a. Units will submit requests (via email or hard copy) for the use of MTC facilities through command channels, to Headquarters, Marseilles Training Center, to arrive NLT 90 days prior to the desired use date. Appropriate request forms are located in Appendix D. Procedures and policies for scheduling the Training Support Complex are contained in Appendix M. The training request form (appendix D) must have all signatures present for the application to be considered for approval. If one or more of the required signatures is absent from the application, it will not be accepted. ILARNG requests must be approved through command channels before the request reaches MTC. Any requests that arrive without command approval will be denied.

Marseilles Training Center
ATTN: Operations
1700 Army Road
Marseilles, IL 61341

- b. Units and civilian agencies will not request MTC facilities more than one calendar year in advance.
- c. Units/civilian agencies will receive written notification of approval or disapproval of their request from MTC Operations in accordance with paragraph 2-2 of NGIL 350-11. Notifications for ILARNG units will be sent through command channels.

d. The following timeline identifies the sequence of events in the request process, and gives approximate times for their occurrence.

- (1) MTC receives MTC Request Form(s) (Appendix D) at least 90 days prior to the event.
- (2) Within 10 working days of receipt:
 - (a) An event number is assigned & usage approval appears on Range Facility Management Support System.
 - (b) Billeting rooms are blocked by event (if required), and a release date for blocked rooms is set.
 - (c) Classrooms and dining facilities are assigned.
 - (d) A notification(s) is generated and sent to the unit / requesting agency (Appendix D).
- (3) Dining facility numbers are finalized 30 days prior to arrival.
- (4) Event occurs: Appropriate fees paid when required.

e. If a request is processed with less than 30 days of the training event, then a Memo from the requesting units BN Co explaining why the request has been entered, and is within the 90 day period, is required.

4-6. Scheduling Priority

a. Priority for facility use will be given to the units/agencies whose primary mission is related to military training and readiness; and whose requests/reservations are submitted in a timely manner as set forth in this policy. This policy is intended to provide a reasonable approach to MTC facility use by a variety of military, public agencies and private organizations while ensuring MTC's primary mission of providing a quality soldier training environment.

b. Facility user priority categories have been identified. A facility-scheduling matrix is available in the Range Facility Management Support System (RFMSS) request module or for review at MTC Operations. RFMSS will identify facility commitments 12 months in advance. Priority categories and organization ranking within each category is listed below:

(1) Priority Categories #1.

- | | | |
|----------------|---------------------------------------|---|
| (a) ILARNG | (f) USAR (SCHOOL) | (k) United States Air Force (USAF) |
| (b) ILANG | (g) FORSCOM | (l) OTHER DOD |
| (c) ARNG | (h) TRADOC | (m) United States Coast Guard (USCG) |
| (d) ANG | (i) United States Marine Corps (USMC) | (n) Military Personnel in a Duty Status |
| (e) USAR (TPU) | (j) United States Navy (USN) | (o) Civil Air Patrol (CAP) |

(2) Priority Category #2. Other state and federal agencies training/conferences:

- (a) Federal Agencies.
- (b) State Agencies.
- (c) County Agencies.
- (d) Municipal Agencies.

(3) Priority Category #3. Other organizations as authorized in accordance with 32 USC 508 and DoD or Army regulation or guidance in the following order:

- (a) Public Organizations.
- (b) Private Non-Profit Organizations.

(4) Priority Category #4. Others:

- (a) Military personnel in a non-duty status.
- (b) Retired military personnel.

c. For all training areas and facilities only one unit or organization will be scheduled per facility or training area. If multiple units or organizations are conducting joint training, the request(s) submitted will indicate all units involved in the training area or facility.

d. Land navigation courses are a separate part of the training area in which they are located and are scheduled separately. Example: a unit requesting the beginner course in 102S is restricted to the land navigation course, and does not have the right to maneuver elsewhere in 102S. If a unit requests and is assigned 102S, but the unit has not requested the land navigation course located in that training area, the unit does not have the right to operate in the land navigation course. If a unit wants to operate in 102S and run the land navigation course in 102S then they must request both.

4-7. Cancellations

- a. Requests for changes to approved training dates will be submitted through command channels, and arrive at the Headquarters, Marseilles Training Center, a minimum of 45 days prior to the scheduled activity.
- b. If last minute cancellations are necessary, the following procedure will be followed as soon as the scheduled unit determines it will not be using MTC.
- c. ILARNG units will immediately call the offices listed below, advising of the cancellation.
 - (1) Immediate higher HQs (BDE or BN)
 - (2) J3 Office (217) 761-3574
 - (3) MTC Scheduling NCO (815) 750-6524 /6525
- d. All other users will notify the MTC Scheduling NCO who will log the date & time on the RFMSS report system.
- e. Summary of Utilization Report will be sent to J3 showing cancellations, last minute changes, etc, to be placed on the state back brief slide.

Chapter 5 Communications

5-1. General Information

- a. The MTC Range Control FM radio net is a high band civilian system not compatible with military low band radios. Radio assets will be issued by MTC Range Control to all using units / organizations for communications with Range Control. Radios will be operated on Channel 1 as the primary channel, and channel 2 as the alternate. All radios issued by Range Control will be used only for communication with Range Control.
- b. Telephone service for units using MTC, is located in the TSC.

5-2. Telephone Numbers

- a. Training Site Commander / Manager • (815) 750 – 6507
- b. Training Site Deputy Commander / XO • (815) 750-6500
- c. MTC Logistics • (815) 750 – 6501 / 6503 / 6517
- d. MTC Range Control / Security • (815) 750 – 6521 / 6522 / 6523 / 6525
- e. MTC Scheduling • (815) 750 – 6524 / 6525
- f. MTC Finance • (815) 750 - 6506
- g. Ambulance • Emerg. - 911 / Contact Range Control
- h. Community Hospital - (Ottawa) • (815) 433 - 3100
- i. Explosive Ordinance Disposal (EOD) - Ft McCoy • (608) 388 - 3315
- j. Fire Department • Emerg. - 911 / Non-Emergency • (815) 795 – 5535 / Contact Range Control
- k. Marseilles Police Department • Emerg. - 911 / Non-Emergency • (815) 795 - 2131 / Contact Range Control
- l. Seneca Police Department • Emerg. - 357-8721 / Non-Emergency • (815) 642 - 8721/ Contact Range Control
- m. Joint Operations Center (JOC) • (217) 761 - 3941
- n. UTES • (815) 750 - 6530
- o. Marseilles Armory (A Co, 33 BSTB) • (815) 750 – 6535/6536
- p. Marseilles Armory (RSP) • (815) 750 – 6538/6539
- q. MTC Environmental • (815) 750-6509 / 6511
- r. MTC Ammunition Personnel • (815) 750-6698/6690/6678
- s. Security • (815) 750-6527
- t. MTC DEERS ID Machine (815) 750-6513

5-3. Tactical Communications

- a. One radio is permanently mounted in the range towers of A, B, C, and CPQC for unit use.
- b. Units training at MTC will draw communication assets from MTC Range control for secondary means of communication for all ranges, and as a primary means of communication for training areas and those training facilities, which require communications with range control.
- c. Routine training in the training areas requires a single radio for communications with Range Control. Each unit in each training area must establish and maintain communications with range control. When a unit departs a training area either to occupy another area or to clear MTC, they will contact Range Control to request a closing

time and will provide their closing information. (See Appendix I) When units are conducting joint training in the same training area or facility, each will be required to establish and maintain communications with Range Control.

d. Echo Range, Rappel Tower, hand grenade range and CS chamber do not have communication assets on site. Units using these facilities will draw a primary and secondary radio from Range Control for two means of communications.

e. Units conducting waterborne, sling load or smoke operations will draw a primary and secondary radio from Range Control for two means of communications.

f. MTC Range Control maintains a low band radio net for communications with ILARNG aviation assets, primary operating frequency is 41.750, alternate frequency is 32.325. Aviation units are expected to establish and maintain communication with MTC Range Control for the duration of their training on site.

g. Units conducting training operations at MTC should operate in the Frequency-Hop (FH) mode to prevent operational interference with other units. Frequency-hop and SOI information will be generated at the Brigade S6 office and will be download to a subordinate units DTD's prior to any exercises at MTC. The Brigade S6 can coordinate for frequencies through the State Frequency Manager's Office at 708-824-6300. Training COMSEC Fills can be requested at either Springfield (217-761-3369) or Crestwood (708-824-6302) locations.

h. Range Operations

(1) Units will establish and maintain a primary and alternate method of communication with Range Control.

(2) Two FM radios are required and will be drawn from MTC Range Control.

(3) Ranges CPQC, B Range and C Range have a provided hard wire radio.

(4) A hand held two way radio will be hand receipted through Range Control.

(5) Cell Phones are not an approved method of communication with range control.

i. Wire Communications.

(1) Units will ensure that all wire is removed prior to clearing MTC.

(2) Wire will not be strung over-head, if wire is strung across the surface of roads it will be staked down on both sides of the road.

(3) Wire may be buried except in designated no digging areas. (See an Installation map or contact Range Control for more information)

j. Procedures for requesting occupation, hot, and cold times for ranges, and for occupying and closing training areas and facilities are located in Appendix I of NGIL 350-11.

5-4. Telecommunications / Data Communications

a. Telephone support, for EMERGENCIES ONLY, is available at the Training Site Headquarters and Range Control for organizations using MTC.

b. Units requesting and using the cantonment area will have telephones in their assigned administrative areas.

c. Data transmission lines are available in the cantonment area for ILARNG and ILANG users only using standard RCAS access. Non – ILARNG Organizations requiring internet access will coordinate this request through MTC Logistics at least 90 days prior to anticipated arrival.

d. There are phones in all Chargeable Transient Quarters in B Bldg (BOQ/BEQ) and select rooms have LAN connectivity, contact MTC Logistics for more information.

e. Individuals or organizations, who attempt internet access with Non-ILARNG computers, through LAN jacks, do so in violation of established security regulations. Individuals or organizations violating computer security regulations may be removed from the site for a first offense at the discretion of the training site commander or designate.

Chapter 6

Training Resources

6-1. Land Navigation

a. There are six land navigation courses offered.

b. There are compass courses located in TA 102S and 104W, designed strictly as compass courses, with pace count markers. These courses have a combination of "grid to grid" legs and dead reckoning legs.

c. A land navigation course is located in TA 101. This course is designed for the more advanced student to teach terrain association and land navigation skills.

d. SOF, Advanced TA 106, and Expert courses - cover larger areas in more difficult terrain. TA 106 and the Advanced course are within the SDZ, and therefore cannot be used concurrently with fire ranges.

e. Land navigation packets are available on the website or at Range Control. These packets include prewritten tests, and information for a unit to produce its own test. The courses are listed above in order of difficulty.

6-2. NBC & Smoke Training

a. The NBC proficiency test area is located in training area 200, east of E Range. The test area includes a series of permanent structures (open-air shelters) which serve as the test stations. The test area also includes a CS chamber. Units must provide all equipment and material to conduct training.

b. The following means of smoke generation are authorized for Marseilles Training Center:

- (1) Smoke generators
- (2) Smoke pots
- (3) Smoke grenades

c. Smoke generators and pots may be used only with the prior approval of Range Control. The following precautions must also be taken:

- (1) Smoke does not cross public roads, or affect civilian residential areas or domestic livestock.
- (2) Weather and environmental conditions are such that a fire hazard is not created. Contact Range Control for the most updated wildfire risk level.
- (3) Red smoke will be used only to designate an emergency location for air or ground evacuation.

d. The placement of smoke generators and time of operation will be coordinated with Range Control. The designated training area for smoke generation is TA 104C, (which lies within the SDZ).

e. Riot control agents may only be used in the CS Chamber at the training site; and only CS capsules will be used in the Chamber. CS canisters are not authorized.

6-3. Rappelling

a. The Rappel Facility consists of a 15' practice tower and a 40' main tower. Up to 3 personnel are able to rappel at any one time down the open portion of front wall. One additional lane on the front wall consists of a window allowing a fourth lane to be operational. The main tower also has an open side to rappel on the north side of the tower.

b. MTC has a natural cliff approximately 50' in height, which is authorized for rappel training. The site is located in TA 103W, at vicinity grid 595/736. All provisions of this regulation and the rappel SOP are applicable to this rappel site. Trees will be used as anchoring points for rappelling at this location.

c. Rappel masters will adhere to procedures for establishing anchor points as outlined in FM-3-97.61, Military Mountaineering.

d. A detailed Rappel Tower SOP is available at Range Control and will be reviewed prior to conducting training. (Additional information is contained in Chapter 8, paragraph 8-11 of this regulation)

e. Units are responsible for providing all rappel equipment.

f. The cliff face is scheduled separate from TA 103W on the Range and Training Area Request forms.

6-4. Conditioning Obstacle Course

Located in cantonment area south east of the ASP, the course contains multiple challenges and is designed for use as a two team competitive event or for a basic combat oriented course. The conditioning course meets the requirements for a litter obstacle course in accordance with the Expert Field Medical Badge standards.

6-5. Confidence Obstacle Course

a. The confidence course is located in the cantonment area southwest of the ASP with access off the main training area road. The confidence course is established in accordance with FM 21-20. Additional information regarding the requirements for use of this obstacle course is contained in Chapter 8, paragraph 8-15 of this regulation. The course has 12 obstacles of varying degrees of difficulty with three obstacles from each quadrant of the FM 21-20 pages 8-6 thru 8-10.

b. Blue quadrant obstacles: The Weaver; Reverse Climb; Island Hoppers

c. Red quadrant obstacles: Inclining Wall; Confidence Climb; The Tough One

d. White quadrant obstacles: The Tough Nut; Low Belly Over; Belly Crawl

e. Black quadrant obstacles: Six Vaults; High Step Over; Swing, Stop and Jump

6-6. Firearms Training System (FATS V)

FATS is an indoor 12-lane Laser marksmanship training device. There are multiple marksmanship training and tactical situations available. This training aid must be requested on the MTC request form. Prior planning by the using unit is critical as a qualified FATS operator must be available to conduct training with this equipment. A FATS operator will be scheduled for the unit upon request approval for the FATS training aid.

a. Capabilities

- (1) FATS V - 12 lanes
- (2) Weapon Types – M9, M-16, M60, M203, M249, M2, MK19, 60mm, 81mm, AT4.

b. Primary Use:

- (1) Marksmanship training
- (2) Computer Generated Imagery Combat scenario training
- (3) Video scenario training

c. Special Instructions:

- (1) Only a qualified MTC Range Control trainer/operator will run the FATS V system.
- (2) Food & beverage consumption is not allowed in the building.
- (3) The firing line is to be treated as a live firing line.
- (4) Live weapons must be placed in the weapons storage rack located behind the instructors control desk.

6-7. Weapon Cleaning Facility

A semi-automated weapons cleaning facility is available, located directly behind "B" Range. This is a sonic hydrothermal cleaning system that can clean an entire rack of weapons at one time. Contact the MTC Scheduling NCO to reserve this facility. This facility requires an OIC or NCOIC, in the grade E-6 or above, to be present at all times during operation in order to monitor appropriate and safe use of the facility. The facility SOP and training for this facility is provided through MTC Range control.

6-8. Waterborne Operations

Water operations may be conducted in ponds located in Training Areas 102N, and L2 of 102S. Water Operations may be conducted in 104C, only when live fire ranges are not in use. See section 7-8 or contact MTC Range Control for more information.

6-9. Sling load Operations

Sling load operations may be conducted in a variety of locations on MTC. Commonly used locations are training area 105W area A, training area 102S area L2, and training area 104E area Q. Units may use other locations with prior coordination with Range Control.

6-10. MOUT Area

The MOUT Area (Hornickle Training Area) allows organizations to conduct urban operations to include; building assault, weapons cache searches and clearing procedures. The MOUT is a mock set up of a small village located at grid 584/730. The SOP for MOUT is available from the MTC webpage or MTC Range Control upon request.

6-11. Gate 40 House

The Gate 40 house is located in Training area 103W at grid 5934/7382. This facility serves the same function as the MOUT. The SOP for the MOUT applies to the Gate 40 house.

6-12. Portable Live Fire Shoot Room

The live fire shoot room is a portable 12'x12' room that may be set up on ranges A, B, or C. The room is used for live fire room entrance and clearing procedures with up to a four person team. This facility can be setup with either a center door or corner door. The facility has a separate SOP which can be requested through MTC Range Control.

6-13. Convoy Live Fire Exercise Lanes

There are two convoy live fire exercise (CLFX) lanes located at MTC. The Northern CLFX (NCLFX) lane is approximately 900 meters in length and the Southern CLFX (SCLFX) is approximately 350 meters in length. Both lanes are in the surface danger zone of the MTC range complex and are unavailable any time live fire ranges are scheduled to be hot. These lanes are conducted using Short Range Training Ammunition (SRTA) for 5.56mm (M16 / M4 only), .50 cal and 40mm M203 TP grenades for the grenade launchers. Portable pop up targetry is available for use on these lanes. Installation approved IED simulations can be used at unit discretion. The SOP for both CLFX lanes is available on the MTC webpage and in hardcopy at MTC Range Control.

6-14. Live Fire Ranges

MTC has multiple live fire ranges for individual and crew served weapons. For specific information about the ranges and range operations see Chapter 7 of this regulation.

6-15. Artillery / Mortar Firing Points

MTC has 11 fire points with establish survey data. A trig list is available on the MTC webpage or hardcopy at MTC Range Control. Firing points are scheduled separately from the training area in which they are located. Live fire of short-range training munitions is restricted to E range, see Chapter 7 for more information.

6-16. Cable Bridge

MTC has a cable bridge which spans the ravine immediately to the north east of the sea huts. The bridge length is approximately 50 meters and the ravine depth is approximately 20 feet. Safety equipment including a body harnesses and lanyards are available to be drawn at MTC range control and are required with the use of this bridge.

6-17. Forward Operating Base (FOB)

The FOB is located in Training Area 102E at grid 592/736. The FOB consists of two established access control points, perimeter berms, and portable guard towers and above ground “bunkers”. The FOB housing is constructed out of tents as are the mess locations, TMC and maintenance shop. Two 15Kw’s generators are on site at the FOB to provide electricity to key facilities including the maintenance tent, TOC, supply, TMC and mess area. There is space for units to bring their own generator to augment the existing electric Latrines are provided in the form of portable toilets. Dumpsters are provided on a case by case basis. There is a designated refueling point near the parking area.

6-18. Other Training Resources

MTC is an ideal infantry training area, with rolling and wooded terrain broken by occasional clearings. The Combat Skills Situation Training Exercises (STXs) have been developed and published in the form of “Combat Skills STX Training Packets, Marseilles Training Center.” The STXs are based around a variety of scenarios and include the scenario brief, specially prepared maps and overlays. To draw these packets or for more information contact MTC Range Control at 815-750-6522 / 6525

Chapter 7**Range Operations****7-1. Ranges – General Information**

- a. MTC offers five (5) live fire ranges, one (1) hand-grenade qualification range, one (1) scaled indirect fire range (mortars). A map of the range complex is available in Appendix B, page 33.
- b. MTC Range Control will be operational when a unit is firing on the range complex.
- c. The minimum medical requirement for live fire range operations, unless otherwise specified, is one certified Combat Life Saver (CLS) or medic, aid bag, litter and evacuation vehicle per range. Using units are encouraged to have either a CLS with CPR or 68W-qualified medic on the range complex in addition to the CLS on each range. Unit commanders are responsible for confirming current certification of CLS personnel. Non-DoD users will provide equivalent resources in a trained first responder, with aid bag, litter and evacuation vehicle.

7-2. Alpha Range – Multipurpose and Machinegun Range

- a. Capabilities:
 - (1) 8 points
 - (2) Weapon Types - M60, M240, M249, M24, M2-HB, M16 series, Pistols, SMG, & Shotgun
 - (3) Ammunition - .22, .38, .40, .44, .45, 357, 9mm, 10mm, 5.56mm, shotgun, 7.62mm, 50 cal plastic Short Range Training Ammunition (SRTA), 5.56mm tracer, 7.62mm tracer.
 - (4) Maximum range from firing line to rear berm is 85 meters.
- b. Primary Use: 10 and 25 meter machine gun range
- c. Special Instructions:
 - (1) This is the only range authorized for firing weapons whose caliber is larger than 5.56mm.
 - (2) Elevation limiting devices must be used when conducting live fire with larger than 5.56 ammunition.
 - (3) Firing tracer ammunition will be closely monitored by the Range OIC, and grass fires will be reported to MTC RC. Fires will not be fought by units except as directed by MTC RC.

- (4) MP qualification course may be fired on this range; this course of fire requires 1 safety per firer.
- (5) Requires a minimum of one firing line safety for every four personnel firing.

7-3. Bravo Range – Modified Record Fire Range

- a. Capabilities:
 - (1) 7 points
 - (2) This range is a standard 300 meter rifle qualification range. It is fully automated with computer scored and operated targetry and will print score sheets.
 - (3) Weapon Types - M16 series, M249, SMG, Mini 14, Shotgun, Pistol, Bolt Action Rifles
 - (4) Ammunition - .22 through .45, 9mm, 10mm, 5.56, 5.56 tracer, shotgun slug.
- b. Primary Use: Individual rifle qualification
- c. Special Instructions
 - (1) Shotgun will only fire on paper stationary targets.
 - (2) No rifle caliber larger than 5.56mm or maximum ballistic range of greater than 3,400 meters will be fired on this range, without written authorization from MTC HQ.
 - (3) Organizations may submit requests for exception to fire .308 / 7.62mm rifles on this range. Request for exception will be in writing, sent to MTC HQ NLT 90 days from the date of training. Requests for exception will be accompanied with the following information: Name of load manufacturer, name of the specific load, and manufacturer load number to be fired. Example: Federal, Gold Medal Match, load number GM308M. Requests for exception will be handled on a case by case basis, and requesting organizations will receive a response in memorandum format from MTC HQ
 - (4) There will be a maximum of 2 unit personnel in the B Range tower at any one time.
 - (5) There will be no eating, drinking, or smoking in the tower.
 - (6) Requires a minimum of one line safety per two personnel firing

7-4. Charlie Range - 25-meter (zero) Range

- a. Capabilities:
 - (1) 55 points
 - (2) Weapon Types - M16 series, M249, Pistols, and Shotgun.
 - (3) Ammunition - .22, .38, .40, .44, .45, 357, 9mm, 10mm, 5.56mm, 5.56mm tracer.
- b. Primary Use: Zeroing individual weapons, night firing, NBC firing.
- c. Special Instructions:
 - (1) Automatic firing is allowed.
 - (2) Requires a minimum of one line safety personnel for every 5 personnel firing.
 - (3) Shot guns will not be fired at permanent target frames holding white target backer. Portable target frames are provided on the range for use with shotguns.

7-5. Combat Pistol Qualification Course (CPQC)

- a. Capabilities:
 - (1) 10 Lanes
 - (2) Weapon Types – Pistols and submachine guns chambered for pistol caliber ammunition.
 - (3) Ammunition - .22 calibers through .45 calibers with maximum velocity of 1400fps.
- b. Primary Use: Pistol Qualification
- c. Special Instructions:
 - (1) Movement forward confined to the gravel path.
 - (2) Requires a minimum of one line safety personnel for every 5 personnel firing.

7-6. Echo Range - M-203 Grenade Launcher Range

- a. Capabilities:
 - (1) 1 Lane, 4 firing points (TP only)
 - (2) Weapon Types – M203, M79, 37mm
 - (3) Ammunition - TP-40 DODIC-B519.
- b. Primary Use: Grenade Launcher Qualification.
- c. Special Instructions:
 - (1) Riot control agents are prohibited.
 - (2) Requires one line safety personnel for every 2 firers.

7-7. Echo Range - Scaled Field Artillery / Mortar Sabot Range

- a. Capabilities:
 - (1) 2 firing points/2 observation points
 - (2) Weapon Types – All towed FA weapon systems, 60mm and 81mm mortar.
 - (3) Ammunition – 14.5mm Artillery Sub-Caliber Trainer, 60mm - SRT, 81mm with 22mm sabot.
- b. Primary Use: M203 Grenade Launcher Qualification
- c. Special Instructions:
 - (1) M203 grenade launcher qualification takes precedence over FA and mortar firing.
 - (2) M203 grenade launcher training must be closed during FA and mortar firing.
 - (3) Riot control agents are not allowed to be used.
 - (4) Road guards will be used when FA and / or mortar firing is in a “HOT” status.

7-8. Hand Grenade Range - Hand Grenade Qualification Course

- a. Capabilities
 - (1) 7 points
 - (2) Weapon Types – Practice Grenades
 - (3) Ammunition - M228 practice fuze.
- b. Primary Use: Hand Grenade qualification.
- c. Special Instructions:
 - (1) No live grenades allowed.
 - (2) Practice fuzes MUST be mated with body of the practice hand grenade.
 - (3) Requires one line safety personnel for every 2 personnel being trained.

7-9. Range Duties and Responsibilities

- a. Range Control will:
 - (1) Monitor range operations, conduct safety inspections at least one time daily and insure safety regulations are being followed.
 - (2) Call the immediate cessation of firing when observing unsafe acts, and is further authorized to evict any individual/organization/unit from the range because of repeated, uncorrected safety violations.
 - (3) Require completion of the following documents: Range and Safety Personnel Appointment Form, (App. E) and Marseilles Training Center Clearance Form, (App. F).
 - (4) Ensure units/individuals adhere to clearance procedures.
- b. Using Units Will:
 - (1) Assign personnel to the following duties:
 - (2) Range OIC/NCOIC for each firing range or firing site (E6 or above), and provide names to Range Control.
 - (3) Range Safety Officer for each firing range or firing site, (E5 or above).
 - (4) Range Tower Operator will not be the Range OIC or the Safety Officer. (no rank restrictions)
 - (5) Any deviation from rank requirements must be approved by Range Control.
 - (6) Have at least one CLS or Medic with aid bag, litter and designated evacuation vehicle on each range per paragraph 7-1c of the regulation.
 - (7) Ensure that the range personnel listed above are present on the range during firing. Range safety personnel must be on orders, per instructions in paragraph 9-1C of this regulation. (See Appendix E for appointment format).
 - (8) Report all accidents to Range Control in accordance with paragraph 9-5 of this regulation.
 - (9) Ensure that all ranges/training areas are properly policed, and clearance is coordinated with Range Control.
- c. Range OIC/NCOIC: The Range Officer is responsible for the safe conduct of firing and / or training on a specific range. Additionally the Range Officer will:
 - (1) Attend a safety briefing prior to the commencement of training.
 - (2) Report all fires to Range Control.
 - (3) Request from Range Control occupation time, hot time, and cold time.
 - (4) Ensure all ammunition procedures, firing and training is conducted to standard.
 - (5) Report accidental injury/death of wildlife to range control.
 - (6) Have in his/her possession the following documents:
 - (a) The appropriate weapon(s) FM.
 - (b) Operator level weapons -TM.
 - (c) Range Packet.

(7) Insure incidents/accidents occurring during range operations are reported to Range Control.

(8) The Range OIC is responsible for insuring that all range operations are conducted in accordance with Army Regulations. OIC should be especially familiar with AR 385-63 and DA Pam 385-63.

d. Range Safety Officers: Will be present at each firing range or training area at all times when training is being conducted. They answer directly to the Range OIC. Range Safety Officer will:

(1) Attend a safety briefing prior to the commencement of training.

(2) Ensure safe operation of the range in accordance with AR 385-63, DA Pam 385-63 and pertinent field or technical manuals.

(3) Brief and supervise all range safety personnel.

(4) Ensure all firers are briefed on the safe use of weapons prior to drawing ammunition and reporting to the fire line.

(5) Ensure that all weapons are cleared before leaving the range so that ammunition does not leave the range. Personnel will be inspected to ensure that no ammunition remains in their possession after range operations have concluded.

(6) Per NGIL Pam 385-63 paragraph 1-7C, "ONCE SATISFIED THROUGH TRAINING AND TESTING THAT INDIVIDUALS ARE QUALIFIED TO PERFORM THE DUTIES OF OIC AND RSO OF THE FIRING UNIT, BATTALION COMMANDERS (US ARMY) OR INSTALLATION COMMANDERS (USMC) WILL CERTIFY, IN WRITING THESE INDIVIDUALS TO RANGE CONTROL." Memorandums will be turned in PRIOR to units receiving Range Safety Briefing. Example in Appendix S.

(7) ROTC Cadets, OCS Students, WOCs, or any Officer or Warrant Officer who have not completed OBC/WOBC will not be authorized to be OICs or RSOs.

7-10. Drawing Ranges and Equipment

a. Range Control will provide all necessary range flags, range lights, targets, target frames, special equipment, and special instructions for the range requested.

b. The following supplies/equipment is a unit responsibility:

(1) Score cards/blank forms

(2) All necessary publications

(3) Hearing protection

(4) Left hand deflectors

(5) Small arms tool kit

(6) Weapons cleaning supplies

(7) Chemical Lights (as required)

7-11. Safety Briefings

a. Range Control will conduct a safety briefing for the following personnel:

(1) Range OIC/NCOIC for each range or training area.

(2) Range Safety Officer for each range or training area.

(3) Briefings will be conducted at 1300 every Friday.

b. Individuals on the appointment memorandum signed by the Battalion Commander and receive the Safety Briefing from Range Control are authorized to sign out Ranges and Training areas for their units. The memorandum is kept on file at Range Control and the briefing is good for one year from the date the briefing was received.

c. A basic Range Safety briefing is provided in Appendix G, for RSOs to give at the range to all personnel.

7-12. Opening and Closing Ranges

a. The following procedures must be accomplished to occupy and go hot on a range. Actual scripted procedures for occupying, going hot and cold are provided in Appendix I.

(1) When the unit arrives at the range to begin setup the unit requests "occupation time" from range control.

(2) A risk assessment must be completed prior to range operations.

(3) The unit OIC and unit Safety Officer are present at the firing position.

(4) Primary and Alternate communications are established with Range Control.

(5) The range flag is up, and necessary road blocks in place.

(6) An ambulance or suitable vehicle / with CLS or medical personnel with a strip map to the hospital are on each range.

(7) Verify the down range is clear of all personnel.

(8) Request a "HOT" status.

- b. To clear ranges upon completion of firing:
 - (1) Request "COLD" status from Range Control.
 - (2) Police ranges and range buildings, clean permanent latrines, remove brass, ammunition boxes, crates, and other debris. All trash will be removed from receptacles and transported to dumpsters. Plastic bags in trashcans will be replaced by using unit.
 - (3) Reface or re-paste targets after firing.
 - (4) All material and equipment will be turned-in, in the same condition it was issued (i.e., nails pulled out of lumber, equipment cleaned). Units may be required to furnish a detail to accomplish these tasks at the request of Range Control. All range equipment will be returned to Range Control.
 - (5) The using unit will collect and return to the Ammunition Supply Point all unexpended ammunition, fired brass casings, accessories, and packing materials, such as clips, bandoleers, and packing boxes.
- c. Ranges will not be scheduled for clearing during hours of darkness or limited visibility.
- d. Using units will not be cleared to leave MTC until a range control representative has completed an inspection of all ranges used by that unit.

7-13. Range Operations Requirements

- a. As needed guards, signs, gates, and/or barriers warning of the danger of firing will be placed on roads, trails, and other possible approaches to danger areas; and will remain in place while firing is in progress. Road guards, gates and barriers will not be bypassed without permission of Range Control. During the administrative and safety briefing, Range Control will determine which roads/trails, if any, will be blocked. The unit is responsible for road guards where required.
- b. A scarlet range flag will be displayed from the range pole during daylight hours. During night firing, red lights will be displayed from the appropriate control tower. The range flag is issued at range control.
- c. Left-handed shooters are required to use a brass deflector on the M16 and M16A1 weapon.
- d. All units will bring ear and eye protection for personnel engaged in firing operations. The Range Safety Officer will insure that all personnel on the ready and firing lines are wearing properly fitted ear and eye protection prior to the firing of any weapon.
- e. All personnel and weapons will be thoroughly inspected by a responsible officer after the completion of firing to insure that live ammunition does not leave the range.
- f. Running on ranges is prohibited.
- g. All weapons on the firing line will be pointed down range and in the raised position at all times.
- h. The OIC and Safety Officer of the range will wear a white helmet band and remain on the range at all times that the range is in operation, (HOT).
- i. Ambulance / dedicated evacuation vehicle parking is designated at each range with a sign, all other vehicles will remain in the parking lot. The ammo truck will make one trip to deliver ammunition to the ranges and one trip to pick up residue.
- j. When the zero range is in operation, all firers will move up and down range as a group. After a cease-fire, firers will clear their weapons, and the range safety personnel will ensure that the chambers are clear. The firers will then move down range as a group, to mark their shot group, turn around facing south, and remain in position. When all firers are facing south, they will be given the command to move back to the firing line as a group. Only when all firers have returned, will they be given the command to pick up weapons and adjust sights as necessary.
- k. At a minimum each range will have a dedicated CLS or medic, with aid bag, litter, and dedicated evacuation vehicle. Using units are encouraged to have either a CLS with CPR or 68W-qualified medic on the range complex in addition to the CLS on each range.
- l. Ammunition will be stored in and issued from the ammo break down buildings provided on each range. Live ammunition, except blanks, will be kept on the ranges and ammunition breakdown facilities. At no time will live ammunition be allowed in the bleacher areas or off the range on which it is being fired.

7-14. Night Firing

- a. The following ranges are authorized for night firing:
 - (1) Combat Pistol Qualification Course.
 - (2) A Range
 - (3) B Range RETS.
 - (4) C Range 25 meter (Zero)

- b. Units conducting night firing will mark the left and right limits of the range using chemical sticks or lights. Also ensure RED flashing light is on during firing.
- c. During night firing, all weapons will be rodded/ cleared from only one central point for each range.

7-15. 14.5 mm Artillery Sub-Caliber Trainer

- a. Firing of the M31 Field Artillery Trainer is authorized with the impact area on "E" Range. The M31 fires a 14.5mm sub-caliber training round that is dud producing. The impact area for these munitions is a temporary impact area, therefore in accordance with DA PAM 385-63, paragraph 11-9 only the M183 cartridge will be fired at MTC. The M183, while dud producing, does not fragment upon functioning allowing the impact area to be safely cleared of dud munitions.
- b. Using units will compute the surface danger zone for their operations in accordance with DA PAM 385-63. Impact areas must be contained within the fenced area of "E" range. As much as possible the entire SDZ will be contained within the fenced boundary of "E" range. Units must submit calculations and diagrams to MTC Range Control for verification of data by MTC Level II Safety Certified personnel NLT 60 days from the training event. Units will be notified of acceptance or rejection of the submitted SDZs within 14 days of submission. If an SDZ is rejected appropriate justification will be provided.
- c. Units are responsible for providing personnel to search the impact area for dud munitions upon completion of firing operations, in accordance with DA PAM 385-63, paragraph 11-9.c. These personnel will be designated by memorandum. The number of personnel required for the clearing operation will be determined by MTC Range Control based on the size and topography of the impact area. The exact number of personnel required will be provided to the unit with the SDZ notification discussed in paragraph b. above.
- d. Prior to initiating a search for duds MTC Range Control will provide a safety briefing, a briefing on marking procedures and the marking materials. MTC Range Control personnel will be in charge of marking operations. Coordination with EOD for disposition of any duds is the responsibility of MTC Range Control.
- e. Use of standard field artillery indirect fire safety procedures is required to include the use of safety T's, safety stakes / tape.
- f. When firing over roadways, these roadways will be closed. The firing unit will provide road guards and ensure no traffic is permitted in front of the gun line.
- g. High angle fire is not authorized and will not be conducted. Exceptions to this policy will not be accepted.

7-16. Portable Live Fire Shoot Room

The portable live fire shoot room is considered a live fire maneuver range in accordance with DA Pam 385-63. This facility has a separate SOP governing its setup and operation. This SOP can be requested through MTC Range Control or down loaded from the internet at <http://www.il.ngb.army.mil/departments/POTO/MTC/>. The requirements for operation of this facility are different from standard range operations, and are specified in the Shoot room SOP.

Chapter 8 Training Area Guidance

8-1. Occupation of Training Areas

- a. Routine Training Area Operations require an OIC or NCOIC in the grade of E-5 or above. Requirements for Waterborne operations, Sling load operations and rappel operations are different. See paragraphs 8-9, 8-10 and 8-11 respectively for specific details.
- b. Units operating in a training area will establish and maintain radio communications with MTC Range Control. Routine operations in the training areas require only one means of communication, in accordance with paragraph 5-3c of this regulation. Scripted procedures for occupying and departing a training area are found in Appendix I, of NGIL 350-11.
- c. Training areas 104C, 105E and portions of 106 lie within the range Surface Danger Zone (SDZ). Absolutely no access is authorized to these training areas when range firing is conducted. Units will be informed of any planned firing at the administrative briefing. Training areas 104C and 105E are clearly marked by fire breaks and signs. These training areas are non-dudded areas.

8-2. Restricted Areas

- a. MTC restricted areas are listed below:
 - (1) Gravel pit area unless coordinated in advance with range control.

- (2) Water ponds, unless coordinated in advance for waterborne operations.
- (3) Residential properties along north boundary road.
- (4) Areas used for the IDNR Wildlife Crop Leases. Units will be informed of these areas during in-briefing.
- (5) Areas around the Training Site Commander's residence, or other occupied buildings.
- (6) UTES and hard stand parking areas are off limits unless coordinated in advance with the UTES foreman.
- (7) Range Control reserves the right to restrict access to any training area when severe tire rutting is expected.
- (8) The North, South, and West boundary roads are outside the limits of the MTC and are, therefore subject to Public regulation.

b. Only designated parking areas along the west boundary road may be used for vehicle parking and administrative operations activities.

(1) The 0.7 acre wetland located in the center of TA 104C and denoted on the MTC map.

(2) Any posted, restricted, or designated area as communicated by Range Control which may be temporarily closed due to construction or environmental rehabilitation.

8-3. Environmentally Based Restrictions

a. Extreme caution must be used to ensure that MTC's natural habitat is not disturbed. Maintaining this natural habitat makes for a better training area.

b. Wildlife will not be disturbed, harassed, or injured. Report the accidental death or injury of wildlife to MTC Environmental or Range Control.

c. Care will be taken to ensure soil cover is not stripped bare of vegetation. Do not cut trees with protective coverings or special marks, trees greater than two inches in diameter will not be cut. Additional guidelines will be established based on current environmental situation of each training area and will be communicated at the weekly range control briefing.

d. At no time will units use area pesticides. Contact Range Control, if the unit identifies a need for area pesticide application. Personal pesticide use on skin, clothing and equipment (i.e. mosquito or tic spray) is allowed.

e. Crop lease areas and wildlife food plots are not to be disturbed.

f. Bivouac areas must be approved by Range Control. Range Control may not allow bivouac sites to be set up in certain training areas if environmental conditions will not support those activities.

g. Open fires and burning without the appropriate permit is prohibited anywhere on the training site.

h. Digging of trash pits is not authorized.

i. Foxholes, emplacements, or trenches will not be dug without prior approval of Range Control. No latrines will be dug on MTC. Portable toilet facilities are available on site (advance planning is required).

j. All refuse will either be placed in dumpsters provided, or transported by unit to home station. All ammunition residue, brass, and unused ammunition will be policed and turned in prior to departure. Every effort will be made to put appropriate recyclable materials in the respective collection bin when available. Non-compliance may result in disciplinary action as determined by the Training Site Commander.

k. P.O.L. Products will be handled in a manner which will eliminate or reduce the chance for cross contamination or spills. Follow these procedures for specific operations.

(1) Use of mobile fueling tanks (MFT) in cantonment will be restricted to refueling pads located Southeast of the UTES. Refueling in the field will follow field-refueling procedures and use a spill mat or heavy plastic in the refueling area with drip cans. No vehicles will fuel within 100 meters of any water body. This also includes intermittent streams. MFTs will have spill kits and at least one copy of the spill card (Appendix K) per vehicle.

(2) Fueling with five-gallon cans for field kitchens and generators will also be done at the fueling pads or properly designated areas. Special precautions must ensure that when burners and generators are filled, pre-checks are made for fueling operations.

(a) Never fill five-gallon cans over the seam that connects the upper and lower parts of the can. This will allow the liquid to expand and prevent seepage.

(b) Always ensure that cans have serviceable gaskets. Never store cans without removing the fuel spouts and replacing the caps.

(c) Check the operation of components before, during, and after operation to insure that fuel is not leaking (fuel hoses, gaskets, etc.)

(d) Kitchens need to follow procedures outlined in TM 10-7360-204-13p for safe fueling operations.

(e) Units conducting field-fueling operations will submit a copy of the Unit OPORD to MTC HQ – Environmental for review. Specific items looked for will be detailed Concept of Operation paragraph which outlines ingress / egress, layout of the field fuel point, grid locations of tankers and the items listed above.

l. Archeological Sites are located around the Marseilles Training Center. It is a federal offense to knowingly disturb these sites. Follow these procedures to limit disturbing these sites:

(1) Use the current Marseilles Training Center map to locate no digging or vehicle traffic restrictions. Note all areas have been checked. No Digging or vehicles maneuvers in these areas.

(2) Limit your digging and vehicle maneuvers to areas well away from these specified sites.

(3) If any cultural resources are uncovered during your operation, **CEASE THE DIGGING**, mark the hole, and record the location of the artifacts. Report the incident to the chain of command and forward the information to MTC Range Control.

m. Streams and Wetlands are a protected resource under the Clean Water Act. Follow these simple guidelines to avoid impact:

(1) Vehicles can cross streams only in designated areas. These areas are low water crossings lined with rock, culverts or bridged crossings.

(2) Troops should limit stream and river crossings when possible. Use a single crossing point as much as possible.

(3) Marsh area and wetlands should be avoided, especially by platoon size or larger maneuvers on foot. At no time should any vehicle be in or around these areas.

n. Turn Hazardous/Non-Hazardous Waste associated with equipment maintenance operations in to the UTES maintenance facility from 0900-1500; Mon.-Fri. POC is the UTES Shop Chief at (815) 750-6530. Use the following guidelines when turning in special non-hazardous and hazardous waste during your AT period:

(1) Segregate all wastes according to the ILARNG Waste Management and Hazardous Material Management SOP.

(2) All special non-hazardous and hazardous wastes will be stored in closed containers and the container labeled clearly with its contents. Along with any applicable warning labels as outlined in the ILARNG Waste

(3) Management and Hazardous Material Management SOP.

(4) Turn in wastes in five-gallon containers. If any other size container is used, you must coordinate with the UTES prior to turning in that waste.

(5) All special non-hazardous and hazardous wastes will be turned into the UTES prior to leaving MTC.

Transport of special non-hazardous and hazardous wastes to home station is illegal.

o. Off Road Driving should be minimized by obeying the following guidelines:

(1) Stay on established roads when moving to and from training areas.

(2) Obey all speed limits.

(3) If off-road maneuvers are necessary, do not drive through lowland or wetland areas. Stay on established roads/trails when possible.

(4) Off road operations during wet weather should be minimized to the fullest extent possible.

(5) Avoid making U-turns, neutral steer turns, and driving on road shoulders.

(6) Report excessive soil and vegetation disturbance (i.e. wheel rutting, 'burn outs', etc.) to range control and consider an alternative training area/event.

(7) Do not intentionally drive over or otherwise damage vegetation unless specifically authorized by Range Control / Environmental. Removing certain plant species while training may coincide with natural resource management goals as outlined in the MTC INRMP.

(8) The current Marseilles Training Center Map indicates areas that are off-limits to vehicles.

p. Pyrotechnics must be coordinated with Range Control to reduce the potential of fire.

q. Non-ILARNG entities using MTC firing ranges will not clean their weapons at MTC. Non-ILARNG units may request an exception to this policy in memorandum format and addressed to the Training Site Commander. The memorandum will include as enclosures the following: a list of all solvents to be used with associated MSDS sheets; a list of all expendable supplies to be consumed in the cleaning process (i.e. patches, rags, paper towels, etc..) and analytical documentation which demonstrates the cleaning waste to be non-hazardous. The requesting unit or organization will receive written notification of approval or denial of their request for exception to policy from MTC HQ.

r. ILARNG units cleaning weapons at MTC by manual means or using the Weapons Cleaning Facility will follow the protocol sheets in Attachment A-1 of the ILARNG Waste Management and Hazardous Materials Management SOP regarding disposal and handling of weapons cleaning waste.

s. Cutting and felling of trees is strictly prohibited without prior consultation with Environmental and/or IDNR.

(1) Take care to not damage trees while training.

(2) Do not cut down or damage trees for camouflage without prior coordination with range control.

t. Environmental safety concerns should be considered while conducting training at MTC. Soldiers should be instructed to use the appropriate PPE and take appropriate actions to minimize injuries from the following:

(1) Ticks: Range control has handouts that explain the procedures and methods to deal with any tick related issues.

(2) Rabies has been reported throughout LaSalle County, specifically in the skunk and raccoon populations. Report any sighting of suspected infected animals to Range Control. Look for foaming at the mouth, uneven or staggering walk and unusual / unprovoked growling.

(3) Poison Ivy and Poison Oak is very prevalent throughout MTC's training areas. Take precautions to prevent exposure, cover exposed skin, sleeves down, glove shells, etc...

(a) Unit leaders should insure soldiers can actively identify poison ivy and poison oak

(b) When possible, avoid direct contact with poison ivy and poison oak. Over-the-counter soaps such as 'Technu' have proven successful in washing away the plant oils that cause skin irritation and rashes if used within 6 hours of contact.

(c) Soldiers should be directed to change uniforms and wash equipment if known to have contacted poison ivy and poison oak. Plant oils can remain on clothing and equipment and cause skin irritation for several weeks after initial contact.

(d) Individuals known to be hypersensitive to poison ivy or poison oak should seek medical attention upon initial occurrence of rash.

(e) Food. Place food scraps in designated dumpsters and keep all food in airtight and re-sealable container so as not to attract wildlife. Do not purposely feed wildlife.

8-4. Tactical Mess Operations / Field Sanitation

a. Field kitchen and feeding areas are provided for units. The areas are located at Grids: 605 / 691 (200 area). Grid: 581 / 730 (area 102S), Grid: 608 / 723 (area 103E). Other locations may be used with prior coordination and written approval of MTC range control.

b. Tactical Mess Operations.

(1) Ice is available at MTC. Coordination for pick-up will be arranged during in processing briefing.

(2) All materials for establishing a field mess site are provided by MTC. Units will contact MTC Range Control to get these materials. Field kitchens will follow guidelines below for disposing of used washing water (gray water):

(a) Dig a hole about 12-18 inches deep that will accommodate a metal or plastic drum.

(b) Fill the perforated drum with burlap to catch grease and food particles.

(c) Use additional barrels to supplement proper drainage.

(d) Fill and mark the hole and place back to near original condition.

(e) Dispose of food and burlap at the proper dumpsite.

(f) Ensure the hole is placed at least 150 feet from any water source or "wetland."

(g) Follow the "green" field guide for kitchen placement distributed by DOL-PP.

c. Field Sanitation

(1) All refuse will be deposited in dumpsters. All barrels near the portable latrines will be emptied into the dumpster. No trash or garbage will be buried. Plastic bags in containers are to be replaced by the using unit.

(2) Wastewater will be poured into soakage pits. Burlap will be changed by using unit at completion of training. Using units at field mess sites will dig soakage pits.

(3) No trash will be placed in latrines. If during clearing, trash is found in the latrines, it will be the using unit's responsibility to clean it out.

(4) Hand washing materials and devices will be furnished at the latrines and near mess areas by the using units.

(5) Do not handle any wild animals found on the grounds.

(6) Showers will be at the designated shower facility. Water from the showers will be channeled into a sump. Locations for the shower unit(s) must be pre-coordinated with the MTC site manager so a soil percolation test can be conducted. Once this is completed, the specifications for the sump hole will be designated by the environmental Branch per the 77 Illinois Administrative Code Chapter I section 905 appendix A. Each shower unit is capable of pumping at a rate of 20 gallons per minute and will be limited to run for 4 hours a day. This equals 4800 gallons of water which the sump must contain and allow the water to be absorbed by the soil. To facilitate drainage, the showers will be run 2 hours on and 10 hours off. For example, showers could be run from 0800-1000 hours and then from 2000-2200 hours.

If more than one shower unit is deployed to the field, an additional sump will be set up at a separate designated location. If at any time the sump (not including the berm) becomes full, the operation will stop. When the water in the sump drops, showers may resume. At no time will overland flow occur. It is the command responsibility to ensure that this operation is continually checked for proper compliance.

(7) Latrines will be provided by the training site and will be located near the bivouac areas. No slit trenches or cat holes are authorized.

(8) Units will comply with field sanitation procedures as outlined in AR 40-5, Preventative Medicine and FM 4-25 Field Sanitation.

8-5. Spill Clean-Up and Control

a. Respond to all POL spills as indicated in Appendix K. Using units will report POL product spills to Range Control as soon as possible after the spill. Units will assist in the clean up as directed by Range Control.

b. If a Non-ILARNG unit's training results in a POL spill, the unit will be charged for the cost of spill residue clean-up and disposal. These costs will be billed to the unit through the Identifiable Incremental Cost (IIC) process outlined in Appendix C of this regulation. Cost will be annotated on the IIC worksheet, Figure C-6, under the line item, "Environmental Clean-up". The bill for services rendered will include a statement of charges incurred by the ILARNG as a result of the POL spill.

c. Units will not attempt to dispose of spill waste except as directed by Range Control.

d. For spills in the refueling area at the UTES, a spill kit is located in the refueling area.

8-6. Residential Restrictions

a. Private property surrounds MTC. Crossing private fences, trespassing, or other infringement of private property is strictly prohibited.

b. Private drives and residences will not be used for parking, turning around, or any other training activities.

8-7. Aircraft Operations

a. There are several designated landing zones (LZ) and pick up zones (PZ) throughout MTC see appendix B for a map of designated LZ / PZs. Areas not designated as LZ/PZs may be used for this purpose with prior coordination with MTC Scheduling and Range Control. LZ / PZs are reserved by requesting the entire training area. Example, a unit wishing to conduct sling load operations in an LZ in training area 104C would reserve training area 104C. Co-use of unused portions of the training area may be possible and is coordinated with MTC Scheduling.

b. Aircraft flights, when range firing is being conducted, are prohibited without specific coordination with the MTC-RC. Flying over training areas is prohibited unless the aircraft pilot(s) has been briefed as to aerial danger (no fly) areas by Range Control. FLT OPNS at MTC requires a MTC Request to be completed. (Appendix D)

c. Aircraft will avoid low-level flights over adjacent residential areas and crop areas during growing season.

d. Helicopter operations are prohibited during the designated deer season.

8-8. Firearms and Lethal Weapons

a. Loaded firearms are prohibited, except in authorized hunting or range areas. These restrictions likewise apply to weapons concealed or contained in any vehicle or conveyance, or its attachments.

b. Concealed weapons, such as "black jack's", straight razor, brass knuckles, switch blade knives, etc., are strictly prohibited.

c. Military personnel training at MTC are not authorized to have personal weapons or ammunition in their possession.

d. The following restrictions apply to weapons and ammunition used for training:

(1) Individual weapons issued for training or operations will be in the possession of the person to whom issued, except during emergencies or medical evacuation. Weapons will not be surrendered to the charge of another person.

(2) When small arms are in a field environment and not issued to an individual, they will be secured in locked racks or containers and placed under constant guard.

(3) Reference AR 190-11: When necessary during tactical training exercises, ammunition will be stored under constant guard on a vehicle or aircraft. NOTE: Ammunition will not be stored on the ground or in tents.

(4) At no time will live ammunition be carried by the individual soldier except on the range complex in accordance with chapter 7 of this regulation.

(5) Commanders and supervisors must ensure that blank ammunition only be issued for use in field training areas.

8-9. Waterborne Operations

a. Water operations may be conducted in ponds, in Training Areas 102N, and L2 of 102S. Water Operations may be conducted in 104C, only when live fire ranges are not in use.

b. Using units will provide a detailed operations plan to MTC Range Control for final approval NLT 15 days, prior to conducting training.

c. Due to the hazardous nature of these operations, waterborne operations will be conducted with the following requirements:

(1) Using units will have personnel as follows:

(a) Training OIC or NCOIC, (E-6 or above)

(b) Training Safety Officer, (E-5 or above)

(c) Minimum of 2 certified life guards, a copy of certification will be filed with Range Control

(2) Using units will have the following equipment available at all times.

(a) U.S. Coast Guard approved type II personal flotation device for each person in the water at any one time.

This item will be immediately available for personnel in the water training and worn by all personnel assigned rescue duty from shore or in the boat.

(b) Two throw lines, at least 50' in length, with attached float. One assigned to shore and one to rescue boat.

(c) Rescue boat, manned by one lifeguard and one person to maneuver the boat.

(d) Medic with litter, aid bag and dedicated evacuation vehicle.

(3) Training OIC/NCOIC: The training OIC/NCOIC is responsible for the safe conduct of all training.

(a) Attend the range safety briefing at range control prior to commencement of training

(b) Ensures two forms of communication operable and contact made with range control prior to commencement of training.

(c) Request occupation and closing time as outlined in Appendix I for training areas.

(d) Ensures that any necessary manuals and equipment are available to conduct training.

(e) Will report any incidents or accidents occurring during training to Range Control immediately.

(4) Training Safety Officer (TSO): Will be present at all times training is being conducted. TSO is

responsible for ensuring that all necessary safety measures are implemented and all safety equipment is properly utilized. TSO will:

(a) Brief all personnel on safety and rescue measures.

(b) Brief and supervise safety personnel.

(c) Ensures that lifeguards are performing only their assigned duties.

8-10. Sling load Operations

a. Effective 1 October 1997 all Army sling loads must be inspected by a soldier qualified as an inspector prior to conducting a sling load operation. Qualified inspectors are in the rank of E-4 or above and a graduate of one of the following courses: Pathfinder, Air Assault or Sling Load Inspector Certification Course (SLICC). Graduates of the above courses, regardless of the date of graduation, are authorized to inspect loads. Graduates of the above courses that are below the rank of E-4 are not authorized to inspect loads.

b. Inspections will be recorded on the Sling Load Inspection Record (DA Form 7382-R). This form is available in Appendix I of FM 10-450-3, and must be reproduced locally. This form is required in triplicate. Distribution of the form is as follows:

(1) Copy one - to the supporting aviation unit

(2) Copy two - securely taped or tied to the load.

(3) Copy three - remains with the supported unit.

c. Coordination for the delivery of "copy one" should be arranged prior to the operation. The supporting aviation unit may request their copies be sent through distribution, mailed or delivered to the aircraft on the PZ. Load inspections are the responsibility of the supported unit. Completion of the DA Form 7382-R, SLING LOAD INSPECTION RECORD, is required for all loads. In the event that the same loads are being used several consecutive times only one DA 7382-R is required for the load. However, a qualified inspector will re-examine the load between hook ups to ensure the load is still rigged safely. Any load that is being used more than once and is left unattended, or is not hooked up for more than one hour will be re-inspected using DA Form 7382-R.

d. Units will initiate a request for occupation time when unit members arrived at their LZ/PZ, and a closing time at the end of their operations.

- e. Units will have the following assigned personnel:
 - (1) Training OIC or NCOIC, (E-7 or above) on appointment orders, and approved for safety duties at MTC by attending the MTC safety briefing.
 - (2) Training Safety Officer (TSO), (E-7 or above) on appointment orders, and approved for safety duties at MTC by attending the MTC safety briefing.
 - (3) Sling load inspector qualified individual as per paragraph 7-10a of this regulation.
- f. Training OIC/NCOIC: The training OIC / NCOIC is responsible for the safe conduct of all training.
 - (1) Attend the range safety briefing at range control prior to commencement of training.
 - (2) Ensures two forms of communication operable and contact made with range control prior to commencement of training.
- g. Request Occupation and closing time as outlined in Appendix I for training areas.
 - (1) Ensures that necessary manuals and equipment are available to conduct training.
 - (2) Will report any incidents or accidents occurring during training to Range Control immediately.
- h. Training Safety Officer (TSO): Will be present at all times training is being conducted. TSO is responsible for ensuring that all necessary safety measures are implemented and all safety equipment is properly utilized. TSO will:
 - (1) Brief all personnel on safety measures.
 - (2) Monitor personnel safety.
 - (3) Ensures that personnel are performing only their assigned duties.

8-11. Rappel Operations

a. Military Units that plan to conduct rappel training at MTC must have one (1) Rappel Master qualified individual and either an Air Assault or Ranger qualified OIC (E-7 or above) who is also MTC Safety certified. Civilian users and police departments must have a rappel trained OIC and two rappel instructors. Rappel master and rappel instructors will submit copies of rappel certifications to MTC Range Control.

b. Special instructions:

- (1) An Army Medic for military users and a Paramedic for non military users, with aid bag, litter, backboard, neck collar and dedicated evacuation vehicle is required. Medics are also encouraged to have oxygen available. CLS instead of a 68W-qualified medic is not authorized.
- (2) Rappel operations require two means of communications. Range Control will issue communications equipment.
- (3) Rappel operations request occupation time, HOT time and COLD time as though it were a range.
- (4) Rappelling from the natural cliff requires a protective covering to be placed around the tree. These can be drawn from Range Control. The covering protects both the tree and the rope.
- (5) Slack rappelling, defined as any form of rappelling in which slack in the rope is taken up to the rappel platform, and where the rappeller “free falls” from the platform until the slack is taken up, is strictly prohibited.

8-12. MOUT Area

a. The MOUT Area is located on the main training area road, approximately 500 meters east of gate 50, in training area 102S.

b. A safety certified OIC (E-6 or above) and an RSO (E-5) and above must be present at all times while a unit is operating this facility. The MOUT Area will establish FM radio communications as designated for training area operations.

c. Blank fire, simunitions and paintball are authorized for use in the HTA. The following pyrotechnic devices may be used in these buildings:

- (1) Flash bang grenades (GG09) are authorized for use throughout the various buildings. **NOTE:** These will not be used during force on force training.
- (2) Practice grenades with fuses (G878) are authorized for use throughout the various buildings. **NOTE:** These will not be used during force on force training.
- (3) Smoke grenades (G930, G932, G940, G945, G950, G955). Smoke grenades will be placed in the orange painted metal buckets. These buckets will have a minimum of 4 inches of sand in the bottom of the bucket. The buckets maybe set anywhere in the facilities, but must not obstruct normal traffic flow, doorways, or stairwells. When using smoke grenades in a building, all of the windows in that building will be fully opened to allow appropriate ventilation. Smoke may be used during force on force training. **NOTE:** Chemical protective masks will not prevent personnel injury in areas with a high concentration of smoke in enclosed areas. Open windows and doors allow smoke from grenades to exit the buildings and allow for circulation of air.

(4) Simulator, tank main gun (LA06) and simulator, M31A1 (LA07) may be used by qualified personnel. A minimum of a hundred (100) days notice will be given to MTC Operations in order to secure these pyrotechnics.

(5) All other pyrotechnic devices are prohibited and chemical agents of all types are prohibited from use within the HTA.

f. A detailed SOP for the facility is available through MTC Range Control. Units using this facility will adhere to all requirements laid out in this SOP.

8-13. Gate 40 House

The Gate 40 House is located approximately 100 meters east of gate 40 in training area 103W. This facility is operated like the MOUT, and the SOP for the MOUT training area apply in all respects to the Gate 40 House.

Rules: see 8-12.

8-14. Portable Targetry

a. MTC has 30 portable, battery operated, radio control, computer scored pop-up target lifters available for use throughout the training site. These targets function similarly to an automated rifle range. The targets can be used year round. These targets will interface with MILES so that a soldier firing at a target with a MILES emitter on the weapon will cause the target to fall and be scored, as though it were struck by a bullet. These targets are extremely flexible and can be used in virtually any terrain, along roads, in the MOUT training area or Gate 40 House, with full size "E" silhouettes or the half size "F" silhouettes. They can also be used with simunitions and paintball weapon systems.

b. Prior coordination with MTC Range Control is required in order to effectively use this equipment, and the equipment is run by an MTC range control representative. Especially complex scenarios are possible with this equipment but require a prior planning session with MTC Range Control in order to write any necessary programs and ensure proper placement of the targetry to ensure the unit gets the most from the training event.

c. Requests for a small number of targets (10 or less) with a simple all up - all down scenario will be accepted on 1 week notice.

d. For more information on the availability of MILES, see paragraph 5-19 of this regulation.

e. This equipment can be reserved on the MTC Range and Training Area Request Form in appendix D of this regulation.

8-15. Confidence Obstacle Course

a. This course is designed to provide a test of mental and physical confidence; it is not to be used for physical conditioning. Individuals are encouraged but not forced to negotiate the obstacles on this course and the course is not run against time. Individuals negotiating the confidence obstacle course should be in good physical condition and be well rested prior to start of training. The FM 21-20 provides guidance on negotiation of the obstacles and several safety notes regarding use of the confidence obstacle course. The FM 21-20 is required to be present and used to safely and successfully negotiate this course.

b. Special instructions:

(1) Prior to running the course an inspection of each obstacle will be conducted to include ropes, landing / fall areas under and around obstacles using a checklist provided by MTC Range Control. Problems or concerns will be forwarded to MTC Range Control for further action. Thorough Risk Assessment will be conducted and will take into consideration the physical fitness of the soldiers negotiating the course. Risk Assessment and obstacle checklist will be available at all times for MTC Range Control inspection.

(2) A MTC safety qualified OIC E-7 or above must be present on the obstacle course at all times during the training.

(3) The following obstacles require an assistant instructor E-6 or above to be present at all times: The Tough One and The Confidence Climb. The Confidence Climb requires the assistant instructor to be positioned on the top rung of the obstacle. The AI will be tied into one of the eye bolts on the obstacle with a safety harness provided by MTC Range Control. The AI instructor for the tough one will be positioned at the obstacle and will move as needed around or on the obstacle to provide assistance and instruction. When the AI is on the obstacle the AI will tie into the obstacle using the safety harness provided by range control prior to providing assistance or instruction.

(4) The following obstacles require at least one spotter per individual negotiating the obstacle: Low Belly Over, Reverse Climb and The Weaver.

(5) Individuals negotiating the course will receive instruction and demonstration of how to complete each obstacle prior to attempting to negotiate the obstacle.

(6) The course will not be used if obstacles are wet, icy or during inclement weather.

(7) An Army Medic for military users and a Paramedic for non military users, with aid bag, litter, backboard, neck collar and dedicated evacuation vehicle is required. Medics are also encouraged to have oxygen available.

(8) Confidence Obstacle Course operations require two means of communications. Range Control will issue communications equipment.

(9) The Obstacle Course will request occupation time, HOT time and COLD time as though it were a range.

(10) Do not conduct muscular strength or muscle failure physical training within 12 hours of negotiating the confidence obstacle course.

8-16. Training Area Clearing Procedures

a. Request closing status from Range Control.

b. Police assigned training area and buildings, clean portable latrines if applicable, remove brass, ammunition boxes, crates, and other debris. All trash will be removed and transported to dumpsters located throughout area 200.

c. All material and equipment will be turned-in, in the same condition it was issued (i.e., nails pulled out of lumber, equipment cleaned). Units will be required to furnish a detail to accomplish these tasks at the request of Range Control. All range equipment will be returned to Range Control.

d. The using unit will collect and return to the Ammunition Supply Point all unexpended ammunition, fired brass casings, accessories, and pyrotechnics.

e. Training areas will not be scheduled for clearing during hours of darkness or limited visibility.

f. Using units will not be cleared to leave MTC until a range control representative has completed an inspection of all training areas used by that unit.

Chapter 9

Safety

9-1. General

a. This chapter prescribes safety and policy requirements common to all users of MTC. AR 385-63, DA Pam 385-63 and AR 385-64 regulate, Army-wide, the firing of weapons and explosives for training and target practice. The AR 385-1 and AR 385-10 prescribe the use of and procedures related to the Army Safety program. The provisions of this regulation supplement the above ARs.

b. The battalion safety program is the responsibility of the Battalion Commander. Range OICs and Range Safety Officers will be on appointment orders signed by the BN Commander indicating they are safety trained and qualified. The appointment order will contain the individual's name, rank, and last four of SSN this document will be provided to MTC range control. MTC Range Control will pass around a copy of the Range Safety Personnel Appointment Roster in Appendix E at each safety briefing, with the Battalion commander's signature this form may be used as the appointment order.

c. The requirements for personnel to be safety certified for conducting range or training area operations at MTC are:

(1) Must attend the MTC range certification brief.

(2) Read, understand, and comply with:

(a) AR 385-63 and / or AR 385-64, as appropriate

(b) Provisions of this regulation.

(c) Appropriate AR's, FM's and TM's for their operations.

(3) Provide a copy of appointment orders to Range Control

d. A risk assessment must be completed prior to starting any training operation. The completed assessment will be maintained by the OIC or NCOIC and available at the training location for Range Control inspection.

e. Misfire of ammunition and weapons malfunctions, which do not result in injury or damage to govern property, will be reported to MTC Range Control IAW DA PAM 385-63, para 3-4. In the event of a misfire the OIC is responsible to ensure:

(1) All personnel are safe.

(2) Proper procedures are followed as outlined in the appropriate weapons Field Manual.

(3) Range Control is notified

(4) Appropriate reports are completed

9-2. Safety Briefings

- a. All personnel will receive a safety briefing prior to conducting training of any kind. Appendix G is a generic Range Safety Briefing units may use for guidance in developing their own.
- b. Installation Safety briefings for designated personnel will be conducted IAW paragraph 7-11 of this regulation.

9-3. Medical Emergency

- a. Units conducting range training will have the following readily available: (Non-DoD users will provide similar resources)
 - (1) Military Ambulance or military vehicle capable of medical evacuation.
 - (2) Litter.
 - (3) Certified combat lifesaver or medic with aid kit. Units not authorized medical personnel may request support from other units or substitute a qualified civilian medic, e.g. EMT. Certification of training, for civilian medics will be presented to Range Control during the unit's safety briefing. NOTE: a CLS is not authorized for waterborne, rappel and confidence obstacle course operations only a qualified medic is authorized. For more information, see paragraph 8-9, 8-11, and 8-15 respectively.
 - (4) All medical teams need to have a strip map to the local civilian hospital, for non-emergency use. See Appendix B.
- b. Military Ambulances are not authorized to perform emergency evacuation for life threatening injuries. (Memorandum Dated -- 3 Sept 1999 - Appendix L) Marseilles Ambulance service can be called through 911. Medical assistance for units conducting field training or range operations must be coordinated through Range Control. Units may contact 911 for medical emergencies that occur in the Training Support Complex. However, units must coordinate with installation security in order to ensure quick response at the gate.
- c. Units will use that the Army Standard 9 line MEDEVAC (Peacetime) request format when requesting an ambulance. This format can be found in the STP-21-24-SMCT, task number 081-831-101. Copies may be obtained from MTC Range control.
- d. Medical personnel must know the route to the nearest hospital prior to the commencement of all training / firing. In the event that hospital treatment is required, evacuation will be to:

Ottawa Community Hospital
US Route 6, East
Ottawa, IL 61350
Phone: (815) 433-3100/6090

- e. In rare cases when air evacuation is necessary, local community ground EVAC assets will transport any soldier(s) to the Ottawa Community Hospital for further transport by air.
- f. During or immediately following the completion of an evacuation, the unit OIC will notify Range Control as to the nature and circumstances of the injury/accident.
- g. When accidents involving injury occur at MTC, the OIC will:
 - (1) Stop training.
 - (2) Obtain all facts and circumstances surrounding the accident, to include suspected cause, name, range where injury occurred, SSN, organization, and any other pertinent information deemed necessary.
 - (3) Report to Range Control to complete NGIL form 15.
- h. The Troop Medical Clinic (TMC) in the TSC is available for units to draw in accordance with Appendix M, paragraph M-8 of NGIL 350-11. The TMC is not staffed on a routine basis. Units wishing to draw the TMC will request the facility on the Marseilles Training Center Billeting and Logistics Request Form. (Appendix D)
- i. Automated Electronic Defibrillators (AED) are available on MTC. AEDs will be dispatched throughout MTC by security personnel by calling 6521. AEDs are available for using unit access in the following buildings and areas:
 - (1) MTC Range Control near gate 5, the AED is located beside the main fire desk on the south end of the building and is available 24 hours a day, every day. The exterior door closest to the AED has an exterior lighted AED sign.
 - (2) The Training Support Complex, Building A in the fitness room, the AED is located near the main interior door and is available 24 hours a day, every day. The exterior door closest to the AED has an exterior lighted AED sign.

(3) MTC Hq, has an AED mounted beside the exterior door of the Logistics section entrance. This AED is only accessible during routine working hours Monday through Friday and at various times on weekends. The door is marked with an AED sticker in the window.

(4) One AED is assigned to the Troop Medical Clinic in A Bldg and units may draw that AED from the MTC Logistics section.

9-4. Emergency Aero Medical Evacuation (MEDEVAC):

a. Civilian MEDEVAC is available through Life Flight assets based out of Peoria. Unit medics must inform MTC-RC of the severe nature of the injury and specifically request Life Flight evacuation during the initial 9-line medevac report. Determination of the need for Life flight evacuation will be made jointly between unit assigned medics and Marseilles Ambulance Service, with Marseilles Ambulance Service personnel having final decision on necessity of aero medical evacuation. Marseilles Ambulance Service will initiate contact with Life Flight for the evacuation.

b. MTC has three designated LZs for civilian MEDEVAC operations:

- (1) TA 102E Grid 5660 7303
- (2) TA 103E Grid 603 725
- (3) Cantonment near Gate 5 Grid 5965 6981

c. Military MEDEVAC is not normally available at MTC. Units may coordinate for MEDEVAC services on their own. MEDEVAC operations will be conducted in accordance with this regulation.

d. Emergency MEDEVAC radio communications between MTC Range Control and aviation will be established in the assigned FM frequency of 41.75 MHZ.

e. Request for MEDEVAC will be made using the Army Standard 9 line MEDEVAC request format on the Range Control radio net. This format can be found in the STP-21-24-SMCT, task number 081-831-101. Copies may be obtained from MTC Range control

f. Each patient will have his name, age, social security number and known allergies printed on a piece of paper and attached to his uniform.

g. Precedence for Evacuation.

(1) Urgent: Request for emergency cases which must be evacuated immediately to save life or limb or to prevent serious complications which could endanger life or limb if evacuation were to be delayed.

(2) Priority 1: Request for patients requiring prompt medical or surgical care but for whom the risk of life or limb will not be increased greatly if evacuation is delayed beyond one-half hour.

(3) Determination of whether an evacuee is URGENT, PRIORITY 1, or a lower priority will be made by the unit commander, and confirmed by the medic or the attending medical officer at the evacuation site.

(4) Lower priority cases (non-life, limb, threatening) will be evacuated by ground means by the supporting ground medical element.

h. Ground personnel will have to provide an area approximately 50 meters square or larger with no high trees or other obstructions in the immediate vicinity.

9-5. Accident / Incident Reporting

a. All Class A or B accidents or incidents regardless of location will be report by the unit Commander or Range / Training Area OIC to MTC Range Control. Additionally all Class C Aviation will be report by the unit Commander or Range / Training Area OIC to MTC Range Control. These individuals will:

- (1) Suspend all firing or training.
- (2) Provide necessary care for injured personnel, ensure the area is safe for others and secure the scene.
- (3) Ensure that any weapons, munitions or munitions debris and / or equipment involved remain intact are left in place and undisturbed.
- (4) Make an immediate report to Range Control or Security with all the available facts of the incident.
- (5) In the event of a fatality, the MTC Training Site Commander / Manager and NGIL-G3 will be notified immediately.

(a) NGIL-G3: During normal duty hours: (217) 761-3575

(b) After normal duty hours, contact the Joint Operations Center (JOC) (217) 761-3941.

(c) Training Site Commander: All hours (815) 750-6522

b. Report specifics of accident/injuries through command channels using NGIL Form 15 and DA Form 285-AB-R, JUL 94.

c. Commanders or Range / Training Area OIC will report all Class C and D accidents to Range Control or MTC

Security. All training in the immediate vicinity of the accident will be suspended, pending further determination of actions to be taken by MTC Range Control or Security.

d. All accident reporting and processes will be handled IAW AR 385-40 and DA PAM 385-40.

9-6. Surface Danger Zones

a. When ranges are hot the associated surface danger zone is restricted for training. Access to the surface danger zone is prohibited unless authorized by Range Control. See maps in Appendix B.

b. A firebreak and signs mark the small arms surface danger zone.

9-7. Misfires / Unexploded Ordnance (UXO)

a. Personnel are not to pick up or to handle flares, simulators, or any ammunition or fragment that may be found anywhere on MTC. Any movement of the items may cause them to explode. If unexploded ordnance of any kind are found, their location should be marked with a stake, branch, engineer tape, or any object that can be seen above the foliage of the immediate area. It should be driven into the ground not closer than 10 meters from the device and tipped toward the device. A handkerchief or piece of cloth should be securely fastened to the stake or object marking the location. Traffic will be routed a safe distance around the area. The location will be reported at once to Range Control and will include the following information:

(1) Type (if known) and size of device.

(2) Location (by grid coordinate and other description which will help to pinpoint the location).

(3) Name, rank, and unit of individual reporting.

b. The removal of any material, component parts of projectiles, targets, or other objects from MTC is prohibited.

c. In the event of a misfire the OIC is responsible to ensure:

(1) All personnel are safe.

(2) Proper procedures are followed as outlined in the appropriate weapons Field Manual.

(3) Range Control is notified.

d. Emergency EOD support beyond the capabilities/responsibilities of the OIC may be obtained through Range Control.

e. Units requesting EOD support on a range for unexploded ammunition/device will be required to furnish a guide for EOD personnel to the approximate location of the unexploded ammunition/device. The OIC and Range Control will determine a location for linkup between the unit guide and EOD personnel.

9-8. Fire Prevention

a. Warming/cooking fires for the convenience or comfort of troops are not authorized.

b. Any or all grass or forest fires will be reported immediately to Range Control or to a security guard giving the following information:

(1) Location of the fire (grid coordinate and common landmark directions if possible).

(2) Number of personnel in the vicinity of the fire, type of equipment in the vicinity of the fire.

(3) Determination by the OIC on ability of the personnel present to extinguish fire with equipment on hand.

(4) Status of the fire as situation develops every 15 minutes.

(5) When the fire has been extinguished.

c. Range Control will dispatch a representative to the scene to determine need for additional personnel or equipment to control the fire, a guide will be posted on the main road or trail leading to the fire to direct fire fighting personnel and/or equipment to the scene.

d. Upon being given clearance to fight the fire, units will extinguish range fires as quickly and safely as possible. At no time will a unit leave a range while fire is present unless otherwise directed by Range Control. This includes smoldering stumps or grass.

e. Range Control will contact area fire departments as necessary.

9-9. Hearing Hazards

a. Commanders are responsible for implementing the requirements for hearing protection in accordance with AR 40-5 regarding protective devices for hearing.

b. Units are required to provide their own hearing protection.

9-10. Climatic Conditions

a. Units will provide their own Wet Bulb Globe Temperature (WBGT) device. During extreme conditions, WBGT and wind chill readings will be broadcast by Range Control by NET call to all units in the training

areas. During summer months in the garrison area Range Control will fly a colored flag corresponding the current WBGT index from the flag pole at Range Control. Copies of the chart for a WBGT index may be obtained from Range Control.

b. Severe Weather

(1) Storm alerts will be declared when dangerous storms are expected to strike the installation. Alert warnings will be disseminated by Range Control.

(2) Actions to institute protective measures against severe weather are the responsibility of commanders. Range Control will not cancel unit training based on weather conditions.

Chapter 10 Logistic Support

10-1. General

a. Unit commanders are responsible for the safety and security of ammunition.

b. Pyrotechnics and ammunition will be used by qualified personnel only, and limited to training prescribed in appropriate training manuals.

c. Commanders must ensure that all unit personnel drawing /using munitions are in compliance with LAUTENBERG AMENDMENT to The Federal Gun Control Act of 1968. (18 USC 922). (Appendix O)

10-2. Ammunition Storage Point

a. Procedures governing the use of the ASP are found in NGIL Pam 750-1 and the external ASP SOP. Units can find the external ASP SOP on the MTC webpage. Units will coordinate with the MTC ASP Manager prior to pick-up or turn-in.

b. Access to the ASP is limited only to units conducting ammunition draws or turn-ins.

c. MTC ASP hours of standard operation 0800-1530 Mon. thru Friday.

10-3. Transportation & Handling of Ammunition

a. Ammunition will be transported and handled only under the direct supervision of competent and qualified personnel who are thoroughly familiar with the safety regulations listed in AR 385-63, AR 385-64, TM 9-1300-206, FM 5-25, and the field manuals of specific weapons. All ammunition will be secured in such a manner as to prevent any forward, rearward, or lateral movement. Units will be provided dunnage, blocking, and tie down straps upon request.

b. HAZMAT Qualifications Paperwork Requirements.

(1) Vehicle operators and assistant operators must have Military HAZMAT Certification with valid operator's licenses.

(2) Properly filed out DD Form 626, Motor Vehicle Inspection (Transporting Hazardous Materials).

(3) Vehicles must conform to DD Form 626, Section 13.

(4) Each vehicle must have two 10lbs. BC rated fire extinguishers, approved tie down straps, and vehicle hazard reflector kit.

c. Vehicles transporting explosives will have proper placards when required. (Per CFR 49) Placards are available at the MTC ASP.

d. Handling and use of Ammunition:

(1) Ammunition will be handled and transported so that containers will not be tumbled, dragged, thrown, dropped on each other, rolled or walked over, or dropped from tailgates of trucks.

(2) Personnel handling ammunition will not tamper with components.

(3) No steel or other spark-producing metal tools or equipment will be used with ammunition. Safety tools constructed of non-sparking material must be used to open or repair ammunition boxes. Do not use axes to open ammunition containers or to cut metal bands.

(4) The OIC of any training involving the use of ammunition will conduct a safety briefing for all personnel prior to issue. The briefing will cover as a minimum:

(a) The dangers of tampering with ammunition.

(b) Proper methods for handling and firing ammunition.

(c) Ammunition containers will not be opened unnecessarily, and should remain sealed until needed for use.

(d) Live ammunition and residue will not be transported in the same vehicle.

e. Under elevated Force Protection Conditions (FPCON) transportation of ammunition will be in accordance with guidelines published from Illinois Joint Forces Headquarters.

10-4. Storage of Ammunition

a. Ammunition will typically be stored on the vehicle on which it is transported.

(1) Storage of ammunition is governed by AR 385-63, AR 385-64, AR 190-11, TM 9-1300-206, and appropriate FMs.

(2) Ball ammunition will only be issued for use from the ammunition storage buildings/shelters at each range.

(3) Ammunition & pyrotechnics may only be stored in ammunition storage buildings located on B range and the CPQC or loaded on a vehicle in the range complex.

(4) When ammunition or pyrotechnics are stored anywhere other than the ASP there must be a posted guard.

(5) Blank ammunition and pyrotechnics in training areas will remain unloaded on vehicles unless issued to individual soldiers. Tarps or covers must be utilized over all items. Fire extinguishers must be on hand.

(6) Ammunition will not be stored in the TSC, nor will a vehicle with ammunition loaded on it be parked around the TSC.

b. Units will not use the ASP for overnight storage of ammunition that they have signed for.

10-5. Blank Ammunition and Pyrotechnics

Blank ammunition and pyrotechnics may be used at MTC consistent with the risk assessment and awareness for safe use. Specific guidance is located in NGIL Regulation 350-2, Appendix B.

10-6. Authorized Ammunition

See Appendix J for DODICs authorized for use at MTC.

10-7. Suspension of Ammunition or Explosives

If any lot of ammunition, explosives or components, has malfunctioned in such a way that further use of the lot will possibly result in injury to personnel or damage to property, the lot involved will be suspended from use by MTC-RO. The suspension will be either substantiated or withdrawn by Range Control.

10-8. Class III Supplies (POL)

a. Units can obtain fuel from the UTES. Prior coordination is mandatory call (815) 750-6530.

b. Mobile fuel truck operations in the cantonment area will be conducted on the fuel pad at Grid: 597 / 698

c. UTES refueling will be conducted behind the UTES facility in accordance with their SOP. Contact UTES supervisor for more information.

d. Bulk Fueling - Not available.

e. Package - Limited, emergency only.

10-9. Maintenance Support

MTC does not provide direct maintenance support. The Unit Training Equipment Site (UTES) at MTC may be available to units for maintenance support by prior coordination with the UTES Supervisor at (815) 750-6530. Questions about availability and types of support the UTES can provide should be directed to the UTES Supervisor.

10-10. Water

Potable water is available at Grid: 598 / 698 and Grid: 591 / 699

10-11. Wash Rack

a. Wash facilities are available at the UTES, with prior coordination.

b. Washing of vehicles at any location other than designated areas is prohibited.

10-12. Rations

Rations are a unit responsibility; MTC does not handle rations distribution. MTC personnel will not sign for unit rations deliveries.

10-13. Training Aids, Devices, Simulation Systems

a. MULTI-INTEGRATED LASER ENGAGEMENT SYSTEM (MILES): MILES equipment in small quantities is available several months a year and does vary. Normal quantities on hand consist of 60 individual sets including halo, body harness, and emitter. Crew served weapons emitters are available with 10 - M249 and 2 M2 emitters. For information regarding exact quantities and availability contact MTC Logistics at 815-7506501 / 6502 /6503.

b. MACHINE GUN NOISE – FLASH SIMULATOR: These are propane oxygen regulated devices which simulate crew served weapons fire. Normal quantities on hand are two of these devices, however, quantities do vary. For information regarding exact quantities and availability contact MTC Scheduling NCO at 815-750-6512.

c. BEAM HIT: Beam Hit is a portable electronic marksmanship trainer. It is available for use and can be signed out through MTC Logistics. Additional SARTS support can also be requested at the same time. (contact the State Marksmanship Coordinator at 217- 761 – 3576).

d. PORTABLE POP-UP TARGETRY: MTC has 30 portable, battery powered, radio remote controlled, target lifters similar to those found on automated pop-up live fire ranges such as the RETS. These targets can be set up virtually anywhere on the installation for use in a very wide variety of training scenarios including but not limited to convoy ambush, personnel ambush, assault on a defensive perimeter, or defending a perimeter against attack. These targets use the 3D silhouettes and have the ability to function with MILES. These targets maybe scheduled for use on the MTC request forms and an MTC Range Control operator will be assigned to operate the equipment for the using unit.

e. TIBERIUS ARMS (Veritas): The Veritas paintball weapon system allows users the opportunity to conduct realistic force on force training in multiple environments with positive confirmation of hits on target. The Veritas closely approximates the M4 weapon system. The Veritas shoots .68 caliber paintballs and is fed from 33g air canisters through a 15 round magazine. Each 33g air canister allows approximately 45 shots. The Veritas has a fire selector switch for safe and semi automatic fire. MTC has 41 weapons systems and required safety equipment for issue. Each weapon system includes the following components: 1 carrying case, 1 Rifle, 6 Magazines, 6 33gram CO2 canisters, 1 cleaning kit per 6 rifles, weapon oil, 1 operator manual per issue, 1 MTC Paint ball SOP, 1 V-type goggles with face mask, and paintballs. Requests for use may be submitted through IKO under Marseilles Training Center.

f. IMPROVISED EXPLOSIVE DEVICE (IED) SIMULATION KIT: The MIL-SIM-FX IED simulations kit is a non-pyrotechnic IED simulator using compressed air, special effects powder and paintballs to replicate IED detonation. The simulator kit is highly flexible allowing units to adjust the type and size of the replicated detonation from artillery shell sized IEDs to small vehicle or personnel borne IEDs. The IED simulator can be used in very close proximity to convoys and personnel. On detonation, sound is generated by compressed air rupturing of a plastic or rubber burst disc, “smoke” plums are simulated using the special effects powder and shrapnel is simulated using .68 caliber paintballs.

g. M16 / M4 RIFLE - SHORT RANGE TRAINING AMMUNITION (SRTA) - M2 PRACTICE BOLT: SRTA is a plastic practice cartridge (M862, DODIC A065) that enable units to conduct realistic training at short ranges. To fire SRTA from the M16 / M4 series rifles the standard bolt and bolt carrier are replaced with the M2 practice bolt which allows normal operation of the weapon with the lower powered SRTA. The M2 practice bolt is used on both of MTCs Convoy Live Fire Exercise (CLFX) Lanes in order to allow realistic training with a reduced surface danger zone. For more information, see FM 3-22.9 and TM 9-6920-746-12&P. MTC has 30 M2 practice bolts on hand for issue. Units can reserve these through the MTC Logistics using the Training Support Complex request form or by calling the MTC Logistics Office at 815-750-6501 / 6502 / 6503.

h. M2 BROWNING MACHINE GUN- SHORT RANGE TRAINING AMMUNITION (SRTA) - M3 RECOIL AMPLIFIER BARREL ASSEMBLY: SRTA is a plastic practice cartridge (M858 SRTA A603, M860 SRTA-Tracer A595, 4 rounds M858 SRTA / 1 round M860 SRTA-T A602) that enable units to conduct realistic training at ranges of up to 150 meters. To fire SRTA from the M2 the standard barrel is replaced with the M3 Recoil Amplifier Barrel Assembly (RABA) which allows normal operation of the weapon with the lower powered SRTA. The M3 RABA is used on both of MTCs Convoy Live Fire Exercise (CLFX) Lanes in order to allow realistic training with a reduced surface danger zone. For more information, see FM 3-22.65. MTC has 6 M3 RABA on hand for issue. Units can reserve these through the MTC Logistics using the Training Support Complex request form or calling the MTC Logistics Office at 815-750-6501 / 6502 / 6503.

i. M69 PRACTICE GRENADE: The M69 practice hand grenade simulates the M67 series of fragmentation hand grenades for realistic training and hand qualification purposes. The grenade can be used in conjunction with the M228 practice fuse (DODIC G880). The M69 with fuse is used on MTC’s hand grenade qualification range and maybe used on the CLFX lanes and in the MOUT Training Area. MTC has 150 M69 practice grenades. These maybe reserved for use on the MTC Range and Training Area request form and are drawn from MTC Range Control.

j. HMMWV EGRESS ASSISTANCE TRAINER (HEAT): The HEAT system is a live training device based on a HMMWV platform that is designed to operate indoors and outdoors. The HEAT is specifically designed for vehicle roll over drills. The HEAT will be operated only by qualified Range Control personnel and qualified

Tech Ops personnel. Requests for use may be submitted through IKO under Marseilles Training Center.

k. MULTI-PURPOSE TRAINER (MPT30): The Multi-purpose Pyrotechnic Trainer or MPT30 is a training device designed to deliver realistic battlefield visual and acoustic effects in an economic and safe manner. This includes heavy weapons fire, indirect fire cues, hostile gun fire cues, and improvised explosive signature. The MPT30 will be operated only by qualified Range Control personnel and qualified Tech Ops personnel. Requests for use of the MPT30 can be found in IKO under Marseilles Training Center.

l. SHOOT BACK DEVICE: The Shoot Back Device is a return fire simulator designed for use with 68 cal. Paintballs and LED flashes. The Shoot Back Device has been designed to be fully compatible with the use of portable pop up targets. These devices can be used in semi automatic mode, three round burst or fully automatic. The Shoot Back Device will be operated only by qualified Range Control personnel and qualified Tech Ops personnel. Requests for use of the Shoot Back Device can be found in IKO under Marseilles Training Center

m. VIRTUAL CONVOY OPERATIONS TRAINER (VCOT): The VCOT is a mobile or fixed site convoy trainer. The VCOT is a crew station trainer with crew stations for each crew member and tabletop trainers for quick and easy set up and movement. The VCOT has a 360-degree visibility and weapon engagement area. Exercises include enemy IED's, RPG's, machine gunners, riflemen, technical trucks, mortars and suicide vehicles. The VCOT will be operated only by qualified Range Control personnel and qualified Tech Ops personnel. Requests for use of this simulator can be found in IKO under Marseilles Training Cent

n. CALL FOR FIRE TRAINER (CFFT): The CFFT is a simulator designed to create virtual battlefields in which all levels of personnel can train in call-for-fire missions. This simulator supports basic through advanced levels of training to include forward observer tasks and procedures and mission planning. The CFFT virtually uses artillery with close air support, naval gunfire and mortars. The CFFT will be operated only by qualified Range Control personnel and qualified Tech Ops personnel. Requests for use of this simulator can be found in IKO under Marseilles Training Center.

o. MOVING INFANTRY TARGET SYSTEM (MITS): MTC has 8 moving, battery and solar powered, radio remote controlled target lifters similar to the portable pop-up target system. The MITS targets are placed on B range and will be operated by Range Control personnel.

p. TIPPMANN (AK 47): The Tippmann paintball weapon system allows users the opportunity to conduct realistic force on force training in multiple environments with positive confirmation of hits on target. The Tippmann closely approximates the AK 47 weapon system. The Tippmann shoots .68 caliber paintballs and is fed from a 12 oz air canister and hopper assembly. Each 12oz air canister allows approximately 500 shots. The hopper allows for approximately 200 shots per fill. The Tippmann has a safe and fire button for semi automatic fire. MTC has 22 weapons systems and required safety equipment for issue. Each weapon system includes the following components: 1 wood carrying case, 4 Rifles, 4 Hoppers, 8 12oz CO2 canisters, 1 cleaning kit to include 4 rubber barrel bore squeegees, weapon oil, 1 operators manual, 1 MTC Paint ball SOP, 4 V-type goggles with face mask, and paintballs. Requests for use may be submitted through IKO under Marseilles Training Center.

q. ENGLER CUSTOM M2 (.50 Cal): The M2 paint ball weapons system allows users the opportunity to conduct realistic convoy and defensive operations in multiple environments with positive confirmation of hits on target. The M2 closely approximates the .50 cal weapon system. The M2 shoots .68 caliber paint balls and is fed from a 12oz CO2 air canister and hopper assembly. Each 12oz air canister allows for approximately 500 shots. The hopper allows for approximately 300 shots per fill. The M2 comes with a charging handle that must be charged before a shot can be fired. The M2 has an electronic trigger for full automatic fire. MTC has 3 weapons systems and required safety equipment for issue. Each weapon system includes the following components: 1 weapon system, 3 9v batteries, 1 hopper, 5 12oz CO2 air canisters, 1 detachable barrel, 1 remote air line, canister container that holds 5 12oz CO2 air canisters, 1 operators manual, 1 Paint ball SOP and paint balls. Requests for use may be submitted through IKO under Marseilles Training Center.

r. OPERATOR DRIVER SIMULATOR (ODS): The ODS is a driver simulator designed to train soldiers on a variety of vehicle systems prior to driving the actual vehicle. The simulator is complete with dash board gauges and controls. For a complete list of available vehicles contact MTC Range Control.

10-14. Logistical and Billeting Clearing Procedures:

a. Units must notify Logistics 30 minutes in advance to clear billeting and other logistical facilities. Units will retain a clearing detail at the site to assist in clearing. Units are not cleared unless Logistics clears all logistical facilities used by that particular unit.

b. Building will not be cleared while there is extra gear being stored in them.

c. Units will conform to the specified clearing checklist which can be obtained in the HQ building.

d. Units will not be scheduled for clearing during hours of darkness or limited visibility.

e. In the event of lost, misplaced, or stolen keys a commander's inquiry will be conducted immediately according to AR 190-11/3.8k and the ILARNG Physical Security SOP's Chapter 5-14. (See Appendix T for KEY LOST STATEMENT (NGIL 153) and Appendix U for REQUEST FOR KEY(S) (NGIL152).

Appendix A
References

AR 15-6

Procedures for Investigating Officers and Boards of Officers

AR 40-5

Health and Environment

AR 75-1

Misfire & Dud Report

AR 75-15

Malfunctions involving Ammunition and Explosives

AR 145-2

Organization, Administration, Operation, and Support

AR 190-11

Physical Security of Arms, Ammunition and Explosives

AR 190-45

Serious Accident Reporting

AR 210-22

Private Organizations on Army Installations

AR 385-40

Accident Reporting & Records

AR 385-63

Policies & Procedures for Firing Ammunition for Combat Target Practice

AR 385-64

Ammunition & Explosives Safety Standards

AR 420-1

Army Facilities Management

DA PAM 385-40

Army Accident Investigation and Reporting

DAPAM 385-63

Ranges

NGR 5-1

Grants and Cooperative Agreements

NGR 5-2

Interservice/ Intergovernmental Support Agreements

NGR 5-3

Installation Management

NGR 210-50

Chargeable Transient Quarters and Billeting Fund Management

NGR 420-10

Base Operations/Maintenance and Minor Construction

NGIL 350-2

Training

NGIL 350-3

Training Ammunition Management.

NGIL 350-19

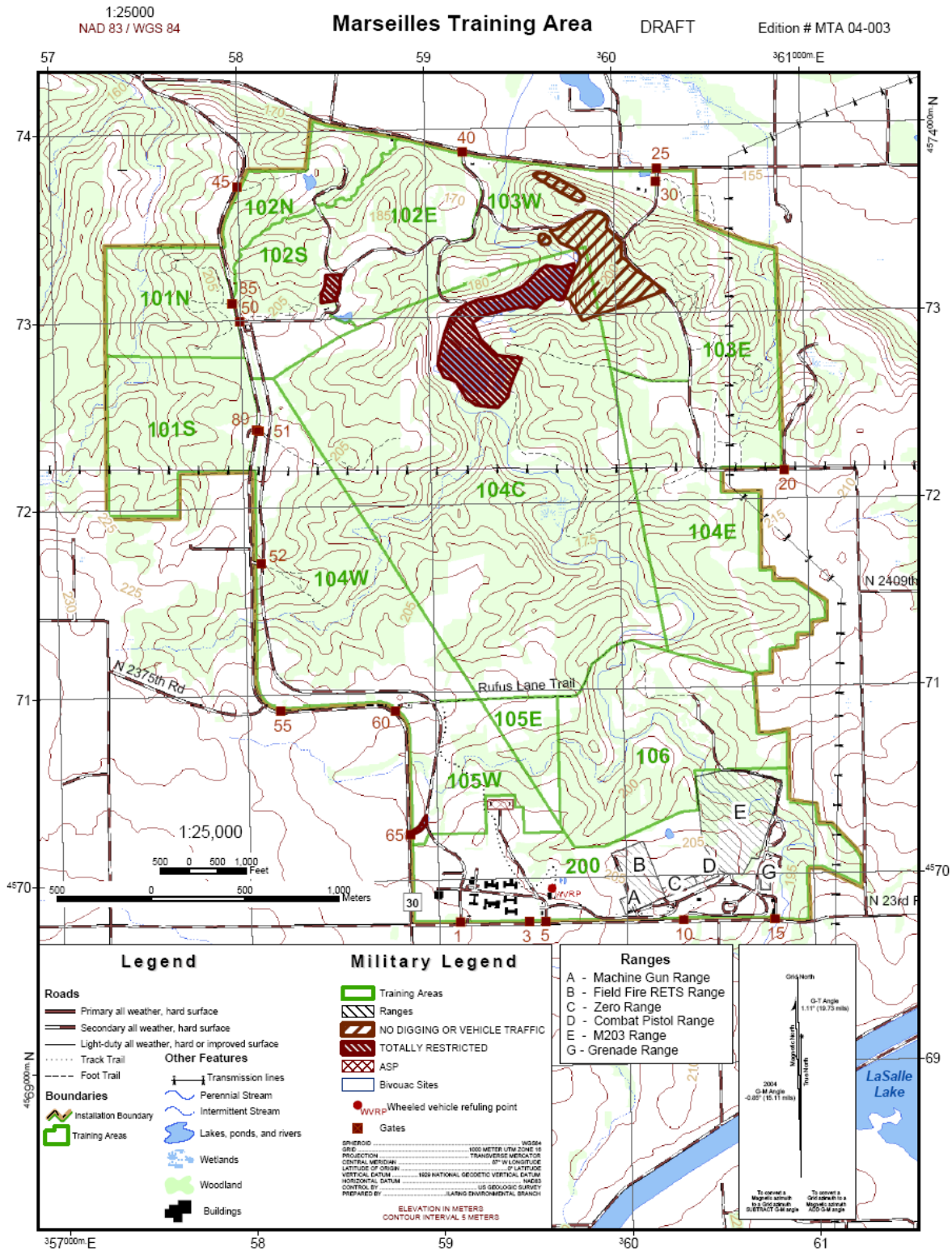
Range Operations

NGIL 740-1

MTC Ammunition Storage Point.

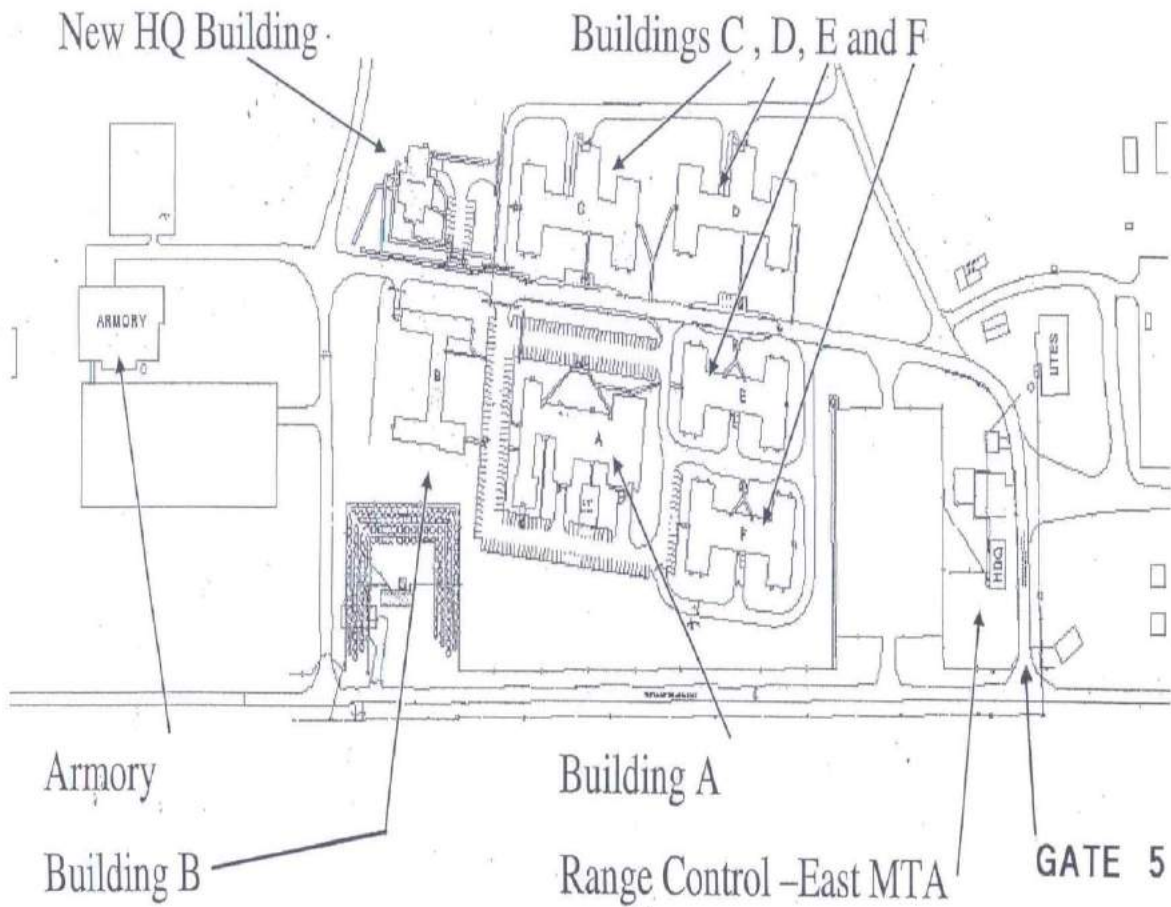
**Appendix B
Maps**

B-1. Installation Map



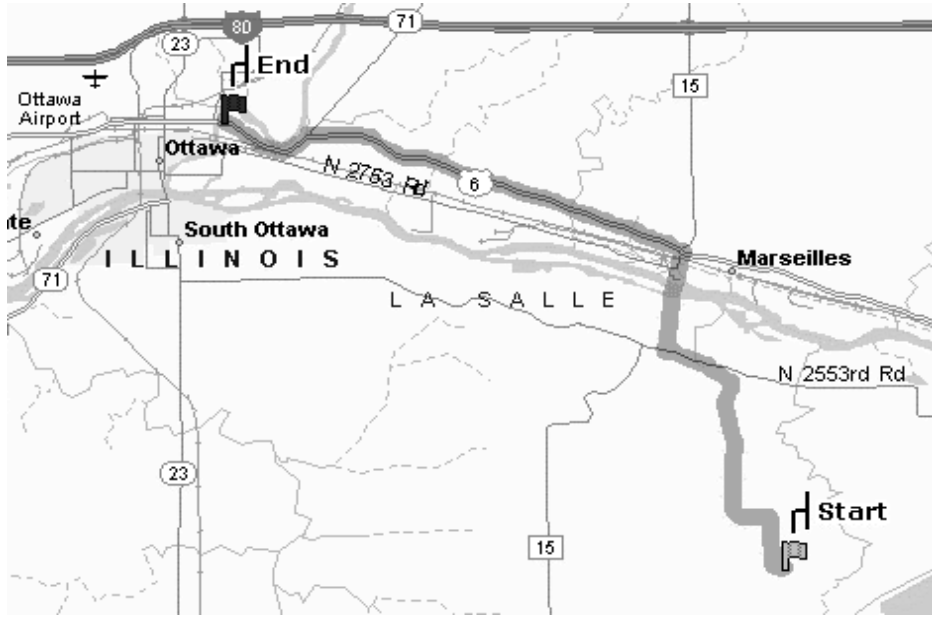
B-2. CANTONMENT AREA

AREA ORIENTATION



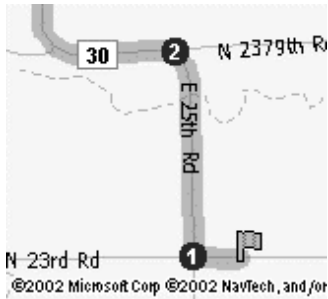
NOTE: THIS MAP NOT TO SCALE

B-3. Hospital Strip Map



Start: Depart 2515 N 23rd Road, Marseilles, IL on N 23rd Road heading West.

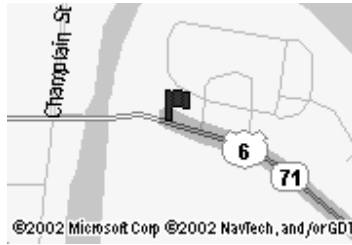
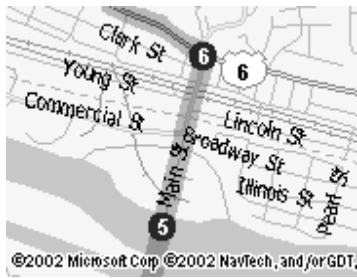
1. Turn RIGHT (North) onto E 25th Rd. 0.2 miles
2. Road Name changes to CR-30 (E 2450th Rd) 0.7 miles



3. Bear LEFT (West) onto N 2553 Rd 0.6 miles
4. Turn RIGHT (North-East) onto CR15 (E2350th Rd) 0.9 miles

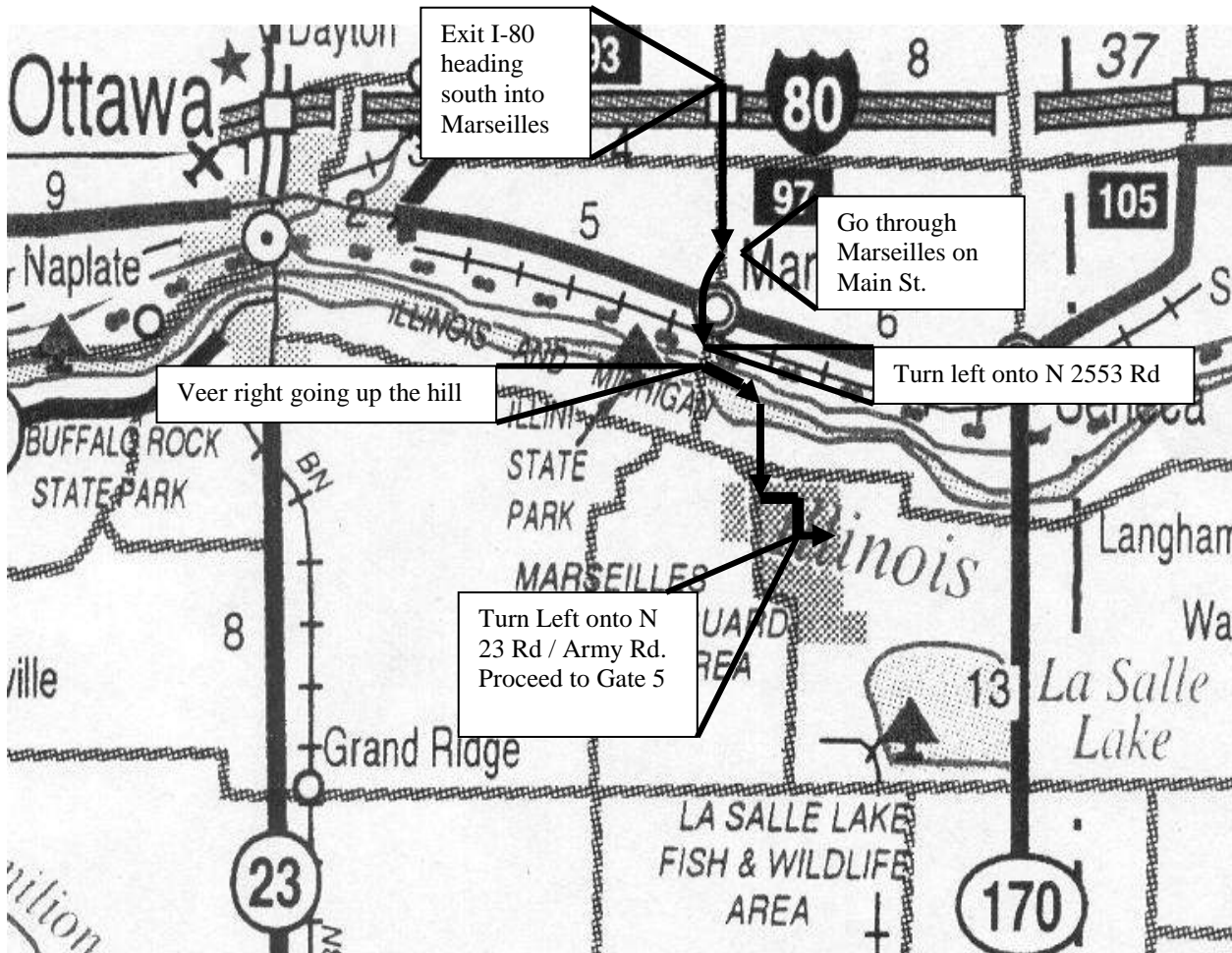


5. Road name changes to Main St.
6. Turn LEFT (West) onto US-6 (W. Bluff St)

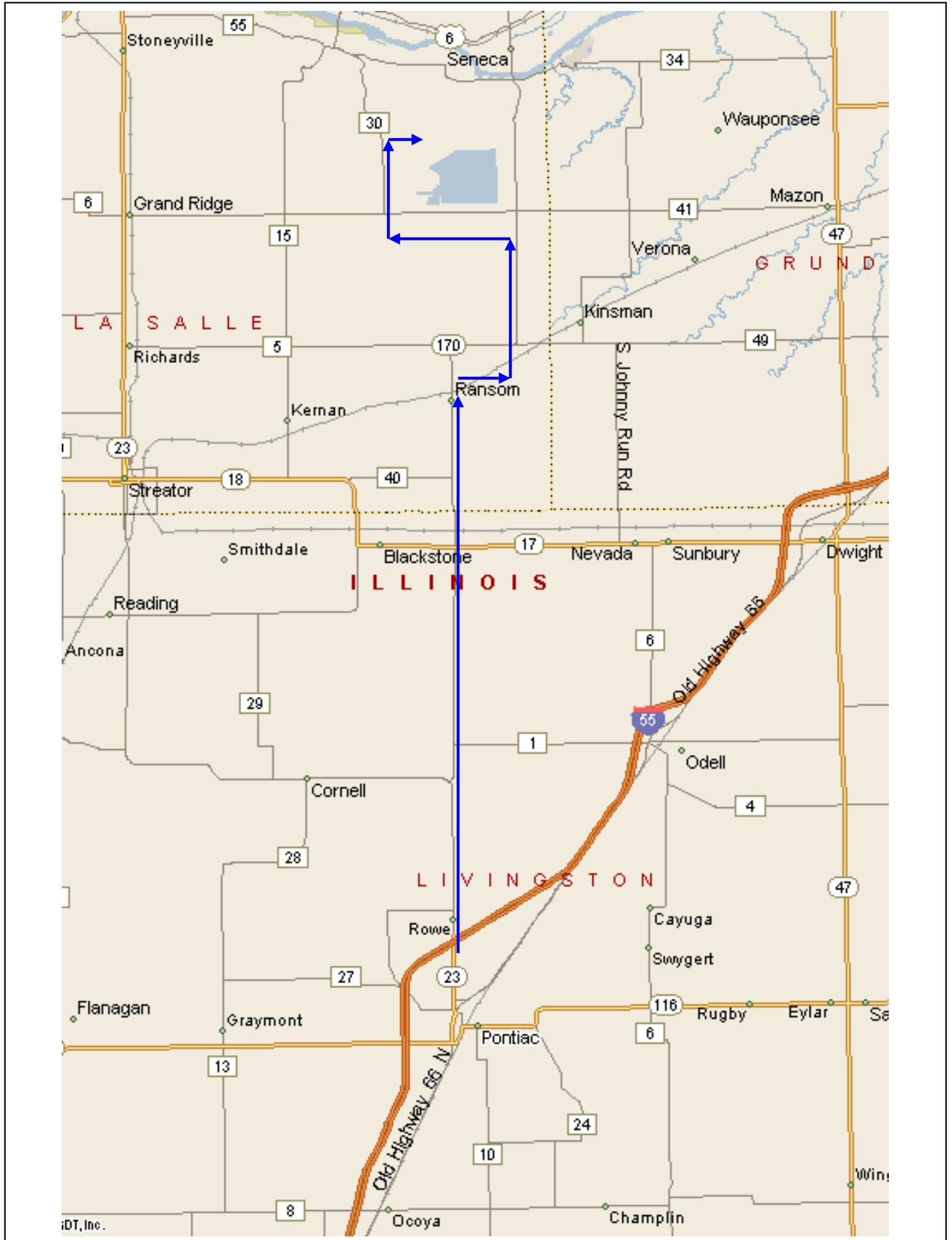


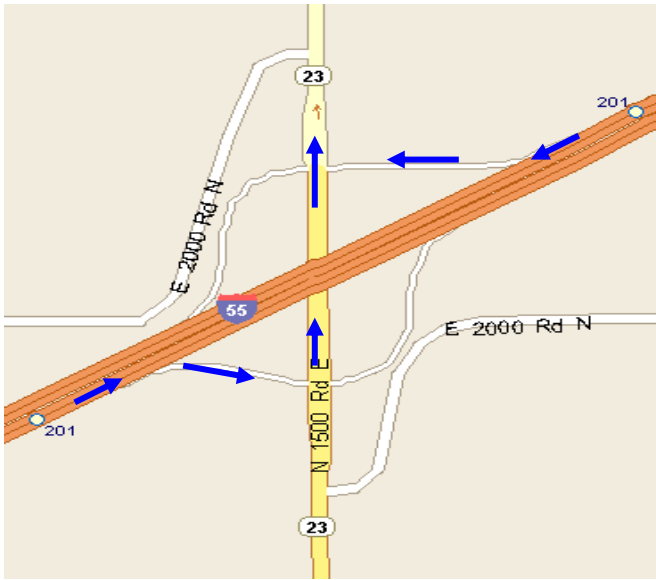
END: Arrive 1100 E. Norris Dr, Ottawa, IL

B-4. Convoy Strip Map From I-80



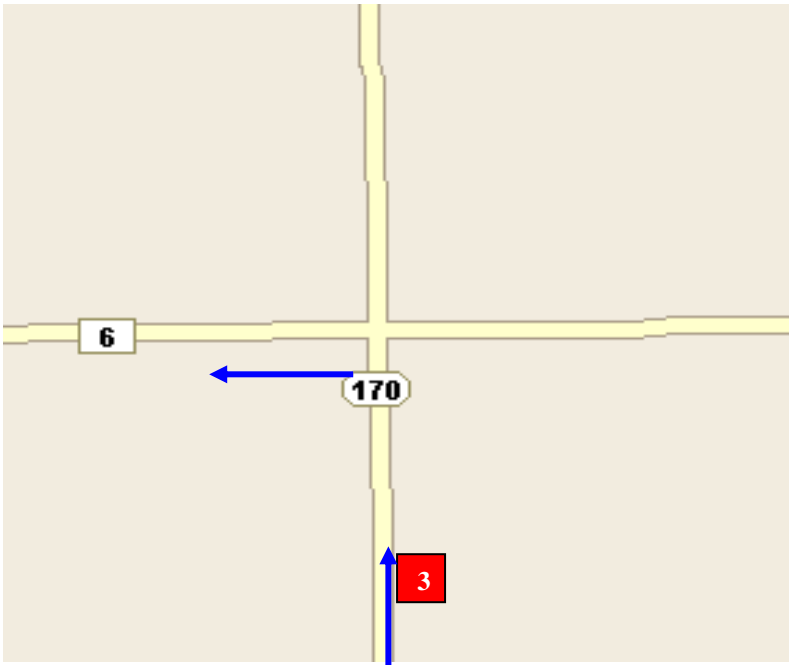
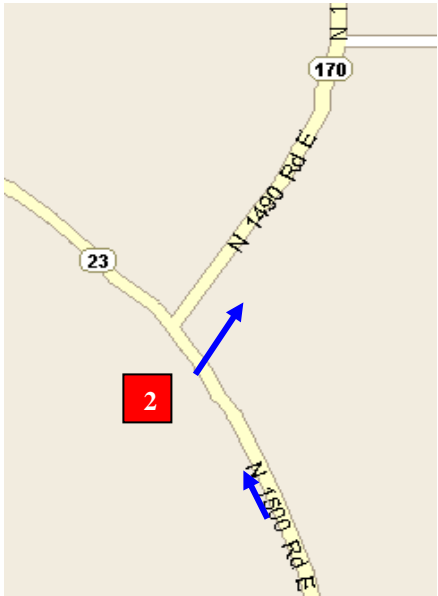
B-5. Convoy Strip Map From I-55



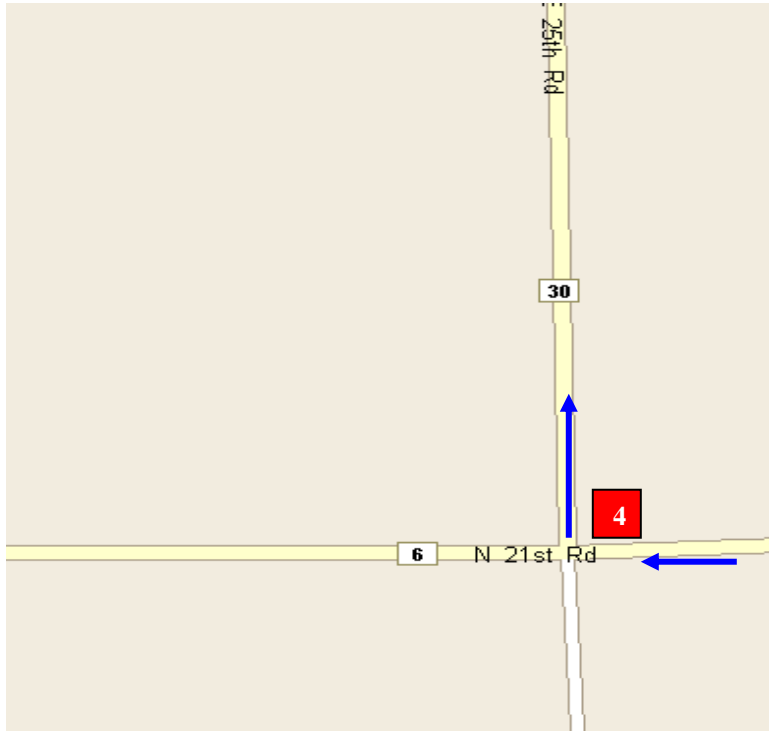


1. Exit I-55 at Exit 201 on to IL 23 going north toward Streator.

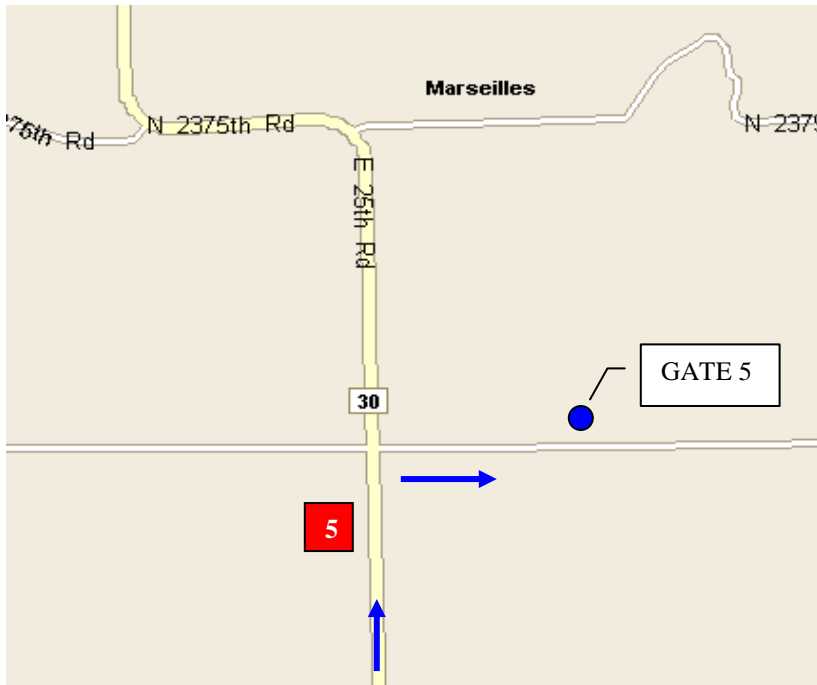
2. Turn right off of IL 23 on to IL 170 going toward Ransom.



3. Turn Left off of 170 on to 6 toward Grand Ridge.



4. After driving past the power plant entrance, turn right onto County Road 30

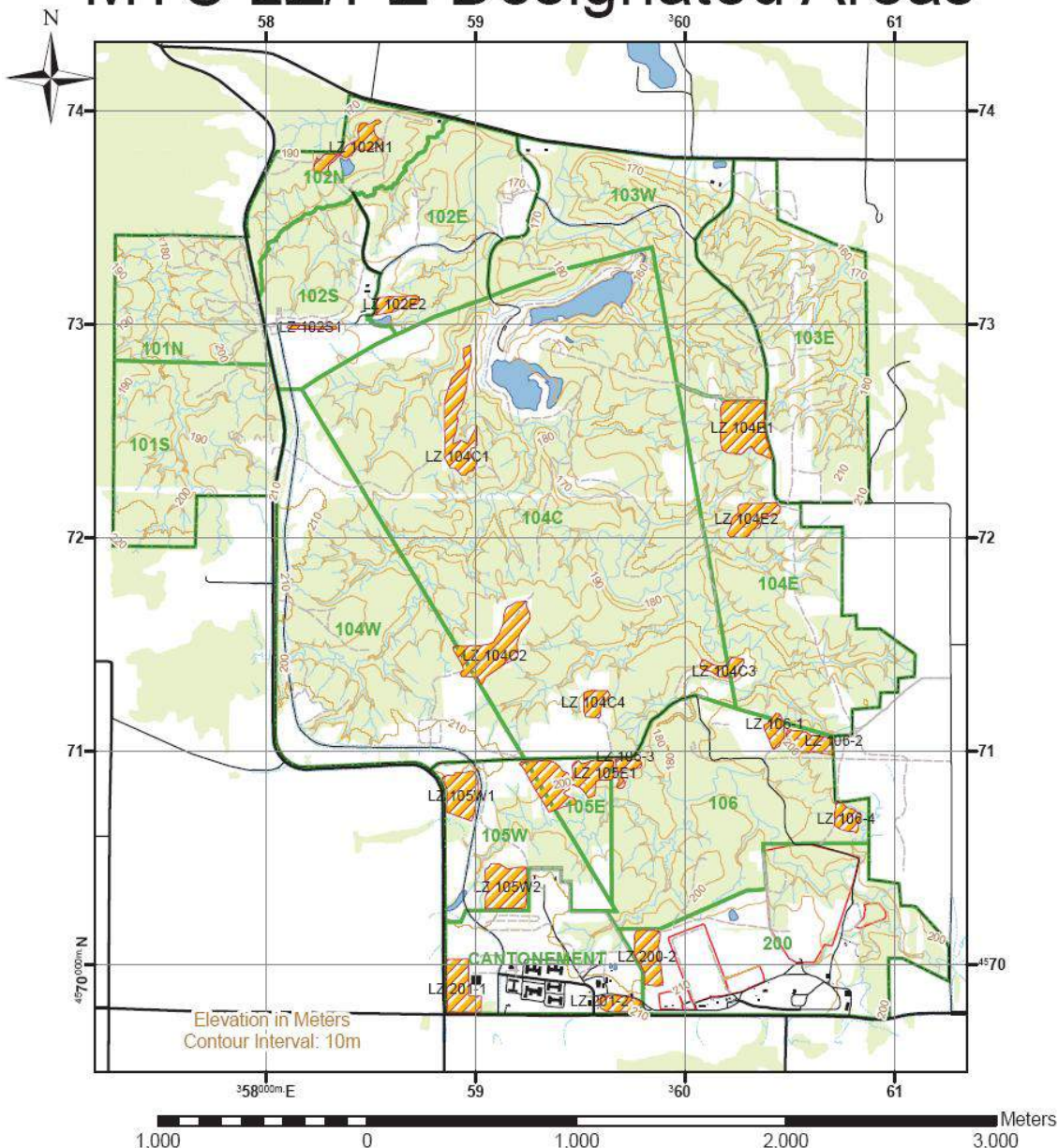


5. Turn right off of County Road 30, on to N 23 or Army Rd, proceed to Gate 5.

1:25,000

Map Edition: DMAIL-MTC-20070201-1

MTC LZ/PZ Designated Areas



Data sources: All data from DMAIL-Environmental

Datum and Projection: WGS84, UTM Zone 16N

MGRS Zone: 16T

MGRS 100,000m Grid Square Identifier: CL

Map Produced By: James Mortland

Map Produced On: 01 February 2007

	LZ/PZ		Roads		Forest		Lakes
	MTC Boundary		PRIMARY		Streams		PERMANENT
	Training Areas		SECONDARY		PERMANENT		INTERMITTENT
	Buildings		TERTIARY		INTERMITTENT		
	Ranges						

NOTE: Map not to scale

Appendix C

MTC Use Support Agreement, Housing, and Financial Procedures

C-1. Purpose

This appendix provides the applicable definitions and procedures governing User Support Agreements, Housing, and Financial procedures for all users of the Marseilles Training Center (MTC).

C-2. References

- a. NGR 5-1, National Guard Grants and Cooperative Agreements, 28 May 2010.
- b. NGR 5-2, Interservice/Intragovernmental Support Agreements, 1 September 1999
- c. NGR 210-50, Chargeable Transient Quarters and Billeting Fund Management, 27 August 2004.
- d. AR 420-1, Army Facilities Management, 28 March 2009.
- e. Chapter 5, Illinois Compiled Statutes, Act 220 and Intergovernmental Cooperation Act.
- f. DODI 4000.19, Interservice and Intragovernmental Support, August 9, 1995.
- g. National Guard Bureau, Support Agreement Handbook, 1 August 1998.
- h. Illinois Intergovernmental Cooperation Act, 5 ILCS 220.

C-3. Definitions

- a. Federal Agency. All Department of Defense (DoD) Branches of Service, All Non-DoD Federal Agencies / Entities, and Any State Agency or entity that is supported by federal funds under a cooperative agreement.
- b. Non-Federal Agency. Any state or local governmental agency that obtains funding from non-federal sources. Additionally, all civilian organizations regardless of funding source, such as a private security firm.
- c. Identifiable Incremental Costs (IIC). NGR 5-1 Chapter 6 defines IIC's are the costs that a base or installation incurs that are directly related to the usage by the supported unit, and which the base or installation would not otherwise incur. Examples include rental, placement, and pickup of dumpsters and portable latrines; additional refuse pickups, grass mowing, and insect spraying; utilities for metered buildings; cost of consumables, like targets; training area cleanup and damage repair; and employee overtime as a result of the use of the base or installation. (see Figure C-1, page 57) Federal Agencies (Users) are only charged IIC's. per NGR 5-1.
- d. Indirect Cost. NGR 5-2 Appendix D defines an indirect cost as cost of resources, including overhead, that are not consumed by a single cost object. Non-Federal Agencies (Users) are charged IIC's **AND** Indirect Costs. At time of publication a Non-Federal Cost Worksheet is under construction with an expected availability for use in FY 2011.
- e. Intrасervice/Interservice/Intragovernmental Support Agreement (ISA). (see NGR 5-2) Agreements to provide one-time or recurring support to another DoD or Non-DoD Federal Agency. The DD Form 1144 specifies calculations of and basis for reimbursements, billing and reimbursement process, terms and conditions of agreement. (see Figure C-1, page 57)
- f. Military Interdepartmental Purchase Request (MIPR). Used as funding document for support involving reimbursement between two or more DoD entities. Use of DD Form 448. (see Figure C-2, page 58.)
- g. Government Purchase Card (GPC). Used as the primary payment method for Non-DoD Federal, State, and Local agencies, and may be used in lieu of a MIPR for DoD entities.
- h. Automated Clearing House (ACH). Also called automated funds transfer. Used as a secondary method of payment for Non-DoD Federal agencies. Not used for DoD entities
- i. Memorandum of Agreement (MOA). A document that defines general areas of conditional agreement between two or more federal parties, and stipulates an amount of reimbursable cost. For example, what one party does depends upon what the other party does. (see Figure C-3, page 59)
- j. Memorandum of Understanding (MOU). A document that defines general areas of mutual understanding between two or more federal parties, **but does not** involve reimbursement of support among the parties. It is an umbrella document that explains what each party plans to do. However, what each party does is not dependent on what the other party does. (see Figure C-3, page 59)
- k. Intergovernmental Agreement. An Agreement made under the Intergovernmental Cooperation Act between the State and any public agency to perform services, furnish property, and personnel. This document defines general areas of conditional agreement between two or more parties. If reimbursement is required, the Agreement must define the support, the basis for reimbursement, billing and payment procedures, and other terms and conditions. "(see Figure C-4, pages 60-61)

l. Non-Governmental Organizations/Not-for-Profit Organizations/Civilian organizations as authorized in accordance with 32 USC 508 and DoD or Army regulation or guidance “(see Figure C-5 pages 62-63)

m. Government Travel Credit Card (GTCC). A government furnished commercial credit card used to pay for official travel expenses.

n. Defense Travel System (DTS). A computerized system that generates orders or travel authorizations and allows a user to file for travel reimbursement.

C-4. Use/Support Agreement Procedures

a. Table C-1, page 52 summarizes the required documents and approvals as determined by type of user.

b. Non-Illinois ARNG and ALL ANG Units:

(1) Forms, Processing and Approvals. An MTC Request Form (NGIL Reg. 350-11, Appendix D), approved by Training Site Commander, is required in order to authorize the use of MTC facilities when basic support is required. If an enhanced level of support is requested, or a reimbursement of funds will occur, the MTC Accounts Manager will prepare an Identifiable Incremental Cost Worksheet (see Figure C-6, page 64) estimating the costs and the requestor will prepare a Military Interdepartmental Purchase Request, DD Form 448 (see Figure C-2, page 58), or arrange for payment by GPC. If recurring support is required, a DD Form 1144, Support Agreement (see Figure C-1, page 57) will be prepared by the USPFO-IL. The Training Site Commander approves basic services. The USPFO-IL approves all DD Form 1144's or MOU/MOA's.

(2) Rules for Charging. Non Illinois ARNG and all ANG users may be charged Identifiable Incremental Costs if the user requests a level of service that exceeds day-to-day installation service, (an enhanced service) such as additional rented portable latrines. (see Table C-2, page 55 for a summary of Identifiable Incremental Costs)

(3) Method of Payment. When an enhanced level of service is used, either a DD Form 448 (MIPR) or GPC is used. Payment will be compared with the approved IIC Worksheet to reconcile the amounts due to the IL ARNG at the end of use. Payment may be in advance of use or up to thirty days after the invoice date. Within seven days after the completion of the event the MTC Accounts Manager will forward the IIC Worksheet to PFOIL-CG for reconciliation with the DD Form 448 (MIPR). The PFOIL-CG will prepare the SF 1080 for transfer of funds as payment for the services. If a GPC is used for payment those funds will be forwarded to the PFOIL-CG at the next regularly scheduled IIC closeout on a Cash Collection Voucher DD Form 1131 (see Figure C-7, page 65)

c. Other DoD entities:

(1) Form Processing and Approval. Forms, Processing, and Approvals. An MTC request form (NGIL Reg. 350-11, Appendix D) approved by the Training Site Commander shall be completed. The MTC Accounts Manager will prepare an Identifiable Incremental Cost Worksheet (see Figure C-6, page 64) estimating the costs for use and will send to requestor. An MOA or MOU is required for one-time use of the facility when no reimbursement is involved; it will be prepared by the PFOIL-CG and approved by USPFO (see Figure C-3, page 59). If DoD Federal users need recurring use, the requestor will prepare a DD Form 1144, Support Agreement for approval by USPFO (see Figure C-1, page 57). When reimbursement is involved, a MIPR (see Figure C-2, page 58.) or GPC must be provided as the funding document

(2) Rules for Charging. As a condition for continued Federal support of MTC, the state military department is required to collect at least the amount of IIC's incurred. See Table C-2, page 55 for a summary of Identifiable Incremental Costs. Effective 1 October 2005 Army component users are not charged Identifiable Incremental Costs for ranges or training facilities unless the user requests an enhanced level of service. Army component users continue to be charged IIC's for use of other facilities, such as barracks and laundry costs.

(3) Method of Payment. Either a DD Form 448 (MIPR) (see Figure C-2, page 58.) or GPC is used. Payment will be compared with the approved IIC Worksheet (see Figure C-6, page 64) to reconcile the amounts due to the IL ARNG at the end of use. Payment may be in advance of use or up to thirty days after the invoice date. Within seven days after the completion of the event the MTC Accounts Manager will forward the IIC Worksheet to PFOIL-CG for reconciliation with the DD Form 448 (MIPR). The PFOIL-CG will prepare the SF 1080 for transfer of funds as payment for the services. If a GPC is used for payment those funds will be forwarded to the PFOIL-CG at the next regularly scheduled IIC closeout on a Cash Collection Voucher DD Form 1131 (see Figure C-7, page 65)

d. Non-DoD Federal Agencies or entities:

(1) Forms, Processing, and Approvals. An MTC request form (NGIL Reg. 350-11, Appendix D) approved by the Training Site Commander shall be completed. The MTC Accounts Manager will prepare an Identifiable Incremental Cost Worksheet (see Figure C-6, page 64) estimating the costs for use and will send to requestor. An MOA or MOU (see Figure C-3, page 59) is required for use of the facility; it will be prepared by the PFOIL-CG and approved by USPFO.

(2) Rules for Charging. As a condition for continued Federal support of MTC, the state military department is required to collect at least the amount of IIC's incurred. See Table C-2, page 55 for a summary of Identifiable Incremental Costs. The state military department is also encouraged, but not required, to collect an amount equal to its overhead costs using established business methods. Overhead costs are the total budgeted costs to run a training center, including all direct, indirect, general and administrative costs, fairly allocated among its users. These costs are generated per training center or areas otherwise under the control of the Training Site Commander, and are expended totally on the training center.

(3) Method of Payment when reimbursement is involved Non-DoD Federal Agencies have three methods of payment. A Non-DoD Federal agency may pay in advance or up to thirty days after the invoice date. Payment may be by GPC, any Visa or MasterCard credit card, check, or ACH or another other form of funds transfer. Any adjustment shall be made on the basis of actual use. Payment will be forwarded to the PFOIL-CG at the next regularly scheduled IIC closeout on a Cash Collection Voucher DD Form 1131 (see Figure C-7, page 65).

c. State / Local Governmental Agencies or entities:

(1) Forms, Processing, and Approvals. An MTC request form (NGIL Reg. 350-11, Appendix D) approved by the Training Site Commander shall be completed. The PFOIL-CG shall prepare an Intergovernmental Training Use Agreement (see Figure C-4, pages 61) as a lease agreement. This document must be coordinated with the USPFO and approved by The Adjutant General.

(2) Rules for Charging. IIC's *AND* Overhead costs will be collected as the rental fee. The MTC Accounts Manager will prepare a Non-Federal Cost Worksheet estimating the costs for use and will send to requestor. At time of publication a Non-Federal Cost Worksheet is under construction with an expected availability for use in FY 2011.

(3) Method of Payment. Upon checkout, the MTC Accounts Manager shall complete the actual cost portion of the Non-Federal Cost Worksheet, obtain user approval, and provide a copy to the user. The user may pay by check, cash or any Visa / MasterCard credit card, or another form of funds transfer. Payment may be in advance of use or up to thirty days after the invoice date. Payment will be forwarded to the PFOIL-CG at the next regularly scheduled closeout on a Cash Collection Voucher DD Form 1131 (see Figure C-7, page 65).

d. Not-for-Profit Organizations and Non-Governmental Organizations.

(1) Forms, Processing, and Approvals. An MTC request form (NGIL Reg. 350-11, Appendix D) approved by the Training Site Commander shall be completed. A lease agreement (see Figure C-5 pages 62-63) shall also be completed. This document must be coordinated with the USPFO and approved by The Adjutant General.

(2) Rules for Charging. IIC's *AND* Overhead costs will be collected as the rental fee. The MTC Accounts Manager will prepare a Non-Federal Cost Worksheet estimating the costs for use and will send to requestor. At time of publication a Non-Federal Cost Worksheet is under construction with an expected availability for use in FY 2011.

(3) Method of Payment. Upon checkout, the MTC Accounts Manager shall complete the actual cost portion of the Non-Federal Cost Worksheet, obtain user approval, and provide a copy to the user. The user may pay by check, cash or any Visa / MasterCard credit card, or use some other form of funds transfer. Payment may be in advance of use or up to thirty days after the invoice date. Payment will be forwarded to the PFOIL-CG at the next regularly scheduled closeout on a Cash Collection Voucher DD Form 1131 (see Figure C-7, page 65)

**Table C-1
Required Documents & Approvals**

TYPE OF USER	TYPE OF AGREEMENT	IIC Form	Coordination	Approval	Method of Payment
Non Illinois ARNG and All ANG units	Approved MTC Request Form (If recurring support DD Form 1144 Required)	No (unless enhanced service)	MTC Scheduling Manager. (if enhanced service-PFOIL-CG)	MTC Scheduling Manager (if enhanced service USPFO)	NA (enhanced service requires DD 448 MIPR) or GPC)
Other DoD entities	Approved MTC Request Form; MOA/MOU one time use; or DD Form 1144, Support Agreement (recurring support)	Yes	MTC Scheduling Manager, PFOIL-CG; and NGIL-JA	USPFO	DD 448 MIPR or GPC)
Non-DoD Federal Agencies	Approved MTC Request; MOA/MOU (one time) or DD Form 1144, Support Agreement (recurring support)	Yes	MTC Scheduling Manager, PFOIL-CG, PFOIL-PC, and NGIL-JA	USPFO	Visa / MasterCard, Check, or ACH
State & Local Governmental Agencies	Approved MTC Request Form & Intergovernmental Training Use Agreement	No – Use Non-Federal Cost Worksheet	MTC Scheduling Manager, PFOIL-CG, NGIL-JA, and USPFO	TAG	Visa / MasterCard, Check, Cash, or ACH
Not-for Profit Org & Non-Government Org IAW 32 USC 508	Approved MTC Request Form & Lease Agreement	No – Use Non-Federal Cost Worksheet. Even if granted a waiver to track the \$8000 threshold.	MTC Scheduling Manager, PFOIL-CG, NGIL-JA, and USPFO	TAG for Use Agreement USPFO for Waiver of Fees	Visa / MasterCard, Check, Cash, or ACH

C-5. Identifiable Incremental Cost (IIC) Internal Financial Procedures and Waivers of fees.

a. Funds received for IIC support and overhead costs will be accounted for and managed separately from the billeting fund account.

b. The MTC Accounts Manager shall complete the actual usage costs on the IIC Worksheet or Non-Federal Cost Worksheet and receive approval from the user prior to check out of the facility.

c. Within seven days after the end of the event, the MTC Accounts Manager shall forward the approved IIC Worksheet or Non-Federal Cost Worksheet, and Invoice to the PFOIL-CG, Grants and Agreements Specialist. The Cash Collection Voucher DD 1131 (see Figure C-7, page 65) is sent to the PFOIL-CG, Grants and Agreements Specialist so that reconciliation of all payments can occur at least quarterly, or more often if necessary.

d. Upon receipt of the approved IIC Worksheet or Non-Federal Cost Worksheet, PFOIL-CG shall prepare the SF 1080 for transfer of funds or will process the other forms of payment into the appropriate AMSCO account.

e. NGR 5-1 chapter 6-3 permits the USPFO to authorize a waiver of fees in two specific circumstances (1) To local community based non-profit organizations. However, the total sum of all such waivers must not exceed \$8000 per fiscal year. For purposes of this regulation “local” means within a 50 mile radius. The USPFO determines, by cost/benefit analysis, that the administrative cost incurred by collecting a direct reimbursement from another Federal user would exceed the amount of earned reimbursement.

C-6 MTC Advisory Council.

a. TAG will appoint an MTC Advisory Council and MTC Fund Manager. The council will make commendations as to suggested procurements, local policy, and disposition of accumulated billeting, range, and training area funds. The council will meet, as a minimum, on an annual basis and will be comprised of the following officers: Assistant Adjutant General-Army (Chairman); U.S. Property and Fiscal Officer-IL, Director Plans Operations and Training, Director Facilities Division, Director of Logistics and MTC Training Site Commander.

b. Federal program managers will track direct and indirect costs that they expend for the MTC. Documentation for these costs will be used by the Advisory Council to support reimbursement to the appropriate AMSCO.

c. The MTC Advisory Council will apply these funds to the appropriate AMSCO after review of all documentation. These funds will also be subject to annual audits by the USPFO.

C-7. Housing Policy Regarding Charges and Status of User

a. ARNG personnel who are performing active duty for training (ADT) or operation support (ADOS) for 180 days or more who are not entitled to per diem, **and** elect to reside in chargeable transient quarters, shall be required to pay the standard room rate (see Table C-5, page 56) **without** reimbursement.

b. ARNG personnel who are performing duty for a period of 179 days or less, and who are entitled to per diem shall be required to pay the standard room rate. (see Table C-5, page 56) The standard room rate **is reimbursable**.

c. ARNG personnel who are performing active duty and active duty for training of 179 days or less, and are not entitled to per diem, will not be required to personally pay the standard room rate when officially assigned to chargeable quarters **because** no other quarters were available.

d. **All** housing issued to ARNG personnel who are performing duty in a training status i.e.; Annual Training (AT), Active Duty for Operation Support (ADOS) Title 32, Active Guard Reserve (AGR) Title 32, or Inactive Duty for Training (IDT), are considered adequate. Individuals who are performing duty at the training center and elect to stay in chargeable housing for personal convenience shall be personally liable for such room rate charges (see Table C-5, page 56) **without** entitlement to reimbursement.

e. Other DoD personnel or ANG personnel performing duty in a training status, who are performing duty at an ARNG training center may be issued a Statement of Non-availability (SNA) if requested, and if adequate quarters are not available, and if the individual's orders do not specify that all quarters are considered adequate.

f. Active Army personnel, and advisors/participants who are involved in ARNG maneuvers, exercises (FTX, CPX, MOBEX, etc.), or Army Training Evaluation Programs (ARTEPS) during AT or IDT **will be provided quarters** (to include tents) without charge and without regard to adequacy. Therefore, personnel desiring accommodations to include amenities above that level will pay for it with personal funds. (Table C-5, page 56)

g. Non-DoD Federal, State, and Local Agency users will be required to pay the standard room rate (see Table C-5, page 56) for the use of rooms/quarters in Building B. No IIC's for Building B will be required of these users.

h. In compliance with JTR Vol. II, C1055, and Technician Personnel Regulation TPR 935, military technicians will be housed in accordance with their military rank. This applies to all military technicians of the National whose job requires military membership in accordance with Title 32 USC, Section 709. Competitive civilian employees employed under Title 5 and 32 USC, Section 709 (non-dual status technicians) will be quartered in accordance with their civilian grade.

i. Payment for all room charges may be made by cash, personal check, Government Travel Credit Card, or other Visa / MasterCard credit card.

C-8. Chargeable Transient Quarters Priority/Room Rate

a. The following information lists the priority for room reservations and establishes a standard room rate-cost. MTC Billeting Clerk/Training Site Commander will assign room reservations weekly based on these criteria.

- (1) ARNG/ANG General Officer
- (2) All Other General Officers
- (3) ARNG Chief of Staff
- (4) In same order as BOQ/BEQ rooms

b. BOQ/BEQ Rooms will be issued in the following priority.

- (1) ARNG/ANG Officers (O-6)
- (2) ARNG Warrant Officers (CW-5)
- (3) All other Officers/Warrant Officers by Rank (on official travel)
- (4) State CSM
- (5) ARNG CSM, SGM, ANG CMSgt
- (6) ARNG E-8
- (7) All other E-8's (on official travel)

(8) All others as space is available (by rank, including authorized civilians/retirees).

c. All remaining room assignments will be issued in no special order unless blocked for any reason. MTC makes every attempt to preclude a male from sharing a latrine and shower with a female, but no guarantees are expressed or implied.

d. Active duty and Army Reserve soldiers are considered transient unless otherwise identified by an approved activity or by the Training Site Commander.

e. One of the four Americans with Disabilities Act compliant rooms will be reserved and kept unoccupied until 2200 hours of each day.

f. The eight bays in buildings C, D, E, F are available to all E-6 and below soldiers, as no-charge quarters when in any pay status. IL ARNG units have first priority for all space. Soldiers E-7 and above may stay in the bays with approval of the Training Site Commander or MTC Housing Management.

g. Chargeable Transient Quarters Rates: BEQ's/ BOQ's \$20.00/night and GOQ's \$30.00/night. *Note* room rates are subject to change please call 815-750-6501, 6503 or 6506.

h. All reservations in advance are for bed space **only** and not a specific room.

i. Spouses are allowed billeting comparable to their military sponsor at the standard rate. Double occupancy is **not** allowed in single rooms. **All** guests must register at all times.

j. This facility *is not* family housing, and children are not desirable guests. The intent is to house military personnel in a military environment. Exceptions to this policy will be on a case by case basis, by the Training Site Commander or MTC Housing Management.

k. Non-official users are those users in a non-duty status to include: active and reserve component military personnel, NGIL state employees, competitive technicians, military technicians, and retired personnel in the preceding categories.

l. **All** housing customers are required to pay for their rooms, or make arrangements for payment prior to departure. Arrangements for payment will be considered on a case-by-case basis by either the Training Site Commander or Program Analyst.

m. Individuals occupying a room for official duty and authorized activities must be on travel orders (AT, ADT, or IDT Format 400). Individuals will file for reimbursement through their unit in accordance with normal procedures using DD Form 1351-2 or DTS.

n. Non-military technicians or other government employees will be housed by priority under the criteria listed previously, in accordance with their pay level, and as compared to the military equivalent, at the discretion of the Training Site Commander or MTC Billeting Clerk.

o. Each individual is responsible to check out of their BEQ/BOQ at 1100 or an additional fee will be added.

p. The Training Site Commander is authorized to make exceptions to the above criteria when in the best interest of the Illinois Army National Guard and to issue statements of non-availability as needed in accordance with Army Regulations. Address any questions or concerns directly to the Training Site Commander at (815) 750-6507.

C-9. Housing Internal Financial Procedures

a. A billeting fund is established at the training site and is recognized as a separate stand-alone, Non-Appropriated Fund. This fund is organized and managed IAW NGR 210-50. (See Reference c. in paragraph C-2 of this Appendix)

b. Funds are accounted for in accordance with applicable policy and guidance. Funds turned in will be supported, at a minimum, by the following documentation for the accounting period:

(1) Original or a copy of sequentially numbered signed receipt(s), (see Figure C-8, Marseilles Housing Assignment Receipt and Figure C-9 Guest Tracker Receipt pages 66-67).

(2) Credit Card Settlement Report or Bank Deposit Receipt.

(3) Marseilles Billeting Fund Cashier's Record (see Figure C-10 page 68)

(4) Marseilles Billeting Fund Occupancy Report (see Figure C-11 page 69).

c. The billeting fund will issue a check to the ILARNG NAF account on a monthly basis for all receipts earned, and will submit the same to the USPFO on a Marseilles Billeting Fund Occupancy Report (see Figure C-11 page 69)

C-10. Annual Review Requirements

The USPFO will conduct an annual review, within 60 calendar days of the beginning of each Federal fiscal year, of the billeting fund. The annual review shall include, but is not limited to:

- a. Review of receipts versus disbursements.
- b. Validity of service charges and non-official use surcharges.
- c. Accountability of property utilized in support of the billeting operation.
- d. Any other issues.

Table C-2

Marseilles Training Center-Identifiable Incremental Costs (IIC's) *Note* fees are subject to change please call appropriate point of contact, 815-750-6525, or 815-750-6506

Cost Element	National Guard Users	Other DOD & Federal Users (excluding National Guard)	All Non-Federal (Civilian, State)
Overhead Cost	Not Applicable	Not Applicable	See C Below
POL	Contact UTES 815-750-6530 for current price	Contact UTES 815-750-6530 for current price	Not Available
Gasoline, unleaded	per gallon	per gallon	Not Available
Diesel fuel #2	per gallon	per gallon	Not Available
Other oils, lubricants	As required	As Required	Not Available
Ice (Cubed 8lb bags)	Contact Logistics 815-750-6501 or 6503 for current price	Contact Logistics 815-750-6501 or 6503 for current price	Contact Logistics 815-750-6501 or 6503 for current price
Laundry Services	As required	As required	As required
Environmental Cleanup	Priced per Requirement	Priced per Requirement	Priced per Requirement
Expendable Supplies	As Required	As Required	As Required
Range Target Costs	As Used	As Used	As Used
Security (Additional As Required)	Not Applicable	Per hour	Per hour
Custodial (Additional as Required)	Not Applicable	Per hour	Per hour
Maintenance & Repair of Damages	As contracted by NGIL-FE	As contracted by NGIL-FE	As contracted by NGIL-FE

Table C-3

Training Support Complex Fees – *Note* fees are subject to change please call 815-750-6525 or 815-750-6506

Cantonment Areas	
Bldg A (13) Bde HQ & Classroom s (36000SF)	\$90/day
Bldg C (10)-Barracks & Dining (25000 SF)	\$78/day
Bldg D (12) Barracks & Dining (25000SF)	\$78/day
Bldg E (15) Barracks (19250SF)	\$63/day
Bldg F (17) Barracks (19250SF)	\$63/day
50 Person classroom	3.50/day

Table C-4**Training Area and Range Fees “- *Note* fees are subject to change please call 815-750-6525 or 815-750-6506**

Training Areas/Ranges		Training Areas/Ranges	
Combat Pistol Qual. Course (CPQC)	\$19/day	Red Brick House	\$17/day
A Range	\$19/day	Hand Grenade Range, Rappel Tower, Conditioning Obstacle Crs, Confidence Obstacle Crs, Sea Huts, NBC Course, Training Areas, Land Nav Crs, MP Compound	\$5/day per facility
B Range	\$19/day	Engagement Skills Trainer	\$8/day
C Range	\$16/day	Hornickel Training Area	\$18/day
E Range	\$14/day		

Table C-5**Standard Housing Room Rates *Note* room rates are subject to change please call 815-750-6501, 6503 / 6506**

All Users	BEQ's and BOQ's \$20.00 per night
All Users	GOQ \$30.00 per night

SUPPORT AGREEMENT			
1. AGREEMENT NUMBER <i>(Provided by Supplier)</i>	2. SUPERSEDED AGREEMENT NO. <i>(If this replaces another agreement)</i>	3. EFFECTIVE DATE (YYYYMMDD) (UPON SIGNATURE)	4. EXPIRATION DATE <i>(May be "Indefinite")</i>
5. SUPPLYING ACTIVITY		6. RECEIVING ACTIVITY	
a. NAME AND ADDRESS USPFO FOR ILLINOIS COMPTROLLER 1301 N. MACARTHUR BLVD. SPRINGFIELD, IL 62702		a. NAME AND ADDRESS COMMANDER HEADQUARTERS FORT MCCOY 2101 SOUTH 8TH AVENUE FORT MCCOY, WI 54656	
b. MAJOR COMMAND NATIONAL GUARD		b. MAJOR COMMAND USARC	
7. SUPPORT PROVIDED BY SUPPLIER			
a. SUPPORT <i>(Specify what, when, where, and how much)</i>		b. BASIS FOR REIMBURSEMENT	c. ESTIMATED REIMBURSEMENT
ADMINISTRATIVE SERVICES		COST OF OVERTIME	ESTIMATED AMOUNT
RANGES		ENVIRONMENTAL CLEANUP AMMUNITION	
TELECOMMUNICATIONS		ACTUAL COST	
ADDITIONAL SUPPORT REQUIREMENTS ATTACHED: <input checked="" type="checkbox"/> YES		<input type="checkbox"/> NO	
8. SUPPLYING COMPONENT		9. RECEIVING COMPONENT	
b. COMPTROLLER SIGNATURE	b. DATE SIGNED	a. COMPTROLLER SIGNATURE	b. DATE SIGNED
c. APPROVING AUTHORITY		c. APPROVING AUTHORITY	
(1) TYPED NAME JOHN W. NEWMAN, COL, USAF		(1) TYPED NAME JOHN J. JONES, COL	
(2) ORGANIZATION USPFO FOR ILLINOIS	(3) TELEPHONE NUMBER 217-761-3544	(2) ORGANIZATION FT. MCCOY HEADQUARTERS	(3) TELEPHONE NUMBER 222-333-4444
(4) SIGNATURE	(5) DATE SIGNED	(4) SIGNATURE	(5) DATE SIGNED
10. TERMINATION <i>(Complete only when agreement is terminated prior to scheduled expiration date.)</i>			
a. APPROVING AUTHORITY SIGNATURE	b. DATE SIGNED	c. APPROVING AUTHORITY SIGNATURE	d. DATE SIGNED

DD FORM 1144, NOV 2001

PREVIOUS EDITION MAY BE USED.

Page 1 of 3 Pages

Figure C-1. DD Form 1144 Support Agreement

MEMORANDUM OF AGREEMENT OR MEMORANDUM OF UNDERSTANDING
BETWEEN
THE ILLINOIS ARMY NATIONAL GUARD
AND
FEDERAL AGENCY NAME

SUBJECT: Format and Use of a Memorandum of Understanding or Memorandum of Agreement

1. Reference. List the references that are directly related to the agreement in this paragraph.
2. Purpose. Provide a brief statement defining the purpose of the agreement.
3. Scope. Add a clear and precise statement specifying the perimeters of the agreement.
4. Understandings, agreements, support and resource needs. List the understandings, agreements, support and resource needs, and responsibilities of and between each of the parties or agencies involved in the agreement.
5. Points of Contact are as follows:
 - (a) Marseilles Training Center: Indicate POC and contact phone numbers.
 - (b) Include any other POCs and contact phone numbers.
6. Effective date. Enter the date the agreement will become effective.

John J. Jones
Federal Agency Name
Department

CHRISTOPHER J. HALL
The Director COL, GS
United States Property
and Fiscal Officer for Illinois

(Date)

(Date)

Figure C-3. Memorandum of Agreement Between ILARNG and Federal Organizations

MARSEILLES TRAINING CENTER
Intergovernmental Training Use Agreement

Pursuant to Intergovernmental Cooperation Act, 5 ILCS 220/1 et seq. the Illinois Department of Military Affairs (NGIL) and the _____ (Licensee) enter into the following agreement:

(Local or State Agency) (Please Print)

(1) Licensee will be permitted to use the following training area(s) located at Marseilles Training Center on the date(s) and time(s) indicated:

A. Training Area (s): _____

Range (s): _____

Training Support Complex Building (s): _____

(List all areas as identified in the MTC Worksheet)

B. Date(s) and Time(s) of use: _____

C. Authorized uses of training area(s): _____

D. Restrictions on use of above training area(s) and/or additional support to be furnished by NGIL:

(If "none", so state): _____

2. Licensee certifies that all training will be conducted under the supervision of competent instructors, or that the participants themselves are experts, and that proper safety precautions will be strictly adhered to at all times. Licensee further certifies the above training area(s) will be used solely for the purposes authorized herein, and all participants will be restricted to the authorized training area(s).

3. Licensee will thoroughly clean the training area(s) after use, properly dispose of all waste, and leave the premises in the same condition as when occupied by Licensee.

4. Licensee will promptly relinquish the training area(s) upon request of NGIL if said training area(s) are required for NGIL military instruction or use.

5. Licensee will comply with all applicable NGIL regulations and safety rules when using the training area(s), and NGIL reserves the right to immediately terminate this agreement or order the removal of any person for any violation of proper safety practices or other improper conduct, as determined by authorized NGIL personnel.

6. Permission to use the above training area(s) is given as an accommodation to Licensee, and there shall be no rent for the use of the training area(s) except identified incremental costs.

7. Licensee shall exercise its privileges hereunder at its own risk. All injuries to Licensee's personnel or damage to Licensee's property incurred while utilizing the training area(s) or while on NGIL property are the responsibility of the Licensee, and NGIL will assume no liability therefore. Licensee is required to provide evidence of liability and property damage insurance in such amounts as are approved by NGIL and as a named insured, except that agencies of the State of Illinois are self-insured and are not required to provide such evidence.

8. Licensee agrees to pay for the loss of, damage to, or destruction of NGIL, State, or Federal property resulting from or arising out of any act or omission by Licensee's personnel in connection with its use of the above training area(s).

9. To the extent permitted by law, Licensee shall indemnify, defend, and hold NGIL, its officers, employees and agents (the "Indemnified Parties") harmless from and against any and all damages, liabilities, fines, penalties, losses, claims, demands, suits, costs, and expenses (including, without limitation, reasonable attorneys' fees) sustained by the Indemnified Parties, and arising out of or resulting from any act(s) or omissions of the Licensee (or any entity or person performing on its behalf) in connection with Licensee's use of the training area(s).

IN WITNESS WHEREOF, the parties hereto have caused this Intergovernmental Agreement to be executed by their proper officers and officials.

LICENSEE

BY: _____ DATE: _____

NAME & TITLE (PRINTED): _____

ILLINOIS DEPARTMENT OF MILITARY AFFAIRS

BY: _____ DATE: _____

NAME & TITLE (PRINTED): _____

THE ADJUTANT GENERAL

Figure C-4. Intergovernmental Use Agreement

MARSEILLES TRAINING CENTER
Not-For-Profit/Non-Governmental Organization Use Agreement

The Illinois Department of Military Affairs (NGIL) and the _____ (Licensee) enter into the following agreement:

(Not-for-Profit/Non-Governmental Org.) (Please Print)

1. Licensee will be permitted to use the following training area(s) located at Marseilles Training Center on the date(s) and time(s) indicated:

A. Training Area (s): _____

Range (s): _____

Training Support Complex Building (s): _____
(List all areas as identified in the MTC Worksheet)

B. Date(s) and Time(s) of use: _____

C. Authorized uses of training area(s): _____

D. Restrictions on use of above training area(s) and/or additional support to be furnished by NGIL:

(If "none", so state): _____

2. Licensee certifies that all training will be conducted under the supervision of competent instructors, or that the participants themselves are experts, and that proper safety precautions will be strictly adhered to at all times. Licensee further certifies the above training area(s) will be used solely for the purposes authorized herein, and all participants will be restricted to the authorized training area(s).

3. Licensee will thoroughly clean the training area(s) after use, properly dispose of all waste, and leave the premises in the same condition as when occupied by Licensee.

4. Licensee will promptly relinquish the training area(s) upon request of NGIL if said training area(s) are required for NGIL military instruction or use.

5. Licensee will comply with all applicable NGIL regulations and safety rules when using the training area(s), and NGIL reserves the right to immediately terminate this agreement or order the removal of any person for any violation of proper safety practices or other improper conduct, as determined by authorized NGIL personnel.

6. Permission to use the above training area(s) is given as an accommodation to Licensee, and there shall be no rent for the use of the training area(s) except identified incremental costs.

7. Licensee shall exercise its privileges hereunder at its own risk. All injuries to Licensee's personnel or damage to Licensee's property incurred while utilizing the training area(s) or while on NGIL property are the responsibility of

the Licensee, and NGIL will assume no liability therefore. Licensee is required to provide evidence of liability and property damage insurance in such amounts as are approved by NGIL and with NGIL as a named insured.

8. Subject to appropriation of funds from which payment can be made. Licensee agrees to pay for the loss of, damage to, or destruction of NGIL State or Federal property resulting from or arising out of any act or omission by Licensee's personnel in connection with its use of the above training area(s).

9. Licensee shall indemnify, defend, and hold NGIL, its officers, employees and agents (The "indemnified Parties") harmless from and against any and all damages, liabilities, fines, penalties, losses, claims, demands, suits, costs, and expenses. These included without limitation, reasonable attorneys' fees sustained by the Indemnified parties, and arising out of or resulting from any act(s) or omission of the Licensee or any entity or person performing on the Licensee's behalf in connection with Licensee's use of the training area(s).

IN WITNESS WHEREOF, the parties hereto have cause, this Intergovernmental Agreement to be executed by the proper officers and officials.

LICENSEE

BY: _____ DATE: _____

NAME & TITLE (PRINTED): _____

ILLINOIS DEPARTMENT OF MILITARY AFFAIRS

BY: _____ DATE: _____

NAME & TITLE (PRINTED): _____

THE ADJUTANT GENERAL

Name of Unit / Command:											
Date(s) Expected:											
	Daily Rate Cost	Unit	#PER QTY	Est. Cost per Day	Est. Days	Estimated Total	#PER QTY	Actual Cost per Day	Actual Days	Actual Total	
Training Support Complex											
Building 13 (Bldg A - HQ)	\$90.00	day		\$0.00		\$0.00		\$0.00		\$0.00	
Building 10 (Bldg C - Barracks w/Dining)	\$78.00	day		\$0.00		\$0.00		\$0.00		\$0.00	
Building 12 (Bldg D - Barracks w/Dining)	\$78.00	day		\$0.00		\$0.00		\$0.00		\$0.00	
Building 15 (Bldg E - Barracks)	\$63.00	day		\$0.00		\$0.00		\$0.00		\$0.00	
Building 17 (Bldg F - Barracks)	\$63.00	day		\$0.00		\$0.00		\$0.00		\$0.00	
50 Person Classroom	\$3.50	day		\$0.00		\$0.00		\$0.00		\$0.00	
Ranges											
Combat Pistol Qual Course (CPQC)	\$19.00	day				\$0.00				\$0.00	
"A" Range	\$19.00	day				\$0.00				\$0.00	
"B" Range	\$19.00	day				\$0.00				\$0.00	
"C" Range	\$16.00	day				\$0.00				\$0.00	
"E" Range	\$14.00	day				\$0.00				\$0.00	
Scaled Mortar Sabot Range	\$14.00	day				\$0.00				\$0.00	
Hand Grenade Range	\$5.00	day				\$0.00				\$0.00	
Engagement Skills Trainer Range	\$8.00	day				\$0.00				\$0.00	
Weapons Cleaning Facility	\$100.00	day				\$0.00				\$0.00	
Training Areas											
Training Area	\$5.00	day		\$0.00		\$0.00		\$0.00		\$0.00	
Land Navigation Course	\$5.00	day		\$0.00		\$0.00		\$0.00		\$0.00	
NBC Training Site	\$5.00	day				\$0.00				\$0.00	
Rappelling Facility	\$5.00	day				\$0.00				\$0.00	
Sea Huts	\$5.00	day				\$0.00				\$0.00	
Hornicle Tactical Training House	\$18.00	day				\$0.00				\$0.00	
Red Brick House	\$17.00	day				\$0.00				\$0.00	
MP Compound	\$5.00	day				\$0.00				\$0.00	
Conditioning Obstacle Course	\$5.00	day				\$0.00				\$0.00	
Confidence Obstacle Course	\$5.00	day				\$0.00				\$0.00	
Other Identifiable Costs											
Tippman / Veritas Paintball Sets	\$119.00	set/day		\$0.00		\$0.00		\$0.00		\$0.00	
Additional Security (hourly rate)		hr		\$0.00		\$0.00		\$0.00		\$0.00	
Additional Clean-up (hourly rate)		hr		\$0.00		\$0.00		\$0.00		\$0.00	
POL Diesel Fuel #2		Gal				\$0.00				\$0.00	
Oils,Lubricants		Gal				\$0.00				\$0.00	
Ice Cubed 8 lbs bags		bag				\$0.00				\$0.00	
Laundry Per Turn-In List		1 Lot				\$0.00				\$0.00	
Environmental Clean-Up											
Chargeable Transient Quarters Rate											
All users	\$20.00	Ea		\$0.00		\$0.00		\$0.00		\$0.00	
TOTAL Cost						\$0.00				\$0.00	

Estimated Approved by: _____
Date: _____

Actuals Approved by: _____
Date: _____

CF: User, PFOIL-CG, MTC Files

Figure C-6. Identifiable Incremental Cost Worksheet

CASH COLLECTION VOUCHER		1. DISBURSING OFFICE COLLECTION VOUCHER NUMBER		
		2. RECEIVING OFFICE COLLECTION VOUCHER NUMBER		
3. RECEIVING OFFICE				
a. ACTIVITY (Name and Location) (Include ZIP Code)				
b. RECEIVED AND FORWARDED BY (Printed Name, Title and Signature)			d. DATE (YYYYMMDD)	
c. TELEPHONE NUMBER (Include Area Code): COMMERCIAL: _____ DSN: _____				
4. DISBURSING OFFICE				
a. ACTIVITY (Name and Location) (Include ZIP Code)				
b. DISBURSING OFFICER (Printed Name, Title and Signature)			d. DISBURSING STATION SYMBOL NUMBER	
c. TELEPHONE NUMBER (Include Area Code): COMMERCIAL: _____ DSN: _____			e. DATE (YYYYMMDD)	
5. PERIOD: a. FROM: _____ b. TO: _____				
6. DATE RECEIVED	7. NAME OF REMITTER DESCRIPTION OF REMITTANCE	8. DETAILED DESCRIPTION OF PURPOSE FOR WHICH COLLECTIONS WERE RECEIVED	9. AMOUNT	10. ACCOUNTING CLASSIFICATION
11. TOTAL				

DD FORM 1131, DEC 2003

PREVIOUS EDITION IS OBSOLETE.

APD PE v1.00

Figure C-7. DD form 1131 IIC Cash Collection Voucher

MARSEILLES HOUSING ASSIGNMENT RECEIPT

			RECEIPT #:
NAME	RANK	BRANCH	UNIT
ADDRESS		DUTY STATUS (Copy of Order Required)	
PHONE		IDT _____	ADSW _____
APPLICABLE RATE:		AT _____	Non-Official _____
		DATE OF ARRIVAL	NUMBER OF NIGHTS
<p>A LATE FEE IS CHARGED FOR KEYS RETURNED AFTER 1100 HOURS. I HEREBY ASSUME RESPONSIBILITY FOR THE QUARTERS AND PROPERTY IN:</p>			
BLDG#	ROOM#	SIGNATURE	
DATE OF DEPARTURE	DAILY RATE CHARGED	TOTAL CHARGES	
DATE PAID:	RECEIVED BY:		
CHECK #: AMOUNT			CASH:

Figure C-8. Manual Housing Assignment Receipt

Marseilles Training Center
 1700 Army Road
 Marseilles, IL 61341

12/24/2009

Name and Address:

Decatur, IL 62526

Reserv. No.

9868

Room No

B53

Rate

\$20.00/Day

Rate Type

NIGHTY 1

Arrival Date

12/21/2009

Departure Date

12/22/2009

Credit Card / Billing Information

VI xxxx-xxxx-xxxx

<u>Date</u>	<u>Room No</u>	<u>Room Type</u>	<u>Description</u>	<u>Charges</u>	<u>Payments</u>	<u>Balance</u>
12/21/09	B53	BOQ	Room Charge	20.00		20.00
12/22/09	B53	BOQ	Visa Payment		20.00	0.00
Balance Due:						\$ 0.00

_____ sign

I acknowledge all charges above as being correct.
 Thank you for staying at our fine hotel.

Figure C-9 Computerized MTC Housing Assignment Receipt

Appendix D
Example Format: Billeting Fund Cashier's Record

Billeting Fund Cashier's Record
Instrument for the State of _____

1. The following Cashier's record is completed for the period _____ thru _____.

2. The petty cash beginning balance (amount available in the safe) \$ _____

3. Second count \$ _____ From: _____
_____ (Cashier's count) _____ (Cashier's Signature)

4. Receipts Issued: Beginning with # _____ Last Receipt issued: # _____

5. Blank Receipts: Beginning with # _____ Last Blank Receipt: # _____

	<u>Disbursed by Manager</u>	<u>Cashier Beginning</u>	<u>Cashier Ending</u>	<u>Collected by Manager</u>
a. Coins	\$ _____	\$ _____	\$ _____	\$ _____
b. Ones	\$ _____	\$ _____	\$ _____	\$ _____
c. Twos	\$ _____	\$ _____	\$ _____	\$ _____
d. Fives	\$ _____	\$ _____	\$ _____	\$ _____
e. Tens	\$ _____	\$ _____	\$ _____	\$ _____
f. Twenties	\$ _____	\$ _____	\$ _____	\$ _____
g. Fifties	\$ _____	\$ _____	\$ _____	\$ _____
h. Hundreds	\$ _____	\$ _____	\$ _____	\$ _____
i. Checks	\$ _____	\$ _____	\$ _____	\$ _____
j. Other	\$ _____	\$ _____	\$ _____	\$ _____

7. Ending total cash count: \$ _____

8. Beginning petty cash amount: \$ _____ (From Line 2)

9. Net cash: \$ _____ (Line 7 minus Line 8) 10. _____ (Total Amounts Reflected on Receipts)

11. Cash short/over \$ _____ (Difference between Lines 9 and 10) _____ (Print Cashier's name)

12. Fund manager review: _____ (Collecting/Reviewing Official's Signature)

Figure C-10. Marseilles Billeting Fund Cashier's Record

**MARSEILLES BILLETING FUND
OCCUPANCY REPORT**

FROM:

	TOTAL NIGHTS:	\$20 per		\$
BLDG: B	TOTAL NIGHTS:	\$30 per		\$
		<u>AMOUNT</u>		<u>TOTAL</u>
OTHER AMOUNTS RECEIVED:			=	\$
		\$		
		\$		
PAID BY DIRECT BILL:				\$
		\$		
		\$		
ADVANCE CHARGES:			=	\$0.00
		<u>TOTAL COLLECTIONS:</u>	=	<u>\$</u>
		<u>AMOUNT</u>		<u>TOTAL</u>
PAST DUE AMOUNTS NOT RECEIVED:			=	\$
		\$		
		\$		
		\$		
REFUNDS PAID OUT:			=	\$0.00
CREDIT CARD READER FEE:			=	\$
		<u>TOTAL DEDUCTIONS:</u>	=	<u>\$</u>
		<u>TOTAL NET CASH THIS REPORT:</u>	=	<u>\$</u>

3-Dec-09
DATE

FUND MANAGER

FACILITY MANAGER

Figure C-11. Marseilles Billeting Fund Occupancy Report

Appendix D

Marseilles Training Center – Illinois National Guard

REQUEST FORM General Instructions: All requests will be processed in the order in which they are received. Prior to approval, you may be contacted by MTC staff to clarify a portion of your request, solicit more details, or give you alternate suggestions for requested facilities, dates or times that are not available. Once approved, you will receive an approval letter. Items left blank or not filled out properly will result in delayed processing. Submission preference is email: MTC@ng.army.mil. You may also submit via fax (217) 750-6520 or by mailing it to MTC Scheduling, 1700 Army Road, Marseilles, IL 61341. Questions call 815-750-6525/6524/6503.

PART I – UNIT INFORMATION

Line #	Required Information	Unit/Group Information							
1.	Date Prepared:								
2.	Name of Unit or Group:								
3.	Mailing Address:								
4.	Person Submitting Request:								
5.	Commercial Phone:								
6.	DSN Phone:								
7.	Email Address:								
8.	Number of Personnel: If you have a combination of components, please put the number of personnel beside each category.		Air force		ANG		ARNG		DOD Civilian
			FORSCOM		Navy		Joint Forces		Non-DOD-Civilian
			Foreign Nation		USMC		USAR(SCHOOL)		USAR(TPU)
			TRADOC		Youth		Law Enforcement		Other (List in 9)
9.	UIC (if Military):								
10.	Arrival Date/time and # of Personnel (Advance party):								
11.	Arrival Date/time and # of Personnel (Main body):								
12.	Departure Date:								
13.	Type Training and/or Title of Event:								
14.	Specify Training Status AT, IDT, Active, Other:								
15.	Date/time Requested for Safety/Coordination Brief:								
16.	Night operations	YES <input type="checkbox"/> / NO <input type="checkbox"/> if Y specify time-							
16.	Method of Payment for Facilities:								
		(Specify: (CREDIT CARD IS THE PREFERRED METHOD OF PAYMENT) /MIPR/Direct Bill)							
17	Method of Payment for Billeting:								
			(Specify: (CREDIT CARD IS THE PREFERRED METHOD OF PAYMENT)/MIPR/Direct Bill)						

7Note to 16-17	It is imperative the you provide the name of the organization providing your funding if other than the requesting organization listed on this form: (Please call for clarification if needed)				
	Organization:		POC:		Phone #:

PART II - BARRACKS

General Information: Open bay barracks can accommodate 241 personnel per building, divided into 8 bays with up to 30 personnel per bay.

18.	Are Barracks Required?	YES <input type="checkbox"/> / NO <input type="checkbox"/>
19.	Number of Males/Females:	/
20.	Dining Facility Needed:	YES <input type="checkbox"/> / NO <input type="checkbox"/> (see Part VII)
21.	Orderly/Supply Room Req?	

PART III – BOQ /BEQ

General Information: Specific type rooms may be requested, but are not guaranteed to be available. Housing personnel will do their best to assign comparable billeting quarters when requested facilities are not available. More detailed descriptions of billeting areas, as well as prices, are available on our website at <http://www.il.ngb.army.mil/departments/POTO/MTC/default.htm>

22.	Name of General Officer	
23.	Number of Field Grade Officer Rooms (M/F)	
24.	Number of BOQ/BEQ Rooms (M/F)	
25.	Other VIPS (M/F)	

PART IV – FIELD QUARTERS

General Information: The FOB contains 63 tents with 18 cots per tent for a total sleeping space for 1134. The two Sea Huts contain floor sleeping space for approximately 50 personnel.

26.	FOB – # of personnel	YES <input type="checkbox"/> / NO <input type="checkbox"/> -
27.	Sea Huts - # of personnel	YES <input type="checkbox"/> / NO <input type="checkbox"/> -

PART V – RANGES

General Information: See MTC NGIL 350-11 for range operating instructions. Ranges are: CPQC(Combat Pistol Range), A Range(Multi-Pur), B Range(Qual Range), C Range(25 meter), E Range(M203), Scaled FA Mortar Range, Hand Grenade Range

Line #	Start Date/Time End Date/Time	No. Persons	Range Name	Type of Weapon	Type of Ammo/DODIC	Night Fire
28.					
29.					
30.					
31.					
32.					
33.					
34.					
35.					

PART VI – TRAINING FACILITIES

General Information: MTC offers a variety of training opportunities to include Confidence/conditioning course, EST/FATS, Rappel Tower, Weapon Cleaning Facility, Range Mess Pad, Range Trailer, Call-for-Fire Trainer, Virtual Convoy Trainer, Operator Driving Simulator, HEAT Trainer, MP Compound, CPQC Range Classroom, MP/POW Compound, NBC/CS Chamber, Rappel Cliff, Cable Bridge, MOUT Training Area, Gate 40 House (MOUT building), Portable Shoot Room, Northern and Southern CLFX.

Line #	Start Date/Time ----- End Date/Time	No. Persons	Type of Training (Describe training area needed, or specific training area if known)
36.	-----		
37.	-----		
38.	-----		
39.	-----		
40.	-----		
41.	-----		
42.	-----		

PART VII – TRAINING AREAS / LAND NAVIGATION AREAS / FIRING POINTS

General Information: MTC offers a variety of land navigation courses to include Beginner 102S, Advanced Beginner 104W, Intermediate 101 N/S, SOF Course, Advanced Course 106, Expert Course. MTC Training Areas include 101N, 101S, 102S, 102N, 102E, 102W, 103E, 103W, 104E, 104W, 104C, 105E, 105W. MTC artillery/mortar firing points 1-11

Line #	Start Date/Time ----- End Date/Time	No. Persons	Type of Training (Describe training area needed, or specific training area if known)
43.	-----		
44.	-----		
45.	-----		
46.	-----		
47.	-----		
48.	-----		
49.	-----		

PART VIII – MEALS / BATTALION HQ BUILDING (Bldg A)

General Information: MTC offers a variety and sizes of classrooms and administrative areas. Building "A" offers 2 state-of-the-art classrooms seating 100 each, each room can be divided in half. MTC does not provide caterers. Contact MTC billeting for a "non-official" recommended list of local caterers.

50.	Classrooms (# required) Start Date/Time End Date/Time	
51.	BN Office Area	YES <input type="checkbox"/> / NO <input type="checkbox"/>
52.	Medical Wing (See Appendix M for requirements)	YES <input type="checkbox"/> / NO <input type="checkbox"/>
53.	Dining Facility in Bldg A	YES <input type="checkbox"/> / NO <input type="checkbox"/>
54.	Meals catered?	YES <input type="checkbox"/> / NO <input type="checkbox"/>
55.	Food Delivered? If YES, POC for food shipment	YES <input type="checkbox"/> / NO <input type="checkbox"/>
56.	Name/phone of cater	

PART IX – EQUIPMENT

General Information: MTC offers a variety and sizes of classrooms and administrative areas. Building "A" offers 2 state-of-the-art classrooms seating 100 each, each room can be divided in half.

	Date(s) of Use: Provide Start Date and End Date	Anticipated Time		Number Requested	Number Available
		Start	End		
Instructional Equipment					
Portable Projector(s) (classrooms have projectors)					4
Audio systems					2
DVD / VCR combination (classrooms are equipped)					3
Portable Projector Screens (classrooms have screens)					0
Over head projector					1
Public Address systems					4
Easels (butcher board)					8
TADSS Field Training Equipment					
Portable Targets					31
Grenade Bodies					50
Pneumatic Guns					2
Individual MILES, harness, halo, emitter M16A2					60 sets
M249 MILES Emitter					10
M2 Browning .50 Cal MG MILES Emitter					2
MILES Controller Gun					2
SAAS MILES Zeroing Device					1
Veritas Tactical Paintball Gun					41
Tippmann Paintball Gun					22
Engler .50 Cal Paintball Marker					3
Beam Hit Systems					2 systems
IED Simulations Kit (1 Kit)					1
M2 Practice bolt for M16 / M4 (for firing SRTA)					30
M3 Recoil Amplifier Barrel Assembly for M2 .50 cal.					6
AK-47 rubber resin training weapon					6
RPG-7 rubber resin training weapon					2
M1151 Enhanced Armament Carrier (Up-armored					11

HMMWV)					
Volleyball equipment					2
Basketballs					4
Football					1
Frisbees					2
Horseshoe equipment					2 Sets

PART X – MILITARY FUEL /AMMUNITITION

General Information: For military fuel and vehicle support questions please contact Marseilles UTES at (815) 750-6530/6531/6534. For Ammunition contact MTC Ammunition Supply Point Manager at (815) 750-6698.

57.	Has coordination been made for Diesel fuel needs?	YES <input type="checkbox"/> / NO <input type="checkbox"/> MTC FUEL POINT SHOULD BE COORDINATED
58.	Has ammunition been requested? Has ammunition issue been coordinated? Has ammunition turn-in been coordinated?	YES <input type="checkbox"/> / NO <input type="checkbox"/> YES <input type="checkbox"/> / NO <input type="checkbox"/> YES <input type="checkbox"/> / NO <input type="checkbox"/>

*****UNITS MUST VERIFY THAT ALL AMMO REQUESTS HAVE BEEN PROCESSED BY THE STAMIS PRIOR TO ARRIVAL FOR AMMUNITION ISSUE PURPOSES*****

PART XI – MISC

General Information: Use the following table to request any facilities or items not already addressed.

59.	
60.	
61.	
62.	
63.	
64.	
65.	

PART XII – APPROVAL

** ILARNG Units: MTC will not process a request without a signature in each block below or an email from each organization below indicating that level of command’s approval of the request.

BN / CO Command: _____	Commander's Signature of Approval: _____
Point of Contact: _____	Date: _____

Major Command (BDE / Directorate): _____
Commander's Signature of Approval: _____
Point of Contact: _____
Date: _____

J3 Directorate, Signature of Approval: _____
Point of Contact: _____
Date: _____

**Marseilles Training Center
Request Notification**

TO:

DATE:

REGARDING REQUEST FROM:

Your request for the use of at MTC for the following dates has been:

APPROVED / DENIED

APPROVED WITH THE FOLLOWING CHANGES:

REASON FOR DENIAL:

If your request has been approved please ensure that all outstanding paperwork associated with your request is completed. These items would include any rosters, requested training plans, or other items specific to your request. If you have questions contact MTC Range Control and / or billeting at (815) 750-6525 or 6503.

You must ensure that you have personnel on site at MTC by not later than 1300 hours on the day you are drawing the requested facilities. MTC personnel cease issuing facilities at 1615 hours in order to secure the installation and close out the day. If your organization is unable to arrive by 1300 you may contact with the MTC section you are drawing facilities from in order to request a late arrival.

If your request has been denied, and you believe that your request was denied unfairly you may contact the Marseilles Training Center, Training Site Commander at (815) 750-6507, or in writing at:

Marseilles Training Center
ATTN: Training Site Commander
1700 Army Rd.
Marseilles IL 61341

NOTE: All scheduled training is dependent upon the needs of the ILARNG, and is subject to changes at any time based on these needs. If the needs of the ILARNG require changes to prescheduled training events the affected organization will be notified at the earliest possible time in order to reschedule, cancel or alter assigned ranges, billets, and training areas. Questions regarding this policy should be directed to Marseilles Training Center, Training Site Commander.

Appendix G
Range Safety Briefing

Range Safety Briefing

<p>All Of The Following Will Be Included In A Units Range Safety Briefing</p>
--

1. Observe safety precautions as soon as you receive a weapon.
2. Always check the chamber to insure that there are no live rounds in the chamber.
3. Do not point a weapon at anyone and keep the weapon pointed up and down range.
4. Weapons will be loaded on the firing line only on the command of the **Tower Operator**.
5. Comply with all commands of the **Tower Operator** and the line **NCOs**. The commands “COMMENCE FIRE” and “CEASE FIRE” are given loud and clear.
6. Anyone who considers it necessary to insure safety may give the command “CEASE FIRE”. When a firer hears the command “CEASE FIRE”, he will take his finger off the trigger, place the weapon on safe and wait for further instructions.
7. As soon as the firing exercise is complete, or on the command, the firer will clear his weapon, lock the bolt to the rear, remove the magazine, put the weapon on safe and wait for further instructions.
8. No one will move in front of the firing line unless directed to do so by the **Tower Operator**, who, before giving the command, will have all weapons cleared by the Safety Officer or Line NCO.
9. No weapons will be moved in front of the firing line.
10. No one will be allowed beyond the firing line **except** on the zero range.
11. No weapon will be removed from the firing line until it has been checked and cleared by the Safety Officer or NCO.
12. All personnel will wear hearing protection while on the firing line.
13. Brass deflectors are required by all left-hand shooters. *(Unit’s responsibility to furnish deflectors).*
14. All weapons will be considered loaded whenever a magazine is in the receiver. Keep the safety on, the bolt locked to the rear and the magazine out, except when firing.
15. Safety NCO’s will rod all weapons before they are removed from the firing line.
16. Ammunition will not be issued, loaded or fired without the approval of the range OIC.

Appendix H
Range Checklist

Range Checklist

- DA 1687 For AMMO / Assumption Of Command.
- DA 1687 For Training Equipment / Assumption Of Command.
- Risk Assessment Work Sheet.
- Range OIC/NCOIC, Safety Officer / NCO.
- Medical Personnel Have Strip Map To Hospital and Have Reconed Route to Hospital.
- Appropriate Safety and Weapons Manuals on Hand.
- Minimum of 2 PRC 77 Radios or Equivalent Per range To Monitor Range Control Net. (FM – 41.75)
- Hazmat Qualified Personnel To Handle Ammo and Proper Equipment.
(Tie Downs, Fire Extinguishers and DA-581s)
- Coordination With Unit Training Equipment Site (UTES) Has Been Accomplished. (Refueling, repairs and wash rack)
- Coordination with MTC for Placement of Port-A-Pots.

Appendix I Range and Training Area Operating Procedures

I-1. Range Operating Procedures

a. Occupying a Range.

- (1) Using Organizations will immediately request occupation time from Range Control when they have arrived at a range. This will be done using primary means of communication, on the range control radio net.

“Range Control this is ___ Range, request occupation time.”

- (2) Range control will provide an occupation time and range control operator’s initials. Range Control will require initials of the individual requesting occupation time.

(a) “ ___ Range this is Range Control, I give you occupation time of _____ hours, what are your initials?”

(b) “Range control this is ___ Range, my initials are _____”

(c) “_____ Range this is Range Control, be advised you are in a COLD status my initials are _____, do you have any further traffic of this station”

- (3) During this procedure Range Control may provide additional instructions to a using organization, as needed.

b. Requesting HOT Status.

- (1) The following must be done before requesting HOT status:

- (a) Range flag is up.
- (b) Ensure that the range has at least the minimum number of safety personnel required
- (c) Range has Combat Life Saver or Medic, designated evacuation vehicle, aid bag and litter.
- (d) Secondary means of communication is operational, but not tested
- (e) OIC and RSO must be on the range.

- (1) Prior to firing a using organization will request HOT status from Range Control. This will be done on the primary Range Control radio net.

(a) “Range Control this is ___ Range, request HOT status”

(b) “ ___ Range this is Range Control, is the range flag up?”

(c) Response from range

(d) “Do you have the appropriate number of safety personnel?”

(e) Response from range

(f) “Do you have medical personnel with aid bag, litter and a designated evacuation vehicle?”

(g) Response from range

(h) “ ___ Range who is your OIC and your RSO”.

(i) Response from Range

(j) “ _____ Range this is Range Control, at this time contact Range Control on your secondary means of communications”

(k) “Range Control this is _____ Range, on my secondary means of communications”

(l) “ _____ Range this is Range Control, switch back to primary, contact Range Control and standby.”

(m) “ ___ Range this is Range Control, what are your initials?”

(n) “Range Control this is ___ Range, my initials are _____”

(o) “ _____ Range this is Range Control, I give you HOT time of _____ hours, my initials are _____, do have any further traffic for Range Control?”

c. Requesting COLD Status.

- (1) Prior to requesting COLD status users should have the following information available: Types of weapons fired, Number of rounds fired, and Number of personnel trained.
- (2) Requests for COLD status will be done on the primary Range Control net.
 - (a) "Range Control this is ___ Range, requesting COLD status."
 - (b) "___ Range this is Range control, send your closing information."
 - (c) "Range Control this is ___ Range, Caliber of rounds fired ____; Number of rounds fired ____; Total number of personnel on site ____"
 - (d) "___ Range this is Range Control, what are your initials?"
 - (e) "Range Control this is ___ Range, my initials are ____"
 - (f) "___ Range this is Range Control, I give you cold time of ____ hours, my initials are ____.
Do you wish to schedule a clearing time?"

I-2. Training Area Operating Procedures

a. Occupying a Training Area.

- (1) Using Organizations will immediately request occupation time from Range Control when they have arrived at Training Area. This will be done using primary means of communication, on the range control radio net, frequency 41.75.
 - (a) "Range Control this is, _____ request occupation time for training area _____."
- (2) Range control will provide an occupation time and range control operator's initials. Range Control will require initials of the individual requesting occupation time.
 - (a) "Training Area _____ this is Range Control, who is your OIC?"
 - (b) "Range Control this is Training Area _____, my OIC is _____"
 - (c) "Training Area _____ this is Range Control, I give you occupation time of ____ hours, what are your initials?"
 - (d) "Range control this is Training Area _____, my initials are ____"
- (3) During this procedure Range Control may provide additional instructions to a using organization, as needed.

b. Departing a Training Area.

- (1) When a unit departs a training area either to occupy another area or to clear MTC, they will contact Range Control to request a closing time and will provide closing information. Units will have available the following information: number of personnel trained, number of vehicles used, number and type of blank ammunition fired.
 - (a) "Range Control this is Training Area _____, requesting closing time."
 - (b) "Training area _____ this is Range control, send your closing information."
 - (c) "Range Control this is Training area _____, Total number of personnel on site ____; Type of vehicles on Site ____ number on site ____; Type of blank rounds fired ____; Number of blank rounds fired ____"
 - (d) "Training Area ____ this is Range Control, what are your initials?"
 - (e) "Range Control this is Training Area _____, my initials are ____"
 - (f) "Training Area ____ this is Range Control, I give you a closing time of ____ hours, my initials are ____.
Do you wish to schedule a clearing time?"
- a. All units will go through this procedure for each occupation and closing in each training area, NBC gas chamber, land navigation course, obstacle course, for waterborne and sling load operations.

Appendix J
Authorized Training Ammunition

a. The ammunition listed below is authorized for use at MTC.

DODIC	ITEM		
		A681	CTG SUB CAL 22MM CHG 2
AA33	CTG 5.56 MM BALL	A682	CTG SUB CAL 22MM CHG 3
AA49	CTG 9MM M882 BALL	A683	CTG SUB CAL 22MM CHG 4
A011	CTG 12FA00 SHOT	B519	CTG 40MM PRACT GREN
A059	CTG 5.56MM BALL	C440	CTG 105MM BLANK M395
A062	CTG 5.56MM SAW LKD BALL	G839	CTG GR 7.62 MM / DR TR
A063	CTG 5.56MM TR	G878	FUZE F / PRAC HAND GR
A064	CTG 5.56MM SAW LKD 4:1	G930	GREN HAND, HC SMK
A065	CTG 5.56MM Plastic SRTA M862	G932	GREN HAND, RED SMK
A068	CTG 5.56MM TR	G940	GREN HAND, GREEN SMK
A071	CTG 5.56MM BALL	G945	GREN HAND, YELLOW SMK
A072	CTG 5.56MM TR	G950	GREN HAND, RED SMK
A075	CTG 5.56MM SAW LKD BLANK	G955	GREN HAND, VIOLET SMK
A080	CTG 5.56MM BLANK	K139	MINE, APERS, INERT M68 (CLAYMORE)
A085	CTG .22CAL BLANK	K765	CHEM AGENT CS CAPSULE
A086	CTG .22CAL BALL	L278	SIGNAL ILLUM GRD RED
A090	CTG .22CAL TR	L305	SIGNAL ILLUM GR ST P
A091	CTG .22CAL MATCH GR	L306	SIGNAL ILLUM RD ST C
A093	CTG .22CAL MATCH GR	L307	SIGNAL ILLUM WH ST C
A110	CTG 7.62 MM BLANK	L310	SIGNAL ILLUM GR ST P
A111	CTG 7.62 MM BLANK MG	L311	SIGNAL ILLUM RD ST P
A130	CTG 7.62 MM BALL/M14	L312	SIGNAL ILLUM WH ST P
A131	CTG 7.62 MM 4 & 1 M60	L314	SIGNAL ILLUM GR ST P
A136	CTG 7.62 MM MATCH GR	L378	DETONATION SIM M80
A143	CTG 7.62 MM BALL / M60	L495	FLARE SURFACE TRIP
A146	CTG 7.62 MM TR / M60	L508	FUZE RAILROAD RED
A171	CTG 9MM M882 Ball	L592	SIMULATOR, TOW BLAST
A363	CTG 7.62MM MATCH GR	L594	SIMULATOR, PROJECTILE
A367	CTG 14.5MM TNR PD	L598	SIMULATOR, EXPLOSIVE BOOBY TRAP M117
A400	CTG .38 CAL BALL / SP	L599	SIMULATOR, EXPLOSIVE BOOBY TRAP M118
A404	CTG .38 CAL WAD-CUT	L600	SIMULATOR, BOOBY TRAP WHISTLING M119
A475	CTG .45 CAL BALL	L601	SIMULATOR, HAND GRENADE M116A1
A476	CTG .45 CAL BLANK	L602	SIMULATOR, ARTILLERY FLASH, M21
A479	CTG .45 CAL TR		
A482	CTG .45 CAL WAD-CUT		
A483	CTG .45 CAL MATCH GR		
A598	CTG .50 CAL BLANK		
A599	CTG .50 CAL BLANK		
A602	CTG .50 CAL 4/1 PLASTIC M2		
A680	CTG SUB CAL 22MM CHG 1		

b. Ammunition not listed will be considered on a case-by-case basis. Requests for use of munitions not listed will be sent in memorandum format to MTC HQ: Attention Training Site Operations Officer.

**Appendix K
Contingency Fuel Spill Plan**

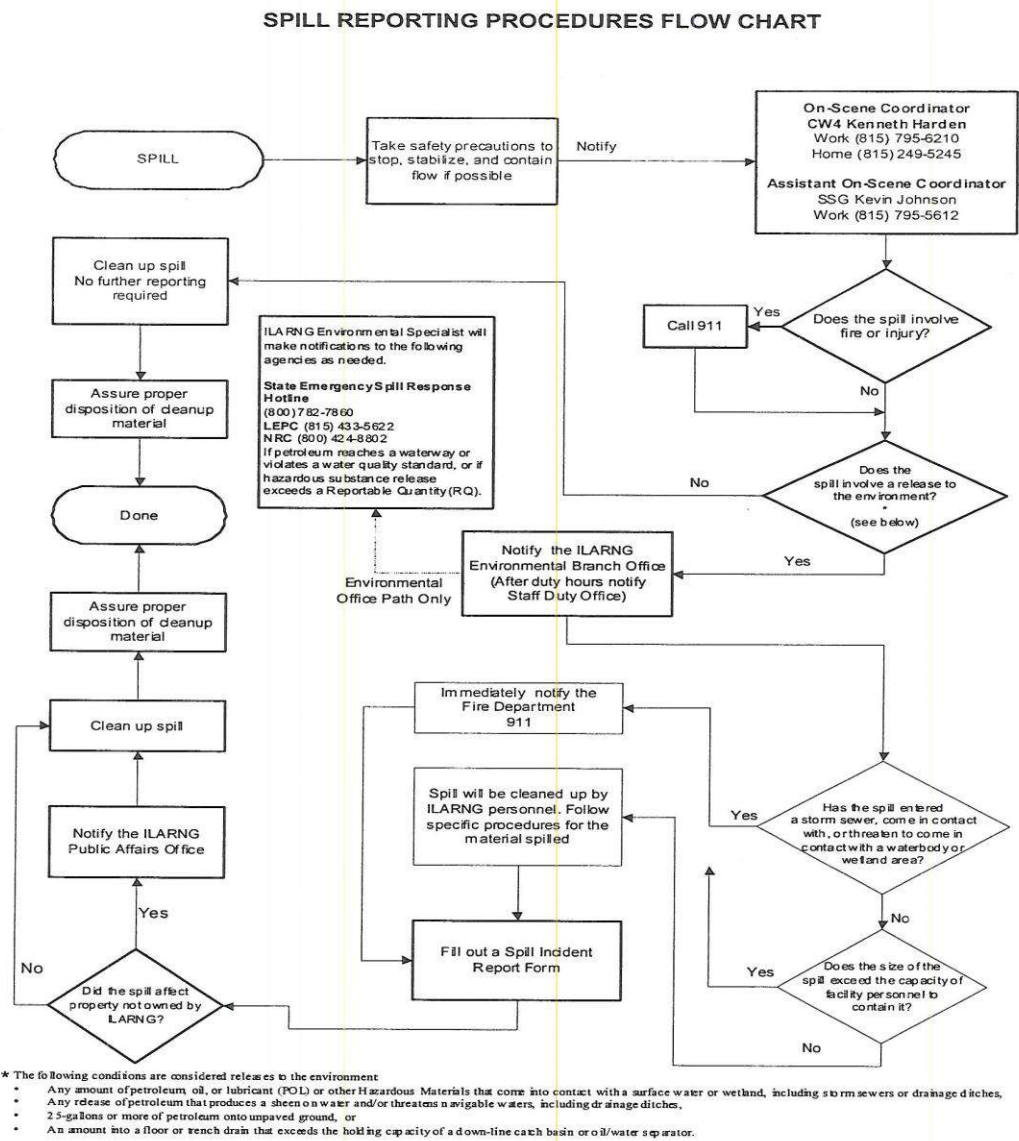


Figure K-1: Contingency POL Spill Plan Diagram

SPILL INCIDENT REPORT FORM

1. FACILITY NAME:
ADDRESS:
CITY or TOWN:
NEAREST HIGHWAY
or INTERSECTION:
2. DATE AND TIME OF INCIDENT:
3. NAME AND TEL. NUMBER OF ON-SCENE CONTACT:
4. SEVERITY OF THE INCIDENT:
 - a. Name of Spilled Material:
 - b. Total Amount Spilled:
 - c. Amount Recovered:
 - d. Where are the Recovered Materials (i.e., oil, water, soil, absorbents, etc.):
5. SIGNIFICANT AREAS AFFECTED BY THE SPILL: (Indicate location of any of the following affected areas, and estimate amount spilled in or on each area).
 - a. Building Area:
 - b. Surface Water:
 - c. Floor Drains:
 - d. Storm Drains:
 - e. Drainage Ditches
 - f. Soil, Gravel or Lawn Surfaces:
6. LOCAL TERRAIN CONDITIONS: (Check off most appropriate description).
 - a. Flat: (no significant slope)
 - b. Somewhat Flat: (1-5% slope)
 - c. Gently Rolling: (5-10% slope)
 - d. Sharply Rolling: (10-20% slope)
 - e. Steep: (>20% slope)
7. WEATHER CONDITIONS: (Check off most appropriate condition).
 - a. Dry
 - b. Fog or Drizzle
 - c. Rain
 - d. Snow
 - e. Other
8. CAUSE AND SOURCE OF INCIDENT: (Check off the most appropriate choice and give a brief description of the problem).
 - a. Equipment Failure
 - b. Accident
 - c. Human Error
 - d. Other
9. OFFICE NOTIFIED: (Check off the offices that were notified and the name of the person who took the report over the telephone).
 - a. ILARNG Env. Office
Name:
 - b. Staff duty Officer
Name:
 - c. Fire Department
Name:
 - d. Sanitary District
Name:
 - e. Police Department
Name:
 - f. County Emergency Services
Name:
10. Note any equipment repairs to prevent reoccurrence:

Appendix L

DEPARTMENT OF THE ARMY AND AIR FORCE
Illinois Army and Air National Guard
1301 North MacArthur Boulevard, Springfield, Illinois 62702-2399

NGIL-PRM (40)

3 September 1999

Memorandum For:

SUBJECT: Medical Care For M-Day Soldiers

1. Effective 1 October 1999, all medical, dental and pharmaceutical claims for M-Day soldiers injured in the line of duty (in any duty status, including Annual Training) must be approved by the Military Medical Service Office (MMSO) located at Great Lakes Naval Base. Units must notify the MILPO Medical Support Branch, who will in turn notify the MMSO.
2. In a life, limb or eye emergency, call 911 or take the soldier to the nearest medical treatment facility, whichever is appropriate. As soon as possible, notify the State Staff Duty Officer (SDO), 217-761-3890. The SDO will notify the MILPO Medical Support Branch for further guidance.
3. Prior to seeking non-emergency care, notify the SDO for guidance. In most non-emergency injury cases when the soldier is within 40 miles or 40 minutes driving time of Great Lakes Naval Base or Scott Air Force Base, the soldier will be taken to either of these emergency rooms. If outside the 40 mile / 40 minute limit, the Medical Support Branch will provide guidance for care.
4. All follow-up care must be approved by the MMSO. Notify the MILPO Medical Support Branch the next working day for instructions to receive follow-up care. Failure to report civilian medical care and receive pre-authorization, may result in the soldier becoming responsible for payment.
5. If a soldier reports to drill with an illness or an injury note related to duty, the soldier should be sent home and allowed to make up drill at a later date. IL ARNG medical personnel are not allowed to treat soldiers on IDT weekends. Do not order a soldier to seek medical attention. If a recommendation is made to seek treatment, remind the soldier that this is at his/her own expense. If in doubt, contact the MILPO Medical Support Branch or the State SDO for clarification.
6. Questions or assistance requests should be addressed to MAJ Hinchliffe, Medical Support Branch, Comm (217) 761-3796 or DSN 555-3796

FOR THE ADJUTANT GENERAL:

TERRY L. DOWNEN
COL, IN, IL ARNG
Military Personnel Officer

Distribution: A

Appendix M

Training Support Complex

M-1. Accommodations

- a. Building A.
 - (1) Battalion Headquarters Administrative and Supply Areas.
 - (2) Medical Facilities.
 - (3) Physical Fitness room.
 - (4) Two Classrooms with seating for 100 per classroom. Classrooms may be subdivided into four classrooms seating 50 each.
 - (5) Dining Facility able to feed 400 per meal or may be used as a multipurpose meeting room.
- b. Building B.
 - (1) One General Officer Quarters.
 - (2) One Field Grade Chargeable Transient Quarters (CTQ) with private bath.
 - (3) Four Field Grade CTQ's with shared bath and an Americans with Disability Act (ADA) compliant room.
 - (4) 52 single occupancy rooms that share a bath.
 - (5) Room 99 is considered a Moral Welfare and Recreation room.
- c. Building C, D, E, & F.
 - (1) Bldg C, D, E and F house 241 personnel per building with 120 beds per wing and one bed in the supply room.
 - (2) 2 each centralized male and female latrine/shower areas.
 - (3) 2 each laundry rooms.
 - (4) Each building has one Company Headquarters and supply area.
 - (5) Building C & D have attached dining facilities able to feed 250 soldiers per meal

M-2. Telecommunications

- a. Telephones are located in the administrative areas and all CTQs.
- b. Data transmission lines are available in the administrative areas and some single occupancy rooms
- c. Computers with RCAS are available in the Battalion and Company HQ areas of all buildings.
- d. BEQ /BOQ's have computer access on RCAS or a civilian internet source. See MTC Billeting Clerk for details. See chapter 5 for more information on telecommunications in the training support complex.

M-3. Request Suspense

Requesting use of the Training Support Complex is similar to requesting any facility at Marseilles Training Center. Request forms must arrive no later than 90 days prior to date of use.

M-4. Request Forms

Requesting organizations must use the MTC Billeting and Logistics Request form found in Appendix D of this regulation. These forms are available at the MTC webpage www.il.ngb.army.mil the Department of Military Affairs or on request via email, fax and standard mail. Send requests for forms to: Marseilles Training Center, ATTN: Housing Manager, 1700 Army Road, Marseilles, IL 64131, or call (815) 750-6503 / 6502 / 6501 (phone). Completed forms can be faxed, mailed or emailed to the location indicated above. MTC Housing Manager is responsible for scheduling all areas of the Training Support Complex.

M-5. Billeting, NON-Chargeable Quarters

Barracks bays will be scheduled by "blocks". Barracks bays will be assigned prior to the scheduled training event.

- a. Organizations are responsible for assignment of rooms or barracks bays to subordinate organizations/individuals within their allocated blocks. This is to allow units or organizations to assign billets to best accommodate unit needs. After the block of bays has been assigned to the using unit, it is critical that a rank, name, gender roster be provided to MTC Operations. This roster must be provided no later than one week prior to the scheduled usage. This roster will also provide the in-house emergency /fire evacuation accountability roster. The Training Site Commander reserves the right to cancel scheduled usage of the facility if the organization fails to meet this requirement.

b. Barracks bays not blocked will be available for other organizational usage or transient guests. MTC billeting Clerk will assign them, based on Priority Guidelines as follows;

- (1) Road to War Units
- (2) Units attending SRP or PHA
- (3) ILARNG Units
- (4) DOD entities
- (5) NON-DOD Units

c. All barracks will be issued by hand receipt of the key(s).

d. Acceptance of the key will provide assumption of responsibility for the key, all items within the barracks will be hand-receipted to the using Unit. Any damaged or missing items must be reported to billeting office immediately.

M-6. Administrative Areas

a. Units are encouraged to use administrative and service areas. Weapon cleaning is prohibited in these areas.

b. Battalion Headquarters area will support administrative needs for complete staff activities, including individual offices, conference or meeting room, and general office space.

c. Company Administrative Areas include private offices for Commander and First Sergeant, and open office space.

d. Supply Room areas are available in all company buildings and a larger battalion supply room is located in building A. These rooms are not designed for unattended arms, ammunition, or sensitive item storage (there is no vault or alarm system). There is a caged area in each supply room that can be secured with a padlock, the using unit must provide their own lock.

e. Laundry facilities are available in buildings B, C, D, E, and F. Individuals must provide their own laundry detergent, vending machines for these type items are not available.

f. Classrooms will be issued to users based on their request. Classroom keys will be issued to the unit / organization using DA-5513-R, Key Control Register and Inventory. Users are responsible for inventorying room contents, using the Inventory Control Sheet posted in each classroom. Any discrepancies are to be reported to the MTC Billeting Clerk of MTC HQ immediately for re-mediation.

M-7. Dining Facilities

The dining facilities may be scheduled for all activities. A civilian contractor does NOT operate the dining facilities. All food service operations are the using unit's responsibility. Using units must have qualified cooks to operate a dining facility, See appendix Q for additional information regarding the use of the Dining Facilities.

M-8. Medical Facilities

Medical facilities located in Building A may be scheduled if the using unit/agency has qualified personnel to operate the facility. Qualified Personnel are considered to be Doctors, Physician's Assistants, and Registered Nurses. Medics will not be allowed to draw the TMC. MTC does not have assigned medical personnel.

M-9. Physical Fitness

a. Physical fitness room in Building A is available. This facility will be issued to organizations or agencies as requested. Use of the fitness room is in accordance with MTC Memorandum dated 4 Feb, 2003. This memorandum is posted on the interior side of the entrance doors of the fitness room.

b. A two-mile APFT run course is marked through the parking areas. A basic strip map is available from MTC Range Control or the MTC webpage. Scheduling for unit APFTs **must be coordinated with Range Control prior to use** so traffic may be restricted as needed.

M-10. Parking

a. Parking is provided for privately owned vehicles, and administrative vehicles (GSA) in the TSC.

b. Tactical vehicle parking is only permitted in the gravel parking lot east of the Training Support Complex and north of the HQ building..

M-11. Chargeable Transient Quarters

- a. The following is the list of priority for room reservations. Billeting Clerk will assign reservations weekly based on these criteria.
 - (1) General Officer 2-room suite will be issued in the following priority: (building B)
 - (a) ILARNG / ILANG General Officers
 - (b) All other General Officers
 - (c) ILARNG Chief of Staff
 - (d) ILARNG / ILANG Officers 06
 - (2) BOQ/BEQ Rooms will be issued in the following priority.
 - (a) ARNG / ANG Officers 06.
 - (b) ARNG CW5s
 - (c) All other Officers/Warrant Officers by rank order, on approved activities.
 - (d) State CSM.
 - (e) ILARNG CSMs, SGMs, ANG CSM's
 - (f) ILARNG E8s
 - (g) All others space available by rank, including civilians and retirees
- b. All remaining room assignments will be issued in no special order unless blocked for any reason.
- c. All reservations in advance are for bed space only not a specific room.
- d. The billeting section of MTC is authorized to perform health and welfare checks at any time room is occupied.
- e. The Training Site Commander is authorized to make exceptions to the above criteria when in the best interest of the Illinois Army National Guard, address any questions or concerns to the Training Site Commander at (815) 750-6507 or Training Site XO at (815) 750-6500.

M-12. Facility Use Rules

- a. Smoking is prohibited in all buildings.
- b. Smoking is prohibited in front of building A or in the vicinity of the flagpole.
- c. Alcohol use at MTC is in accordance with page 4, paragraph 3-8 of this regulation.
- d. Food and Beverages will be consumed in authorized areas only. The following guidelines are provided to assist in this effort:
 - (1) "A" Ration meals will not be consumed in classrooms or billeting areas, unless authorized by MTC Commander.
 - (2) Only covered coffee cups or soda containers with lids will be allowed outside dining facility area.
 - (3) Special events must be approved by the Training Site Commander and conducted in designated areas only.
- e. Linen that is used during a training period must be exchanged at the completion of the training period. All linen exchange will be performed on an item-for-item basis for single users and bulk distribution for organizational users.
 - (1) Upon completion of each week of continuous use (every Friday am), the user is required to remove the linen from their bed and place the sheets inside the pillowcase for turn in and to receive clean linens. Billeting personnel will be contacted by the unit turning in linens to arrange a turn in and reissue time. Billeting personnel will inventory the soiled linen and exchange it for clean linen. Blankets are cleaned on a quarterly basis.
 - (2) Linen that is soiled or contaminated due to spills, accidents, or sickness must be reported to the Billeting Clerk. Soiled linen will be removed and exchanged.
 - (a) Individual Users will make the exchange through Billeting Clerk.
 - (b) Organizational Users will make the exchange through their supply representative.
- f. Weapons are prohibited in the dining facilities and medical areas. Munitions of all types are prohibited inside the Training Support Complex (TSC).
- g. Any problems with office or classroom furniture should be reported to MTC Supply or MTC HQ immediately.
- h. Users of common use areas are responsible to ensure that furnishings are cared for and not abused.
- i. Wall hangings, bulletin boards, etc, will be affixed to walls only after being approved by Training Site Commander.
- j. Cleaning of all equipment (including weapons) will take place in an area designated by the using unit for cleaning and where spills will not result in damage to the building.
- k. BOQ / BEQ users:
 - (1) Movement of furniture from one BOQ / BEQ to another is prohibited.
 - (2) Cleaning and polishing of boots will not be done on the beds.
 - (3) Any room damage must be reported to Billeting personnel or MTC HQ immediately.

(4) Pets are not permitted in the TSC at any time.

(5) Upon initial entry into the BOQ / BEQ room, the guest must perform a physical inventory of all room contents as listed on the room inventory sheet posted on the back of each BOQ / BEQ room door. Any shortages or damage to the room must be reported to the Billeting Clerk or MTC HQ representative immediately. Failure to do so may result in the individual being charged for the missing or damaged items when they are cleared.

(6) Proper and effective key control is essential to the security of personnel and equipment at MTC. Lost or stolen keys must be reported to Billeting Clerk or Range Control immediately. Individuals/organizations are responsible for safeguarding all keys. There is a \$25.00 per key charge for all lost keys.

M-13. Clearance Procedures

a. Turn-in of all buildings will be started through Billeting or in an emergency at MTC HQ as an alternate, NLT 1100 hours on any day.

b. Using organizations will notify Billeting or MTC HQ when they are ready to clear and have cleaned buildings to standards listed in paragraph M-14 below.

c. Billeting, or MTC HQ, personnel will conduct a walk through inspection and verify:

(1) Inventory – Inspecting personnel will determine if any shortages or damages are present. All shortages or damages not paid for voluntarily (via: cash collection or statement of charges for ILARNG) will be collected IAW Chapter 12 & 13, AR 735-5.

(2) All spaces meet closing requirements in paragraph M-14 below.

M-14. Building Clearance Requirements

a. All Buildings (except open bays).

(1) All doors and windows are closed and locked. All exhaust fans and lights are turned off.

(2) All trash removed, with floors swept and mopped.

(3) Latrines cleaned, and toilet lids up. Shower walls, floors, and fixtures thoroughly scrubbed and sanitized.

(4) All common areas (hallways entrance/exit) swept and mopped.

b. Open Bays in C, D, E, and F Buildings.

(1) From 1 May through 15 Oct ALL open bays will have the exhaust fans left on and one window on the back wall left partially open.

(2) Instructions for cleaning and maintenance are posted outside the Administrative office of each building along with Inventory Control Sheets.

c. Administrative building/ company administrative areas.

(1) Drawers in desks and filing cabinets are to be left open for inspection.

(2) Windows & exterior door(s) are closed and locked.

(3) Window blinds all the way up and window sills cleaned.

(4) Trash cans are emptied and replaced with a fresh trash can liner.

(5) Floor must be swept and mopped.

d. Classrooms.

(1) Chairs put up on tables, seat down.

(2) Tables are cleaned, level and returned to their original positions.

(3) Dry erase boards are cleaned, markers and erasers left in the holder tray.

(4) Windows & exterior door(s) are closed and locked.

(5) Window blinds all the way up and windowsills cleaned.

(6) Trashcans are emptied and replaced with a fresh trash can liner.

(7) Floor must be swept and mopped. (to include access hallway)

(8) Audiovisual equipment put back in cabinet and locked.

e. Laundry rooms.

(1) All laundry removed.

(2) Washers/dryers turned off.

(3) Lint traps for washers & dryers are cleaned.

(4) Trash cans are emptied and replaced with a fresh trash can liner.

(5) Floor must be swept and mopped.

f. Cleaning Supplies

(1) All cleaning supplies for each building are provided.

(2) Additional or replacement supplies are available from MTC Supply.

M-15. Responsibilities

a. Users are responsible for basic care and cleaning during use of any facilities, and for reporting any issues or problems to Billeting or during off hours MTC HQ.

b. MTC personnel are responsible for reacting to maintenance requests from users. MTC personnel are responsible for contacting appropriate state maintenance crew personnel and filling out work requests for larger repairs. MTC personnel will perform minor repairs (replace light bulbs, etc.) to reduce the possibility of interference with training.

M-16. Notification Procedures

a. Billeting, or MTC HQ during after hours, must be notified if minor problems, (plugged toilets, light bulbs) are detected. When notified, MTC personnel will correct the problem as quickly as possible.

b. In the event problems arise that are beyond the capability of MTC personnel, (water leakage, heating system failure) State Building and Grounds maintenance personnel will be notified immediately. They will assess the problem and correct it if possible, or advise the Training Site Commander to contact a local contractor for correction.

c. In the event that maintenance or maid personnel are required to clean areas or handle materials soiled as a result of bodily fluids, procedures for cleaning of bio hazardous materials, as prescribed by the Occupational Health and Safety Administration (OSHA), will be followed.

d. Notification of maintenance problems will be documented using the facility work request form at page M-10.

M-17. Additional Equipment Services

The following equipment is available for reservation on the Billeting and Logistics Request Form and sign-out from MTC Logistics:

- a. TV's (limited)
- b. DVD/VCR's (limited)
- c. Small Tables (limited)
- d. Sound System (limited)
- e. Overhead Projectors (limited)
- f. Butcher Block Easels (limited)
- g. Distance Learning Lab (TBA)
- h. Infocus Projection Cameras (limited)
- i. Video Tele-Conferencing (in MTC Hq)
- j. PC Computer Support (limited)
- k. Computer Labs (TBA)
- l. Easel Stands (available)
- m. Podiums (available)
- n. Phones (Limited)

Appendix N
Exception to Alcohol Policy Sample

Sample Alcohol Exception Policy

0/000th IN Alcohol Policy for MTC

1. This policy will be in effect from *date 1* to *date 2*.
1. Soldiers will not drink alcoholic beverages during duty hours.
2. Soldiers will not participate in, nor support underage drinking.
3. Soldiers will not drink and drive.
4. Soldiers will not drink alcoholic beverages after xxxx hours.
5. Authorized drinking areas are: Identify specific locations or areas.
6. Soldiers will not transport alcohol in military vehicles.
7. Soldiers will conduct police call of all designated drinking areas each evening.
8. It is the responsibility of the commander and NCOs to monitor reasonable use.
9. Under no circumstances will soldiers drink to any degree of intoxication. Any degree of alcohol intoxication will be a violation of this policy and will subject the soldier to appropriate disciplinary and / or administrative action.
11. Soldiers who violate this policy will be subject to appropriate disciplinary and / or adverse administrative action.

Signed,
XXXXXXXXXX
Commanding

NOTE: This sample provides guidelines that at a minimum should be in an alcohol exception policy. Commanders are welcome to use this as a guideline for establishing their policy and are welcome to alter the sample to fit their needs.

Appendix O Lautenberg Amendment

Lautenberg Amendment

The Federal Gun Control Act of 1968, as amended in 1996, makes it a federal Felony for anyone who has a *qualifying misdemeanor conviction for domestic violence* to ship, transport, possess, or receive firearms or ammunition. It's also a felony for you to issue or dispose of firearms or ammunition to anyone with a qualifying conviction if you know, or should know, about the conviction.

To qualify as a conviction under the Lautenberg Amendment, there must be:

1. A conviction, not a mere arrest; AND
2. The crime must have involved the use or attempted use of physical force, or the threatened use of a deadly weapon; AND
3. At the time of the crime, the soldier/airman must have had a particular relationship with the victim, such as current or former spouse, parent/guardian, cohabited with the victim, shared a child in common with the victim or was similarly situated.

THIS LAW APPLIES TO EVERYONE, INCLUDING MILITARY PERSONNEL!

There is no time limit on how old or recent the conviction need be, and all qualifying convictions, no matter their age, are covered under the law.

If you have a qualifying conviction, do not accept possession of firearms or ammunition, military or otherwise, to do so violates the law and subjects you to criminal prosecution, as well as possible adverse administrative action by the military.

If you know of someone in the Illinois National Guard who has a qualifying conviction, report this fact to your commander or First Sergeant, and do not issue that person firearms or ammunition. Issuing firearms or ammunition to someone who has a qualifying conviction, which you know or should have known about, is also a federal felony, which would subject you to criminal prosecution and adverse administrative action.

Remember, it is not a federal felony under the Lautenberg Amendment to merely have a qualifying conviction. You are committing a felony only if you have such a conviction, and then possess firearms or ammunition. Therefore, if you have a qualifying conviction, or may have one, it's in your interest to avoid possessing firearms or ammunition and violating the Lautenberg Amendment.

If you have a qualifying conviction, or if you are unsure whether you have one, see your commander. Your access to firearms and ammunition will be suspended, but you will also be referred to a legal assistance attorney, who will work with you to find out if you have a qualifying conviction. If you do not have such a conviction, your access to weapons and ammunition will be restored. If you have a qualifying conviction, it's in your interest to know, so you can avoid violating the Lautenberg Amendment, thereby committing a federal felony. In that case, your legal assistance attorney will explore with you your legal options to obtain relief from the Lautenberg Amendment's restrictions.

READ BEFORE DRAWING A WEAPON OR AMMUNITION

- If you have a qualifying misdemeanor conviction for domestic violence under the Federal Gun Control Act, you may not possess or receive firearms or ammunition, military or otherwise.
- If you have such a conviction and draw a weapon or ammunition, you are committing a felony under federal law. Title 18, United States Code, Section 922.
- If you have any questions whether this law applies to you, contact your Commander or First Sergeant. They will provide you information, or refer you to a legal assistance attorney.

Appendix P

Night Vision Device Training Policy

- a. This appendix provides installation requirements for conducting Night Vision Device operator training at Marseilles Training Center (MTC).
- b. Units will request appropriate training areas for vehicle type and training to be accomplished, IAW NGIL 350-11. The only permitted area for conducting NVD initial driving instruction and licensing is the gravel roadway immediately north of the Hornickle Training Area in training area 102E to the track driving area in training area 104E grid 60387264. Routine training can be done in any training area the using unit is assigned or the roadway previously indicated for licensing.
- c. Prior to training, units will provide to Marseilles Training Center Range Control:
 - (1) Training schedule identifying the training to be accomplished.
 - (2) Risk assessment for routine NVD training, new driver certification or refresher training
 - (3) A command certification (IAW AR 600-55) for the instructors who will be conducting new drivers training, and a list of all personnel to be trained.
 - (4) For routine NVD driver's training the unit will ensure all personnel are qualified to drive with NVD, and this qualification is annotated on their military driver's license.
- d. The established speed limit for Marseilles Training Center is 15 Miles per hour on roadways when in NVD, and no faster than the vehicle ground guide when off road.
- e. Questions regarding this policy should be addressed to the undersigned or Range Operations NCO, commercial, (815) 750-6522 / 6523 / 6525.

Appendix Q

Dining Facility Operations

Q-1. General

This Standing Operating Procedures (SOP) describes the “checking in” and the “clearing out” of units using the Dining Facilities (DFACs) in buildings A, C, and D of the Marseilles Training Center (MTC). The DFAC in building A has a capacity of serving 400 diners per meal, and the DFACs in buildings C and D can serve up to 200 diners per meal each. This SOP is applicable to all units visiting the MTC for any length of training.

Q-2. Purpose

- a. To provide guidance in the issuance and clearance of the three DFACs at the MTC for use by visiting units of the ILARNG, ILANG, U.S. Army Reserve, Active Components, and other authorized users.
- b. To establish the rules and procedures for the units using the MTC-DFAC.

Q-3. Actions Prior to Use

- a. A complete inventory of each dining facility and kitchen will be completed by the designated MTC personnel with copies of the inventory being provided to the USPFO-SS prior to use.
- b. Any unit or organization requesting the use of any dining facility will complete an opening and closing inventory with the MTC personnel.

Q-4. Checking In and Out

- a. An administrative briefing will be conducted at MTC-Range Control on Friday at 1300 hours for all units conducting weekend training at MTC. The DFACs will be issued to unit representatives having signature authority (NGIL Reg. 350-11, 3-2 b). MTC personnel will escort authorized foodservice personnel from the visiting unit to the DFAC being requisitioned to conduct a joint inspection of the facility. This inspection will be thorough enough to check for the overall cleanliness of the facility, status of the major pieces of equipment, quantity of cooking utensils, silverware, and other supplies and equipment.
- b. Shortly after taking possession of the facility, visiting unit personnel will report to the MTC personnel any malfunction of the equipment that occurs or that was not noted in the initial inspection. Do not wait until the clearing out process to report shortfalls, malfunctions, or any maintenance/repair needs.
- c. During the unit-training visit, MTC personnel will be available to provide repair, maintenance, replacement of equipment, or any other needs of the visiting unit as they arise.

d. During the clearing process the visiting unit personnel and MTC personnel will conduct a thorough inspection of the DFAC, inside and out to check for overall cleanliness and sanitation of the entire facility (see # 3 above). A complete inventory will be conducted of all the equipment issued including the major pieces of equipment of the DFAC, cooking utensils, silverware, and other supplies and equipment.

e. Turn-in of all buildings will be initiated through MTC Billeting NLT 1000 hours, on any day. (NGIL Reg. 350-11, M-13 a.)

Q-5. AREAS OF THE DFAC THAT WILL BE SUBJECT TO INSPECTION DURING CHECKING IN AND CLEARING OUT.

a. Area surrounding the DFAC outside of the building will be policed as often as needed to keep it clean and free of debris.

b. DFAC building outside walls and windows will be kept clean and free of any adornments.

c. DFAC entrance and exit areas will be kept clean, sanitary, and free of any obstacles or garbage

d. DFAC interior will be kept clean, sanitary, and free of any unauthorized objects, hangings, or adornments.

e. DFAC tray washing area will be kept clean, sanitary, and free of water pools. Any material or equipment that does not belong in this area will be removed to provide an obstacle free working area.

f. DFAC patron dining area will be kept clean and sanitary. The tables and chairs will also be kept clean and sanitary, and in an orderly manner.

g. DFAC food serving area will be kept clean and sanitary. Special care will be provided to ensure floors are not slick and remain uncluttered to provide an expeditious passage by the dining patrons.

h. DFAC food preparation area will be kept clean and sanitary. Special care will be provided to ensure floors are not slick and remain uncluttered. Personnel will conduct a clean-as-you-go approach while working in this very sensitive area of the DFAC.

i. DFAC cooking area same as paragraph Q-5h.

j. DFAC dry food storage area will be kept clean, dry, and sanitary. Special care will be provided to keep all perishables and non-perishables in their original containers, off the floor, covered and protected from rodents, and other disease causing pests. No pesticides, cleaning supplies, or other dangerous chemicals are allowed in this room.

k. DFAC refrigerated storage (walk-in coolers) will be kept clean, dry, and sanitary. All foodstuffs kept here must be covered to protect them from being damaged while in storage. Temperature measuring devices must be readily available to check the temperature often. Inside bi-metallic thermometers are recommended to check the temperature against the equipment thermometers.

l. DFAC service rooms (mops and cleaning area) will be kept clean and orderly with brooms, mops, and other cleaning equipment and supplies stored in an orderly fashion.

m. DFAC latrines will be kept clean, free of odors, and supplied with the required hand washing supplies for the foodservice personnel to wash their hands every time they visit the latrine. Signs will be posted at the latrine and throughout the facility directing foodservice personnel to wash their hands after visiting the latrine or using tobacco products.

n. DFAC unloading area will be kept clean and free of grease to avoid any slipping by contractor or military personnel working there. Any unsightly garbage will be disposed of in the garbage container.

o. DFAC trash disposal area (dumpster) will be kept clean and orderly. The dumpster will be kept closed at all times.

p. All equipment/utensils returned to storage positions.

q. Any food left over at the completion of a units training will be properly stored and MTC personnel will be informed of the leftover food during the DFAC clearing process. It is the responsibility of the Food Service Sgt and Food Service Officer of the using unit to complete DA Form 3161 to transfer leftover food to MTC. MTC personnel will then complete a DA 3161 to donate the food to a local charity. MTC personnel will handle the delivery of food to the appropriate charity.

r. DFAC refrigeration units must be cleaned with warm water and baking soda. Unit must be left turned on, doors closed. DFAC ranges must be cleaned thoroughly and oven doors left open. All drip trays below burner units must be cleaned and left pulled half way out.

s. Griddles thoroughly cleaned and coated with edible oil. This oil is provided at the facility.

t. Tables wiped clean.

u. All equipment/utensils returned to storage positions.

Q-6. DFAC Equipment Serviceability, Maintenance and Repair.

Upon leaving MTC, the units will complete the Dining Facility Clearing Form indicating the status of the food service equipment certifying that it is operational and specify if any equipment needs service, or if it should be replaced. Unit personnel must provide the specifics as to how equipment malfunctioned/ broke down, etc.

Q-7. Administrative Procedures

a. Shortages or damages not paid for voluntarily (via cash collection or statement of charges for IL ARNG) be collected IAW Chapter 12 & 13, AR 735-5.

b. Sanitation deficiencies will be handled on the spot by visiting unit personnel prior to their departure. It is imperative that the visiting unit will not be allowed to clear the MTC to return home until MTC personnel clear their DFAC. This will assure that there are adequate personnel to clean up the DFAC.

c. An MTC-Dining Facility Clearing Form will be used for Clearing the DFACs.

d. Units are not allowed to “hand receipt” the dining facility to other units.

d. No serving utensils (spoons, forks, cups, trays etc.) are to be taken out of the dining/kitchen facilities.

Q-8. Ration Requests at MTC

a. Units ordering rations for an IDT weekend at MTC will use their IDT account. Rations can be either delivered to MTC or at their home station. If the rations are delivered to the MTC then the using unit must have someone at MTC to receive them.

b. Units that are conducting Annual Training (AT) at MTC will utilize an AT account. The AT ration cycle will be determined by DOL.

MARSEILLES TRAINING CENTER DINING FACILITY CLEARING FORM

UNIT/ UIC _____ DINING FACILITY MANAGER _____
 DATE _____ SIGNATURE _____






DINING FACILITY AREAS	GO	NO GO	NOTES
I. OUTSIDE AREAS			
a. surrounding area free of debris and garbage			
b. outside walls and windows free of adornments			
c. entrance and exit areas clean and free of obstacles and garbage			Clean is free of dirt, food, paper, and grease.
d. mop and cleaning area clean and orderly			
e. unloading area clean and free of garbage			
f. trash disposal area clean and orderly			
II. INSIDE AREAS			
a. walls, floors, and ceiling clean, sanitary, and free of unauthorized objects, hangings, and adornments			Sanitary is washed down with a sanitizing solution per instructions on the solution sheet provided in the dining facility.
b. Scullery area clean, sanitary, and dry. Grease trap cleaned out. No material or equipment left in dishwashing machine area. Dishwashing machine cleaned per equipment Manual			
c. Dish washing area (in kitchen) clean, sanitary, and dry, grease trap cleaned out			
d. patron dining area clean (tables and chairs clean) tables and chairs organized per MTC SOP			
e. food serving area clean and sanitary (floors per SOP and equipment cleaned per Manual)			Cold tables, hot table, and beverage dispensers cleaned, dry, and unplugged.
f. food preparation area clean and sanitary: tables free of debris, grease and food, floors swept and mopped. This includes the exhaust racks. The racks will be cleaned and stacked on a food preparation table until inspected.			The exhaust racks will be replaced after inspected and cleared.
g. cooking area and equipment same as above(equipment cleaned per Manual)			The following equipment will be shut completely down per manual before inspection: Stove, griddle, coffee urn, ice machines (emptied and cleaned out), steam kettles, and steamer.
h. dry goods storage area clean , sanitary, and dry (this includes the racks)			
i. refrigerated storage clean, sanitary, and dry (including the racks)			
j. service rooms (mop and cleaning room) clean, sanitary, and orderly			Mops stored with mop heads pointing down.
k. toilets/lavatory facilities clean, free of odors, and sanitary (all four toilet areas).Trash cans emptied			DO NOT Use same mop for bathroom and rest of dining facility.

DATE: _____ NAME / SIGNATURE OF INSPECTOR: _____






Figure Q-1. DFA Clearing Form

APPENDIX R




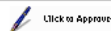

BILLETING

NOTICE OF DELEGATION OF AUTHORITY - RECEIPT FOR SUPPLIES <i>For use of this form, see DA PAM 710-2-1. The proponent agency is DCS, G-4.</i>					DATE
Current Date					
AUTHORIZED REPRESENTATIVE(S)					
ORGANIZATION RECEIVING SUPPLIES UNIT NAME			LOCATION UNIT ADDRESS		
LAST NAME-FIRST NAME-MIDDLE INITIAL			AUTHORITY		SIGNATURE AND INITIALS
			REQ	REC	
Last, First, Middle Initial Name, Rank, ETS date			YES	YES	 <small>Click to Approve</small>
Last, First, Middle Initial Name, Rank, ETS date			NO	YES	 <small>Click to Approve</small>
Last, First, Middle Initial Name, Rank, ETS date			YES	NO	 <small>Click to Approve</small>
NOT BEING USED					 <small>Click to Approve</small>
AUTHORIZATION BY RESPONSIBLE SUPPLY OFFICER OR ACCOUNTABLE OFFICER					
THE UNDERSIGNED HEREBY <input checked="" type="checkbox"/> DELEGATES TO <input type="checkbox"/> WITHDRAWS FROM THE PERSON(S) LISTED ABOVE, THE AUTHORITY TO: E5 & Above REQ & REC Billeting from Marseilles Training Center					
REMARKS N/A					
I ASSUME FULL RESPONSIBILITY					
UNIT IDENTIFICATION CODE UNIT UIC			DODAAC/ACCOUNT NUMBER UNIT EXPENDABLE DODAAC		
LAST NAME-FIRST NAME-MIDDLE INITIAL	GRADE	TELEPHONE NUMBER	EXPIRATION DATE	SIGNATURE	 <small>Click to Approve</small>
CMDR's Name					
DA FORM 1687, MAY 2009			PREVIOUS EDITIONS ARE OBSOLETE		APD PE v1.00ES




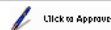

LOG

NOTICE OF DELEGATION OF AUTHORITY - RECEIPT FOR SUPPLIES <i>For use of this form, see DA PAM 710-2-1. The proponent agency is DCS, G-4.</i>					DATE
Current Date					
AUTHORIZED REPRESENTATIVE(S)					
ORGANIZATION RECEIVING SUPPLIES UNIT NAME			LOCATION UNIT ADDRESS		
LAST NAME-FIRST NAME-MIDDLE INITIAL			AUTHORITY		SIGNATURE AND INITIALS
			REQ	REC	
Last, First, Middle Initial Name, Rank, ETS date			YES	YES	 <small>Click to Approve</small>
Last, First, Middle Initial Name, Rank, ETS date			NO	YES	 <small>Click to Approve</small>
Last, First, Middle Initial Name, Rank, ETS date			YES	NO	 <small>Click to Approve</small>
NOT BEING USED					 <small>Click to Approve</small>
AUTHORIZATION BY RESPONSIBLE SUPPLY OFFICER OR ACCOUNTABLE OFFICER					
THE UNDERSIGNED HEREBY <input checked="" type="checkbox"/> DELEGATES TO <input type="checkbox"/> WITHDRAWS FROM THE PERSON(S) LISTED ABOVE, THE AUTHORITY TO: E5 & Above REQ & REC Supplies from Marseilles Training Center Logistics Section					
REMARKS Classroom Equipment, Audio, Visual, Laptops, Tents, MWR Equipment, and ETC					
I ASSUME FULL RESPONSIBILITY					
UNIT IDENTIFICATION CODE UNIT UIC			DODAAC/ACCOUNT NUMBER UNIT EXPENDABLE DODAAC		
LAST NAME-FIRST NAME-MIDDLE INITIAL	GRADE	TELEPHONE NUMBER	EXPIRATION DATE	SIGNATURE	 <small>Click to Approve</small>
CMDR's Name					
DA FORM 1687, MAY 2009			PREVIOUS EDITIONS ARE OBSOLETE		APD PE v1.00ES

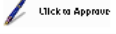
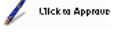


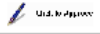
RANGE

NOTICE OF DELEGATION OF AUTHORITY - RECEIPT FOR SUPPLIES					DATE
<i>For use of this form, see DA PAM 710-2-1. The proponent agency is DCS, G-4.</i>					Current Date
AUTHORIZED REPRESENTATIVE(S)					
ORGANIZATION RECEIVING SUPPLIES			LOCATION		
UNIT NAME			UNIT ADDRESS		
LAST NAME-FIRST NAME-MIDDLE INITIAL			AUTHORITY		SIGNATURE AND INITIALS
			REQ	REC	
Last, First, Middle Initial Name, Rank, ETS date			YES	YES	 Click to Approve
Last, First, Middle Initial Name, Rank, ETS date			NO	YES	 Click to Approve
Last, First, Middle Initial Name, Rank, ETS date			YES	NO	 Click to Approve
NOT BEING USED					 Click to Approve
AUTHORIZATION BY RESPONSIBLE SUPPLY OFFICER OR ACCOUNTABLE OFFICER					
THE UNDERSIGNED HEREBY <input checked="" type="checkbox"/> DELEGATES TO <input type="checkbox"/> WITHDRAWS FROM THE PERSON(S) LISTED ABOVE,					
THE AUTHORITY TO: E6 & Above REQ & REC Ranges & Range Equipment from Marseilles Training Center					
REMARKS					
The above soldiers have been trained in Range Operations.					
I ASSUME FULL RESPONSIBILITY					
UNIT IDENTIFICATION CODE			DODAAC/ACCOUNT NUMBER		
UNIT UIC			UNIT EXPENDABLE DODAAC		
LAST NAME-FIRST NAME-MIDDLE INITIAL	GRADE	TELEPHONE NUMBER	EXPIRATION DATE	SIGNATURE	
CMDR's Name				 Click to Approve	
DA FORM 1687, MAY 2009		PREVIOUS EDITIONS ARE OBSOLETE		APD PE v1.00ES	

TADDS

NOTICE OF DELEGATION OF AUTHORITY - RECEIPT FOR SUPPLIES					DATE
<i>For use of this form, see DA PAM 710-2-1. The proponent agency is DCS, G-4.</i>					Current Date
AUTHORIZED REPRESENTATIVE(S)					
ORGANIZATION RECEIVING SUPPLIES			LOCATION		
UNIT NAME			UNIT ADDRESS		
LAST NAME-FIRST NAME-MIDDLE INITIAL			AUTHORITY		SIGNATURE AND INITIALS
			REQ	REC	
Last, First, Middle Initial Name, Rank, ETS date			YES	YES	 Click to Approve
Last, First, Middle Initial Name, Rank, ETS date			NO	YES	 Click to Approve
Last, First, Middle Initial Name, Rank, ETS date			YES	NO	 Click to Approve
NOT BEING USED					 Click to Approve
AUTHORIZATION BY RESPONSIBLE SUPPLY OFFICER OR ACCOUNTABLE OFFICER					
THE UNDERSIGNED HEREBY <input checked="" type="checkbox"/> DELEGATES TO <input type="checkbox"/> WITHDRAWS FROM THE PERSON(S) LISTED ABOVE,					
THE AUTHORITY TO: E5 & Above REQ & REC TADDS Equipment from Marseilles Training Center					
REMARKS					
The above soldiers have been trained in the TADDS Equipment that is being requested.					
I ASSUME FULL RESPONSIBILITY					
UNIT IDENTIFICATION CODE			DODAAC/ACCOUNT NUMBER		
UNIT UIC			UNIT EXPENDABLE DODAAC		
LAST NAME-FIRST NAME-MIDDLE INITIAL	GRADE	TELEPHONE NUMBER	EXPIRATION DATE	SIGNATURE	
CMDR's Name				 Click to Approve	
DA FORM 1687, MAY 2009		PREVIOUS EDITIONS ARE OBSOLETE		APD PE v1.00ES	

TRAINING AREAS

NOTICE OF DELEGATION OF AUTHORITY - RECEIPT FOR SUPPLIES					DATE	
For use of this form, see DA PAM 710-2-1. The proponent agency is DCS, G-4.					Current Date	
AUTHORIZED REPRESENTATIVE(S)						
ORGANIZATION RECEIVING SUPPLIES			LOCATION			
UNIT NAME			UNIT ADDRESS			
LAST NAME-FIRST NAME-MIDDLE INITIAL			AUTHORITY		SIGNATURE AND INITIALS	
			REQ	REC		
Last, First, Middle Initial Name, Rank, ETS date			YES	YES	<input type="text"/> 	
Last, First, Middle Initial Name, Rank, ETS date			NO	YES	<input type="text"/> 	
Last, First, Middle Initial Name, Rank, ETS date			YES	NO	<input type="text"/> 	
NOT BEING USED					<input type="text"/> 	
AUTHORIZATION BY RESPONSIBLE SUPPLY OFFICER OR ACCOUNTABLE OFFICER						
THE UNDERSIGNED HEREBY <input checked="" type="checkbox"/> DELEGATES TO <input type="checkbox"/> WITHDRAWS FROM THE PERSON(S) LISTED ABOVE,						
THE AUTHORITY TO: E5 & Above REQ & REC Training Areas from Marseilles Training Center						
REMARKS						
The above soldiers have been trained in Range Operations.						
I ASSUME FULL RESPONSIBILITY						
UNIT IDENTIFICATION CODE			DODAAC/ACCOUNT NUMBER			
UNIT UIC			UNIT EXPENDABLE DODAAC			
LAST NAME-FIRST NAME-MIDDLE INITIAL	GRADE	TELEPHONE NUMBER	EXPIRATION DATE	SIGNATURE		
CMDR's Name				<input type="text"/> 		

DA FORM 1687, MAY 2009

PREVIOUS EDITIONS ARE OBSOLETE

APD PE v1.00ES

APPENDIX S.

**DEPARTMENT OF THE ARMY
YOUR UNIT
UNIT ADDRESS
CITY, STATE, ZIP**

FILE INFO

DATE

MEMORANDUM FOR Commander, Marseilles Training Center, 1700 Army Road
Marseilles, Illinois 61341-9750

SUBJECT: Safety Certification Appointment

1. Effective DATE, the below listed personnel were command certified per AR 385-63 para 1-4r(1),(2),(3), DA Pam 385-63. para. 1-6e(1) and Table 1-1, on M16A2 and M9 weapons:

<u>NAME</u> Soldier Name Add additional as needed for OIC/RSO	<u>SSN</u> Last 4	<u>RANK</u> SSG	<u>DUTY POSITION</u> Self explanatory	<u>CERTIFIED</u> OIC/RSO
---	----------------------	--------------------	--	-----------------------------

2. Personnel listed above are certified and qualified to conduct live fire training. They are authorized to sign for the live fire ranges and also designated as safety officers for field training and may sign for designated areas on the Marseilles Training Center (MTC).

3. Authority: Per AR 385-63, DA Pam 383-63, and NGIL Reg 350-11.

4. Period: Valid for one year or until relieved by proper authority.

5. Special instructions: Personnel will become familiar with AR 385-63, FORSCOM Regulation 350-2, DA Pam 385-63, NGIL Regulation 350-11, and all applicable related to the safety requirements of the above weapons used during training.

BATTALION COMMANDER
RANK, XX, ILARNG
Battalion Commander

Safety Briefing conducted by: _____ Date: _____
(Range Control Personnel)

ROTC Cadets, OCS Students, WOCs, or any Officer or Warrant Officer who have not completed OBC/WOBC will not be authorized to be OICs or RSOs.

APPENDIX T

KEY LOST STATEMENT

Key Holder: _____

Date: _____

Key Control Officer/NCO: _____

Date: _____

Armory/Facility Manager: _____

Date: _____

Key Symbol	Key #	Door #/Purpose	Nature of Loss	Change Y.N.	NGIL-JSD-PS
					Recommendation Y.N.
1. _____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____

NGIL-JSD-PS Approval: _____

Date: _____

NGIL-CFM-FM Request Completed: _____

Date: _____

NGIL Form 153, 01 June 2010

APPENDIX U

REQUEST FOR KEY(S)

Key Requester: _____

Date: _____

Key Control Officer/NCO: _____

Date: _____

Armory/Facility Manager: _____

Date: _____

Key Symbol	Door #/Purpose	Existing Key Qty	Requested Key Qty	Justification	NGIL-JSD-PS Approved Key Qty
1. _____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____

NGIL-JSD-PS Approval: _____

Date: _____

NGIL-CFM-FM Request Completed: _____

Date: _____

NGIL Form 152, 01 June 2010

APPENDIX V

Extract from NGIL Regulation 350-2

B-1. Risk Assessment and Safety Awareness

As training in the army has become increasingly more intense and demanding, the overall level of risk inherent in training has risen. This increase of risk puts greater demands on commanders, who are the risk managers, to first, minimize the risks inherent in an operation and second, to reconcile inherent risks with essential mission requirements.

a. The risk management approach to safety requires identification of the risks associated with a particular operation and weighs those risks against the overall training value to be gained. A change in the level of mission difficulty produces a corresponding change in the risk involved.

b. Soldiers must develop a sixth sense about safety. They must be conscious of unsafe acts, see the potential for tragedy, and take steps to avoid it. Commanders must stress compliance in the following six areas:

(1) Set high standards. Set and enforce high operating standards in everything your unit does. Safety is a by-product of professionalism and of doing the job right the first time every time. By the book, disciplined operations are mandatory.

(2) Know your soldiers, their training status and their qualifications. Test new soldier's knowledge, regardless of whether or not they have been previously certified. This applies to weapons and every type of moving equipment.

(3) Know your equipment. Know its capabilities and its condition. Numerous check sheets and publications are available to guide you.

(4) Apply dispatch discipline. Many accidents involve equipment that should not even be out of the motor pool or off the heli-pad. Use equipment only when necessary and only when it can contribute to genuine training in the unit mission. Tough-minded dispatch discipline reduces exposure to accidents.

(5) Manage risks in training. Integrate the requirement for safety with the demand for realistic combat training. A high degree of safety can be achieved through the systematic management of inherent mission risks.

(6) Maintain awareness. Be constantly aware of the mission-critical importance of safety in all of your operations. You must be ever vigilant and not allow complacency when everything is running smoothly. Continuous awareness of the requirement for integrating safety into all day-to-day unit operations is essential to maintaining peak readiness.

c. Commanders and leaders must perform risk assessment prior to all training events. Where the risk assessment index exceeds the level specified by the next higher level of command, commanders and leaders **must** request permission from the next higher level of command prior to beginning the training event.

B-2 Consistent with the Risk Assessment and Awareness Discussed

The Specific Action Leaders and Soldiers must Stress are:

a. Safety will be stressed by all levels of command and will be addressed in all OPOD. At no time will safety be compromised for training. Death or serious injuries to soldiers conducting training cannot be justified.

b. All personnel will be thoroughly briefed on the conduct of training exercises to include safety procedures and possible accident-producing conditions and hazards.

c. Individuals will be accounted for prior to and after any LFX and hazardous night training exercises.

d. LFX must employ an emergency "Cease Fire" notification system that is known to all participants.

e. Range firing is conducted IAW AR 385-62, AR 385-63 and post or local SOP.

f. Medical support will be available including evacuation by air or motor vehicle, as appropriate, during LFX.

g. Before firing blank ammunition, personnel will be briefed on the following points:

(1) Blank ammunition is dangerous at close range. The same precautions utilized during loading, unloading, and clearing weapons with live ammunition will be exercised when using blank ammunition.

(2) Soldiers will not fire M16/M4 5.56mm blank ammo directly at anyone within 15 meters.

(3) Soldiers will not fire M60/M240B 7.62mm blank ammo directly at anyone within 40 meters.

(4) Weapons will have safety on and no ammunition chambered except when conducting train-up or participating in an exercise.

(5) All left-handed shooters will ensure that the top button of the uniform jacket is buttoned during firing.

h. All safety officers will be properly trained, and appointed. All personnel involved in the directing, laying and firing of weapons will be made fully aware of their responsibilities in carrying out fire missions.

i. Personnel will be briefed on proper methods of loading, unloading, and lifting heavy materials. Personnel will also be briefed on proper mounting and dismounting vehicles.

j. Only designated and safety briefed officers and NCOs will handle pyrotechnics. Pyrotechnics (1) and (2) below will be thrown into a pit (4 feet wide by 4 feet long by 3 feet deep, surrounded with engineer tape and clearly designated by a sign which says pyro pit) at the minimum safe range as expressed below:

(1) Hand grenade simulators - 15 meters.

(2) Ground burst projectiles - 15 meters.

(3) Smoke grenades - 5 feet.

(4) Smoke pots - 20 feet with area free from ignitable materials.

(5) Ground flares - 5 feet.

(6) Simulated Projectile Airburst Liquids (SPALS, used in simulated chemical attacks) - 25 feet away but directed over troops.

k. Motor vehicle operators will be briefed on safe operation of vehicles both on and off roads and in bivouac areas, to include use of ground guides. Vehicle operations will be governed by the following:

(1) Only qualified and properly licensed personnel will drive government vehicles.

(2) During the hours of daylight, drivers in Mission Oriented Protective Posture (MOPP) 2 or higher will not exceed 15 mph.

(3) During the hours of darkness, drivers in MOPP 2 or higher will not exceed 5 mph and will have an assistant driver who is not in MOPP.

(4) All personnel will wear properly adjusted passenger restraints (when available) while riding in any military vehicle.

(5) Tracked vehicles will not be operated without a driver and track commander (TC).

(6) Tracked vehicles will not close within 100 meters of Opposing Forces (OPFOR).

(7) All vehicle hatches (including cargo and troop doors) will be secured prior to movement with installed hatch locks and pins.

(8) Dismounted soldiers will **never** attempt to mount a tracked vehicle while the engine is running or in motion.

(9) All ammunition and pyrotechnics will be secured in appropriate storage containers prior to any movement of vehicles.

(10) There will be no smoking or open flames within 20 meters of any tracked vehicle.

(11) Tracked vehicles will not be operated without an operative intercom between the TC and driver or a ground guide.

l. As a precaution during electrical storms, all metal equipment must be properly grounded; soldiers should disperse and stay away from non-grounded metal structures, high ground, and tall trees; put on poncho; lie down in prone position, and wait further instructions from the commander. Never take cover under vehicles. Stay off the radio and telephones!

B-3. Heat and Cold Injuries

a. Training plans must consider vulnerability to heat and cold weather injuries. Guidance in preventing such injuries is found in TB MED 507, TB MED 508, Army Regulation AR 40-5, with FORSCOM Supplement 1, and Department of Army Pamphlet 40-11.

b. The State Surgeon/Medical Officer or, in their absence, the senior medical officer present for duty, is responsible for monitoring and dissemination of information to commanders on climatic conditions which may become a health hazard for troops training under those conditions.

c. Prior to commencing a unit's training with Chemical Protective Over Garments (CPOG) for MOPP 1 through 4, leaders will be given instruction on identifying heat stress symptoms and emergency first aid to treat those type of injuries.

B-4. Rules or Engagement

The following rules of engagement will be briefed to all unit personnel by the STX OIC or Assistant OIC **before** missions that could lead to contact. All controllers, unit leaders, and staff will be familiar with the complete rules of engagement

a. Only designated and safety-briefed Officers/NCOs (E5 or above) will handle pyrotechnics. All pyrotechnics will be thrown into a pit at the minimum safe range of 20 meters.

- b. Authorized personnel throwing pyro will wear hearing and eye protection.
- c. Minimum standoff distance between friendly and OPFOR personnel is 20 meters.
- d. No bodily contact! No hand-to-hand! No scuffles!
- e. Controllers will have authority at the scene of engagement.
- f. Force, mistreatment, physical abuse, or harassment of EPWs is prohibited. Observe the five S's.
 - (1) Segregate by rank, sex, and nationality.
 - (2) Search for weapons, military documents or equipment in the vicinity of capture.
 - (3) Speedily, evacuate from point of capture.
 - (4) Silence; prohibit any talking among EPWs for ease of control.
 - (5) Safeguards to prevent harm or escape.
- g. Personal wallets are off-limits. Only the upper pockets on EPW shirts or BDU / ACU shirts are subject to search by "friendly" soldiers. All other pockets are safe for wallets and personal effects.
- h. All searches will be under strict observation of STX controllers.
- i. Do not separate weapons, equipment, or any personal property from EPWs. Rifles will be unloaded, safety on, and slung over the shoulder with barrel down.
- j. EPWs will be held no longer than thirty (30) minutes. Their safety and health are the responsibility of the capturing unit.
- k. There will be no resistance, escape or evasion by EPWs.
- l. Friendly forces will not approach OPFOR aircraft or vehicles closer than 75 meters.
- m. Do not capture, enter or drive any OPFOR vehicle.
- n. Red smoke or a red star cluster means all personnel and all vehicles **must** stop in place immediately.
- o. OPFOR will wear OPFOR uniforms or their camouflage cover removed from the kevlar helmet. Friendly forces will wear ACUs with TA-50.
- p. Incidents where rules of engagement are ignored and soldiers are injured will result in punishment under the Military Code of Illinois, and/or NGIL REG 25-1.

B-5. Dangers of HC Smoke

- a. Some soldiers are not aware of the hazards of hexachlorethane (HC) white smoke
- b. Personnel will be instructed not to sleep in, on, under, or in close proximity to wheeled and tracked vehicles. Ground guides will be used for all vehicular movement in bivouac areas, tank park/maintenance areas.
- c. The deer tick spreads Lyme's Disease. Ticks attached to the skin and tick bites will be reported to medical personnel. Personnel bitten will be evacuated to cantonment area for further evaluation. If possible, the tick will be recovered. If imbedded in the skin, leave it for medical personnel to extract.
- d. Avoid snakes, rodents, or other wildlife that inhabit the training area. Animals can be dangerous. If a snake bites you, minimize your movement but let someone know immediately. Direct someone to kill or catch the snake to determine if it is poisonous, this will aid in prescribing an antidote if the snake is poisonous.
 - (1) No blanks will be fired unless the weapon has a blank firing adapter.
 - (2) NO live ammunition will be intermixed with blank ammunition. Soldiers using blank ammunition must not have access to live ammunition, grenades and smoke pots. Properly used, they add realism to combat training. However, improperly used, they can kill!
- e. The combustion products used in HC smoke grenades are toxic in high concentrations. Burning a mixture of granular aluminum, zinc oxide, and hexachlorethane produces the smoke. Sources of HC smoke include the AN-M8 smoke grenade.
- f. **HC smoke can be dangerous if improperly used.** The smoke contains corrosive substances that can destroy lung tissue, causing lungs to fill with fluid in a condition known as "Dry-Land Drowning". In some cases, the body can also be poisoned by zinc metal oxide in the smoke. The effects are usually delayed. Soldiers don't realize they inhaled too much until hours, or even days, after the exposure.
- g. Precautions on the use of HC smoke are listed on a card found in each box of 24 grenades. Technical information concerning HC smoke and health effects are in FM 3-11.9; Potential Military Chemical/Biological Agents and Compounds and FM 3-23.30; with Change 1; Grenades and Pyrotechnic Signals.
- h. The following safety precautions will be implemented when using HC smoke:
 - (1) Personnel will carry their protective mask when participating in exercises that uses smoke.
 - (2) Personnel will mask
 - (a) Before expose to any concentration of smoke produced by AN-M8 white smoke grenades or smoke pots (HC smoke) or metallic powder obscurants.

(b) When passing through or operating in dense smoke such as smoke blankets and smoke curtains (visibility less than 50 meters).

(c) When operating in or passing through a smoke haze (visibility greater than 50 meters) and the duration of exposure will exceed four (4) hours.

(d) Anytime exposure to smoke produces, breathing difficulty, eye irritation, or discomfort all similarly exposed personnel will mask.

(e) Personnel will mask when using smoke, in enclosed spaces, during Military Operations in Urban Terrain (MOUT). NOTE: The protective mask is not effective in oxygen may have been displaced.

(f) Smoke generator personnel will mask when it is impossible to stay upwind of the smoke.

i. Showering and laundering of clothing following exercises will illuminate the risk of skin irritation following exposure to smoke. Troops exposed to smoke should reduce skin exposure by rolling down sleeves.

j. Take special care when using HC smoke. Ensure that appropriate protection is provided to all personnel who are likely to be exposed. When using HC smoke in training, specific consideration must be given to weather conditions and the potential downwind effects of the smoke. Establish positive controls (observation, control points, communications) to prevent exposure of unprotected personnel.

k. The pin of the M201A1 fuse used in AN-M8 smoke grenade can be inadvertently pulled. This can occur when grenades that are not in the fiber container are placed, side by side, in boxes or out of boxes and the lever on one grenade catches in the ring pin of an adjacent grenade and either pulls or partially pulls the pin. The potential for the pin to be inadvertently pulled is significant up to the point when the grenade is placed in its fiber container. When a grenade is in its fiber container, there is almost no possibility of the pin being inadvertently pulled.

l. To prevent fuse pins from being inadvertently pulled, users are cautioned to comply with the following procedures:

(1) Retain the grenades in their fiber containers until they are to be used.

(2) Always store and transport the grenades in the fiber containers

(3) Prior to removing the grenade from the fiber container for use, observe the fuse safety pin. If it is missing, do not remove the grenade from the fiber container. If both legs of the pin are straight, or if one leg is straight and the other is bent to an angle less than 45 degrees, bend each leg 90 degrees in opposite directions.

m. The procedure outlined above should also be used for the M18 series smoke hand grenade and AN-M14 incendiary hand grenade, since they use the same fuse (M201A1) as the AN-M8 smoke grenade.

n. Applicable publications and standing operating procedures (SOP) must be reviewed to ensure procedures are established for issue, accountability, storage, handling, and employment during all training activities. AN-M8 smoke grenades will not be stored with CS grenades and will not be hung on uniforms.

o. Other smoke training where health effects must be considered includes WP, PEP, Fog Oil, Red Phosphorous (RP), colored smoke, and diesel smoke.

p. The best policy is if you are not sure, tell your soldiers to put on their protective masks.

GLOSSARY

For the purpose of this regulation, the following definitions are applicable.

Block of rooms A section of adjacent or adjoining rooms set aside for a specific request.

“CEASE-FIRE” This is when range firing is temporarily suspended. A “Cease-fire” may be imposed by anyone. Authority to lift a cease-fire will be granted only by the range OIC.

Cleared for Firing or “HOT” This is a range condition when firing is either in progress or fully authorized to proceed. This requires clearance of all personnel from the surface danger zone. All entrances, roads, trails, etc. to the surface danger zone must be adequately denied by gates, roadblocks, or live guards. Additionally, this term is applied to rappel operations and indicates that the unit is prepared to commence rappelling.

Completed Firing or “COLD” This is a range condition when firing is not authorized. All firing is completed and all weapons have been cleared. Additionally, this term is applied to rappel operations and indicates that the unit has completed rappelling and that no personnel are on the rappel tower.

DFAC

Dining Facility, include the kitchen and mess hall.

Mess Hall

Area of a dining facility used to serve and eat a meal.

Occupation

When a unit arrives at a range, training facility (such as rappel tower, MP compound, etc.), or training area.

APPENDIX F
SPECIES LISTS

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FLORA AND FAUNA SPECIES LISTS

Mammals, Reptiles and Amphibians.....1
Birds.....2
Plants.....5

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**Table F-1. Mammals, Reptiles and Amphibians
Observed or Suspected to Occur at the Marseilles Training Area**

Common Name	Scientific Name
Mammals	
Opossum	<i>Didelphis virginiana</i>
Eastern Mole	<i>Scalopus aquaticus</i>
Eastern Cottontail	<i>Sylvilagus floridanus</i>
Woodchuck	<i>Marmota monax</i>
Thirteen-lined Ground Squirrel	<i>Spermophilus tridecemlineatus</i>
Eastern Chipmunk	<i>Tamias striatus</i>
Gray Squirrel	<i>Sciurus carolinensis</i>
Fox Squirrel	<i>Sciurus niger</i>
Beaver	<i>Castor canadensis</i>
Western Harvest Mouse	<i>Reithrodontomys megalotis</i>
Deer Mouse	<i>Peromyscus maniculatus</i>
White-footed Mouse	<i>Peromyscus leucopus</i>
Meadow Vole	<i>Microtus pennsylvanicus</i>
Coyote	<i>Canis latrans</i>
Raccoon	<i>Procyon lotor</i>
Striped Skunk	<i>Mephitis mephitis</i>
White-tailed Deer	<i>Odocoileus virginianus</i>
Feral Cat	<i>Felis domesticus</i>
Little Brown bat**	<i>Myotis lucifugus</i>
Red bat**	<i>Lasiurus borealis</i>
Northern long-eared bat **	<i>Myotis septentrionalis</i>
Reptiles	
Eastern Plains Garter Snake	<i>Thamnophis radix radix</i>
Midland Brown Snake	<i>Storeria dekayi wrightorum</i>
Northern Water Snake	<i>Nerodia sipedan sipedan</i>
Aquatic Turtles - could be one or more of the following	
Map Turtle	<i>Graptemys geographica</i>
False Map Turtle	<i>Graptemys pseudogeographica</i>
Painted Turtle	<i>Chrysemys picta</i>
Amphibians	
Bull Frog	<i>Rana catesbeiana</i>
Green Frog	<i>Rana clamitans</i>
American Toad	<i>Bufo americanus</i>
Fowler's Toad	<i>Bufo woodhousii fowleri</i>
Blanchard's Cricket Frog	<i>Acris crepitans blanchardi</i>
Northern Cricket Frog	<i>Acris crepitans</i>
Western Chorus Frog	<i>Pseudacris triseriata triseriata</i>
Gray Treefrog	<i>Hyla versicolor</i>
Copes Gray Tree Frog	<i>Hyla chrysoscelis</i>
Source: Carter, 2001**; PTS, 1996	

Appendix F-2. Avian Species Identified at the Marseilles Training Area				
Species	Habitat	Nesting	Nest Location	Food
Acadian Flycatcher	FI	JU	LS	I
American Crow	AF	MY,JU	MS,US	I,S,F,M
American Goldfinch	FE,S	JL,AU	LS	I,S
American Kestrel	FE,G	MY,JU	MS	B,R,I
American Redstart	FE	JU	MS	I
American Robin	FE	AP-AU	LS,MS	I,B
American Woodcock	FI,S	AP,MY	G	I
Bank Swallow	-	JU	B	I
Barn Swallow	B	JU	LS	I
Barred Owl	FI	MA-JU	US	B,R
Bell's Vireo	S	JU	LS	I
Belted Kingfisher	W	MY,JU	B	A
Black-capped Chickadee	AF,S	JU	LS,MS	I
Blue Jay	AF,S	JU	LS,MS	I,S,M
Blue-gray Gnatcatcher	AF	MY,JU	MS	I
Blue-winged Warbler	S	JU	G	I
Broad-winged Hawk	FI	AP,MY	US	B,R
Brown Thrasher	S	MY,JU	LS	I
Brown-headed Cowbird	AF,S,G	MY,JU	G,MS	I,S
Canada Goose	W	AP	G	A,G
Carolina Wren	AF,S	JU	LS	I
Chestnut-sided Warbler	S	JU	LS	I
Chimney Swift	-	-	-	I
Chipping Sparrow	S	JU	LS	I
Common Grackle	AF,S,G	MY,JU	LS,MS	I,S,F
Common Nighthawk	-	JU	G	I
Common Yellowthroat	FE,S,G	JU	LS	I
Downy Woodpecker	FI,S	MY,JU	MS	I
Eastern Bluebird	S	MY,JU	C,LS	I,F
Eastern Kingbird	S	JU	LS	I
Eastern Meadowlark	G	JU	G	I
Eastern Pewee	AF	JU	US	I
Eastern Phoebe	FE	MY,JU	LS	I
European Starling	AF	MY,JU	MS,US	I,S
Field Sparrow	S	JU	LS	I,S
Grasshopper Sparrow	G	JU	G	I,S
Gray Catbird	S	JU	LS	I
Great Blue Heron	W	-	-	A
Great Crested Flycatcher	FI	JU	C,US	I
Great Horned Owl	AF,G	JA-MY	US	B,R
Hairy Woodpecker	FI	MY,JU	US	I
Henslow's Sparrow	Observed in the Summer of 2006			
Horned Lark	G	AP,MY	G	I,S
House Sparrow	B	MY-JL	MS	I,S
House Wren	AF,S	MY,JU	LS	I
Indigo Bunting	FE,S	JU	LS	I
Kentucky Warbler	L,FE	JU	LS	I
Killdeer	G,-	MY,JU	G	I,A
Louisiana Waterthrush	L,FI	JU	LS	I
Mallard	W	AP	G	A,S

Appendix F-2. Avian Species Identified at the Marseilles Training Area

Species	Habitat	Nesting	Nest Location	Food
Mourning Dove	-	AP,AU	LS,MS	I,S
Northern Bobwhite	S,G	MY,JU	G	I,S
Northern Cardinal	FE,S	MY-JL	LS	I,S
Northern Flicker	AF,S,G	JU	MS,US	I
Northern Harrier	Observed in the Summer of 2006			
Northern Oriole	FE	JU	US	I
Northern Parula	L,FE	JU	US	I
Orchard Oriole	FE,S	JU	LS,MS	I
Ovenbird	U,FI	JU	G	I
Red-bellied Woodpecker	FI	MY,JU	US	I
Red-eyed Vireo	FI	JU	US	I
Red-headed Woodpecker	FE	JU	US	I
Red-tailed Hawk	AF,G	AP,MY	US	B,R
Red-winged Blackbird	S,G	MY,JU	LS	I,S
Ring-necked Pheasant	G	MY,JU	G	I,S
Rough-winged Swallow	-	JU	B	I
Ruby-throated Hummingbird	FI,-	JU	MS	I,N
Rufous-sided Towhee	FE,S	JU	LS	I,S
Savannah Sparrow	G	JU	G	I,S
Scarlet Tanager	FI	JU	US	I
Song Sparrow	FE,S,G	MY,JU	LS	I,S
Spotted Sandpiper	-	JU	G	I,A
Tree Swallow	FE,W	MY,JU	C	I
Tufted Titmouse	AF	JU	MS	I
Turkey Vulture	AF	MY,JU	G	-
Veery	FI	JU	LS,MS	I
Vesper Sparrow	-	MY,JU	G	I,S
Warbling Vireo	FE	JU	US	I
White-breasted Nuthatch	AF	JU	MS	I
White-eyed Vireo	S	MY,JU	LS	I
Whit-poor-will	FI	JU	G	I
Wild Turkey	AF	AP,M,JU	G	I,S,M
Willow Flycatcher	S	JU	LS	I
Wood Duck	W	M,JU	US	A,M
Wood Thrush	FI	JU	LS,MS	I
Worm-eating Warbler	U,FI	JU	G	I
Yellow Warbler	FE,S	JU	MS	I
Yellow-billed Cuckoo	FE,S	JU	MS	I
Yellow-breasted Chat	S	JU	LS	I
Yellow-throated Vireo	FI	JU	US	I

HABITAT	NESTING	NEST LOCATION	FOOD
AF – All Forest	JA – January	US – Upper Stratum	I- Insects
FE – Forest Edge	F – February	MS – Mid Stratum	F – Fruits
FI – Forest Interior	M – March	LS – Lower Stratum	G- Grasses
S – Shrublands	AP – April	G – Ground	S- Seeds
G – Grasslands	MY – May	S – Shrubs	M- Mast
L – Lowland	JU – June	B- Burrows	B – Birds
U – Upland	JL – July	C- Cavities	R – Rodents
W – Ponds/Streams	AU – August		N – Nectar
B – Buildings/Bridges			A – Aquatic Organisms

Source: Birkenholz, 1995; ILARNG, 2007

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Appendix F-3. Marseilles Training Area Plant Species List

Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thickets	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>Acalypha rhomboidea</i>	Three-seeded mercury	X	X							X		
<i>Acer negundo</i>	Box elder			X						X		
<i>Acer saccharum</i>	Sugar maple	X	X	X								
<i>Achillea millefolium*</i>	Yarrow	X						X		X	X	X
<i>Actaea pachypoda</i>	White baneberry	X	X	X								
<i>Adiantum pedatum</i>	Maidenhair fern		X		X							
<i>Agalinis gattingeri</i>	Round-stemmed false foxglove	X										
<i>Agalinis paupercula</i>	False foxglove			X								
<i>Agalinis tenuifolia</i>	Slender false foxglove						X			X		
<i>Agastache nepetoides</i>	Yellow giant hyssop		X	X								
<i>Agastache scrophulariifolia</i> +	Purple giant hyssop			X								
<i>Agrimonia gryposepala</i>	Tall agrimony	X		X						X		
<i>Agrimonia pubescens</i>	Soft agrimony	X	X	X						X		
<i>Agrimonia rostellata</i> +	Woodland agrimony	X					X					
<i>Agropyron repens*</i>	Quack grass			X						X		

Appendix F-3. Marseilles Training Area Plant Species List

Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thicket	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>Agrostis alba</i>	Red top			X							X	X
<i>Agrostis alba var palustris</i>	Creeping bent grass											X
<i>Agrostis hyemalis</i>	Tickle grass										X	X
<i>Agrostis perennans</i>	Upland bent grass	X										
<i>Alisma plantago-aquatica var parviflorum</i>	Water plantain										X	
<i>Alliaria petiolata*</i>	Garlic mustard	X	X	X								
<i>Allium burdickii</i> +	Ramp		X									
<i>Allium canadense</i>	Wild onion		X	X	X							
<i>Allium tricoccum</i>	Wild leek	X	X	X	X							
<i>Ambrosia artemisiifolia</i>	Common ragweed	X			X					X	X	X
<i>Ambrosia trifida</i>	Great ragweed									X		
<i>Amorpha canescens</i>	Lead plant											
<i>Amorpha fruticosa</i>	Indigo bush			X								
<i>Amphicarpaea bracteata</i>	Hog peanut	X	X		X							
<i>Andropogon gerardii</i>	Turkeyfoot					X	X	X		X		X
<i>Anemone cylindrica</i>	Thimbleweed			X								

Appendix F-3. Marseilles Training Area Plant Species List

Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thickets	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>Anemone virginiana</i>	Tall anemone							X			X	
<i>Antennaria neglecta</i>	Field pussytoes	X			X	X					X	X
<i>Antennaria plantaginifolia</i>	Plantainleaf pussytoes	X				X	X	X			X	
<i>Apios americana</i>	Groundnut			X								
<i>Apocynum androsaemifolium</i>	Spreading dogbane					X	X					X
<i>Apocynum sibiricum</i> +	Prairie dogbane									X		X
<i>Aquilegia canadensis</i>	Columbine		X	X	X	X						
<i>Arabis canadensis</i> +	Sicklepod	X	X									
<i>Arabis laevigata</i>	Smooth rock cress	X										
<i>Aralia racemosa</i>	American spikenard		X									
<i>Arctium minus</i> *	Smaller burdock	X										
<i>Arisaema dracontium</i>	Green dragon	X	X	X								
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	X	X	X	X							
<i>Aristida longespica</i> +	Three awn									X		
<i>Aristida oligantha</i>	Wire grass									X		
<i>Asarum canadense</i> var	Canada wild ginger	X	X	X								

Appendix F-3. Marseilles Training Area Plant Species List

Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thickets	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>reflexum</i>												
<i>Asclepias exaltata</i>	Poke milkweed	X	X									
<i>Asclepias hirtella</i>	Tall green milkweed									X		
<i>Asclepias purpurascens</i>	Purple milkweed				X					X		X
<i>Asclepias quadrifolia</i> +	Whorled milkweed	X						X				
<i>Asclepias sullivantii</i> +	Prairie milkweed									X		
<i>Asclepias verticillata</i>	Whorled milkweed					X		X		X		X
<i>Asclepias viridiflora</i>	Green milkweed							X				
<i>Asimina triloba</i>	Pawpaw			X				X				
<i>Asparagus officinalis</i> *	Garden asparagus	X										
<i>Asplenium platyneuron</i> +	Ebony spleenwort				X							
<i>Aster azureus</i>	Sky-blue aster							X		X		X
<i>Aster drummondii</i>	Drummond aster	X		X					X	X		
<i>Aster ericoides</i>	Wreath aster							X		X	X	X
<i>Aster laevis</i>	Smooth blue aster							X		X		X
<i>Aster lateriflorus</i>	White woodland	X		X					X	X	X	

Appendix F-3. Marseilles Training Area Plant Species List

Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thickets	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
	aster											
<i>Aster novae-angliae</i>	New england aster									X	X	
<i>Aster oblongifolius</i>	Oblong-leaf aster							X				
<i>Aster pilosus</i>	Hairy aster							X		X	X	
<i>Aster sagittifolius</i>	Arrow-leaved aster	X	X	X						X	X	
<i>Aster shortii</i>	Short's aster	X	X	X								
<i>Athyrium angustum</i>	Lady fern		X									
<i>Aureolaria grandiflora var pulchra</i>	Yellow false foxglove	X						X	X		X	
<i>Baptisia lactea</i>	White wild indigo									X		X
<i>Barbarea vulgaris* +</i>	Yellow rocket									X		
<i>Berberis thunbergii* +</i>	Japanese barberry	X	X	X								
<i>Bidens aristosa var retrorsa</i>	Bur Marigold										X	
<i>Bidens frondosa</i>	Sticktight									X		
<i>Bidens vulgata +</i>	Tall beggarticks										X	
<i>Bidens vulgata</i>	Tall beggarticks	X										
<i>Botrychium</i>	Cut-leaved									X		

Appendix F-3. Marseilles Training Area Plant Species List

Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thickets	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>dissectum</i>	grape fern											
<i>Botrychium virginianum</i>	Rattlesnake fern	X	X	X								
<i>Bouteloua curtipendula</i>	Tall gramma						X					
<i>Brachyelytrum erectum</i>	Long-awned wood grass	X	X	X								
<i>Brassica juncea</i> *	Leaf mustard									X		
<i>Brickellia eupatorioides</i>	False boneset						X					
<i>Bromus inermis</i> *	Smooth brome									X	X	X
<i>Bromus japonicus</i> * +	Japanese chess									X	X	X
<i>Bromus pubescens</i>	Woodland brome	X	X	X			X					
<i>Bromus purgans</i>	Ear-leaved brome	X		X								
<i>Cacalia atriplicifolia</i>	Pale indian plantain			X			X					
<i>Calystegia spithamea</i>	Dwarf bindweed	X				X	X			X		
<i>Campanula americana</i>	American bellflower	X	X	X								
<i>Cardamine pensylvanica</i>	Bitter cress										X	
<i>Carex aggregata</i> +	None									X		

Appendix F-3. Marseilles Training Area Plant Species List

Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thickets	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>Carex albursina</i>	Sedge		X									
<i>Carex annectens</i> +	None										X	
<i>Carex annectens</i> var <i>xanthocarpa</i>	None										X	
<i>Carex bicknellii</i> +	Prairie sedge										X	
<i>Carex blanda</i> +	Woodland sedge	X	X	X		X						X
<i>Carex cephalophora</i>	None				X					X		
<i>Carex conjuncta</i>	None										X	
<i>Carex cristatella</i>	Sedge					X					X	
<i>Carex davisii</i>	Davis sedge	X										
<i>Carex festucacea</i>	Sedge									X	X	
<i>Carex frankii</i> +	Sedge		X								X	
<i>Carex granularis</i>	Meadow sedge	X									X	
<i>Carex gravida</i>	Heavy sedge		X							X		
<i>Carex grisea</i>	Sedge									X		
<i>Carex hirsutella</i>	Sedge	X	X				X			X		X
<i>Carex jamesii</i> +	Grass sedge	X										

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Scientific Name	Common Name	Plant Community Types										
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					Shaded	Open	Moderate Quality	High Quality				
<i>Carex lanuginosa</i>	Wooly sedge										X	
<i>Carex meadii</i> +	Mead sedge							X				
<i>Carex normalis</i> +	Sedge									X		
<i>Carex pennsylvanica</i>	Pennsylvania sedge	X	X		X	X	X	X				
<i>Carex sparganioides</i>	None		X		X							
<i>Carex vesicaria</i> +	Blister sedge											
<i>Carex vulpinoidea</i>	Fox sedge		X							X	X	X
<i>Carpinus caroliniana</i>	American hornbeam		X									
<i>Carya cordiformis</i>	Yellowbud hickory		X	X								
<i>Carya ovata</i>	Shellbark hickory	X	X	X								
<i>Cassia fasciculata</i>	Golden cassia								X	X		
<i>Castilleja coccinea</i>	Indian paintbrush					X						
<i>Catalpa speciosa</i> * +	Western catalpa			X								
<i>Caulophyllum thalictroides</i>	Blue cohosh		X	X								
<i>Ceanothus americanus</i>	New jersey tea											X
<i>Celtis occidentalis</i>	Hackberry	X	X	X								

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Scientific Name	Common Name	Plant Community Types										
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					Shaded	Open	Moderate Quality	High Quality				
<i>Cerastium vulgatum*</i>	Common mouse-ear chickweed									X		
<i>Cercis canadensis</i>	Eastern redbud	X		X	X			X				
<i>Chaerophyllum procumbens</i>	Wild chervil			X								
<i>Chamaesyce maculata</i>	Wartweed									X		
<i>Cichorium intybus*</i>	Common chicory									X		
<i>Cinna arundinacea</i>	Stoutwood reed	X		X								
<i>Circaea lutetiana</i>	Enchanter's nightshade	X	X	X				X				
<i>Cirsium altissimum</i>	Tall thistle	X	X	X	X							
<i>Cirsium arvense*</i> +	Field thistle									X		
<i>Cirsium discolor*</i>	Pasture thistle								X	X		
<i>Cirsium vulgare*</i>	Bull thistle								X			
<i>Claytonia virginica</i>	Spring beauty	X	X	X	X							
<i>Clematis virginiana</i>	Virgin's bower				X							
<i>Comandra umbellata</i>	False toad-flax	X						X				X

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Scientific Name	Common Name	Plant Community Types										
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					Shaded	Open	Moderate Quality	High Quality				
<i>Convolvulus arvensis</i> *	Field bindweed											
<i>Conyza canadensis</i>	Mule tail									X		
<i>Coreopsis palmata</i>	Prairie coreopsis					X	X	X		X		X
<i>Coreopsis tripteris</i>	Tall tickseed							X		X		X
<i>Cornus drummondii</i>	Rough-leaved dogwood	X										
<i>Cornus obliqua</i> +	Silky dogwood									X	X	
<i>Cornus racemosa</i>	Gray dogwood	X	X	X		X	X	X		X		X
<i>Coronilla varia</i> * +	Crown vetch									X		
<i>Corylus americana</i>	Hazelnut	X	X	X		X	X	X				X
<i>Crataegus macrosperma</i> +	Hawthorn	X						X				
<i>Crataegus mollis</i>	Red haw	X		X				X		X		X
<i>Crataegus punctata</i>	Dotted thorn	X										
<i>Crataegus succulenta</i> +	Hawthorn	X	X							X		
<i>Croton capitatus</i>	Woolly croton							X				
<i>Cryptotaenia canadensis</i> +	Honewort	X	X	X								
<i>Cyperus ferruginescens</i> +	Rusty nut sedge			X								

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					Shaded	Open	Moderate Quality	High Quality				
<i>Cypripedium pubescens</i>	Lg. yellow lady-slipper orchid		X									
<i>Cystopteris protrusa</i>	Fragile fern	X	X	X	X	X						
<i>Dactylis glomerata*</i>	Orchard grass									X		
<i>Dalea candida</i>	White prairie clover											X
<i>Dalea purpurea</i>	Purple prairie clover						X					
<i>Danthonia spicata</i>	Poverty oat grass	X				X	X	X		X		X
<i>Dasistoma macrophylla</i>	Mullein foxglove	X								X		
<i>Daucus carota*</i>	Queen anne's lace	X				X	X			X		X
<i>Dentaria laciniata</i>	Toothwort	X	X	X								
<i>Desmodium canadense</i>	Showy tick trefoil									X		
<i>Desmodium canescens +</i>	Hoary tick trefoil					X						
<i>Desmodium glutinosum</i>	Pointed tick trefoil	X	X		X							
<i>Dianthus armeria* +</i>	Deptford pink									X		X
<i>Diarrhena americana</i>	Beak grass			X								
<i>Dicentra canadensis</i>	Squirrel-corn		X									

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		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thicket	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>Dicentra cucullaria</i>	Dutchman's-breeches	X	X	X								
<i>Dichanthelium acuminatum var fasciculatum</i>	Panic grass							X		X	X	X
<i>Dichanthelium depauperatum</i> +	Starved panic grass											X
<i>Dichanthelium latifolium</i>	Broad-leaf witchgrass	X	X		X	X						X
<i>Dichanthelium oligosanthes var scribnerianum</i>	Panic grass			X								X
<i>Digitaria sanguinalis</i> *	Crab grass								X			
<i>Dioscorea villosa</i>	Wild yam	X	X			X						
<i>Dodecatheon meadia</i>	Shooting star		X									
<i>Echinacea pallida</i>	Pale purple coneflower							X				
<i>Echinochloa crus-galli</i> * +	Black millet										X	
<i>Elaeagnus umbellata</i> *	Russian olive					X				X		
<i>Eleocharis acicularis</i>	Needle spike rush										X	
<i>Eleocharis elliptica</i> +	Spike rush										X	X
<i>Eleocharis erythropoda</i> +	Spike rush										X	
<i>Eleocharis obtusa</i> +	Spike rush										X	

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					Shaded	Open	Moderate Quality	High Quality				
<i>Ellisia nyctelea</i>	Annt lucy			X								
<i>Elymus canadensis</i>	Prairie wild rye			X		X						
<i>Elymus hystrix</i>	Bottlebrush grass	X	X			X	X					
<i>Elymus riparius</i> +	Wild rye			X								
<i>Elymus villosus</i>	Slender wild rye	X		X	X							
<i>Elymus virginicus</i>	Virginia wild rye	X		X								
<i>Epipactis helleborine</i> * +	Helleborine		X	X								
<i>Equisetum arvense</i>	Field horsetail		X	X	X	X						
<i>Equisetum hyemale affine</i>	Rough horsetail			X								
<i>Eragrostis frankii</i> +	Sandbar love grass									X		
<i>Eragrostis spectabilis</i>	Tumble grass									X	X	
<i>Erigeron annuus</i>	Whitetop fleabane	X				X				X		
<i>Erigeron philadelphicus</i>	Philadelphia fleabane										X	
<i>Erigeron strigosus</i>	Whitetop fleabane			X						X	X	X
<i>Erythronium albidum</i>	White trout lily	X	X	X								
<i>Euonymus atropurpurea</i>	Wahoo		X	X								

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					Shaded	Open	Moderate Quality	High Quality				
<i>Eupatorium perfoliatum</i>	Boneset									X		
<i>Eupatorium purpureum</i>	Sweet joe-pye weed	X		X								
<i>Eupatorium rugosum</i>	White snakeroot	X	X	X								
<i>Eupatorium serotinum</i>	Late boneset			X			X			X	X	X
<i>Euphorbia corollata</i>	Flowering spurge				X		X			X		
<i>Euthamia graminifolia</i>	Grassleaf goldenrod									X		
<i>Euthamia gymnospermoides</i>	Grassleaf goldenrod									X		
<i>Festuca obtusa</i>	Nodding fescue	X	X									
<i>Festuca pratensis*</i>	Meadow fescue									X		X
<i>Fragaria virginiana</i>	Wild strawberry	X			X	X				X	X	X
<i>Fraxinus americana</i>	White ash			X						X		
<i>Fraxinus pennsylvanica</i>	Red ash	X	X	X		X		X				
<i>Galium aparine</i>	Goosegrass	X	X	X								
<i>Galium circaezans</i>	Wild licorice	X	X				X					X
<i>Galium concinnum</i>	Shining bedstraw	X			X							
<i>Galium triflorum</i>	Sweet-scented bedstraw	X										

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					Shaded	Open	Moderate Quality	High Quality				
<i>Gaura biennis</i>	Butterfly-weed									X	X	X
<i>Geranium maculatum</i>	Wild geranium	X	X	X	X			X				
<i>Geum canadense</i>	White avens	X										
<i>Geum vernum</i>	Spring avens	X		X							X	
<i>Glechoma hederacea var micrantha*</i>	Ground ivy			X				X				
<i>Gleditsia triacanthos</i>	Honey locust			X				X				
<i>Glyceria striata</i>	Fowl manna grass	X	X	X		X					X	
<i>Gnaphalium obtusifolium</i>	Sweet everlasting											X
<i>Gratiola neglecta</i> +	Clammy hedge hyssop										X	X
<i>Hackelia virginiana</i>	Stickseed	X		X								
<i>Hamamelis virginiana</i>	Witch-hazel		X			X						
<i>Helianthus decapetalus</i> +	Thin-leaved sunflower	X					X					
<i>Helianthus divaricatus</i>	Woodland sunflower								X	X		
<i>Helianthus grosseserratus</i>	Saw-tooth sunflower									X	X	X
<i>Helianthus occidentalis</i>	Western sunflower							X				

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					Shaded	Open	Moderate Quality	High Quality				
<i>Helianthus strumosus</i>	Pale-leaved sunflower	X	X					X				X
<i>Heliopsis helianthoides</i>	False sunflower			X						X		
<i>Hemerocallis fulva</i> * +	Orange day lily									X		
<i>Hepatica nobilis var acuta</i>	Sharp-lobed liverleaf		X		X							
<i>Hibiscus trionum</i> *	Venice mallow									X		
<i>Hordeum jubatum</i>	Squirrel-tail									X	X	
<i>Humulus lupulus</i>	New mexican hop								X			
<i>Hybanthus concolor</i> +	Green violet		X									
<i>Hydrastis canadensis</i> +	Golden seal		X									
<i>Hydrophyllum appendiculatum</i>	Great waterleaf		X									
<i>Hydrophyllum virginianum</i>	Virginia waterleaf		X	X	X							
<i>Hypericum perforatum</i> *	Common st. johns-wort											
<i>Hypericum punctatum</i>	Spotted st. johns-wort									X		X
<i>Hypericum sphaerocarpum</i>	Round-fruited st. johns-wort	X	X				X			X		
<i>Hypoxis hirsuta</i>	Yellow stargrass							X	X			
<i>Impatiens</i>	Spotted touch-			X						X		

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					Shaded	Open	Moderate Quality	High Quality				
<i>capensis</i>	me-not											
<i>Impatiens pallida</i>	Pale touch-me-not			X	X							
<i>Juglans nigra</i>	Black walnut	X		X								
<i>Juncus dudleyi</i> +	Dudley rush								X	X	X	
<i>Juncus tenuis</i>	Poverty rush		X						X	X	X	
<i>Juncus torreyi</i>	Torrey rush											
<i>Juniperus virginiana</i>	Eastern red cedar					X	X	X		X		
<i>Lactuca canadensis</i>	Wild lettuce								X			
<i>Lactuca floridana</i>	Woodland lettuce	X	X	X								
<i>Leersia oryzoides</i> +	Rice cutgrass										X	
<i>Leersia virginica</i>	White grass	X	X	X								
<i>Lepidium campestre</i> *	Field peppergrass									X	X	
<i>Lepidium virginicum</i>	Poor-man's pepper											
<i>Lespedeza capitata</i>	Round-headed clover									X	X	X
<i>Lespedeza cuneata</i> * +	Sericea lespedeza								X	X		
<i>Leucanthemum vulgare</i> *	Ox-eye daisy									X		

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					Shaded	Open	Moderate Quality	High Quality					
<i>Liatris aspera</i>	Rough blazing star							X			X		X
<i>Lilium michiganense</i>	Michigan lily			X									
<i>Linum sulcatum</i> +	Wild flax							X					
<i>Lithospermum canescens</i>	Indian paint							X					
<i>Lithospermum caroliniense</i>	Hairy puccoon	X				X		X					X
<i>Lithospermum latifolium</i>	Broad-leaved puccoon		X	X									
<i>Lobelia inflata</i>	Indian tobacco	X											
<i>Lobelia siphilitica</i>	Blue cardinal-flower			X									
<i>Lobelia spicata</i>	Spiked lobelia									X	X		X
<i>Lonicera maackii</i> * +	Amur honeysuckle	X		X									
<i>Lonicera prolifera</i>	Grape honeysuckle	X	X	X	X								
<i>Lonicera x bella</i> * +	Honeysuckle	X		X									
<i>Lotus corniculatus</i> *	Birdsfoot-trefoil										X		
<i>Lysimachia lanceolata</i> +	Loosestrife										X		X
<i>Maclura pomifera</i> * +	Osage orange			X		X			X				
<i>Maleolmia africana</i> * +	None										X		

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					Shaded	Open	Moderate Quality	High Quality				
<i>Malus ioensis</i>	Iowa crab apple	X		X		X		X		X		
<i>Malva neglecta</i>	Common mallow									X		
<i>Matricaria matricarioides*</i>	Pineapple weed											
<i>Medicago lupulina*</i>	Black medic			X						X		
<i>Medicago sativa*</i>	Alfalfa									X		
<i>Melilotus alba*</i>	White sweet clover											X
<i>Melilotus officinalis*</i>	Yellow sweet clover									X		X
<i>Menispermum canadense</i>	Moonseed	X	X		X							
<i>Mertensia virginica</i>	Virginia bluebells		X	X								
<i>Mimulus alatus</i>	Winged monkey flower		X									
<i>Mimulus ringens</i>	Monkey flower			X								
<i>Monarda clinopodia +</i>	Bee balm			X								
<i>Monarda fistulosa</i>	Wild bergamot	X		X					X			X
<i>Morus alba*</i>	White mulberry			X					X		X	
<i>Muhlenbergia frondosa</i>	Wirestem muhly			X								

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<i>Muhlenbergia schreberi</i>	Nimble will	X	X					X		X		X
<i>Muhlenbergia sylvatica</i>	Woodland satin grass	X										
<i>Muhlenbergia tenuiflora</i>	Slender satin grass	X	X									
<i>Nepeta cataria</i> *	Catnip									X		
<i>Oenothera biennis</i>	Evening primrose				X	X						
<i>Onoclea sensibilis</i>	Sensitive fern				X							
<i>Onosmodium hispidissimum</i>	Marbleseed											
<i>Orobanche uniflora</i>	One-flowered broomrape						X					
<i>Osmorhiza claytonii</i>	Sweet cicely	X	X	X		X						
<i>Ostrya virginiana</i>	Eastern hop hornbeam	X	X	X	X			X				
<i>Oxalis stricta</i>	Yellow wood sorrel	X								X		
<i>Oxalis violacea</i>	Violet wood sorrel	X				X		X		X		
<i>Panax quinquefolius</i>	American ginseng	X	X									
<i>Panicum capillare</i>	Witch grass									X		
<i>Panicum dichotomiflorum</i>	Knee grass									X		
<i>Panicum virgatum</i>	Prairie switchgrass											X

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					Shaded	Open	Moderate Quality	High Quality					
<i>Parthenium integrifolium</i>	Wild quinine							X			X		X
<i>Parthenocissus inserta</i> +	Virginia creeper	X	X	X	X	X			X				
<i>Parthenocissus quinquefolia</i>	Virginia creeper	X	X										
<i>Pastinaca sativa</i> *	Parsnip										X	X	X
<i>Penstemon calycosus</i>	Smooth beard-tongue					X					X		X
<i>Penthorum sedoides</i>	Ditch stonecrop			X									
<i>Perilla frutescens</i> * +	Beefsteak plant		X										
<i>Phleum pratense</i> *	Timothy										X		X
<i>Phlox divaricata</i>	Blue phlox	X	X	X	X	X			X				
<i>Phlox pilosa</i>	Prairie phlox					X		X	X				X
<i>Phragmites australis</i> *	Wild reed					X							
<i>Phryma leptostachya</i>	Lopseed	X	X	X				X					
<i>Phyla lanceolata</i>	Fog-fruit			X									
<i>Physalis heterophylla</i>	Ground cherry												X
<i>Pilea pumila</i>	Richweed	X		X									
<i>Plantago aristata</i>	Bracted plantain										X		X

Appendix F-3. Marseilles Training Area Plant Species List

Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thickets	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>Plantago rugelii</i> *	Rugel's plantain		X	X		X				X		X
<i>Platanus occidentalis</i>	Sycamore			X								
<i>Poa annua</i> * +	Six-weeks grass									X		
<i>Poa compressa</i> *	Canadian bluegrass						X	X		X		X
<i>Poa pratensis</i> *	Kentucky bluegrass	X				X		X		X	X	X
<i>Podophyllum peltatum</i>	Mayapple	X	X	X				X				
<i>Polemonium reptans</i>	Jacob's-ladder	X	X	X								
<i>Polygala polygama</i>	Purple milkwort									X		
<i>Polygala sanguinea</i>	Field milkwort									X		X
<i>Polygala senega</i> +	Seneca snakeroot	X	X			X	X	X				
<i>Polygonum arenastrum</i>	Knotweed									X		
<i>Polygonum persicaria</i> *	Spotted lady's thumb	X		X						X		
<i>Polygonum punctatum</i>	Smartweed	X										
<i>Polygonum scandens</i>	Hedge cornbind	X		X								
<i>Polygonum virginianum</i>	Virginia knotweed	X	X	X								
<i>Polystichum</i>	Christmas fern		X									

Appendix F-3. Marseilles Training Area Plant Species List

Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thickets	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>acrostichoides</i>												
<i>Populus canescens*</i>	Gray poplar									X		
<i>Populus deltoides</i>	Eastern cottonwood			X	X	X						
<i>Populus grandidentata</i>	Large-toothed aspen					X				X		X
<i>Populus tremuloides</i>	Quaking aspen									X	X	
<i>Portulaca oleracea</i>	Purslane									X		
<i>Potentilla norvegica*</i>	Rough cinquefoil									X		
<i>Potentilla recta*</i>	Sulfur cinquefoil									X	X	X
<i>Potentilla simplex</i>	Common cinquefoil	X					X	X		X		X
<i>Prenanthes alba</i>	White rattlesnakeroot	X	X	X	X			X				
<i>Prunella vulgaris var elongata</i>	Self-heal	X								X		
<i>Prunella vulgaris* +</i>	Self-heal									X	X	X
<i>Prunus americana</i>	Wild plum								X	X	X	X
<i>Prunus serotina</i>	Wild black cherry	X	X	X	X	X		X		X		
<i>Prunus virginiana</i>	Common chokecherry	X	X	X	X	X		X				
<i>Ptelea trifoliata</i>	Wafer ash							X				

Appendix F-3. Marseilles Training Area Plant Species List

Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thickets	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>Pycnanthemum tenuifolium</i>	Slender mountain mint	X							X	X	X	X
<i>Pycnanthemum virginianum</i>	Common mountain mint									X		
<i>Quercus alba</i>	White oak	X	X					X				
<i>Quercus imbricaria</i>	Shingle oak									X		
<i>Quercus macrocarpa</i>	Burr oak	X		X				X				
<i>Quercus prinoides var acuminata</i>	Yellow chestnut oak						X	X				
<i>Quercus rubra</i>	Red oak	X	X	X								
<i>Quercus velutina</i>	Black oak	X							X			
<i>Ranunculus abortivus</i>	Small-flowered crowfoot	X	X	X	X							
<i>Ranunculus repens*</i> +	Creeping buttercup										X	
<i>Ranunculus septentrionalis</i>	Swamp buttercup		X	X							X	
<i>Ratibida pinnata</i>	Yellow coneflower			X			X	X		X		X
<i>Rhamnus caroliniana</i> +	Carolina buckthorn									X		
<i>Rhus glabra</i>	Smooth sumac											X
<i>Rhus typhina</i>	Staghorn sumac									X		

Appendix F-3. Marseilles Training Area Plant Species List

Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thicket	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>Ribes missouriense</i>	Missouri gooseberry	X	X	X	X			X				
<i>Rorippa islandica ssp fernaldiana</i>	Marsh yellow cress			X								
<i>Rosa blanda</i>	Meadow rose					X				X	X	X
<i>Rosa carolina</i>	Pasture rose	X						X				
<i>Rosa multiflora</i> * +	Multiflora rose	X	X	X		X		X		X	X	X
<i>Rosa setigera</i>	Prairie rose			X					X		X	X
<i>Rubus allegheniensis</i>	Common blackberry	X				X				X	X	X
<i>Rubus flagellaris</i>	Dewberry	X								X		
<i>Rubus occidentalis</i>	Blackcap raspberry	X	X	X		X						
<i>Rubus pensilvanicus</i> +	Blackberry	X	X							X		
<i>Rudbeckia hirta</i>	Black-eyed susan									X	X	X
<i>Rudbeckia triloba</i>	Brown-eyed susan	X		X	X	X						
<i>Ruellia humilis</i>	Wild petunia							X				
<i>Ruellia strepens</i> +	Smooth ruellia									X		
<i>Rumex crispus</i> *	Curly dock									X	X	
<i>Salix amygdaloides</i> +	Peach-leaved willow										X	

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Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thickets	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>Salix discolor</i>	Pussy willow			X								
<i>Salix exigua</i>	Sandbar willow			X		X						
<i>Salix fragilis</i> * +	Crack willow										X	
<i>Salix humilis</i> +	Prairie willow											
<i>Salix nigra</i>	Black willow										X	
<i>Sambucus canadensis</i>	Elderberry		X	X								
<i>Sanguinaria canadensis</i>	Bloodroot	X	X	X	X				X			
<i>Sanicula canadensis</i>	Canadian black snakeroot	X						X				
<i>Sanicula gregaria</i>	Common snakeroot	X	X	X	X					X		
<i>Saponaria officinalis</i> *	Soapwort					X		X		X		
<i>Sassafras albidum</i>	White sassafras	X										
<i>Schizachyrium scoparium</i>	Little bluestem			X		X		X				X
<i>Scirpus atrovirens</i>	Green bulrush			X							X	
<i>Scirpus pendulus</i>	Red bulrush			X							X	X
<i>Scirpus tabernaemontanii</i>	Great bulrush										X	
<i>Scrophularia marilandica</i>	Late figwort	X		X								

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		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thicket	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>Scutellaria ovata</i> <i>var versicolor</i>	Heart-leaved skullcap	X	X	X								
<i>Scutellaria parvula</i>	Small skullcap						X					
<i>Senecio aureus</i> +	Squaw-weed		X									
<i>Setaria faberi</i> *	Nodding foxtail								X			
<i>Setaria glauca</i> *	Yellow foxtail			X					X			
<i>Silene antirrhina</i>	Sleepy catchfly											
<i>Silene noctiflora</i> * +	Night-flowering catchfly			X								
<i>Silene stellata</i>	Starry campion	X										
<i>Silphium perfoliatum</i>	Cup plant			X								
<i>Silphium terebinthinaceum</i>	Prairie-dock					X		X		X		X
<i>Sisyrinchium albidum</i>	Blue-eyed grass	X				X	X	X		X		
<i>Sisyrinchium angustifolium</i>	Stout blue-eyed grass					X						
<i>Smilacina racemosa</i>	Wild spikenard	X	X	X		X		X				
<i>Smilax ecirrhata</i>	Upright carrion flower		X	X	X							
<i>Smilax herbacea</i>	Carrion-flower		X	X						X		

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Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thickets	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>Smilax hispida</i>	Catbrier	X	X	X								
<i>Smilax lasioneuron</i>	Greenbrier		X							X		
<i>Solanum carolinense</i>	Horse-nettle									X		X
<i>Solidago canadensis</i>	Canada goldenrod								X	X		
<i>Solidago flexicaulis</i>	Zigzag goldenrod		X		X	X						
<i>Solidago gigantea</i>	Late goldenrod											X
<i>Solidago juncea</i>	Early goldenrod						X			X		X
<i>Solidago missouriensis</i>	Missouri goldenrod									X		X
<i>Solidago nemoralis</i>	Old-field goldenrod						X			X		X
<i>Solidago rigida</i>	Stiff goldenrod						X	X	X	X		X
<i>Solidago ulmifolia</i>	Elm-leaved goldenrod	X	X					X	X	X		
<i>Sonchus arvensis</i> <i>var glabrescens</i> * +	Smooth sow thistle									X		
<i>Sorghastrum nutans</i>	Indian grass									X		
<i>Spartina pectinata</i>	Cord grass										X	
<i>Sporobolus asper</i>	Tall dropseed						X			X		

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		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thickets	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>Sporobolus heterolepis</i>	Prairie drop seed							X				
<i>Sporobolus neglectus</i>	Small rush grass									X		
<i>Sporobolus vaginiflora</i>	Poverty grass									X		
<i>Staphylea trifolia</i>	Bladdernut		X	X	X	X						
<i>Symphoricarpos orbiculatus</i> +	Coral berry	X										
<i>Taenidia integerrima</i>	Yellow pimpernel							X	X			
<i>Taraxacum officinale</i> *	Common dandelion	X	X	X		X				X		
<i>Teucrium canadense</i> var <i>virginicum</i>	American germander	X		X				X		X	X	X
<i>Thalictrum dasycarpum</i>	Purple meadow rue									X		
<i>Thalictrum dioicum</i>	Early meadow rue	X	X	X								
<i>Thalictrum revolutum</i> +	Waxy meadow rue										X	
<i>Thalictrum thalictroides</i>	Rue anemone		X	X								
<i>Tilia americana</i>	Basswood	X	X	X	X							
<i>Toxicodendron radicans</i>	Poison ivy	X	X	X		X	X	X		X	X	X
<i>Tradescantia ohiensis</i>	Spiderwort		X									X

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					Shaded	Open	Moderate Quality	High Quality				
<i>Tribulus terrestris*</i>	Puncture-weed									X		
<i>Trifolium campestre* +</i>	Low hop clover									X		X
<i>Trifolium hybridum*</i>	Alsike clover									X		X
<i>Trifolium pratense*</i>	Red clover									X		
<i>Trifolium repens*</i>	White clover											
<i>Trillium flexipes</i>	White trillium											
<i>Trillium recurvatum</i>	Wake robin	X	X	X	X							
<i>Triodanis perfoliata +</i>	Venus' looking-glass	X								X		
<i>Triosteum aurantiacum +</i>	Early horse gentian	X										
<i>Triosteum perfoliatum</i>	Late horse gentian	X										X
<i>Typha latifolia</i>	Common cattail										X	
<i>Ulmus americana</i>	American elm	X	X	X				X				
<i>Ulmus pumila* +</i>	Siberian elm									X		
<i>Ulmus rubra</i>	Slippery elm	X	X	X		X						
<i>Urtica dioica</i>	Stinging nettle		X	X								
<i>Uvularia grandiflora</i>	Yellow bellwort		X	X	X							

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Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thicket	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>Verbena hastata</i>	Blue vervain			X								
<i>Verbena stricta</i>	Woolly verbena									X		X
<i>Verbena urticifolia</i>	White vervain	X		X								
<i>Verbesina alternifolia</i>	Wingstem			X	X							
<i>Vernonia gigantea</i>	Tall iron weed									X		
<i>Vernonia missurica</i>	Missouri ironweed						X			X		
<i>Veronica catenata</i>	Water speedwell											
<i>Veronica peregrina</i>	White speedwell									X		
<i>Veronicastrum virginicum</i>	Culver's root	X	X	X	X							
<i>Viburnum opulus* +</i>	European high-bush cranberry			X								
<i>Viburnum prunifolium</i>	Nannyberry	X	X	X		X	X	X				
<i>Viburnum rafinesquianum</i>	Downy arrowwood	X										
<i>Viola pedatifida</i>	Prairie violet						X					
<i>Viola pratensis</i>	Common blue violet									X		
<i>Viola pubescens</i>	Downy yellow violet	X										

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Scientific Name	Common Name	Plant Community Types										
		Dry Mesic Forest	Mesic Forest	Mesic Floodplain Forest	Eroding Bluffs		Hill Prairies		Thickets	Dry Fields	Wet Fields	Dry Mesic Fields
					Shaded	Open	Moderate Quality	High Quality				
<i>Viola pubescens</i> <i>var eriocarpa</i>	Smooth yellow violet	X	X	X	X							
<i>Viola sagittata</i>	Arrow-leaved violet	X						X		X		X
<i>Viola sororia</i>	Woolly blue violet	X	X	X				X	X			
<i>Vitis riparia</i>	Riverbank grape			X								
<i>Vitis riparia</i> <i>var syrticola</i>	Riverbank grape	X	X				X					
<i>Vitis vulpina</i>	Frost grape			X						X		
<i>Vulpia octoflora</i> <i>var tenella</i>	None	X						X		X		
<i>Woodsia obtusa</i>	Common woodsia											
<i>Xanthium strumarium</i> <i>var canadensis</i>	Cockle bur									X	X	
<i>Zanthoxylum americanum</i>	Prickly ash	X		X			X					
<i>Zizia aurea</i>	Golden alexanders						X	X				
* Introduced Species												
+ Species new to La Salle County												
Source: Jones, 1996												

APPENDIX G

Timber Stand Improvement

and

**Integrated Wildland Fire
Management Plan**

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ILLINOIS ARMY NATIONAL GUARD

INTEGRATED WILDFIRE MANAGEMENT PLAN

Marseilles Training Center

October 2014

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Reviewed By: MAJ. Joseph Poquette, Training Site Commander, MTC

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EXECUTIVE SUMMARY

In accordance with Army Regulation 200-1 *Environmental Protection and Enhancement* an Integrated Wildland Fire Management Plan (IWFMP) is required for Army installations with unimproved grounds that present a wildfire hazard and/or installations that utilize prescribed burns as a land management tool. The Integrated Wildland Fire Management Plan has been developed to meet the land stewardship requirements and the fire protection requirements for the ILARNG while maintaining the training site and the military training mission. This plan describes the procedures and protocols for wildfire suppression on ILARNG lands. This IWFMP is included as an appendix to the 2011-2016 Marseilles Training Center (MTC) Integrated Natural Resource Management Plan for the MTC.

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Tentative Fire Response Plan for MTC, 18 Apr 2011.

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LIST OF ABBREVIATIONS

CERP – Comprehensive Environmental Review Process
DMAIL – Department of Military Affairs Illinois
DoDI – Department of Defense Instruction
FFT1 – Fire Fighter Level 1
FFT2 – Fire Fighter Level 2
FM – Frequency Modulation
FONSI – Finding of No Significant Impact
FWS – U.S. Fish and Wildlife Service
GIS – Geographic Information System
HEMTT – Heavy Expanded Mobility Tactical Truck
IDNR – Illinois Department of Natural Resources
IEPA – Illinois Environmental Protection Agency
ILARNG – Illinois Army National Guard
INRMP – Integrated Natural Resource Management Plan
IWFMP – Integrated Wildland Fire Management Plan
MHz – Megahertz
MIST-Minimum Impact Suppression Tactics
MFWA – Marseilles Fish and Wildlife Area
MOS-Military Occupation Specialty
MTC – Marseilles Training Center
NEPA – National Environmental Protection Act
NFES – National Fire Equipment System
NFIRS – National Fire Incident Reporting System
NFPA - National Fire Protection Association
NGIL- National Guard Illinois
NIIMS – National Interagency Incident Management System
NWCG – National Wildfire Coordinating Group
OBP – Open Burn permit
OIC – Officer in Charge
PMS – Product Management System
POTO – Planning, Operations, and Training Office
PPE – Personal Protection Equipment
RXB – Prescribed Burn Boss
TA – Training Area
TAG – The Adjutant General
UXO – Unexploded Ordinance

CHAPTER 1: WILDLAND FIRE MANAGEMENT

1.1 LOCATION

Marseilles Training Center (MTC), also known as the Marseilles State Fish and Wildlife Habitat Area (MFWA), is a 2515-acre joint land-use project of the Illinois Department of Natural Resources (IDNR) and the ILARNG located approximately 70 miles SW from Chicago, Illinois within Brookfield and Manlius Townships in La Salle County, Illinois. The MTC includes a 264 acre lease with Exelon Generation Company, LLC (not included in this plan) located along the Eastern border of the MTC. The MTC sits along the upper reaches of South Kickapoo Creek one mile south of its confluence with the Illinois River and comprises upland hills and bluffs. Principal vegetation at MTC is comprised of grassland, native glacial drift hill prairie and successional forests of oak and hickory over flat to highly dissected topography characteristic of Illinois River break communities. The site encompasses several small ponds as well as two lakes, and is drained by one main drainage, South Kickapoo Creek, which flows northward through the site into the Illinois River. The lakes, creeks, and existing road networks have been used to divide the site into 26 prescribed burn units. See MTC Prescribed Burn Unit Map, Figure 1. Forested land is the predominant land use that surrounds the MTC property boundary, while agricultural use dominates the remainder of La Salle County.

1.2 WILDLAND FIRE HISTORY

The ILARNG acquired training rights to MTC in 1980 through a cooperative agreement with the landowner, IDNR. Prescribed fire has been used as a habitat management tool by IDNR since acquisition to maintain desirable vegetative states on hill prairies, grasslands and oak woodlands. Based on what is known about pre-settlement vegetation communities present at MTC, periodic fire was significant in maintaining the prairie and oak savanna communities represented by early GLO survey documents for the area. MTC's typical prescribed burn season is late winter through early spring and from late summer through early fall. Accidental human-induced wildfires on the site have been minimal and invariably suppressed by Range Control cadre.

1.3 GOALS AND OBJECTIVES

The primary goals of this plan are to allow for the continued use of MTC as a military training site as well as maintaining the IDNR habitat management objectives of MFWA through the control of wildfires and application of prescribed fire to develop diverse habitat types that foster viable training areas for users of the site and wildlife populations. This plan will lay out the methods and protocols necessary to control fire frequency, intensity, and size on MTC lands and maintain the ecologic integrity of the ecosystem in order to comply with federal and state laws and meet MTC's land stewardship responsibilities. The plan will provide for firefighter and public safety and allow continued maintenance of training area resources necessary for the MTC

and other military and civilian units to maintain a high level of combat readiness and training quality. The general objectives outlined below are discussed in more detail in the MTC INRMP.

General Objectives

- 1) Safety is the first priority of the wildland fire management program.
- 2) Ensure that fire related activities support the military mission. This includes training site development and operations to utilize the benefits of prescribed fire to wildlife habitat or military training.
- 3) Coordinate with IDNR fire management objectives, particularly wildlife habitat management
- 3) Protect natural and cultural resources as can be done safely. Integrate wildland fire management with the INRMP's and other land management goals and plans to include thinning forest understories of competing vegetation.
- 4) Establish a prescribed burn program that addresses both the ecological and land management fire needs. Maintain ILARNG prescribed burn activities through training crews and gaining experience necessary for the completion of the NWCG task books.
- 5) Base fire management activities on the best available science regarding prescribed burn objectives and post treatment monitoring.
- 6) Reduce the wildfire risk to the surrounding community and incorporate public health and environmental quality considerations into fire management planning and execution.
- 7) Coordinate and cooperate where possible and beneficial with federal, state and local agencies.
- 8) Determine resource requirements and availability at each organizational level to provide needed suppression and support.
- 9) Reduce or eliminate firebreak impacts to vegetation, soils, aesthetics and other natural and cultural resources by utilizing roadways, waterways, or power line rights of way as natural fuel breaks
- 10) Continually evaluate the fire and smoke management program and make improvements as necessary to meet policy and procedural requirements or changes.

Specific Objectives

- 1) Ensure zero wildland or prescribed fire related serious injuries or deaths through incorporation of risk management into all prescribed fire planning and implementation activities.

- 2) Ensure military training is enhanced, and not hindered by fire related activities where possible. Fire use should directly benefit safety as around the range firing area, training quality in the remote uplands, and wildlife habitat across the site.
- 3) Through a combination of mechanical means and prescribed burning, maintain and improve training sites and maneuver areas to maximize military training opportunities while minimizing environmental impacts and promoting environmental stewardship. Approximately 500-625 acres per year burned is the desired goal amounting to between 20-25% of the land area comprising MTC. In addition, thinning understory densities in some stands to enhance training and early successional dynamics is a preferred mechanical treatment.
- 4) Establish and maintain fire control through the use of firebreaks with minimal environmental impact. Many soils are considered highly erosive and treatments should be designed to minimize soil loss. Firebreaks will be based on location, fuel type, fuel arrangement and access for maximum fire control and minimum impact suppression tactics (MIST).
- 5) Reduce ignitions caused by military training activities by encouraging their use in areas that have minimal risk of fire starts or conditioning the sites (through prescribed fire) before training begins, and limiting fire related activities when the fire danger is high.
- 6) Adopt the NWCG standards for firefighting and prescribed fire qualifications for ILARNG personnel and require satisfactory completion of training for the level of participation expected on a prescribed fire or wildland fire event. Training Standards can be found in section 1.18.
- 7) Fires will be suppressed at minimum cost while considering firefighter and public safety and resources to be protected.

1.4 ORGANIZATIONAL STRUCTURE & RESPONSIBILITIES

Installation Commander - The Adjutant General (TAG) of Illinois Army National Guard (ILARNG): defines the roles and responsibilities for wildland fire management on the installation, plans and programs resources, and will designate an installation Wildland Fire Program Manager in both the Fire and Emergency Services or Natural Resources organization. Approves the installation IWFMP, Assures the maintenance of training records (e.g., through the Civilian Personnel Office, Wildland Fire Program Manager, or Fire Chief), Approves the deployment of Army civilian firefighters to any off installation incident.

Wildland Fire Program Manager - ILARNG Environmental Branch Chief: develops the IWFMP; reviews and approves burn plans for prescribed fires to ensure consistency with the IWFMP, the INRMP, and other applicable operating instructions such as state and local regulations.

Installation Wildland Fire Manager – MTC Natural Resource Manager: prepares and/or updates prescribe burn plans as required and submits to Wildland Fire Program Manager for review, obtains applicable burn permits, maintains public notification lists and media announcements,

oversees maintenance of firefighting equipment, coordinates with local fire departments for mutual aid agreements, maintains prescribed burn personnel training and burn record documentation, de-conflicts prescribed burn dates with installation training scheduling staff.

Prescribed Fire Burn Boss (RXB)* – Position requires certification by the Illinois Department of Natural Resources (IDNR): executes installation's prescribed burn plan under the direction of the Installation Wildland Fire Manager and oversight of Range Control, responsible for all aspects of the prescribed burn and serves as incident commander, reviews prescribed burn plan with burn personnel and submits proposed changes to the Installation Wildland Fire Manager.

Squad/Crew Boss (FFT1): maintains accountability and safety of all personnel and equipment assign to his/her team, follows the direction of the prescribed burn plan and guidance given by the Prescribed Burn Boss, maintains communication with Prescribed Burn Boss at all times

Firefighter Type 2 (FFT2): maintains personal protective equipment and firefighting equipment, completes refresher training, understands the prescribed burn plan and works under the direction and supervision of a squad or crew boss.

Military Personnel: responsible for reporting any wildland fire to Range Control, whether caused by training actions or natural phenomena, follow range control direction in responding to a wildland fire.

Range Control: maintains oversight of all activities occurring within the training site, responsible for dispatching a representative to the fire scene to determine need of additional personnel or equipment to control the fire, contacts public fire department as necessary.

1.5 SAFETY AND EMERGENCY OPERATIONS

MTC Range Control has oversight for all activities occurring within MTC boundaries except when IDNR hunting regulations and seasons apply to accessing available hunting areas per the 1999 MOU *Agreement for the MFWA/MTA*. All personnel, whether military or civilian, having access to MTC are subject to NGIL Regulation 350-11. This regulation outlines policy and procedures for training safety and emergency operations. Chapter 5-9 of NGIL Regulation 350-11 describes policy and procedures related to fire prevention:

5-9. Fire Prevention

- a. *Warming/cooking fires for the convenience or comfort of troops are not authorized.*
- b. *Any or all grass or forest fires will be reported immediately to Range Control giving the following information:*
 - (1) *Location of the fire (grid coordinate and common landmark directions if possible).*
 - (2) *Number of personnel in the vicinity of the fire, type of equipment in the vicinity of the fire.*
 - (3) *Determination by the OIC on ability of the personnel present to extinguish fire with equipment on hand.*
 - (4) *Status of the fire as situation develops every 15 minutes.*
 - (5) *When the fire has been extinguished.*

c. Range Control will dispatch a representative to the scene to determine need for additional personnel or equipment to control the fire, a guide will be posted on the main road or trail leading to the fire to direct fire fighting personnel and/or equipment to the scene.

d. Upon being given clearance to fight the fire, units will extinguish range fires as quickly and safely as possible. At no time will a unit leave a range while fire is present unless otherwise directed by Range Control. This includes smoldering stumps or grass.

e. Range Control will contact area fire departments as necessary.

Prescribed burns conducted at MTC, by Illinois statute, must be conducted by an IDNR certified Prescribed Burn Boss. The Prescribed Burn Boss has full responsibility for the safe execution of a prescribed burn plan. He/she may declare the prescribed burn a wildfire at any time conditions exceed prescription or firefighting resources are not adequate to maintain control of the fire. The Prescribed Burn Boss, as incident commander, has the authority to request additional firefighting support from public fire departments to regain control of the burn. Assigned lookouts or holding crew members will notify the Prescribed Burn Boss immediately of slopovers or spot fires. Only the Prescribed Burn Boss will redirect firefighting assets to extinguish slopover or spot fires.

Unexploded ordnance (UXO) may be found in any area within the TA. MTC has three unexploded ordnance (UXO) producing ranges at this time. These include: the Live Fire Breach Range, Echo Range, and the Hand Grenade Range. Special considerations for UXO are required in these areas. MTC currently has an ammunition supply point located on the northmost point of the cantonment area. Special consideration must be taken in accordance with DA PAM 385-64 Ammunition and Explosive Safety Standards in regards to Fire Prevention, Protection, and Suppression in this area. All personnel participating on a prescribed burn team must wear appropriate fire fighting personal protective equipment (PPE) as required by the National Fire Protection Association (NFPA) 1977 – *Standard on Protective Clothing and Equipment for Wildland Fire Fighting*. In addition, all MTC prescribed Fire Crewmembers will have passed the appropriate work capacity test for assigned duties within the last year.

1.6 RISK ASSESSMENT/DECISION ANALYSIS PROCESSES

The Prescribed Fire Complexity Rating System Guide NWCG PMS-424-NFES-2474 is the prescribed fire risk management tool utilized at MTC. An initial assessment of all prescribed burn plans has been completed. The Prescribed Burn Boss will conduct a risk assessment with the firefighting team and complete the NWCG Prescribed Fire GO/NO-GO Checklist PMS 421 prior to conducting a test fire. Please see Appendix B: NWCG Prescribed Fire GO/NO-GO Checklist PMS 421.

1.7 FIRE MANAGEMENT UNITS

MTC is subdivided into 3 principal management areas (A, B, C), and approximately 25 burn units (BU's – See Appendix C) utilizing existing road networks, water features, and stream drainages as manmade or natural fuel breaks. The risk of fire escaping at MTC is low due to the use of these features. (See MTC Burn/Hunt Map – Figure 1). Although a tentative annual burn

schedule could be produced for MTC the atmospheric and reality of past management has shown that due to highly variable weather patterns and personnel requirements on prescribed burns, that any tentative schedule is just that, a target to shoot for but one that is invariably altered every burn season. A multitude of compartment combinations could be identified each burn season that would allow local burn planners to reach their acreage targets of 500-625 acres per year, representing a 20-25% site coverage, annually.

Management Area A comprises the majority of the southern sections of the MTC with burn units around the ASP, Cantonment Area, and firing ranges which should frequently be burned and/or mown to minimize potential escaped range fires. Small perimeter units such as 104-5 and 105-5 should also be maintained in an open condition so as to be used potentially to stop a moving headfire from escaping or crossing the site boundaries.

Management Area B comprises a mature oak forest watershed on the western boundary of the MTC identified as Compartments 101-1 and 101-2. These compartments are currently uncondusive to prescribed burning as they share a rough topographic perimeter and are surrounded by adjacent forestlands. Therefore, few prescribed fire opportunities exist within this management area and will not be further considered in this plan.

Management Area C comprises the northern training areas of 102, 103, and 104 NE 1. Important sections of these include the FOB and Urban terrain models on the south side of 102 and the important upland hill prairie remnants in 103 and 104 NE 1. The training features at 102 must be protected from fire while woody forest encroachment into the hill prairie of 103 should be curtailed by mechanical and fire treatments to remove and top-kill woody species grubs and saplings.

Prescribed Burn plans for Training Areas 102, 103, 104, and 105 are included as Appendix D below. See Figure 1 (MTC Burn/Hunt Map) for BU compartmentalization

1.8 WILDLAND FUEL FACTORS

MTC burn units consist of four fire behavior fuel models, namely fuel models 1 and 3 (grass group) and 8 and 9 (timber group). The majority of MTC land area consists of fuel model 9 according to the Fuel models developed by Anderson (1982) but numerous early successional patches and boundary units exist which more clearly represent shrub fuel models. Each prescribed burn plan identifies the fuel characteristics associated within each burn unit including any unique habitat inclusions.

1.9 NATURAL AND CULTURAL RESOURCE CONSIDERATIONS

The natural resource considerations include maintaining a diverse, functioning forest ecosystem that meets both the training objectives of the ILARNG and the wildlife habitat management needs of the IDNR. While stone quarries exist on the site they represent a small amount of natural resource extraction over the last fifty years of site ownership. Groninger and Ruffner

(2004) had suggested multiple timber management benefits and outcomes but to date few of those benefits have been realized including removing competing vegetation to enhance oak regeneration potential and prairie remnant populations. However, prescribed burn activities have certainly increased at MTC since the original plan was written in 2004.

The cantonment area along the southern boundaries of the MTC is an obvious cultural area to be protected from wildfire impacts or losses. Since the 2004 Fire plan was written many building projects have expanded the area of mown area around the cantonment area which reduces wildfire risk for most of the buildings and facilities in the cantonment area. For obvious reasons, all unplanned ignitions will be suppressed around buildings or facilities within the cantonment area. Another cultural feature of interest to MTC managers is the growing residential area along the road to the east of the site. Any large escaped fire heading east may impact these residents and efforts to backfire off that access road may be necessary before sending any large engines or apparatus access those fields and risk getting stuck and entrapped by the advancing headfire. The entire eastern boundary should be burned after the power company periodically removes biomass from those rights of way to reduce the potential to ground out the high capacity wires overhead. Timing these treatments would be most beneficial in mitigating any future wildfire risk of losing power in those transmission lines.

Additionally, all wildland fire management activities will be in accordance with the ILARNG Integrated Cultural Resource Management Plan (ICRMP). Any necessary ground disturbance or work requiring alteration of areas eligible for the National Register of Historic Places will be developed and conducted in consultation with the Cultural Resource Manager.

1.10 MISSION CONSIDERATIONS

Currently, MTC is primarily a mounted and dismounted maneuver area. All training and training area maintenance activities are coordinated through Range Control. Typically, prescribed burns are conducted in low use periods, during early fall/late winter, and during normal work week hours. MTC usage is higher during the summer annual training months and on weekends when ILARNG units conduct weekend inactive duty training. Prescribed burning therefore has minimal negative impacts to mission training.

Special Areas of Considerations for protection during Prescribed Fire events:

- 1) Wooden light poles/fence posts along the ROW surrounding MTC.
- 2) Pop-up Targets located within the MRF Range.
- 3) Wooden C-Huts located along the Eastern Boundary of the 200 Area and FOB.
- 4) Facility & Engineering Maintenance Shop (including the flammable storage area).
- 5) Propane Tanks: FEMS, EST, RC, UTES x 2, FOB, Armory x 3.
- 6) Area surrounding the Ammunition Supply Point.
- 7) IDNR Barn
- 8) Red-Brick Shoot House in BU 103_2.
- 9) MOUT Site

Wildlife habitat is always of great concern to land managers at MTC due to the high presence of interested hunters in the area of the site. Besides monitoring hunter usage and harvests, recent projects have included Indiana/Northern Long-Eared bats and avian resource surveys as well as the periodic IDNR food plot plantings. The INRMP defines 5 key terrestrial habitat types of interest to managers at MTC. These include managed/disturbed areas, maturing forests, food plots, prairie and grasslands, and scrub-shrub early successional areas. Each of these areas has specific features and disturbance requirements. However, several large burn units have a mosaic of vegetation types present and burn planners need to account for these inclusions when planning and conducting firing operations. Active ecosystem management of these habitat types is highly beneficial to creating a diverse training environment for military and civilian trainees which is, of course, a primary objective of the ILARNG and MTC staff.

Any ground disturbing activities will be vetted through the CERP & NEPA process to ensure resources are not disturbed.

Prescribed burns enhance mission training by:

- 1) Reducing population of ticks and other biting insects.
- 2) Reducing undergrowth in dismounted maneuver areas and enhancing natural patchwork mosaic for training diversity.
- 3) Keeping maneuver areas free of the restrictive invasive species such as autumn olive and black locust.
- 4) Reducing hazardous fuel levels across the training site that pose fire risk to soldiers, their equipment, and adjacent units or land owners.

1.11 SMOKE MANAGEMENT AND AIR QUALITY

The Illinois Environmental Protection Agency (IEPA) requires an Open Burning Permit (OBP) for all ecological burns conducted in the state of Illinois. MTC Wildland Fire Manager through the IWFP is responsible for maintaining a valid OBP for MTC on an annual basis. Smoke management and air quality are components of the OBP application and must be addressed appropriately before the OBP is issued by IEPA. Factors which affect smoke management and air quality such as wind direction and speed, weather phenomena, fuel conditions, sensitive areas, and nearby human population are identified and described during the permit application process. All MTC prescribed burn plans incorporate smoke management and air quality within their prescription and in accordance with the IEPA OBP. At this time, no significant smoke impact sites exist within two miles of the MTC. Appendix A: IEPA Open Burn Permit application.

1.12 MONITORING REQUIREMENTS

All wildland/prescribed fires conducted at MTC will be monitored for the following:

- 1) Safety of all personnel is upheld to the highest degree.
- 2) Projects are implemented in compliance with plan direction, project design, and NEPA compliance.

- 3) Regulations, standard operating procedures, or guidelines are followed.
- 4) Planned goals and objectives are met
- 5) Emerging issues are addressed.
- 6) Research and baseline inventory needs are identified.
- 7) Assumptions, relationships, and decisions are valid considering new information or changing conditions.

Post Fire Monitoring - MTC recognizes that monitoring through the use of Adaptive Management Strategies, however difficult, is essential to quantify the goals outlined in Ch. 1 of this plan. The method for this will be dependent on the goals and objectives of the burn. The baseline model for monitoring is the *FWS Fuel and Effects Monitoring Guide*. For instance, the Daubenmire Method, Bitterlich Method, and Line-Intercept Method are all methods involving variable plot sampling to determine ideal “basal area factor” (BAF). These ideal criteria are set forth through the 2004 *Marseilles Training Area Fire and Vegetation Management Plan* as well as the MTC INRMP.

1.13 MILITARY TRAINING RESTRICTIONS

In accordance with NGIL Regulation 350-11 Chapter 8, units must coordinate the use of pyrotechnics with MTC Range Control to reduce the potential of fire. Fire hazard guidelines are clearly defined and strictly enforced by Range Control cadre during all training events using pyrotechnic or ammunition.

1.14 PUBLIC RELATIONS

MTC has developed a neighbor and agency notification list. A letter of notification is mailed to each property owner whose property adjoins the MTC approximately 30 days prior to the burn. MTC will contact both Marseilles and Seneca Fire Departments five, three, and one day in advance of the planned prescribed burn and again on the day of the burn at MTC.

1.15 PERSONNEL TRAINING AND CERTIFICATION STANDARDS AND RECORDS

The 17 Illinois Administration Code, Chapter I, Section 1565, *Illinois Prescribed Burning Act*, November 2, 2009, see Appendix C, requires the Prescribed Burn Boss to be certified by the IDNR. All ILARNG members participating in a prescribe burn on any DMAIL installation will meet the NIIMS standard of firefighter level 2 (FFT2) at a minimum. Currently, the DMAIL only has 3 IDNR certified Prescribed Burn Boss’s including the MTA and STA Natural Resource Manager’s. Several other members of the environmental staff are FFT2 trained. FFT2 required training is listed below:

Prerequisite experience to qualify as a FFT2 Trainee: None

Required Training:

- IS-700.a NIMS An Introduction*
- I-100 Introduction to ICS (Incident Command System)*
- S-130 Firefighter Training*
- S-190 Introduction to Wildland Fire Behavior*
- L-180 Human Factors in the Wildland Fire Service (included in S-130)

* Training available Online and/or CD delivery options for these courses

Position Currency:

To remain qualified as a Firefighter Type 2:

- Complete Recurrent Training- RT-130 Annual Fireline Safety Refresher
- Complete annual fitness testing
- Successfully perform the FFT2 position (or a higher position such as FFT1, ENGB, FIRB etc.) on a wildland fire within a five (5) year timeframe

In addition to IDNR, MTC, and Environmental Staff, Volunteer’s may assist in prescribed burning with appropriate approval and a signed liability waiver (Appendix E). Chapter 5, Section 5D-2, *Illinois Department of Natural Resources Policy and Procedure Manual*, January 1, 2006, states, “Volunteers may only be utilized in the execution of prescribed burns under the following conditions:

- A. All volunteers must be 18 years of age and sign an IDNR Volunteer Form.
- B. It is the Burn Boss’ responsibility to assess each volunteer, provide necessary minimal training on the day of the burn, and assign the volunteer to a job or duty that best fits the volunteer’s observable or known physical condition, stated experience, level of training, and observable leadership qualities. (Note: Training for purposes of this subsection does not mean Section III. Training [I-100, S-130 and S-190]).
- C. Volunteers shall not be designated as a Burn Boss on Department owned, leased, and managed lands.”

In addition, Environmental Branch will maintain records of all personnel training certifications and records all members participating on prescribe burns on the ILARNG state server.

1.16 PHYSICAL FITNESS STANDARDS

DMAIL personnel will only conduct low complexity operations on installation prescribe fire firefighting. DMAIL personnel are required to meet physical fitness requirements of their daily duty position. The Prescribed Burn Boss will assign firefighting positions based on the appropriate level of physical fitness of each person participating on the firefighting teams.

The Burn Boss shall assign staff and volunteers to specific jobs, designate line bosses and other duties as needed. Assignments shall be based on the participant's observable or known physical condition, stated experience, level of training and observable leadership qualities.

1.17 EQUIPMENT

All personnel participating on a prescribed burn team must wear appropriate fire fighting personal protective equipment (PPE) as required by the National Fire Protection Association (NFPA) 1977 – *Standard on Protective Clothing and Equipment for Wildland Fire Fighting*.

The 661st and 662nd Firefighting teams each have a M1142 HEMTT Tactical Fire Fighting Truck and M1158 HEMTT Water Tanker at Sparta Training Area. No similar fire fighting capabilities yet exist at MTC.

1.18 FUNDING REQUIREMENTS

Firefighter training and operations are funded through the Directorates of Plans, Operations, Training, and Orders (POTO), Directorate of Facilities and Engineering, and the Environmental Branch. Funding of firefighter training is the responsibility of the owning directorate. Consolidated firefighter training is conducted whenever practical to minimize training expenses and maximize training effectiveness. Prescribed burns are conducted with MTC operational staff employees as an assigned duty for their respective duty position.

MTC has limited firefighting equipment that consists primarily of ignition and holding crew equipment such as drip torches, backpack sprayers, hand tools, and PPE. The Environmental Branch is currently able to provide two 300 gallon trailer and pickup truck mounted water tanks with gasoline power water pump sprayers provide an increased water firefighting capacity, as well as an ATV mounted drip torch for large ignition operations.

In addition, MTC currently owns and operates 1 6X6 Polaris Fire Response ATV with 90 gallon tank, 2 Pull-behind 60 gallon Mountain Goat trailers, 1 750 gallon Hydro-Seeder, and 1 150 gallon tractor-towed tank with sprayer; all of which can be used for fire management. Maintenance of this equipment is through RTLP Funds while additional PPE and Service and Support come from ITAM funds.

The future development of a fire fighting unit with both structural and wildland fire qualifications would greatly enhance prescribed fire operations at MTC.

1.19 INTERAGENCY COOPERATION AND MUTUAL AID AGREEMENTS

MTC has interagency cooperation responsibilities with the Illinois Department of Natural Resources (IDNR) to manage the site (see TAB B). MTC land management actions must be approved by IDNR MFWA site superintendent to ensure compliance with interagency habitat management objectives. Mutual aid agreements exist between MTC, Marseilles Fire Protection

District and Seneca Fire Departments and a Tentative Fire Response Plan has been developed and implemented by MTC Range Control (see below). In addition, MTC conducts a Fire Drill and Emergency Readiness Meeting with the Marseilles & Seneca Fire Departments and the LaSalle County Sherriff's office on an annual basis. This meeting will typically take place after the MTC/IDNR Annual Meeting and prior to the Spring burn season.

The Tentative Fire Response Plan for MTC is available through MTC but is briefly summarized here.

MTC Range Control will assume Incident Command and establish the Incident Command Post of all unplanned ignitions or fire starts and will request additional resources from Marseilles and/or Seneca Fire Departments as Incident Commander deems appropriate. IDNR contacts will immediately be notified to rally their resources, if needed, and establish liaison for effective inter-agency communication and support.

Currently, fire response coordinators include: MTC Natural Resources Manager, and MTC Facility Maintenance Supervisor. They will organize and deploy Fire Response Teams as necessary to contain and limit fire effects on natural or cultural features. In their absence, Range Control cadre will evaluate fire (size-up) and immediately extinguish, if within their capabilities, any small fire such as range fires. The response plan does allow for the application of "fire use" fires, in that, if appropriate, unplanned ignitions can be allowed to burn to meet management objectives or more safely contain the wildfire with a back fire operation to minimize firefighter exposure and equipment loss, and enhance safety on the fireline.

However, one major caveat to the Tentative Fire Response Plan, is as stated in Point 6, on page 2 of the said plan, [If at any time the fire looks as if it may endanger personnel or facilities, local fire responders will be called immediately. This supersedes all other directives outlined in this "Fire Response Outline."]

1.20 ENVIRONMENTAL ASSESSMENT

This IWFMP was developed in conjunction with the revision of the 2008-2013 MTC INRMP and is included as Appendix E of the updated INRMP. Prescribed Burns have been and will continue to be a natural resource management tool at MTC. A Finding of No Significant Impact (FONSI) was issued for the 2008-2013 MTC INRMP. As such, INRMP EA and the FONSI are valid for the updated INRMP. A Record of Environmental Consideration will be completed for the updated INRMP.

CHAPTER 2: UNPLANNED WILDLAND FIRE EVENTS

Wildfires are hereby defined as “all unplanned ignitions” occurring on the MTC site either from escaped prescribed fire, range fires, or other ignition sources.

2.1 SUPPRESSION AND PREVENTION

The MTC prescribed burn program is designed to minimized risk of wildfires on and off the training site. Range Control directs suppression during training operations per NGIL Regulation 350-11. MTC does not have a 24/7 standing firefighting unit on site and therefore must rely on local public fire departments to be first responders to any wildfire situation.

(1) In the event of a structure or property damaging fire at MTC, the standard emergency response call is implemented with Marseilles Fire Department being the primary first responding unit.

(2) In the event of a wildfire at MTC (i.e. a range fire) the National Guard (MTC Command) will be the initial response team and determine the threat and scope of the fire. The local fire authority can be called and alerted, however, they cannot proceed onto MTC property (especially the range impact area) without the authorization of the Range Control OIC, Site Commander, or Site Executive Officer. Gate opening and utilization will be conducted through main gate security and Range Control.

(3) In the event of a fire off post, the NGIL cannot proceed onto civilian or commercially owned property without the consent of the NGIL Emergency Response authority. This authority is usually executed at the IL Governor and The Adjutant General (TAG) and will be processed through the NGIL Joint Operations Center (JOC).

2.2 DETECTION PROCEDURES

Using units and MTC operational staff within MTC provide early fire warning during normal duty hours or when conducting field training activities. IDNR rangers and biologists on site will provide additional fire warning during hours of business. During non-duty hours, concerned citizens calling 911 or detection by local police patrols would alert local fire departments.

2.3 DISPATCH PROCEDURES

Range Control, during duty hours, has responsibility per NGIL Regulation 350-11.

2.4 COMMUNICATIONS PLAN

All units, MTC operational staff and IDNR staff are required to maintain communication with Range Control while occupying any training area within MTC.

Primary: Motorola Hand Held radio

Frequency/NET: Issued by RC

Secondary: Phone

Number: 815-750-6522

Contingency: Runner

2.5 REHABILITATION PROCEDURES

Damage to the MTC as a result of wildland fire will be assessed by the natural resource manager to determine possible short and long term effects and the need for rehabilitation efforts required to minimized erosion or restore damaged forest and wildlife habitat areas.

2.6 RECORDS, REPORTS, AND MONITORING

All wildland fires occurring at MTC will be recorded utilizing a Geographic Information System (GIS) database. Parameters recorded will be: date and time, weather conditions (if known), and perimeter of burned area. This information will be used to adjust prescribe burn intervals of affected burn unit(s). If Marseilles Fire Department or Seneca Fire Department are dispatched to respond to a wildland fire of more than 1 acre they are required to report their response through the National Fire Incident Reporting System (NFIRS). DoDI 6055.6.E.2.2 requires submission of wildland fire reports to the NFIRS.

CHAPTER 3 PRESCRIBED FIRE MANAGEMENT

3.1 PRESCRIBED FIRES

Prescribed Fires are human ignited, fire management tools utilized by vegetation and habitat managers and predominantly referenced and described throughout Chapter 1: Wildland Fire Management objectives at MTC.

3.2 CONSTRAINTS

Military training requirements take priority over any prescribed burn operations conducted at MTC unless a specific training event for wildland firefighters and service members with appropriate MOS. The availability of MTC staff during scheduled burn dates may also limit prescribed burn operations. At no time will any prescribed burns take place without an approved IWFMP and burn unit plan.

3.3 SITE SPECIFIC BURN PLANS

Prescribed burn plans developed for MTC must include the following components:

- 1) Burn unit description and location (to include burn unit map)
- 2) Emergency contact information
- 3) Required permit(s)
- 4) Official and public notifications
- 5) Burn objectives
- 6) Fuel type(s)
- 7) Acceptable weather and fuel moisture parameters
- 8) Prescribed fire prescribed behavior, operations, and expected duration
- 9) Required personnel and equipment resources
- 10) Communication procedures
- 11) Contingency operations
- 12) Safety
- 13) After Action Review and purposed modification to burn plan

MTC Prescribed burn plans for Compartments 102, 103, 104, and 105 are included as Appendix D.

3.4 MONITORING

The MTC natural resource manager is responsible for conducting on-site monitoring of the short and long term effects of implementation of the MTC IWFMP. The MTC IWFMP is an integral part of the MTC INRMP. As such, projects identified in the INRMP such as water quality, erosion control, and invasive species monitoring are concurrent with this IWFMP.

The existing vegetation conditions are based on the 2004 Marseilles Training Area Fire and Vegetation Management Plan (Groninger and Ruffner 2004). All long and short term vegetation monitoring will be compared to the 2004 vegetation plots to determine appropriate burn objectives and assessing prescribed burn outcomes. Analysis of data collected with the fore mentioned monitoring projects will be used to determine the impacts of prescribed burns, both positive and negative, at MTC. Modifications to existing prescribed burn plans or burn intervals may be required as data is collected and analyzed. All data collected at MTC is permanently maintained for long term study.

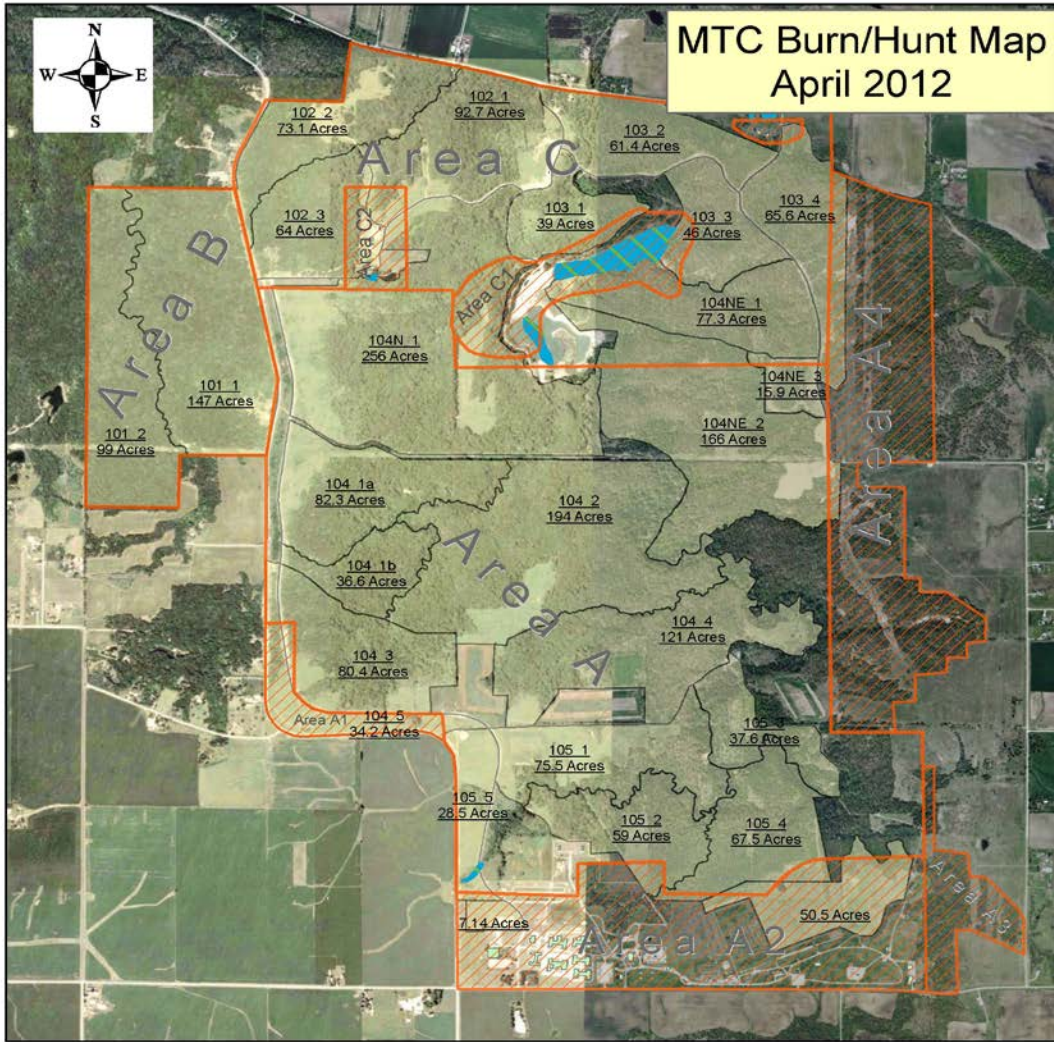
3.5 USE OF FUELBREAKS

The use of permanent and temporary fuelbreaks which optimize use of both natural and artificial features will occur on all burn units (BU) at MTC. Permanent fuelbreaks are currently in place at MTC and are consistently kept open via mowing and/or brush-hogging such as along Rufus Lane, the power line rights of way through the middle and eastern portions of the facility, as well as along access roads.

Specific prescribed fire ignition tactics will be utilized to maximize both permanent and temporary fuelbreak utility at MTC. On any type of fuelbreak, backing fires will be lit by burn personnel on appropriate sides of the burn unit to effectively widen the existing control lines to an appropriate width based upon weather and fuel conditions as determined by the MTC prescribed fire burn boss. Burning off of a wet line is a tactic that can be utilized to establish a fuelbreak in areas of lighter, sparse fuels, along a mowed break, or in units where minimum impact suppression tactics are preferred. In some burn units, fuelbreaks will consist of an ephemeral stream where additional support from a wetline and backing fire may be necessary, depending on conditions.

Most ignition patterns will follow a backing fire along initial holding flanks, then flanking fires and strip headfires can be implemented, only after an appropriate amount of black has been developed and the Burn Boss okays changing ignition patterns.

FIGURE 1



MTC Burn/Hunt Map
April 2012

Legend

-  No Hunting
-  Hunting
-  MTC Pres Burn
-  MTC Wetland

The outside agency and its consultants/engineer(s) (hereinafter referred to as licensee) agree that all IL Dept. of Military Affairs. Data distributed shall be used for the licensee's purposes only. The data shall only be used on the specified project for the unit of the outside agency. Consultants may not further reproduce or redistribute the data beyond the scope of the specified project for the unit of local government. Resale of the data is prohibited.

Path: Z:\GIS_Data_Archive\MARSEILLES\Jobs\201204_Burn_Hunt\Hunting_Burn_Maps.mxd

APPENDICES

Appendix A: IEPA Open Burn Permit Application



STATE OF ILLINOIS
 ENVIRONMENTAL PROTECTION AGENCY
 DIVISION OF AIR POLLUTION CONTROL
 P. O. BOX 19506
 SPRINGFIELD, ILLINOIS 62794-9506

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

For Agency Use Only

I.D. _____

Permit _____

APPLICATION FOR OPEN BURNING PERMIT

1. APPLICANT

Name: _____

Address: _____ Zip Code: _____

Contact Person: _____ Phone: ____/____/____

2. TYPE OF PERMIT APPLICATION

___ Firefighting Instruction/Research ___ Prairie or Forest Ecology Management

___ Disaster Waste ___ Landscape Waste, With Air Curtain Destructor

___ Other (Specify): _____

3. GENERAL JUSTIFICATION FOR OPEN BURNING

Reasons why alternatives to open burning are not available: _____

Reasons why such burning is in the public interest: _____

4. SITE

Address: _____

County: _____ Township: _____

Attach to this application (1) a sketch of the immediate vicinity of the site, and (2) a printed map of the general area with the site and nearby features marked. Together these maps must describe the site and provide the distance to nearby features, including adjacent structures, residences, populated areas, roadways, airports, lakes and waterways, hospitals, nursing homes and schools.

5. DURATION AND SCHEDULE

Estimated duration of Open Burning: _____ Total Hours

If Open Burning will occur over more than one day: _____ Hours/Day

Scheduled Date(s): _____ Alternate Date(s): _____

Name of individual to contact on-site to verify date(s) for Open Burning: _____

_____ Phone: ____/____/____

6. MATERIALS TO BE BURNED

<u>Item</u>	<u>Amount/Size</u>	<u>Composition/Description/Contents</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Specify total amounts of material to burned at the site. Include material(s) used to start the fire and any supplemental material(s) used to maintain the fire. Describe items in appropriate terms, that is

Prairies: Acres - Type and extent of vegetation

Chemicals: Volume or weight - chemical constituents

Buildings: Stories, rooms, square feet - type of construction, state of deterioration, roofing & siding materials, remaining furnishings, other contents

7. CONTAMINANT EMISSIONS

__ Particulate Matter _____ LB __ Sulfur Dioxide _____ LB __ Nitrogen Oxide _____ LB
 __ Organic Material _____ LB __ Carbon Monoxide _____ LB
 __ Other (_____) _____ LB

Attach calculations or other means by which the above data was obtained. (This Section need not be completed for burning of vegetation, landscpae waste, building debris, and agricultural waste. If the materials are adequately described in Section 6).

8. RESIDUE DISPOSAL

Method to be used to dispose of the residue from Open Burning: _____

9. ABATEMENT

Steps taken in planning for Open Burning to minimize emissions and air quality impacts:

__ Amount of Material __ Scheduling __ Site Selection __ Other (_____)

Explanation: _____

Methods used during Open Burning to reduce contaminant emissions and minimize impact on air quality:

__ Water-Fog Curtain __ Controlled Burn __ Other (_____)

Explanation: _____

10. NOTIFICATION

Have individuals living or working near the site been notified of the proposed Open Burning?

Yes No If "Yes", explain method of notice and any additional measures to be taken to respond to concerns:

11. ADDITIONAL INFORMATION -LANDSCAPE WASTE DISPOSAL ONLY!

Name of air curtain destructor or comparable device: _____

Manufacturer: _____ Model No.: _____

Attach a copy of the manufacturer's written instructions for use of the device to the application. A copy of these instructions should be available at the Open Burning site.

12. ADDITIONAL INFORMATION - DISASTER WASTE DISPOSAL ONLY!

Type of Disaster: Tornado Ice Storm Flood Other(Specify): _____

Disaster Declared By: Governor Of Illinois President Of The United States
Will material other than clean wooden building debris, landscape waste or agricultural waste, caused by the disaster, be burned? Yes No

13. ADDITIONAL INFORMATION -FIREFIGHTING INSTRUCTION/RESEARCH ONLY!

Participation in the exercise: Organizations or Departments Estimated Number of participants

<u>Organizations or Departments</u>	<u>Estimated Number of participants</u>
_____	_____
_____	_____
_____	_____

Scope of Training Exercise: Use Of Extinguishers Forceable Entry
 Rescue Techniques Use of Smoke Masks and Breathing Apparatus Other(Specify): _____

Description of Open Burning as related to the training exercise (plan of fire, phases of training, methods of ignition, extinguishment methods, etc.):

Attach written plan for exercise or similar exercise, if available
List of other training activities in the last 12 months including all Open Burning exercises:

AUTHORIZED SIGNATURE

The undersigned hereby makes application for an Open Burning Permit and certifies that the statements contained herein are true and correct.

Signature: _____ Date: _____

Typed Or Printed Name Of Signer: _____

Title Of Signer: _____

Additional Comments:

Appendix B: NWCG Prescribed Fire Go/NO-GO Checklist PMS 421



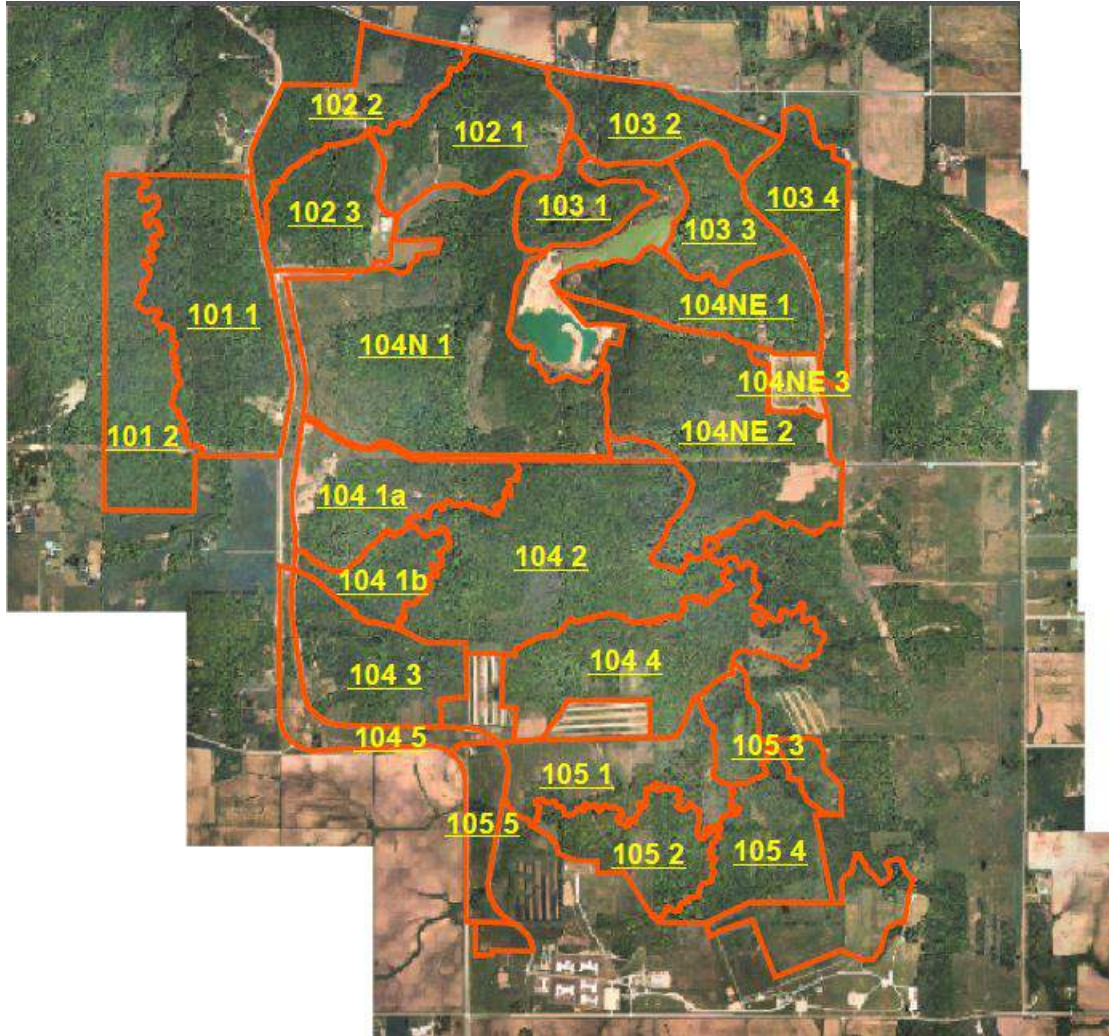
NWCG PRESCRIBED FIRE GO/NO-GO CHECKLIST

Yes	No	Questions
		Are ALL fire prescription elements met?
		Are ALL smoke management specifications met?
		Has ALL required current and projected fire weather forecast been obtained and are they it favorable?
		Are ALL planned operations personnel and equipment on-site, available, and operational?
		Has the availability of ALL contingency resources been checked, and are they available?
		Have ALL personnel been briefed on the project objectives, their assignment, safety hazards, escape routes, and safety zones?
		Have all the pre-burn considerations identified in the prescribed fire plan been completed or addressed?
		Have ALL the required notifications been made?
		Are ALL permits and clearances obtained?
		In your opinion, can the burn be carried out according to the prescribed fire plan and will it meet the planned objective?

If all the questions were answered "YES" proceed with a test fire. Document the current conditions, location, and results

PMS 421 (1/02)

Appendix C: MTC Prescribed Burn Unit Map



Appendix D: Burn Unit Plans for Compartment 102, 103, 104, and 105

PRESCRIBED BURN PLAN
Compartment 102

1. BURN UNIT INFORMATION:

Training site: MTC

Burn Unit: 102-1, -2, & -3

Unit Area: 230 ac: 93, 73, 64 ac respectively by sub-unit

2. SOURCES OF EMERGENCY ASSISTANCE (location, phone #, and/or frequency):

MTC Range Control: 815-750-6522/FM 41750

Burn Boss (On-Site):

Fire: Marseilles FD 815-795-5535

Law Enforcement: 911

Medical: 911

3. PERMITS AND OFFICIAL NOTIFICATIONS:

EPA Burn Permit: required

Local Fire: Marseilles FD 815-795-5535

Local Law Enforcement: Marseilles PD or LaSalle County Sherriff

4. CREW ORGANIZATION

Qualified fire leaders(s):

Crew Number to

Squad/Team Composition:

Special fitness or experience requirements:

5. BURN DURATION

Time (indicate minutes or hours) for:

Baseline Preparation:

Spreading Fire:

Mop-up:

Total Duration:

6. SAFETY/RISK MANAGEMENT

Identified Risks:

Mitigation measures:

7. NEIGHBOR NOTIFICATIONS:

Name	Address	Phone

8. UNIT DESCRIPTION:

Vegetation Types	Fuel Models	% of Unit Area	% Slope	Aspect
Oak hickory forest	9	90	<5%	north
grassland	3	10	<2%	north

Fire Unit Narrative Description (include description of surrounding fuels):

Compartment 102-1 is comprised of mature oak hickory forest with over 24% of the stand being white oak with a broad mixture of other upland species. Much of this burn unit has well used bivouac and urban terrain features which must be protected with additional support during any ignition operations.

Due to the mixed nature of fuel types here the majority of the stands will be classified as Timber FM 9, while open areas more closely reflect Grassland FM 3. Compartment 102-2 has an average of 320 trees/acre (ranging from 220-380), 107 ft² of basal area/acre (ranging from 80-120), 102% stocking (ranging from 81-110), and an average tree diameter of 7.9 inches (ranging from 6.5-9.5). The majority of the trees in this section are of desirable species. Oaks accounted for 69.0% of the trees inventoried in the north section while hickories only accounted for 4.8% (all shagbark hickory).

Compartment 102-3 contains 63.5 acres and ranges from 220 to 500 trees/acre, 60 to 120 ft²/acre of basal area, 61 to 110% stocking, and the average tree diameter is 6.9 inches. Sawtimber is the main size-class for 55% of the compartment and pole-sized trees are the main size class for the other 45% of the compartment. The vast majority of trees in this section are characteristic of an oak-hickory cover type.

Maps Attached:

Location map: Yes / No
 Burn unit map: Yes / No
 Other:

9. PRESCRIBED BURN JUSTIFICATION:

Type of Burn: Prescribed backing, surface fire

Burn Unit Management Goal(s):

1. Encourage oak maintenance by reducing understory and midstory competing stems
2. Grassland management around bivouac sites and MOUT models
3. Enhance training area quality and landscape mosaic
4. Enhance upland game habitat

10. FUEL AND WEATHER PRESCRIPTION (provide acceptable ranges)

Required Parameters:	MAX	MIN	PREFERRED (if applicable)
Wind Direction (degrees)	360	0	210
Effective Windspeed (mph)	15	0	8-12
1-Hour Fuel Moisture (%)	12	5	
10-hour Fuel Moisture (%)	16	9	
100-hour Fuel Moisture (%)			
Live Fuel Moisture (%)			
Atmospheric Mixing Height (ft)		1500	
Guidance Parameters:	MAX	MIN	PREFERRED (if applicable)
Air Temperature (°F)	80	30	
Relative Humidity (%)	50	24	
Days Since Rain	10	2	
20 FT Wind Speed (mph)			

Other Comments:

11. PREDICTED FIRE BEHAVIOR (from BEHAVE or attach BEHAVE outputs: use inputs from #7; include predictions for fuels surrounding burn unit). Use this information as a guide to the potential range of behavior from a free-burning fire, and for contingency planning.

	Fuel Model		
	#9	#	#
Max. Headfire Flame Length	4'		

Min. Headfire Flame Length	.5'		
Max. HF Rate of Spread	10 ch/hr		
Min. HF Rate of Spread	2 ch/hr		
Max. Backfire Flame Length			
Min. Backfire Flame Length			
Max. BF Rate of Spread			
Min. BF Rate of Spread			
Max. Scorch Height			

12. SMOKE MANAGEMENT

Sensitive Area	Direction from Unit	Distance from Unit
Town of Marseilles	NW	2 mile

13. EQUIPMENT REQUIREMENTS

Equipment Item	Number	Source

14. MANAGING THE BURN (Describe each of the following):

Firebreak preparations: western and northern flanks can be built right on the fenceline along the roadways to the west and north. In addition, the gravel road on the south flank will provide an adequate fuelbreak for igniting this unit. If necessary, sub-units can be truncated using the interior streambed and the intersecting two-track lane leading to the northern HLZ.

Firing techniques and ignition pattern: Using the northeastern flank road as an anchor point, begin blacklining westward along the north flank, then turn down both opposing flanks, moving gradually towards the SW corner of the unit, whereby a headfire could be used to cover the interior.

Crew communication: IAW Burn Boss directives and Range Control standards

Fire behavior and weather monitoring: Follow 10-18 Fire Orders and Watch-out Situations

Holding:

Fire sensitive areas: Note particular care must be used around the MOUT and FOB terrain models. Be sure to have adequate suppression equipment staged nearby when backfiring around these structures.

Contingencies (include safety zones, escape routes, secondary control lines, escape response procedures):

Potential hazards to crew:

Mop-up:

Public Relations:

Follow-up assignments:

15. MONITORING AND EVALUATION

Site Fire Management Plan complete? Yes / No

Exemptions or modifications:

Justification(s) for exemptions or modifications:

16. SUBMISSION AND APPROVAL

Plan Submitted By: _____ Title: _____

Plan Approved By: _____ Title: _____

PRE-BURN CHECKLIST AND CREW BRIEFING

Location:

Fire Unit:

Date:

A. PRIOR TO CREW BRIEFING

- Fire Unit is as described in plan.
- Required firebreaks complete.
- Permits obtained. Give permit #'s:
- Official and neighbor notifications complete.
- Required equipment is on-site and functioning.
- Planned ignition and containment methods are appropriate.
- List of emergency phone numbers are in each vehicle.
- Planned contingencies and mop-up are appropriate.

B CREW BRIEFING

- Each crew member has a burn unit map.
- Fire Unit size and boundaries discussed.
- Fire Unit hazards discussed.
- Purpose of burn.
- Anticipated fire and smoke behavior.
- Review of equipment and troubleshooting.
- Check crew qualifications.
- Review organization of crew and assignments.
- Review methods of ignition, holding, mop-up, communications.
- Review contact with the public; traffic concerns.
- Location of vehicles, keys, and nearest phone.
- Location of back-up equipment, supplies, and water.
- Review all contingencies including escape routes.
- Review mop-up procedures.
- Answer questions from crew.
- Give crew members the opportunity to decline participation.

C. PRIOR TO IGNITION

- Weather and fuel conditions are within prescriptions.
- Weather forecast, obtained within two hours of ignition, says prescribed weather will hold for two hours past expected duration of burn.
- Crew members have required protective clothing.
- Crew members have matches.
- Conduct test burn.

D. BEFORE LEAVING BURN UNIT

- Mop-up completed as described in prescription.
- Next morning inspection arranged.
- Notifications of completed burn (if required).

E. NOTE ANY MODIFICATIONS TO RX

Prescribed Fire Burn Boss: _____ **Date:** _____

PRESCRIBED BURN PLAN
Compartment 103 & 104 NE-1

1. BURN UNIT INFORMATION:

Training site: MTC
Burn Units: 103-1, -2, & -3; 104 NE-1
Unit Area: 223 ac: 39, 61, 43, 77 ac respectively by sub-unit

2. SOURCES OF EMERGENCY ASSISTANCE (location, phone #, and/or frequency):

MTC Range Control: 815-750-6522/FM 41750 Burn Boss (On-Site):
Fire: Marseilles FD 815-795-5535
Law Enforcement: 911
Medical: 911

3. PERMITS AND OFFICIAL NOTIFICATIONS:

EPA Burn Permit: required
Local Fire: Marseilles FD 815-795-5535
Local Law Enforcement: Marseilles PD or LaSalle County Sherriff

4. CREW ORGANIZATION

Qualified fire leaders(s):
Crew Number to
Squad/Team Composition:
Special fitness or experience requirements:

5. BURN DURATION

Time (indicate minutes or hours) for:
Baseline Preparation:
Spreading Fire:
Mop-up:
Total Duration:

6. SAFETY/RISK MANAGEMENT

Identified Risks:

Mitigation measures:

9. PRESCRIBED BURN JUSTIFICATION:

Type of Burn: Prescribed backing, surface fire

Burn Unit Management Goal(s):

1. Encourage savanna maintenance by reducing midstory competing stems across stands
2. Grassland management within SFWA Hill Prairie
3. Enhance training area quality and landscape mosaic
4. Enhance upland game habitat

10. FUEL AND WEATHER PRESCRIPTION (provide acceptable ranges)

Required Parameters:	MAX	MIN	PREFERRED (if applicable)
Wind Direction (degrees)	360	0	180-210
Effective Windspeed (mph)	15	0	8-12
1-Hour Fuel Moisture (%)	12	5	
10-hour Fuel Moisture (%)	16	9	
100-hour Fuel Moisture (%)			
Live Fuel Moisture (%)			
Atmospheric Mixing Height (ft)		1500	
Guidance Parameters:	MAX	MIN	PREFERRED (if applicable)
Air Temperature (°F)	80	30	
Relative Humidity (%)	50	24	
Days Since Rain	10	2	
20 FT Wind Speed (mph)			

Other Comments:

11. PREDICTED FIRE BEHAVIOR (from BEHAVE or attach BEHAVE outputs: use inputs from #7; include predictions for fuels surrounding burn unit). Use this information as a guide to the potential range of behavior from a free-burning fire, and for contingency planning.

	Fuel Model		
	#9	#	#
Max. Headfire Flame Length	4'		
Min. Headfire Flame Length	.5'		
Max. HF Rate of Spread	10 ch/hr		
Min. HF Rate of Spread	2 ch/hr		
Max. Backfire Flame Length			

Min. Backfire Flame Length			
Max. BF Rate of Spread			
Min. BF Rate of Spread			
Max. Scorch Height			

12. SMOKE MANAGEMENT

Sensitive Area	Direction from Unit	Distance from Unit
Town of Marseilles	NW	2 mile

13. EQUIPMENT REQUIREMENTS

Equipment Item	Number	Source

14. MANAGING THE BURN (Describe each of the following):

Firebreak preparations: The gravel road that truncates these subunits is a perfect fuelbreak and anchor point from which to establish blacklining operations. The principal concern is to get 103-3 and 104 NE-1 burned more frequently to enhance the expansion of the savanna character in this section of the facility.

Firing techniques and ignition pattern: Using the northeastern flank road as an anchor point, begin blacklining westward along the north flank, then turn down both opposing flanks around the south end of the retention pond near the quarry, moving gradually towards the southern flank of the unit, whereby a headfire could be used to cover the interior.

Crew communication: IAW Burn Boss directives and Range Control standards

Fire behavior and weather monitoring: Follow 10-18 Fire Orders and Watch-out Situations

Holding:

Fire sensitive areas: Note particular care must be used around the MOUT and FOB terrain models. Be sure to have adequate suppression equipment staged nearby when backfiring around these structures.

Contingencies (include safety zones, escape routes, secondary control lines, escape response procedures):

Potential hazards to crew:

Mop-up:

Public Relations:

Follow-up assignments:

15. MONITORING AND EVALUATION

Site Fire Management Plan complete? Yes / No

Exemptions or modifications:

Justification(s) for exemptions or modifications:

16. SUBMISSION AND APPROVAL

Plan Submitted By: _____ Title: _____

Plan Approved By: _____ Title: _____

PRE-BURN CHECKLIST AND CREW BRIEFING

Location:

Fire Unit:

Date:

A. PRIOR TO CREW BRIEFING

- Fire Unit is as described in plan.
- Required firebreaks complete.
- Permits obtained. Give permit #'s:
- Official and neighbor notifications complete.
- Required equipment is on-site and functioning.
- Planned ignition and containment methods are appropriate.
- List of emergency phone numbers are in each vehicle.
- Planned contingencies and mop-up are appropriate.

B CREW BRIEFING

- Each crew member has a burn unit map.
- Fire Unit size and boundaries discussed.
- Fire Unit hazards discussed.
- Purpose of burn.
- Anticipated fire and smoke behavior.
- Review of equipment and troubleshooting.
- Check crew qualifications.
- Review organization of crew and assignments.
- Review methods of ignition, holding, mop-up, communications.
- Review contact with the public; traffic concerns.
- Location of vehicles, keys, and nearest phone.
- Location of back-up equipment, supplies, and water.
- Review all contingencies including escape routes.
- Review mop-up procedures.
- Answer questions from crew.
- Give crew members the opportunity to decline participation.

C. PRIOR TO IGNITION

- Weather and fuel conditions are within prescriptions.
- Weather forecast, obtained within two hours of ignition, says prescribed weather will hold for two hours past expected duration of burn.
- Crew members have required protective clothing.
- Crew members have matches.
- Conduct test burn.

D. BEFORE LEAVING BURN UNIT

- Mop-up completed as described in prescription.
- Next morning inspection arranged.
- Notifications of completed burn (if required).

E. NOTE ANY MODIFICATIONS TO RX

Prescribed Fire Burn Boss: _____ Date: _____

PRESCRIBED BURN PLAN
Compartment 104

1. BURN UNIT INFORMATION:

Training site: MTC

Burn Units: 104N-1, 104 NE-2, 104-1a&b, 104-2, 104-3, 104-4, 104-5

Unit Area: 970 total: subunits 256, 166, 82, 37, 194, 80, 121, 34, respectively

2. SOURCES OF EMERGENCY ASSISTANCE (location, phone #, and/or frequency):

MTC Range Control: 815-750-6522/FM 41750

Burn Boss (On-Site):

Fire: Marseilles FD 815-795-5535

Law Enforcement: 911

Medical: 911

3. PERMITS AND OFFICIAL NOTIFICATIONS:

EPA Burn Permit: required

Local Fire: Marseilles FD 815-795-5535

Local Law Enforcement: Marseilles PD or LaSalle County Sherriff

4. CREW ORGANIZATION

Qualified fire leaders(s):

Crew Number to

Squad/Team Composition:

Special fitness or experience requirements:

5. BURN DURATION

Time (indicate minutes or hours) for:

Baseline Preparation:

Spreading Fire:

Mop-up:

Total Duration:

6. SAFETY/RISK MANAGEMENT

Identified Risks:

Mitigation measures:

buffer strips around the installation which could easily be used in the future to hold a running headfire from escaping the facility onto adjacent property.

Maps Attached:

Location map: Yes / No

Burn unit map: Yes / No

Other:

9. PRESCRIBED BURN JUSTIFICATION:

Type of Burn: Prescribed backing, surface fire

Burn Unit Management Goal(s):

1. Encourage savanna maintenance by reducing midstory competing stems across stands
2. Grassland management on HLZ and small hill prairie remnants
3. Enhance training area quality and landscape mosaic
4. Enhance upland game habitat

10. FUEL AND WEATHER PRESCRIPTION (provide acceptable ranges)

Required Parameters:	MAX	MIN	PREFERRED (if applicable)
Wind Direction (degrees)	360	0	180-270
Effective Windspeed (mph)	15	0	8-12
1-Hour Fuel Moisture (%)	12	5	8-10
10-hour Fuel Moisture (%)	16	9	8-10
100-hour Fuel Moisture (%)			
Live Fuel Moisture (%)			
Atmospheric Mixing Height (ft)		1500	
Guidance Parameters:	MAX	MIN	PREFERRED (if applicable)
Air Temperature (°F)	80	30	
Relative Humidity (%)	50	24	
Days Since Rain	10	2	
20 FT Wind Speed (mph)			

Other Comments:

11. PREDICTED FIRE BEHAVIOR (from BEHAVE or attach BEHAVE outputs: use inputs from #7; include predictions for fuels surrounding burn unit). Use this information as a guide to the potential range of behavior from a free-burning fire, and for contingency planning.

	Fuel Model		
	#9	#	#
Max. Headfire Flame Length	4'		
Min. Headfire Flame Length	.5'		
Max. HF Rate of Spread	10 ch/hr		
Min. HF Rate of Spread	2 ch/hr		
Max. Backfire Flame Length			
Min. Backfire Flame Length			
Max. BF Rate of Spread			
Min. BF Rate of Spread			
Max. Scorch Height			

12. SMOKE MANAGEMENT

Sensitive Area	Direction from Unit	Distance from Unit
Township road on western flank	W	Within sight <u>±</u> 100 yrds
ASP	Central to 104-4	
Cantonment Area	south	2000 ft

13. EQUIPMENT REQUIREMENTS

Equipment Item	Number	Source

14. MANAGING THE BURN (Describe each of the following):

Firebreak preparations: This large unit is broken down into smaller subunits by use of natural water features, or gravel roadways that are excellent fuelbreaks and provide many anchor points from which to establish blackline operations. Splitting the central portion of the units is a east-west running right of way which should be kept open for suppression or ignition operations. The southern flank of this central unit runs along Rufous Lane heading into the ASP area inside unit 104-4. Any ignition operations around that facility must be done carefully with staged personnel and equipment. Mowing of the grass immediately around the facility would foster use of a quick wetline from which to safely ignite.

Firing techniques and ignition pattern: Unique to each subunit and should be defined by the burn boss who writes the actual prescription.

Crew communication: IAW Burn Boss directives and Range Control standards

Fire behavior and weather monitoring: Follow 10-18 Fire Orders and Watch-out Situations

Holding:

Fire sensitive areas: Note particular care must be used around the IDNR Trailer in 104-5. Be sure to have adequate suppression equipment and personnel staged nearby when backfiring around this facility.

Contingencies (include safety zones, escape routes, secondary control lines, escape response procedures):

Potential hazards to crew:

Mop-up:

Public Relations:

Follow-up assignments:

15. MONITORING AND EVALUATION

Site Fire Management Plan complete? Yes / No

Exemptions or modifications:

Justification(s) for exemptions or modifications:

16. SUBMISSION AND APPROVAL

Plan Submitted By: _____ **Title:** _____

Plan Approved By: _____ **Title:** _____

PRE-BURN CHECKLIST AND CREW BRIEFING

Location:

Fire Unit:

Date:

A. PRIOR TO CREW BRIEFING

- Fire Unit is as described in plan.
- Required firebreaks complete.
- Permits obtained. Give permit #'s:
- Official and neighbor notifications complete.
- Required equipment is on-site and functioning.
- Planned ignition and containment methods are appropriate.
- List of emergency phone numbers are in each vehicle.
- Planned contingencies and mop-up are appropriate.

B CREW BRIEFING

- Each crew member has a burn unit map.
- Fire Unit size and boundaries discussed.
- Fire Unit hazards discussed.
- Purpose of burn.
- Anticipated fire and smoke behavior.
- Review of equipment and troubleshooting.
- Check crew qualifications.
- Review organization of crew and assignments.
- Review methods of ignition, holding, mop-up, communications.
- Review contact with the public; traffic concerns.
- Location of vehicles, keys, and nearest phone.
- Location of back-up equipment, supplies, and water.
- Review all contingencies including escape routes.
- Review mop-up procedures.
- Answer questions from crew.
- Give crew members the opportunity to decline participation.

C. PRIOR TO IGNITION

- Weather and fuel conditions are within prescriptions.
- Weather forecast, obtained within two hours of ignition, says prescribed weather will hold for two hours past expected duration of burn.
- Crew members have required protective clothing.
- Crew members have matches.
- Conduct test burn.

D. BEFORE LEAVING BURN UNIT

- Mop-up completed as described in prescription.
- Next morning inspection arranged.
- Notifications of completed burn (if required).

E. NOTE ANY MODIFICATIONS TO RX

Prescribed Fire Burn Boss: _____ **Date:** _____

PRESCRIBED BURN PLAN
Compartment 105

1. BURN UNIT INFORMATION:

Training site: MTC
Burn Units: 105-1, 105-2, 105-3, 105-4, 105-5
Unit Area: 241 total: subunits 76, 59, 38, 68, respectively

2. SOURCES OF EMERGENCY ASSISTANCE (location, phone #, and/or frequency):

MTC Range Control: 815-750-6522/FM 41750 Burn Boss (On-Site):
Fire: Marseilles FD 815-795-5535
Law Enforcement: 911
Medical: 911

3. PERMITS AND OFFICIAL NOTIFICATIONS:

EPA Burn Permit: required
Local Fire: Marseilles FD 815-795-5535
Local Law Enforcement: Marseilles PD or LaSalle County Sherriff

4. CREW ORGANIZATION

Qualified fire leaders(s):
Crew Number to
Squad/Team Composition:
Special fitness or experience requirements:

5. BURN DURATION

Time (indicate minutes or hours) for:
Baseline Preparation:
Spreading Fire:
Mop-up:
Total Duration:

6. SAFETY/RISK MANAGEMENT

Identified Risks:

Mitigation measures:

Burn Unit Management Goal(s):

1. Encourage savanna maintenance by maintaining oak grubs in early successional areas
2. Grassland management around firing ranges
3. Enhance safety and vegetative conditions around ranges to reduce fire escape potential
4. Enhance upland game habitat

10. FUEL AND WEATHER PRESCRIPTION (provide acceptable ranges)

Required Parameters:	MAX	MIN	PREFERRED (if applicable)
Wind Direction (degrees)	360	0	180-270
Effective Windspeed (mph)	15	0	8-12
1-Hour Fuel Moisture (%)	12	5	8-10
10-hour Fuel Moisture (%)	16	9	8-10
100-hour Fuel Moisture (%)			
Live Fuel Moisture (%)			
Atmospheric Mixing Height (ft)		1500	
Guidance Parameters:	MAX	MIN	PREFERRED (if applicable)
Air Temperature (°F)	80	30	
Relative Humidity (%)	50	24	
Days Since Rain	10	2	
20 FT Wind Speed (mph)			

Other Comments:

11. PREDICTED FIRE BEHAVIOR (from BEHAVE or attach BEHAVE outputs: use inputs from #7; include predictions for fuels surrounding burn unit). Use this information as a guide to the potential range of behavior from a free-burning fire, and for contingency planning.

	Fuel Model		
	#9	#	#
Max. Headfire Flame Length	4'		
Min. Headfire Flame Length	.5'		
Max. HF Rate of Spread	10 ch/hr		
Min. HF Rate of Spread	2 ch/hr		
Max. Backfire Flame Length			
Min. Backfire Flame Length			
Max. BF Rate of Spread			

Min. BF Rate of Spread			
Max. Scorch Height			

12. SMOKE MANAGEMENT

Sensitive Area	Direction from Unit	Distance from Unit
Township road on western flank	W	Within sight \pm 100 yrds
ASP	north	100 ft from north flank
Cantonment Area	south	200 ft

13. EQUIPMENT REQUIREMENTS

Equipment Item	Number	Source

14. MANAGING THE BURN (Describe each of the following):

Firebreak preparations: This large unit is broken down into smaller subunits by use of natural water features that are excellent fuelbreaks and provide many anchor points from which to establish blackline operations. On the north flank of this large unit is Rufous Lane heading into the ASP which can be used as an anchor point from which to initiate ignition operations. The southern flank of this central unit runs is the Cantonment Area and the firing ranges in Area A2. Mowing of the grass immediately around the ranges would foster use of a quick wetline from which to safely ignite.

Firing techniques and ignition pattern: Unique to each subunit and should be defined by the burn boss who writes the actual prescription.

Crew communication: IAW Burn Boss directives and Range Control standards

Fire behavior and weather monitoring: Follow 10-18 Fire Orders and Watch-out Situations

Holding:

Fire sensitive areas: Note particular care must be used around the ASP in 105-2 and IDNR Trailer in 105-5. Be sure to have adequate suppression equipment and personnel staged nearby when burning around this facility.

Contingencies (include safety zones, escape routes, secondary control lines, escape response procedures):

Potential hazards to crew:

Mop-up:

Public Relations:

Follow-up assignments:

15. MONITORING AND EVALUATION

Site Fire Management Plan complete? Yes / No

Exemptions or modifications:

Justification(s) for exemptions or modifications:

16. SUBMISSION AND APPROVAL

Plan Submitted By: _____ Title: _____

Plan Approved By: _____ Title: _____

PRE-BURN CHECKLIST AND CREW BRIEFING

Location:

Fire Unit:

Date:

A. PRIOR TO CREW BRIEFING

- Fire Unit is as described in plan.
- Required firebreaks complete.
- Permits obtained. Give permit #'s:
- Official and neighbor notifications complete.
- Required equipment is on-site and functioning.
- Planned ignition and containment methods are appropriate.
- List of emergency phone numbers are in each vehicle.
- Planned contingencies and mop-up are appropriate.

B CREW BRIEFING

- Each crew member has a burn unit map.
- Fire Unit size and boundaries discussed.
- Fire Unit hazards discussed.
- Purpose of burn.
- Anticipated fire and smoke behavior.
- Review of equipment and troubleshooting.
- Check crew qualifications.
- Review organization of crew and assignments.
- Review methods of ignition, holding, mop-up, communications.
- Review contact with the public; traffic concerns.
- Location of vehicles, keys, and nearest phone.
- Location of back-up equipment, supplies, and water.
- Review all contingencies including escape routes.
- Review mop-up procedures.
- Answer questions from crew.
- Give crew members the opportunity to decline participation.

C. PRIOR TO IGNITION

- Weather and fuel conditions are within prescriptions.
- Weather forecast, obtained within two hours of ignition, says prescribed weather will hold for two hours past expected duration of burn.
- Crew members have required protective clothing.
- Crew members have matches.
- Conduct test burn.

D. BEFORE LEAVING BURN UNIT

- Mop-up completed as described in prescription.
- Next morning inspection arranged.
- Notifications of completed burn (if required).

E. NOTE ANY MODIFICATIONS TO RX

Prescribed Fire Burn Boss: _____ **Date:** _____

APPENDIX H

Zika Vector Surveillance Guide and Response Plan

March 2016
Entomological Sciences Program
Environmental Health Engineering
Army Public Health Center

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1. Target Audience

This Zika Vector Surveillance and Response Guide is written to assist preventive medicine and pest management personnel to prepare for and address Zika virus transmission on their installation.

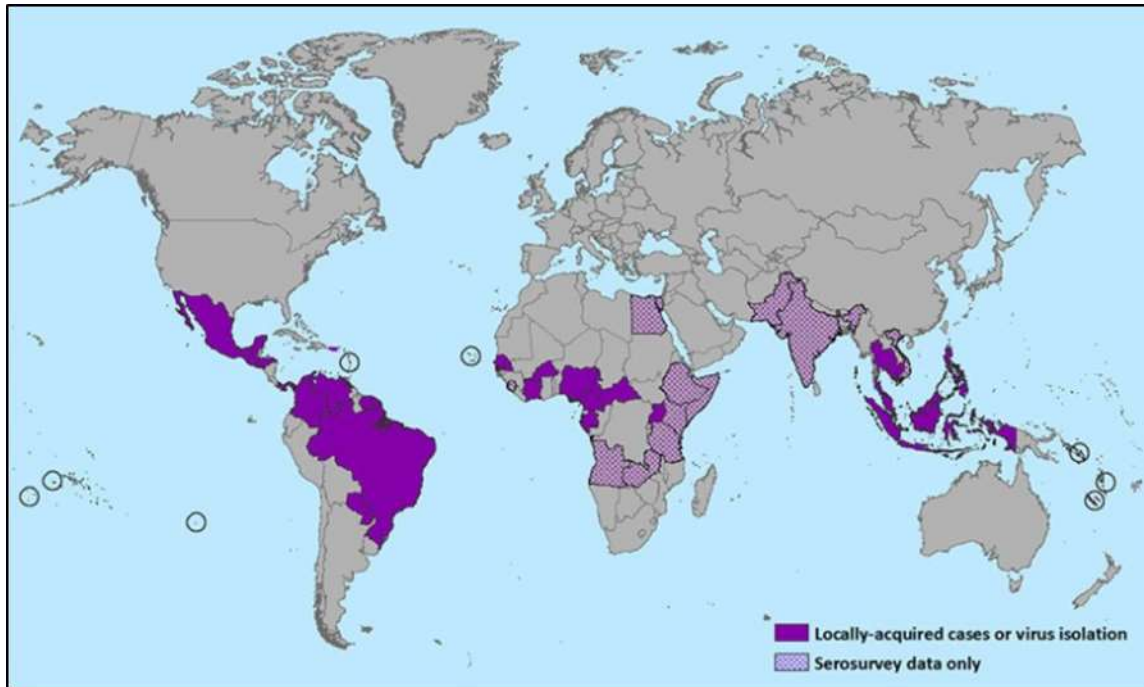
2. Background

Aedes species mosquitoes transmit Zika virus when they bite infected people and then feed on healthy individuals. Until recently, Zika virus infection was considered unimportant because, unlike dengue or chikungunya, it was asymptomatic in 80% of people and caused mild symptoms in the remaining 20%. However, following an outbreak of Zika virus in Brazil in 2015, the Brazilian Ministry of Health is reporting a significant increase in infants born with microcephaly (a birth defect causing smaller than expected head size and incomplete brain development). The U.S. Centers for Disease Control and Prevention (CDC) is tracking these reports and is supporting an investigation into a possible link between microcephaly and Zika virus infection in pregnant women. The CDC is also investigating a possible link between Zika virus and Guillain-Barré syndrome, a rare disorder that causes the body's immune system to attack the nervous system.

Zika virus was first reported in a rhesus monkey in the Zika forest, Uganda, in 1947. Outbreaks of Zika have occurred in parts of Africa, Southeast Asia, and the Pacific Islands. Zika spread to the Western Hemisphere in 2015 and is estimated to have affected more than a million people in South and Central America, Mexico, and the Caribbean. To date, numerous travel-associated cases have been reported in the continental United States (CONUS), but no known local transmission through mosquito bites has been established. There is a serious concern that infected travelers returning to the United States will be bitten by *Aedes* mosquitoes and start local Zika virus transmission. The Army is actively working to prevent, and if necessary, manage outbreaks of Zika virus on Army installations.

a. Current Distribution of Zika Virus

As of March 1, 2016, the CDC reports 36 countries/territories with active Zika virus transmission: 31 in the Americas, one in Africa, and four in the Pacific.



Zika virus distribution: Countries that have past or current evidence of Zika virus transmission as of March 2016. Source: CDC, available online [here](#)

b. Clinical Information

Approximately one in five people infected with Zika virus will develop symptoms, which usually begin 2-7 days after being bitten by an infected mosquito. Common symptoms include fever, rash, joint pain and red eyes. Other symptoms include muscle pain, headache, pain behind the eyes, and vomiting. The illness is usually mild, with symptoms lasting for several days. Note that infection can go unrecognized in individuals that show no symptoms, and that infection can be misdiagnosed. Most people fully recover without severe complications, and hospitalization rates are low. Deaths associated with Zika virus are rare.

3. Authority

Zika virus mosquito surveillance and control is required by the following regulations:

- a. DoDI 4150.07, DoD Pest Management Program, 29 May 2008

para 4.2. “Use IPM to prevent or control pests and disease vectors that may adversely impact readiness or military operations by affecting the health of personnel...”

para 5.4.15. “Cooperate with State and local government agencies on issues involving pest management...”

para E.4.7.4. “The DoD Military Services shall ensure that responsibilities for surveillance and control of medically important pests, including insects and arthropods, are clearly delineated in the installation management plans and operational plans.”

b. DoDD 6490.02E, Comprehensive Health Surveillance, 8 February 2012.

Para 6. The Heads of the DoD Component Shall:

“(d) Implement programs and procedures to collect, interpret, and archive garrison and deployment occupational and environmental health surveillance data.”

c. AR 40-5, Preventive Medicine, 19 October 2009.

Para 4-7b.(1) “The following procedures and activities, provided to installation commanders or unit commanders by the preventive medicine staff of local medical commands, are essential in executing the pest management programs...”

“(a) Conducting surveillance for vectors and pests that affect the health and welfare of the installation community.”

“(d) Coordinating with local health officials to monitor the presence of disease vectors and other public health pests in the area surrounding the installation.”

d. AR 200-1, Environmental Quality, Environmental Protection and Enhancement, 13 Dec 2007. Para 5-3a, “Monitor and control pests that pose a threat to the health and safety of the installation population.”

Note: This response plan is not a regulation, but it is intended to assist those individuals responsible for conducting surveillance and control efforts on Army installations. Additional guidance is available in DA PAM 40-11.

4. Personal Protective Measures

Note: Special guidance is available pertaining to pregnant woman and Zika in USNORTHCOM and USSOUTHCOM areas. In accordance with these plans, women should consult with their healthcare providers.

Personnel should protect themselves from biting mosquitoes by wearing long pants and long-sleeved shirts, and by applying insect repellents to exposed skin. For military personnel, a fact sheet on the DoD Insect Repellent System is available [here](#). Military, Government Civilians, and their family members should use the following personal protective measures:

a. Insect Repellents for Skin

Insect repellents protect exposed skin from insect bites. Using Environmental Protection Agency (EPA) registered insect repellent is key to preventing mosquito bites that may transmit Zika virus. A variety of EPA-registered insect repellents are available to both military and civilian personnel.

(1) Adults

Approved military insect repellents for use on exposed skin come in a variety of formulations. Always refer to the label to determine frequency of repellent application based on activity. Do not apply repellent to eyes, lips, or to sensitive or damaged skin. See Appendix A for the list of DoD-Approved military insect repellents available for use on exposed skin.

(2) Pregnant and Breastfeeding Women

The CDC recommends that pregnant and breastfeeding women apply EPA-registered insect repellents labeled for use against mosquitoes. These insect repellents are safe to use while pregnant and breastfeeding when applied in accordance to the label directions and will help protect both mother and unborn child from Zika virus infections.

(3) Children

Parents should always select insect repellents registered by the EPA, which have been tested extensively to prove that they are both safe and effective. All EPA-registered insect repellents can safely be used on children, but may have age restrictions for extremely young children. Currently, no EPA-registered insect repellent can be used on a child younger than two months of age (infants). Parents should employ other methods to protect new babies from mosquito bites, including covering exposed skin with clothing, and covering strollers or cribs with mosquito netting. For more information on using insect repellents on children, see the fact sheet [here](#).

b. Insect Repellents for Clothing

Permethrin-treated military and civilian clothing safely and effectively repels mosquitoes. Clothing can be treated at the factory, or individuals can treat their own using temporary and permanent products, which are discussed below. Note that factory-treated clothing offers the highest degree of protection, and bonds the repellent uniformly and completely to the clothing.

(1) Military

Currently, both the Universal Camouflage Pattern (UCP) and Operational Camouflage Pattern (OCP) Army Combat Uniforms (ACU) are factory-treated with permethrin. This permethrin treatment will last for the serviceable lifetime of the uniform. Personnel should check the tags sewn into the uniform trousers and blouse to determine if the uniform is permethrin-treated. Older untreated uniforms can be treated using the 2-gallon sprayer method (NSN 6840-01-334-

2666) or the IDA kit (NSN 6840-01-345-0237), which also last for the serviceable lifetime of the uniform. Uniforms can be treated temporarily using the 0.5% aerosol spray can, and additional permethrin can be applied after six weeks and the sixth washing. Note that factory-treated uniforms, and uniforms treated with the 2-gallon sprayer and IDA kit may never be retreated with permethrin. Currently, maternity uniforms are not permethrin-treated, but can be safely treated using the above described methods.

(2) Civilian

Insect repellent-clothing for men, women, and children is available at outdoor and sporting goods stores such as Bass Pro Shop, Cabela's, REI, Dick's Sporting Goods, and L.L. Bean. Insect-repellent clothing is factory-treated with permethrin and will be labeled with a sew-in tag; always check for this tag before purchasing. According to studies conducted by the EPA, and feedback from the CDC, permethrin treated clothing is safe for pregnant and nursing women and children. Always read and follow the directions on the clothing label. Clothing can also be treated temporarily using the 0.5% aerosol spray can, and additional permethrin can be applied after six weeks and the sixth washing.

c. Bed Nets

If sleeping in a structurally-deficient building (one lacking air conditioning or proper screening), camping, or attending a field exercise, personnel should sleep inside a bed net to prevent mosquito bites. Lightweight, self-supporting, low profile pop-up bed nets factory-treated with permethrin are available in coyote brown (NSN 3740-01-518-7310) or green camouflage (NSN 3740-01-516-4415). A higher profile bed net called the Egret bed net (NSN 3740-01-644-4953) is also available and factory treated with both permethrin and deltamethrin. Untreated mosquito bed nets (NSN 7210-00-266-9736) should be treated with 0.5% permethrin aerosol spray and assembled properly on a cot. Check for holes in netting and keep loose edges off the ground by tucking them under the sleeping bag. Alternately, civilian-style bed nets are also available at camping and sporting goods stores.

5. Human Case Surveillance

Whereas mosquito-based surveillance is the preferred method for monitoring or predicting West Nile virus outbreaks, it is not an effective method to monitor or predict a Zika virus outbreak. For this mosquito-borne disease, it is more efficient to detect cases in people. In the United States, Zika is now a nationally notifiable condition at both military and civilian hospitals and clinics. At Military Treatment Facilities, all suspected or confirmed cases of Zika virus must be reported within 48 hours using the Disease Reporting System – internet (DRSi). Preventive Medicine personnel can be added to a daily e-mail update from the DRSi system to track reported cases. Contact usarmy.apg.medcom-aphc.mbx.disease-epidemiologyprogram13@mail.mil to be added to the daily report distribution list. Army preventive medicine personnel must also report cases through state systems. Timely

identification and response to mosquito-borne disease outbreaks like Zika require constant communication between healthcare providers, local and state public health departments, and vector control specialists.

6. Vector Surveillance

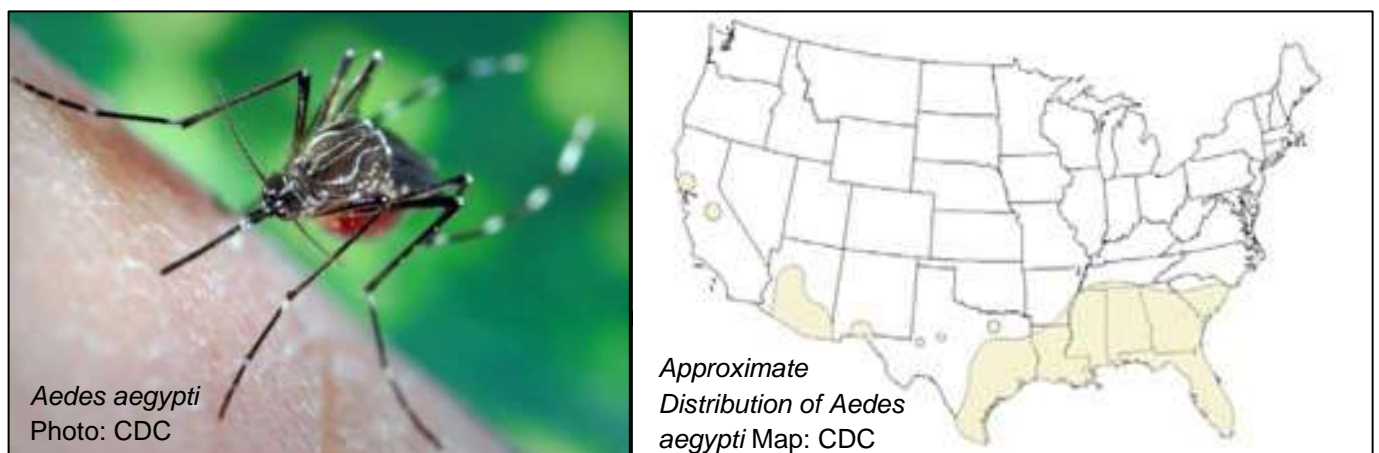
Vector surveillance should always be conducted as part of an integrated pest management program. Mosquito surveillance helps pinpoint control efforts by tracking the distribution and abundance of the *Aedes* spp. mosquitoes that transmit Zika. Effective surveillance relies on identifying larval breeding sites; catching, identifying, and testing adult mosquitoes for pathogens; responding to complaints; and collecting regional data from local health departments and mosquito abatement districts. Surveillance data can in turn be used to determine the appropriate control method and level of response.

a. Vector Biology

Zika virus is primarily transmitted to humans by *Aedes aegypti* (the yellow fever mosquito), with some possible involvement of *Aedes albopictus* (the Asian tiger mosquito). In American Samoa, *Aedes polynesiensis* has also been implicated as a Zika virus vector, while *Aedes mediovittatus* is a possible vector in the Caribbean. *Aedes* mosquitoes are frequently associated with urban environments, although they are also found in rural areas. *Aedes aegypti*, *Aedes albopictus*, and *Aedes polynesiensis* lay their eggs in natural and artificial water-holding containers. Once the eggs hatch, the larvae take approximately a week to develop into pupae, which then emerge as flying adults. These mosquitoes feed primarily on humans and are aggressive daytime biters. While these mosquitoes will enter homes, most bites are received outdoors. Only adult female mosquitoes bite humans and feed on blood, which they use to develop their eggs.

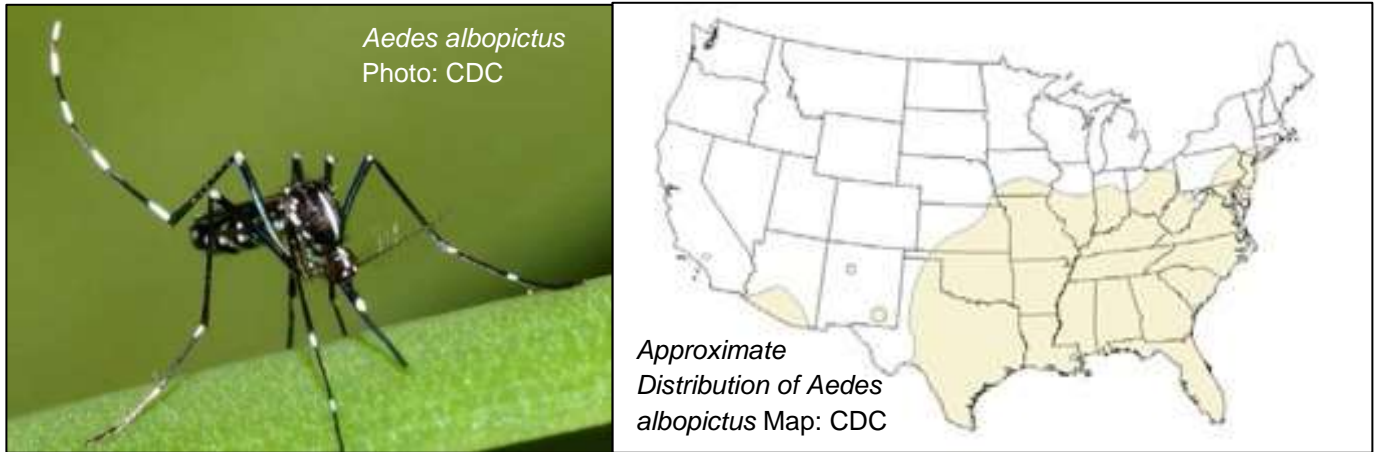
(1) *Aedes aegypti*

Aedes aegypti, the primary Zika vector, is a dark-colored mosquito with white-banded legs and lyre-shaped markings on the top of the thorax. *Aedes aegypti* is a morning- and evening-biting mosquito that breeds in man-made containers, such as flower pots or discarded tires, around homes. Although *Aedes aegypti* is native to Africa, travel and transportation of goods has expanded their range. *Aedes aegypti* is thought to have been brought into the US centuries ago during European exploration and colonization. This mosquito has expanded to regions in the southern United States.



(2) *Aedes albopictus*

Aedes albopictus is a dark-colored mosquito with white-banded legs and a single white stripe on the top of the thorax. It is a day-biting mosquito that utilizes a wider range of breeding places than *Aedes aegypti*, including artificial containers and natural water collections, and prefers to rest in thickets and dense vegetation. *Aedes albopictus* was first documented in CONUS in Texas in 1985, and in Florida in 1986. Since then, this mosquito rapidly spread throughout the eastern United States and continues to expand its range.



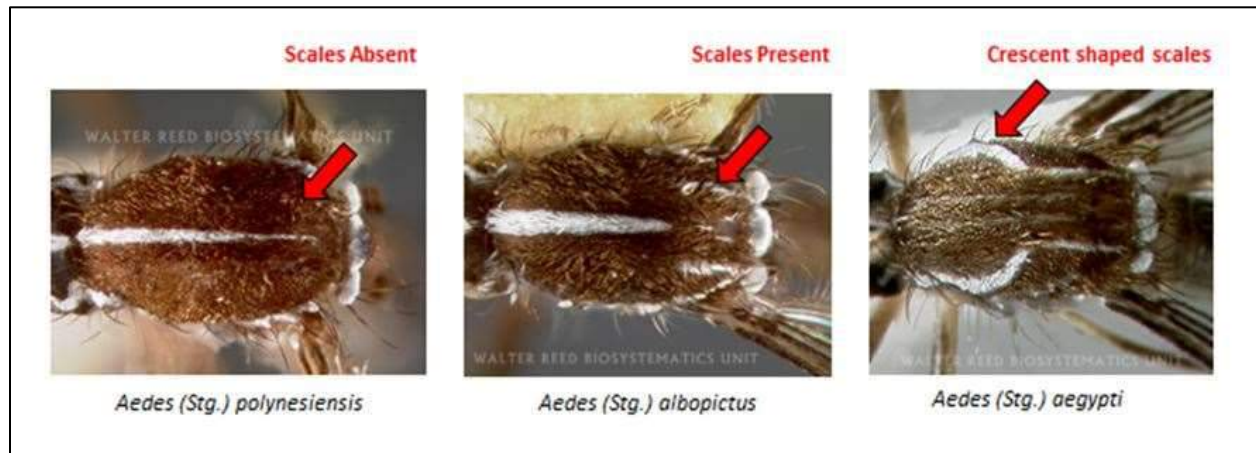
(3) *Aedes polynesiensis*

Aedes polynesiensis is implicated in Zika virus transmission in the island countries and territories of the South Pacific. This species is reported from the South Pacific on the islands of Austral Islands, Cook Islands, Ellice Islands, Fiji Islands, Hoorn Islands, Marquesas Islands, Pitcairn Island, Samoa Islands, South China Sea Islands, and Tuvalu. *Aedes polynesiensis* is semi-domestic with an extremely wide range of breeding places that includes tree holes, coconut shells and husks, various types of artificial containers, leaf axils, crab holes, banana stumps, cacao pods, and canoes. Females are primarily diurnal with biting peaks in the late afternoon and early morning. Adult female *Aedes polynesiensis* can be distinguished by a lack of posterior dorsocentral lines of pale scales (figure below). The dorsal surface of the hind femur within the basal area is completely dark as well. Adult male *Aedes polynesiensis* can be distinguished by examining the basal lobe of the coxite which has setae extending nearly to the base dorsally but without stout specialized setae. It is highly recommended that specimens



identified as *Aedes polynesiensis* be confirmed by a taxonomist. Specimens can be sent to Walter Reed Biosystematics Unit (WRBU) for confirmation upon request.

Below is a graphic showing how to separate the adults of each species based upon differences seen on top of the thorax (Courtesy of WRBU).



b. Surveillance Locations

The adult *Aedes* mosquito has a flight range of approximately 200 meters, which means that adults lay eggs in close proximity to humans. Consequently, adult and larval surveillance should focus on areas around homes and offices where human exposure can occur.

c. Larval Surveillance

Female *Aedes spp.* mosquitoes lay eggs in both natural and man-made water-filled containers. Visually examine water-holding containers such as tires, flower pots, wrinkled tarps, outdoor toys, trash, tree holes, leaf axils, and scarred tree roots for the presence of larvae or pupae. If water is hidden or protected, use a suction device (e.g., turkey baster) to reach the larvae. Use a larval dipper (see Appendix B) to sample larger containers or bodies of water. (Note: if larvae are found, initiate control efforts immediately by emptying standing water or treating it with a larvicide.) For additional guidance on using larval surveillance indices for control, see Appendix C.



d. Adult Surveillance

Recent research has determined that the most effective trap for catching *Aedes aegypti*, *Aedes albopictus*, and *Aedes polynesiensis* is the BG Sentinel Trap™ using a proprietary BG-Lure™. While less effective, CO₂-generating propane traps (e.g., Mosquito Magnet™) can also collect *Aedes spp.* If a BG Sentinel is not available, another alternative is the CDC Light trap augmented by CO₂ and, ideally, with a species-specific chemical lure. A list of recommended adult mosquito traps is provided in Appendix B. Aspirators can also be used to capture adult mosquitoes in confined areas (Appendix B). It should be noted that it is often a challenge to collect *Aedes albopictus* in meaningful numbers for diagnostic testing.



e. Egg Surveillance

If the BG Sentinel is not available, personnel can verify the presence of adult *Aedes spp.* mosquitoes using ovicups. Simple ovicups can be made from dark-colored containers. Fill cups part way with water and place a wooden tongue depressor or paper towel along the inside of the cup. Female *Aedes spp.* mosquitoes will lay their eggs on the wet paper towel or tongue depressor surface (no other genus of mosquito does this). If the small, dark, oblong eggs appear on the tongue depressor or paper towel, it verifies the presence of adult female *Aedes spp.* mosquitoes.



f. Mosquito Identification

A taxonomic key to identify mosquitoes to genus is attached in Appendix D. Species-specific pages to help identify field collected *Aedes aegypti*, *Aedes albopictus*, and *Aedes polynesiensis* are provided in Appendix E. If you are unfamiliar with mosquito identification, seek assistance from a trained Entomologist to ensure correct identification.

g. Recording Vector Surveillance

Personnel should record vector surveillance information from their installation using the Vector Surveillance Log attached in Appendix F. The log is also available for download on the [Army Public Health Center Mosquito-Borne Disease and Control page](#). Personnel record mosquito trap catches, and submit a copy of the log with their specimens for testing at their supporting Public Health Command laboratory. Based on individual laboratory procedures, testing results are usually populated into the Vector Surveillance Log and returned to the installation POC.

This log allows personnel to identify mosquito breeding areas, and use testing results to target Zika virus control efforts.

h. Pathogen Detection

Public Health Command laboratories can test mosquito samples from their assigned military installations for Zika virus. The following are key elements of the program:

The installation will contact their supporting PHC entomology branch, and personnel from the branch will help the installation plan a surveillance program and notify the vector diagnostics lab of impending support requirements. The installation submits samples to their PHC entomology branch using agreed-upon protocols. Entomology then submits the received samples to the lab and the lab performs analysis for Zika virus. In the event Zika virus is detected in a mosquito sample, the lab will notify entomology.

Upon positive pool confirmation, Entomology will contact the principal point of contact for the facility/surveillance by phone. They will then follow up with an e-mail notification with an attached scanned copy of the original data sheet. This message will also be cc-ed to appropriate regional health officials, the Army Public Health Center, and the Army Environmental Command (AEC) entomologist so that coordination can take place to identify and eliminate/control mosquito breeding sites that may be off-installation. If there is positive pool notification for a joint base facility, inter-service coordination will occur to address potential mosquito breeding source issues on the partner base.

7. Vector Control

Initiate targeted chemical control of *Aedes aegypti* and *Aedes albopictus* in concert with the installation integrated pest management (IPM) plan. Pesticide selection will require input from the installation's (AMC, IMCOM, NGB or USAR) command pest management consultant. Determine spraying thresholds at each installation based upon trapping equipment, the IPM plan, and potential coordination with the local community.

All chemical applications must conform to environmental and health regulations and include public notification. Only pesticides labeled for mosquito control will be used for control efforts. Only individuals who are certified to apply pesticides on military property will conduct chemical control.

Personnel should record all pest control on the electronic DD form 1532 available for download [here](#). For Zika virus mosquito control, submit copies of the DD 1532 to your supporting Public Health Command (see Appendix L), to the Army Public Health Center Pesticide Archival inbox at usarmy.apg.medcom-aphc.mbx.pesticide-archival@mail.mil, and to Dr. Bill Miller, AEC entomologist, william.b.miller54.civ@mail.mil. For questions about using the electronic DD

1532, contact the DoD Pesticide Hotline at usarmy.apg.medcom-aphc.mbx.pesticide-hotline@mail.mil or by phone at 410-436-3773 or DSN 584-3773.

a. Larval Control

(1) Breeding Source Elimination or Reduction

Controlling *Aedes spp.* mosquitoes is difficult, particularly in a suburban environment. Recent research shows that careful reduction of mosquito breeding sites (“source reduction”), in concert with educating the public to eliminate water-holding containers, can significantly reduce adult *Aedes albopictus* populations (Fonseca, et al, 2013). For this reason, source reduction and breeding site elimination measures should be given top priority. A checklist to reduce common mosquito breeding sites around homes and on military installations includes the following:

- Make sure rain gutters are not clogged with leaves or other debris and drain completely.
- Ensure that garbage cans and other receptacles have tight-fitting lids and do not collect water.
- Drill holes in the bottom of recycling bins and outdoor storage containers for drainage.
- Seek out and remove unneeded items that collect water such as plastic containers, flowerpots, children’s toys or any other items that can hold water.
- Check holes and cavities in tree trunks for water, and if present, fill with sand or cement.
- Drain or replace corrugated plastic piping used to drain downspouts.
- Empty and refresh pet water dishes, watering troughs, and birdbaths at least once a week.
- Check for standing water around faucets and repair any leaks.
- Keep swimming pools and spas chlorinated.
- Aerate ornamental pools and ponds.
- Empty children’s wading pools after use.
- Store small boats upside down.
- Make sure that water does not collect on covers of grills, spas, pools, boats, cars, or woodpiles.
- Fill in any depressions and low-lying areas in yards that accumulate water.
- Keep drainage ditches and culverts free of debris to allow water to drain properly.
- Ensure that screens on doors and windows are properly installed and free of holes and tears.
- Bright lights attract mosquitoes; consider using lower wattage bulbs or turning off exterior lighting when not needed.
- Eliminate any standing water that might accumulate indoors, such as in vases or in potted plants such as “lucky bamboo.”



Examples of locations on an installation that frequently breed mosquitoes. (Clockwise from top left) Clogged roof gutters and corrugated drain pipes are important mosquito breeding sites that are often overlooked. Water in birdbaths and outdoor pet dishes should be checked weekly. Tarps and equipment covers will sag, accumulate water, and breed mosquitoes if not properly secured. Trays for potted plants, equipment, and other outdoor items holding water should be drained or removed to prevent mosquito breeding.

(2) Larviciding

Breeding sites that cannot be altered or removed can be treated with bacterial larvicide [e.g., *Bacillus thuringiensis israelensis* (Bti)], insect growth regulator (methoprene) or insecticide (Temephos). A list of the larvicides available in the National Stock System can be found in Appendix G.

b. Adult Control

(1) Chemical Control

Adult *Aedes spp.* control can be successful if special care is paid to delivery methods, timing, and environmental conditions. It can also help break disease transmission cycles during an outbreak. Initiate targeted chemical control of *Aedes aegypti*, *Aedes albopictus*, and *Aedes polynesiensis* in areas surrounding residences or workplaces. Include backpack residual barrier treatment of densely- vegetated resting areas next to residences to help kill resting adults. Use a residual spray to treat the lower two feet of external walls and foundations. A list of application

equipment available from National Stock System can be found in Appendix H. A list of mosquito adulticides available from the National Stock System can be found in Appendix I.

(2) *Lethal Ovitrap*

The Mosquito Trap-N-Kill is a reusable lethal mosquito ovitrap that both attracts and kills day-biting container-breeding *Aedes spp.* mosquitoes. Female mosquitoes enter the trap looking for a place to lay their eggs and are killed by the pesticide vapor (Dichlorvos) inside the trap. Since mosquito larvae breathe atmospheric air through a siphon (not gills), the vapor also kills any larvae that may hatch inside the trap. This trap can be particularly effective around structures and residential areas when nearby breeding sources have been eliminated. Trap is effective for 45 days before the strip needs to be replaced. The Trap-N-Kill is registered in most states and is available for purchase from the National Stock System NSN 6840-01-628-4751 (Appendix I). For more information on the Mosquito Trap-N-Kill Lethal Ovitrap, see the fact sheet [here](#).



8. Levels of Response

Levels of response are based on the presence or absence of known *Aedes* vector species, and on human case surveillance on and around Army installations. Levels of response range from level 1, where no vectors and no human cases are present, to level 5, when local transmission is confirmed with human case surveillance or infected mosquitoes. Criteria for each level, and the appropriate responses, are shown in the table below. Note that this chart is equally applicable in areas where *Aedes polynesiensis* or *Aedes mediovittatus* are the primary Zika virus vectors.

Zika Virus Levels of Response

Condition	Response
<p>Level 1</p> <ul style="list-style-type: none"> • Vector not present <p style="text-align: center;">AND</p> <ul style="list-style-type: none"> • No human cases of Zika virus reported 	<ul style="list-style-type: none"> • Distribute educational materials about mosquito-borne disease prevention. • Identify and eliminate sources of standing water to prevent mosquito breeding.
<p>Level 2</p> <ul style="list-style-type: none"> • Vector historically known to be in geographic area <p style="text-align: center;">AND</p> <ul style="list-style-type: none"> • Imported case(s) reported within the county but beyond a 0.5 mile distance from military facility 	<p>Same as Level 1 plus:</p> <ul style="list-style-type: none"> • Alert facility personnel about the importance of using personal protection measures, mosquito exclusion, and self-help source reduction. • Intensify programmatic efforts targeting <i>Aedes aegypti</i> and <i>Aedes albopictus</i> breeding source reduction. • Acquire and run adult mosquito traps and ovicups targeting <i>Aedes aegypti</i> and <i>Aedes albopictus</i>, if not doing so already. (Consult with PHC Entomologist for guidance.) • Maintain close contact with local health authorities to monitor case reports and activities.
<p>Level 3</p> <ul style="list-style-type: none"> • <i>Aedes</i> spp. mosquitoes detected through surveillance <p style="text-align: center;">AND</p> <ul style="list-style-type: none"> • Imported case reported by health authorities residing or working within a 0.5 mile distance from military facility 	<p>Same as Level 2 plus:</p> <ul style="list-style-type: none"> • Contact PHC Entomologist to establish candidacy for mosquito pathogen testing. Upon approval, pool and submit samples for virus detection. • Implement aggressive <i>Aedes aegypti</i> and <i>Aedes albopictus</i> source reduction and larviciding measures, and consider using lethal ovitraps (Mosquito Trap-N-Kill).
<p>Level 4</p> <ul style="list-style-type: none"> • <i>Aedes</i> spp. mosquitoes detected through surveillance <p style="text-align: center;">AND</p> <ul style="list-style-type: none"> • Imported case reported from a resident or worker on a military facility 	<p>Same as Level 3 plus:</p> <ul style="list-style-type: none"> • Implement targeted <i>Aedes aegypti</i> and <i>Aedes albopictus</i> adult collections in vicinity of case residence or workplace. Submit specimens to PHC laboratory for pathogen testing. (Contact PHC Entomologist for guidance) • Initiate targeted chemical control of <i>Aedes aegypti</i> and <i>Aedes albopictus</i> in area surrounding case residence or workplace. Include backpack residual barrier treatment of densely vegetated resting areas next to residence and at adjacent residences and include up to two feet of the lower walls.
<p>Level 5</p> <ul style="list-style-type: none"> • Zika-positive <i>Aedes aegypti</i> or <i>Aedes albopictus</i> detected on a military facility. <p style="text-align: center;">AND/OR</p> <ul style="list-style-type: none"> • Cases w/ no known travel history on a military facility 	<p>Same as Level 4 plus:</p> <ul style="list-style-type: none"> • Expand and intensify <i>Aedes aegypti</i> and <i>Aedes albopictus</i> adult collections and specimen submission. • Expand and intensify chemical control to break transmission cycle until no further cases are reported and/or no Zika-positive mosquitoes detected (continue source reduction, lethal ovicup).

Appendix A. Insect Repellents

Insect repellents for use on exposed skin come in a variety of formulations. All approved insect repellents for use on exposed skin contain the active ingredient DEET or picaridin, and are registered by the U.S. Environmental Protection Agency (EPA). These products are safe to use and effectively repel mosquitoes. Always refer to the label to determine frequency of repellent application based on activity. Do not apply repellent to eyes, lips or sensitive/damaged skin. All DoD personnel should familiarize themselves with the label and Safety Data Sheet (SDS) before applying repellents.

a. Insect Repellents for use on Exposed Skin

National Stock Number (NSN)	Item (Alternative trade name)	Unit Package	ACC	Price	Unit Issue	Users+
6840-01-284-3982	Insect Repellent, personal application, Ultrathon (3M/EPA 58007-1)	(12) 2-oz tubes	H	100.30	BX	A, N, F, M
6840-01-288-2188	Insect Repellent, personal application & sunscreen, 20% DEET/SPF15 (Sunsect)	(12) 2-oz tubes	H	81.35	BX	A, N, F
6840-01-452-9582	Insect Repellent, personal application & sunscreen, 20% DEET/SPF15 (Sunsect)	320 packets	H	448.45	BX	A, N, F
6840-01-584-8393	Insect Repellent, personal application, 30% DEET (SP532-Ultra30/LippoDEET)	(12)-2 oz tubes	H	76.99	BX	A, N, M, F
6840-01-584-8598	Insect Repellent, personal application, 25% DEET , pump spray bottles(Cutter Backwoods DEET Insect Repellent)	(12)-6 oz BT	H	79.80	BX	A, N, F, M
6840-01-619-4795	Insect Repellent, personal application, 20% Picaridin, pump spray bottle (NATRAPEL Insect Repellent)	(12)-3.4 oz BT	H	77.25	BX	A, N, M, F

All NSNs are hyperlinked to the standard list of pesticides on the Armed Forces Pest Management Board website, which has links to the product label and SDS. Users may have to request a log-in from the AFPMB to be able to access the list.

b. Insect Repellents for use on Clothing

National Stock Number (NSN)	Item (Alternative trade name)	Unit Package	ACC	Price	Unit Issue	Users+
6840-01-278-1336	Insect Repellent, clothing application, aerosol (Permethrin Arthropod Repellent)	(12) 6-oz cans	H	83.24	BX	A, N, F, M
6840-01-345-0237	Insect Repellent, clothing application, permethrin (IDA)	12 kits	H	62.16	BX	A, N, F, M
The following repellent must be applied by trained personnel or a DoD-certified pesticide applicator.						
6840-01-334-2666	Insect Repellent, clothing application, 40% permethrin, liquid (2-Gal sprayer)	(12) 151-ml bot	H	157.98	BX	A, N, F, M

Note: Factory permethrin-treated clothing may not be retreated with permethrin. If unsure if clothing has been treated, look at the label sewn into the garment to confirm whether it has already been treated with permethrin.

Procedure for Ordering Repellents:

National Stock System Insect repellents are ordered directly by military or federal activities via funded MILSTRIP requisitions or via DOD EMALL. Insect repellents are Class 3 supply items. Users should contact their S4 POC or the DLA Chemist for any technical, quality, logistical, ordering inquires, or questions at 804-279-3995.

Appendix B. Mosquito Surveillance Equipment

a. Equipment for Collecting Adult *Aedes* spp. Mosquitoes

National Stock Number (NSN)	Item (Alternative trade name)	Cage Code	ACC	Price	Unit Issue	Users+
3740-01-628-9326	BG Sentinel 2880 Mosquito Trap, P/N 2880	59590	Z	286.07	EA	A, N, F
6130-01-467-4177	BG Sentinel 2880 Mosquito Trap, 12 V DC Battery Pack, w/ Charger, P/N 2861	59590	L	268.23	EA	A, F, N
3740-01-464-9998	BG Sentinel 2880 Mosquito Trap, 12 V DC Replacement Battery , P/N 2861A	59590	Z	112.58	EA	A,F, N
3740-01-628-9324	BG Sentinel 2880 Mosquito Trap 12 V Wall Charger for 2861 Battery, P/N 2861C	59590	Z	52.80	EA	A, N, F
3740-01-628-9325	BG Lure, Human Skin, Non-Toxic, Chemical Lure, P/N 2881 for use BG Sentinel 2880 Mosquito Trap	59590	Z	37.43	EA	A, N, F
3740-01-628-9327	BG Sentinel 2880 Mosquito Trap Catch Bag, P/N 2880C	59590	Z	9.26	EA	A, N, F
3740-01-106-0091	Trap, Solid State Army Miniature (SSAM), Curtis Dyna Fog. Model 2505 or Hock Model 512. Used for mosquito surveillance, portable powered by either D cell or rechargeable 6-volt gel	6T654 82254	Z	156.25	EA	A, N, F, M

	cell batteries. Wt. 3 lbs. w/o batteries. For D-cell non-rechargeable alkaline batteries, order 6135-00-835-7210. For gel-cell rechargeable batteries, order 6140-00-432-0490. For a battery charger to recharge gel-cell batteries order 6130-00-629-7396.					
3740-00-134-9229	Trap, Insect, Portable, Battery Operated, Hausherrs Model CDC, battery operated, cylindrical, w/14.5 inch diameter aluminum cover.	65183	J	618.00	EA	A, N, F
3740-01-535-1309	Insect Trap Dry Ice Container, P/N 1.10	6T654	J	34.78	EA	A, N, F, M
3740-01-527-5618	Collection Cup, Fine mesh, Insect Light Trap, Hock P/N 1.49(for use w/ NSN 3740-01-106-0091)	6T654	Z	28.04	EA	A, N, F, M
3740-01-578-1150	Bag, Collection Mosquito Trap ; Curtis Dyna-Fog P/N 25092 (for use w/ NSN 3740-01-106-0091)	82254	J	134.33	EA	A, N, F, M
3740-01-527-5623	Collection Bag, double Ring, Fine Mesh , Hock P/N 1.45 (for use w/ NSN 3740-01-106-0091)	6T654	J	32.97	EA	A, N, M, F
3740-01-503-5339	Aspirator, Insect Backpack, CDC Model 1412, w/ 2 ea 12 V DC/17 ampere gel –cell batteries, 5 ft. neoprene hose, 6 polypropylene collection	6T654	J	665.28	EA	A, N, M

	cups and 6 ea thumbscrews					
3740-01-454-2256	Aspirator, Oral, Entomology Specimen Collection, with HEPA filter for respiratory protection, Model 612, Polycarbonate plastic straight 12” tube, plastic coupler w/nylon screen, screws into 0.3 micron HEPA filter. A 2 ft. rubber tube is attached to other end of filter comes with polycarbonate mouthpiece.	6T654	Z	47.56	EA	A, N, F, M
3740-01-474-7402	Aspirator, Oral, Entomology Specimen Collection, Model 412, Polycarbonate plastic straight tube, 12” long with plastic coupler with nylon screen inside. 2-ft rubber tube attached to end comes with polycarbonate mouthpiece.	6T654	J	17.28	EA	A, N, F, M
3740-01-473-1303	Extension Tube, 3/8 “, for use with Mechanical Aspirator NSN 3740-01-210-2368, 20 EA/PG	65183	Z	19.53	PG	A, N, F, M
3740-01-210-2368	Aspirator, 1.5v (2 -D Cell battery) powered, Mechanical Aspirator, wt. 8 oz. w/o batteries.	65183	Z	144.93	EA	A, F, M

3740-01-210-2371	Collection Bottle Assembly/ Tube, for use with Mechanical Aspirator NSN 3740-01-210-2368	65183	Z	19.29	EA	A, F, M
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b. Surveillance Equipment for Collecting Mosquito Larvae

National Stock Number (NSN)	Item (Alternative trade name)	Cage Code	ACC	Price	Unit Issue	Users+
3740-01-454-2341	Dipper, Entomological, white plastic 5" dia with 3' wood handle, P/N 1132	59590	Z	17.18	EA	A, N, F, M
3740-01-606-1739	Handle, Dipper, Mosquito, P/N 1132H	59590	Z	21.21	EA	A, N, F, M
3740-01-454-2348	Tray, Mosquito Larval Sorter, bright white polyethylene tray, 10" wide X 13 1/2" long X 1 1/4" deep.	59590	Z	17.55	EA	A, N, F, M

Appendix C. Larval Surveillance Indices in *Aedes* spp. Control Programs

(Excerpt from Navy and Marine Corps Public Health Center “*Aedes* Surveillance and Control Plan”)

The following indices are used in larval surveillance to help make decisions regarding when to begin an *Aedes* vector control program. These indices can signal when and where to begin a control program or when vector suppression was successful. These indices were based on residential areas. Since many structures on a military installation may harbor these vectors, these indices can be applied to all structures/work centers surveyed.

- **House Index (HI):** the percentage of houses infested with larvae and/or pupae. The House Index is mostly used to measure the overall distribution and size of the vector population within the surveillance area. It does not account for how many containers on a property are actually producing larvae. The information gathered from the House Index can demonstrate where the vectors are concentrated and where to focus the control effort. After effective control operations the $HI < 1\%$. $HI = \# \text{ of positive mosquitoes} / \text{total number of houses surveyed}$.
- **Container Index:** the percentage of water-holding containers infested with larvae and/or pupae. The Container Index provides information about how many containers in a site are producing vectors. During the collection of these data, surveyors can determine the type of containers that are producing the most vectors, and where the highest concentrations of infested containers are on the installation. After effective control operations the $CI < 1\%$. $CI = \# \text{ of positive containers} / \text{total \# of containers surveyed}$.
- **Breteau Index:** the number of positive containers per 100 sites surveyed. One site can be defined as a structure or an area where containers are present. For example, a site can be a house with containers surrounding it, or it can be a yard with a pile of tires. The Breteau Index establishes a relationship between positive containers and surveyed sites. It is possible to use these data to profile the relative abundance of various container types in the surveillance area (e.g. the number of infested containers per 100 sites). The Breteau Index has also been used to estimate the risk of disease transmission. There is some risk of disease transmission when $BI > 5$. Emergency vector control should be implemented when $BI > 50$. $BI = \# \text{ of positive containers} / 100 \text{ sites surveyed}$.

Appendix D. Taxonomic Key for Identifying Adult Mosquito Genera

Keys to the Adult Female Mosquitoes of North America, North of Mexico
 from the Identification and Geographical Distribution of the Mosquitoes of North America, North of Mexico
 by Richard F. Davis, Jr. and Ronald A. Ward

Key to the Genera of Adult Females

1. Prothorax long and strongly recurved (fig. 1); posterior border of wing distinctly emarginate at apex of Cu_1 (fig. 2)..... *Toxorhynchites* s. *nitida* (plate 432)
Toxorhynchites s. *serripennis* (plate 378)
Toxorhynchites maculosa (plate 423)

Prothorax not so long and only slightly incurved, if at all (fig. 3); wing border rounded or slightly emarginate at apex of vein Cu_1 (fig. 4)..... 2

2.1). Scutellum evenly rounded, with setae near or less evenly distributed (fig. 5); maxillary palpus about as long as proboscis (fig. 6)..... *Anopheles*
 Scutellum trilobed, with setae in 3 distinct groups (fig. 7); maxillary palpus shorter than proboscis (fig. 8)..... 3

3.1). Lateral view of head: *To. c. septentrionalis*..... **Fig. 1. Lateral view of head: *To. c. septentrionalis***

3.2). Dorsal view of wing: *To. c. septentrionalis*..... **Fig. 2. Dorsal view of wing: *To. c. septentrionalis***

3.3). Lateral view of head: *Ae. vexans*..... **Fig. 3. Lateral view of head: *Ae. vexans***

3.4). Dorsal view of wing: *Ae. vexans*..... **Fig. 4. Dorsal view of wing: *Ae. vexans***

4.1). Posterior dorsal view of thorax: *Ae. vexans*..... **Fig. 5. Posterior dorsal view of thorax: *Ae. vexans***

4.2). Lateral view of head: *Ae. quadrimaculata*..... **Fig. 6. Lateral view of head: *Ae. quadrimaculata***

4.3). Mesopronotum with setae (fig. 9); base of hindcoxae in line with base of mesopronotum or slightly dorsal (fig. 10)..... *Wyeomyia*
 Mesopronotum without setae (fig. 11); base of hindcoxae distinctly ventral to base of mesopronotum (fig. 12)..... 4

4.4). Posterior dorsal view of thorax: *Wyeomyia*..... **Fig. 7. Posterior dorsal view of thorax: *Ae. vexans***

4.5). Lateral view of head: *Ae. vexans*..... **Fig. 8. Lateral view of head: *Ae. vexans***

4.6). Posterior dorsal view of thorax: *Wyeomyia*..... **Fig. 9. Posterior dorsal view of thorax: *Wyeomyia***

4.7). Lateral view of head: *Ae. vexans*..... **Fig. 10. Lateral view of head: *Ae. vexans***

4.8). Lateral view of thorax: *Ae. vexans*..... **Fig. 11. Posterior dorsal view of thorax: *Ae. vexans***

4.9). Lateral view of thorax: *Ae. vexans*..... **Fig. 12. Lateral view of thorax: *Ae. vexans***

4(3). Cell R_2 of wing shorter than vein R_{3+4} (fig. 13); thorax usually with lines of iridescent blue scales (fig. 14)..... *Uranotaenia*

Cell R_2 at least as long as vein R_{3+4} (fig. 15); iridescent blue scales absent on thorax (fig. 16)..... 5

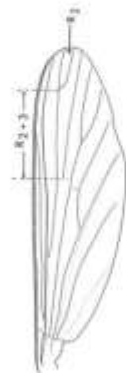


Fig. 13. Dorsal view of wing: *Ur. sapphirina*

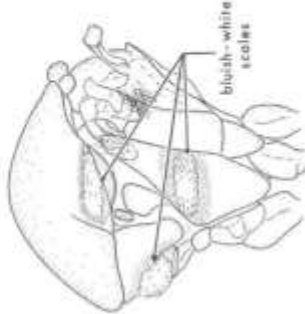


Fig. 14. Lateral view of thorax: *Ur. sapphirina*

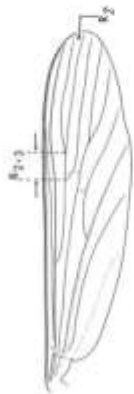


Fig. 15. Dorsal view of wing: *Cx. pipiens*



Fig. 16. Lateral view of thorax: *Ae. vexans*

5(4). Postspiracular setae present (fig. 17)..... 6

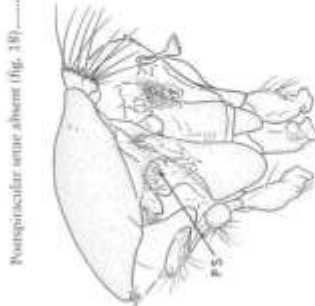


Fig. 17. Lateral view of thorax: *Ae. vexans*

Nonspiracular setae absent (fig. 18)..... 8



Fig. 18. Lateral view of thorax: *Cs. inornata*

6(5). Apex of abdomen bluntly rounded in dorsal view (fig. 19); most scales on dorsal surface of wing very broad (fig. 20)..... *Mimomyia*

Apex of abdomen tapering to a point in dorsal view, segment VII markedly narrower than VI (fig. 21); dorsal wing scales long and slender; at least in veins R_2 and M (fig. 22)..... 7



Fig. 19. Dorsal view of abdomen: *Mm. trillans*



Fig. 20. Dorsal view of some veins: *Mm. trillans*



Fig. 21. Dorsal view of abdomen: *Ae. vexans*

7(6). Postspiracular setae present (fig. 23); pale transverse bands or lateral patches, when present, apical on abdominal terga (fig. 24)..... *Psorophora*

Postspiracular setae absent (fig. 25); pale transverse bands or lateral patches basal on abdominal terga (fig. 26)..... *Anolis* (in part) *Ochlerotatus*

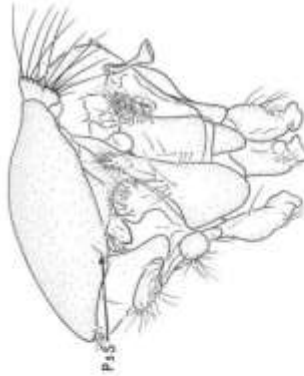


Fig. 22. Dorsal view of some veins: *Ps. ciliata*



Fig. 23. Lateral view of thorax: *Ps. ciliata*



Fig. 24. Dorsal view of abdomen: *Ps. cyanescens*

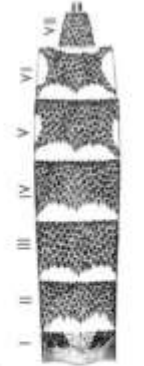


Fig. 25. Dorsal view of abdomen: *Ae. vexans*

815). Prepropodeal setae present (fig. 27); base of wing vein Sc with row of setae ventrally (fig. 28) *Calixia*

Prepropodeal and vein Sc setae absent (figs. 29, 30) 9

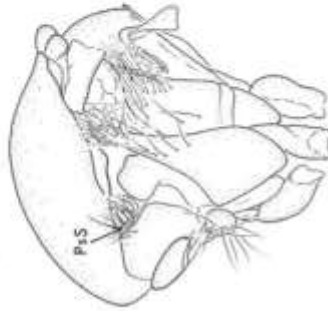


Fig. 27. Lateral view of thorax: *Cx. inornata*

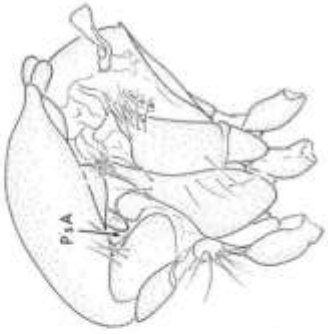


Fig. 29. Lateral view of thorax: *Cx. pipiens*



Fig. 28. Ventral view of basal half of wing: *Cx. inornata*



Fig. 30. Ventral view of basal half of wing: *Cx. pipiens*

918). Scutum covered with broad flat metallic scales; anteprocoxium large, approaching mid-dorsally (fig. 31) *Haemagogus equinus* (plate 40D)

Scutal ornamentation not of broad flat metallic scales; anteprocoxium small, not approaching mid-dorsally (fig. 32) 10



Fig. 31. Dorsal view of thorax: *Hg. equinus*

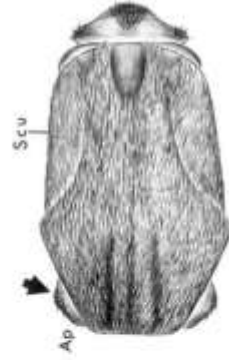


Fig. 32. Dorsal view of thorax: *Cx. pipiens*

1019). Scutum with narrow lines of pale scales (fig. 33); tarsomere 1 of fore- and midlegs longer than other 4 tarsomera combined, tarsomere 4 very short, about as long as wide (fig. 34) *Orthopodomyia*

Scutum without narrow lines of pale scales (fig. 35); tarsomere 1 of fore- and midlegs shorter than other 4 combined, tarsomere 4 much longer than wide (fig. 36) 11

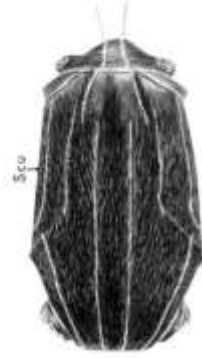


Fig. 33. Dorsal view of scutum: *Or. signifera*



Fig. 35. Dorsal view of thorax: *Cx. pipiens*



Fig. 34. Enlargement of tarsal segments of midleg: *Or. signifera*



Fig. 36. Enlargement of tarsal segments of midleg: *Cx. pipiens*

11110). Most scales on dorsal surface of wing very broad (fig. 57) *Cupillatidia perturbans* (plate 32A)

Scales on dorsal surface of wing long and narrow, at least on veins R₁ and M (fig. 38) ... 12



Fig. 37. Dorsal view of some wing veins: *Cp. perturbans*



Fig. 38. Dorsal view of some wing veins: *Cx. pipiens*

12(11). Antenna longer than proboscis, flagellomere 1 longer than Flm 2 (fig. 39) *Dymoserrata*
Antenna subequal to, or shorter than, proboscis, flagellomere 1 about as long as Flm 2 (fig. 40)..... 13



Fig. 39. Lateral view of head: *Ds. parvulus*



Fig. 40. Lateral view of head: *Cx. pipiens*

13(12). Apex of abdomen tapering to point in dorsal view, terga with basolateral patches of silvery scales (fig. 41); scutum with pattern of black, brown, and golden scales (fig. 42) (subgenus *Kumpai*) (in part)..... *Ochlerotatus*

Apex of abdomen bluntly rounded in dorsal view, terga with baso- or apicolateral patches of pale white (or dingy yellow) scales, never silvery (fig. 43); scutum with other pattern of scales (fig. 44)..... *Culex*



Fig. 41. Lateral view of abdomen: *Cx. purpureipes*



Fig. 42. Dorsal view of thorax: *Cx. pipiens*



Fig. 43. Lateral view of abdomen: *Oc. purpureipes*

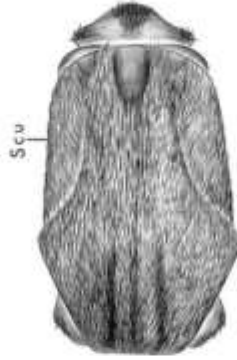


Fig. 44. Dorsal view of thorax: *Cx. pipiens*

Fig. 31. Dorsal view of thorax: *Mg. exiguus*

Fig. 32. Dorsal view of thorax: *Cx. pipiens*

Appendix E. Adult *Aedes aegypti*, *Ae. albopictus*, and *Ae. polynesiensis* Identification Pages

MSP 18-016-1115
APHC 1955:261

APHC Entomological Sciences Mosquito Species Pages

Aedes (Stegomyia) aegypti (Linnaeus, 1762), Lab Reared Rockefeller Strain (APR 07), Character descriptions Carpenter and LaCasse 1955:261

Readily distinguished from most other species of the subgenus by the form of the thoracic markings, and from the few with a somewhat similarly ornamented thorax by the presence of scales on the clypeus (in the female) and white lines on the front and middle femora. Thorax. Mesepimeron (Mam) with two well separated white scale patches (1). Paratergite (Pa) with broad white scales; Postspiracular setae (Ps) present. Prespiracular area (Psa) without setae (Pss absent). Base of hindcoxa usually below base of mesomeron (Msm). Lower mesepimeral seta (MesL) absent. Mesothoracic spiracle (MS). Subspiracular area (SA) with broad white scales. Postspiracular area (PA) without scales. (Edwards, 1941)

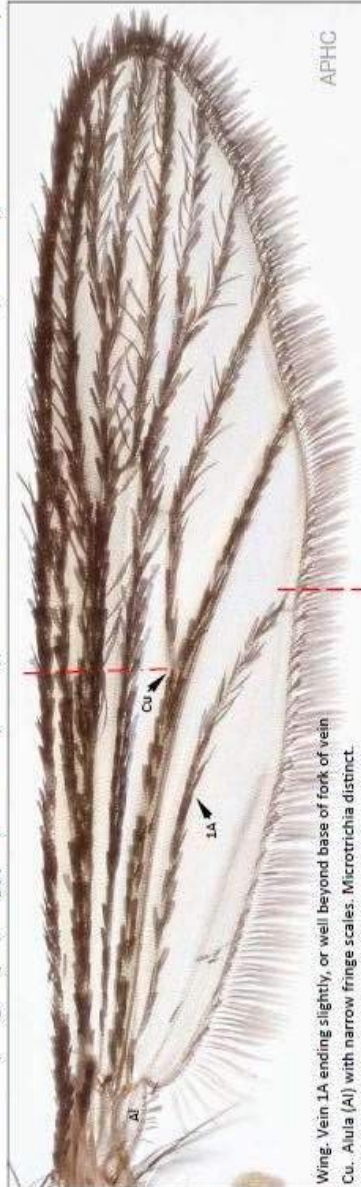


Head. Proboscis (P) not swollen at tip. Clypeus (Cip) with two broad white scale patches, Pedicel (Pe) with setae and scales on mesal surface. Vertex (V) with erect forked scales not numerous, restricted to occiput (Occ). Vertex (V) with all broad, flat decumbent scales. Maxillary Palpi (Mpp) shorter than Proboscis and broadly white tipped. Eyes well separated, the space between them clothed with white scales. (Edwards, 1941)



Army Public Health Center (Provisional), Entomological Sciences Program / COM 410-436-3613 / DSN 312-584-3613 / Website: <http://phc.amedd.army.mil> / Approved for Public Release. Distribution Unlimited

Aedes (Stegomyia) aegypti (Linnaeus, 1762), Lab Reared Rockefeller Strain (APR 07), Character descriptions Carpenter and LaCasse 1955:261



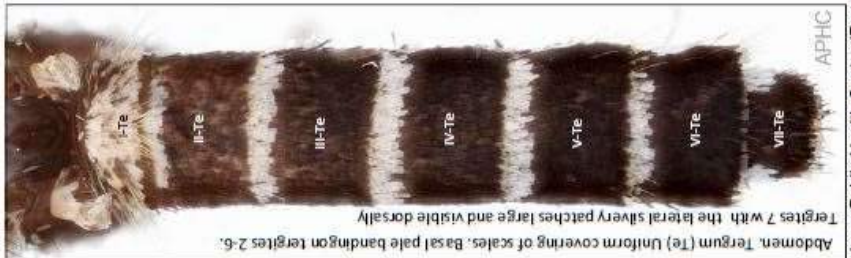
Wing. Vein 1A ending slightly, or well beyond base of fork of vein Cu. Aulia (Al) with narrow fringe scales. Microtrichia distinct.



Male head. Maxillary Palpi as long as Proboscis. antennae feather like.



Abdomen, Tergum (Te) & Sternum (S) Basal pale banding on tergite 2-6 which are separate from the lateral silvery-white spots.



Abdomen, Tergum (Te) Uniform covering of scales. Basal pale banding on tergites 2-6. Tergites 7 with the lateral silvery patches large and visible dorsally

Bionomics: In association with man, aegypti will use any and all natural and artificial containers. Away from urban areas the species tends to favor pools in river beds, tree stumps, tree holes and natural containers. Females are primarily day biters and readily enter buildings to feed. They have also been taken in lesser numbers at night (Christophers 1960). Flight range studies suggest that most female *Ae. aegypti* may spend their lifetime in or around the houses where they emerge as adults and they usually fly an average of 400 metres (WHO). Frequently attacks man, mainly out of doors.

Medical Importance: Primary vector of dengue and yellow fever (Christophers 1960) and Chikungunya. (CDC).



MidLeg. Midfemur (Fe)—white knee spot, longitudinal white stripe on anterior surface



HindLeg. Hindfemur —white knee spot. First tarsal segment shorter than tibia.



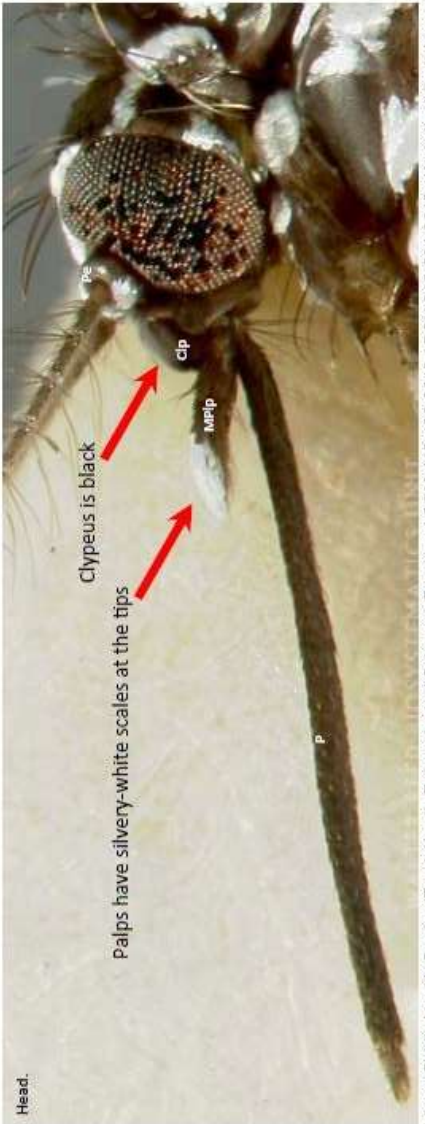
HindTarsus. Hindtarsomeres (Ta) pale-banded on basal part of segments 1-4. Ta5 all white.

Aedes (Stegomyia) albopictus (Skuse), WRBU specimen AEalb, Character descriptions Edwards 1941:153

Thorax. posterior pronotum with a large patch of broad white scales and some dark narrow ones dorsally; postspiracular area (PA) without scales; subspiracular area with white scales (SSc); mesepimeral scale patches connected forming a V-shaped white scale patch, the open end of "V" directed backwards.



Scutum with narrow dark scales; and a prominent medi-an stripe of similar white ones, which narrows slightly posteriorly and forks at beginning of prescutellar space; on each side a posterior dorso-central white line which does not reach to middle of scutum; a patch of broad flat white scales on lateral margin just before level of wing root and few narrow curved white scales over wing root;



Clypeus is black
Palps have silvery-white scales at the tips



Aedes (Stegomyia) albopictus (Skuse), WRBU specimen AEalb, Character descriptions Edwards 1941:153



Wing. With dark scales on all veins except for minute basal spot of white scales on costa; first forked cell 1.5 times as long as its stem.



Male head. Maxillary Palpi as long as Proboscis. Antennae feather like.



Abdominal segment I with white scales on laterotergite.

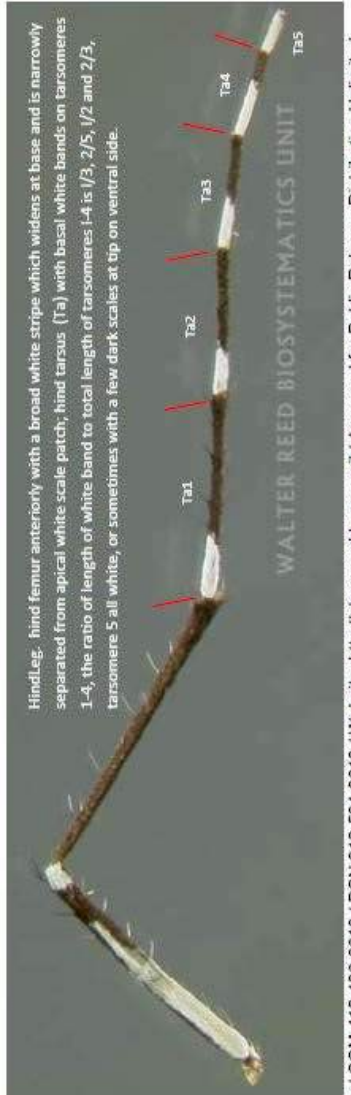
Terga III-VI each with a basal white band which widens laterally and with lateral white spots which do not connect with the basal bands; terga II and VII with lateral white spots only, or sometimes terga II also with a median white spot.

Bionomics: Immatures are found in natural containers, including treeholes, bamboo stumps, coconut shells, rock-holes, palm fronds, and leaf axils. They are also found in all varieties of artificial containers and will breed indoors. Females readily bite man (Huang 1972).

Medical Importance: Vector of dengue and yellow fever in the wild. Under laboratory conditions: bird malaria, Eastern and Western equine encephalitis, West Nile, chikungunya and Japanese encephalitis viruses (Huang 1972).



ForeLeg. Fore and mid femora dark anteriorly, paler posteriorly, fore and mid tarsi with basal white bands on tarsomeres 1-2;



HindLeg. hind femur anteriorly with a broad white stripe which widens at base and is narrowly separated from apical white scale patch; hind tarsus (Ta) with basal white bands on tarsomeres 1-4, the ratio of length of white band to total length of tarsomeres 1-4 is 1/3, 2/5, 1/2 and 2/3, tarsomere 5 all white, or sometimes with a few dark scales at tip on ventral side.

Aedes (Stegomyia) polynesiensis Marks, WRBU specimen AEPol, Character descriptions Belkin 1962:466

Thorax: Median silvery line variable, from very narrow to moderate; lateral prescutal light line not developed, at most 2,3 pale scales near scutal angle; supraalar silvery line complete, with broad scales posteriorly, silvery or whitish scales; prescutellar light line usually with numerous apical dark scales; pleural streaks, forming distinct diagonal narrow, upper stp narrow but often present on ssp face, moderate and usually upper.



posterior-dorsocentral line often distinct, with line; ssp streak long and a few detached scales scaling in relatively narrow lower msp patch detached from



Head: Eyes moderately separated, frontal scaling extensive, median silvery line narrow, reaching erect scales; orbital silvery line partially developed, lateral silvery line variable; labium with or without ventral light streak, sometimes extensively pale ventrally; apical palpal segment usually silvery on at least distal half.



Aedes (*Stegomyia*) *polynesiensis* Marks, WRBU specimen AEPol, Character descriptions Belkin 1962:466



Wing: costa with small basal silvery spot.

Male head.

No Photo Available



Abdomen: Tergites II-VII with slender arcuate lateral silvery markings, the dorsal part submedian and not connected above, no indication of transverse bands.

Bionomics: This species is semi-domestic with an extremely wide range of breeding places that includes tree holes, coconut shells and husks, various types of artificial containers, leaf axils, crab holes, banana stumps, cacao pods and canoes. Females are primarily diurnal with biting peaks in the late afternoon and early morning (Belkin 1962).

Medical Importance: Important vector of nonperiodic *W. bancrofti* wherever it is found (Belkin 1962). Medical importance: Vector of human filariasis and dengue (Rosen 1954). Under laboratory conditions: Ross River virus (LaPointe 2007). Probable vector of Zika virus (ECDC 2014).



Legs: Dark scaling on forecoxa and midcoxa variable; midfemur without anterior silvery line; hindfemur with anterior silvery line long, lower surface with or without distal light streak; foretarsus and midtarsus with moderate silvery markings on segments 1,2, sometimes a few white scales on segment 3 of foreleg; hindtarsal segment 4 silvery on about basal 0.70, segment 5 all silvery.

Appendix G. Insecticides for Mosquito Larvae

National Stock System Insecticides labeled for use against mosquito larvae are all registered by the U.S. Environmental Protection Agency (EPA). These insecticides are used to effectively kill mosquito larvae as part of an integrated pest management plan. Applying them is time-consuming and labor-intensive because larval habitats must be located and treated individually. Strictly follow all directions on the insecticide label. **DO NOT APPLY TO DRINKING WATER!** The following insecticides must be applied by a DoD-certified pesticide applicator or under the direct supervision of a DoD-certified pesticide applicator.

Insecticides for use Against Mosquito Larvae

National Stock Number (NSN)	Item (Alternative trade name)	Unit Package	ACC	Price	Unit Issue	Users+
6840-01-377-7049	Insecticide, Bacillus thuringiensis, 10% (Summit BTI Briquets)	100 Briquets	H	130.85	BX	A, N, F, M
6840-01-565-8241	Insecticide, Bacillus thuringiensis (Vectobac WDG)	24-1 lb bags/CO	H	1413.24	BX	A, N, M, F
6840-01-424-2495	Insecticide, Methoprene (Altosid XR Briquets)	220 Briquettes	H	1200.92	BX	A, N, F, M
6840-01-511-0535	Insecticide, Methoprene (Altosid Pellets)	(2) 22 lb co/box	H	2221.91	BX	A, N, F, M
6840-01-424-2493	Insecticide, Methoprene (Altosid Liquid Larvicide Conc.)	(2) 2.5-gal co	H	9436.37	BX	A, N, F, M
6840-01-424-3132	Insecticide, Temephos (Abate 4E; ALLPRO Provect 4E Larvicide)	2.5-gal co	H	1598.63	CO	A, N, F, M
6840-01-498-9270	Insecticide, Temephos (5% Skeeter Abate; ALLPRO Provect 5G Larvicide)	2-22 lb. co	H	282.18	EA	A, F, N
6840-01-652-1530	Mosquito Larvicide, CocoBear*	(2) 2.5-gal co	D	200.00	BX	

*Also kills mosquito pupae

Note: All NSNs are hyperlinked to the standard list of pesticides on the Armed Forces Pest Management Board website, which has links to the product label and SDS. Users may have to request a log in from the AFPMB to be able to access the list.

Appendix H. Insecticide Application Equipment

a. Hand-Held Thermal Fogging Equipment

National Stock Number (NSN)	Item (Alternative trade name)	Cage Code	ACC	Price	Unit Issue	Users+
3740-00-818-6648	Fog Generator, Manually Carried, gasoline engine driven, thermal fog, Curtis Dyna Model 2610 Golden Eagle	82254	V	1739.41	EA	A, N, F
3740-01-480-3040	Fog Generator, Insecticidal, P/N 58800-21/SUPERHAWK II	822524	Z	1964.88	EA	A,N,F,M
3740-01-456-2625	Fogger, Hand Held, gasoline engine driven, thermal fogger, London Fog Eliminator, PN# 8100	56215	V	1414.00	EA	A,N,F,M

b. Ultra-Low Volume Application Equipment

National Stock Number (NSN)	Item (Alternative trade name)	Cage Code	ACC	Price	Unit Issue	Users+
3740-01-456-2622	Fogger, Hand Held, gasoline engine driven, ULV, London Aire Colt. PN# 8675	56215	Y	8825.03	EA	A, N, F, M
3740-01-456-2623	Fogger, Hand Held, gasoline engine driven, ULV, Clarke P-1, PN# L7800-001	65183	Y	2549.71	EA	A, N, F, M
3740-00-375-9154	Fog Generator, Skid Mounted, gasoline engine driven, Grizzly PDS	24885	J	11670.00	EA	A, F, M
3740-01-548-9102	Sprayer, Pesticide, Skid Mounted, London Fog,	56215	J	3990.84	EA	A, N, M, F

	M.A.G (Medium Area Generator)					
3740-01-076-1341	Sprayer, Pesticide, Skid Mounted, London Fog ULV XKE Gas Sprayer.	56215	Y	3000.00	EA	A

c. Backpack and Hand-Compressed Spraying Equipment

National Stock Number (NSN)	Item (Alternative trade name)	Cage Code	ACC	Price	Unit Issue	Users+
3740-00-191-3677	Sprayer, Pesticide, Manually Carried, 1-gallon stainless tank, with pressure gauge. CID A-A-55748. Flow rate - 0.8 l/min.	58536	D	150.90	EA	A, N, F, M
3740-00-641-4719	Sprayer, Pesticide, Manually Carried, 2-gallon stainless tank with pressure gauge. CID A-A-55748. Flow rate - 0.8 l/min	58536	D	155.50	EA	A, N, F, M
3740-01-463-0147	Sprayer-Duster, Pesticide, Backpack, STIHL Model SR450, gasoline engine driven, includes granular spreader, ULV nozzle, and field parts kit. 24 lbs.	9Z575	Z	1125.88	EA	A, N, F, M
3740-01-496-9306	Sprayer, Pesticide, Manually Carried Hydraulic Backpack sprayer, SOLO 475 DLX	8T840	Z	113.03	EA	A, N, M, F
3740-01-543-0676	Sprayer, Pesticide, Manually Carried Hydraulic Backpack sprayer. Birchmeier,	4GRF7	Z	473.30	EA	A, N, M, F

	Model Iris					
3740-01-561-9663	Sprayer, Pesticide, Manually Carried Compressed Air Backpack Sprayer. Dorendorf P/N AQSZ-12	4D3X6	J	3978.00	EA	A, F, M, N

Appendix I. Insecticides for Adult Mosquitoes

National Stock System insecticides labeled for use with Ultra Low Volume (ULV) cold aerosol or thermal fogging equipment are all registered with the U.S. EPA. Be sure to strictly adhere to all directions and restrictions listed on the product label. The following insecticides must be applied by a DoD-certified pesticide applicator or under the direct supervision of a DoD-Certified pesticide applicator.

a. Insecticides for use with Cold Aerosol ULV Fogging Equipment

National Stock Number (NSN)	Item (Alternative trade name)	Unit Package	ACC	Price	Unit Issue	Users+
6840-01-573-4964	Insecticide, Etofenprox, 20% (Zenivex E20)	(2) 2.5-gal co	H	2875.38	BX	A, N, M
6840-01-606-8581	Insecticide, Permethrin-Piperonyl Butoxide (20.6+20.6%), All Pro Aqualuer 20-20	(2)-2.5 gal co/box	H	1592.33	BX	A, N, F, M
6840-01-550-5660	Insecticide, Permethrin-Piperonyl Butoxide (4.6+4.6%) , (Kontrol 4-4)	(2) 2.5-gal co	H	343.98	BX	A, N, F, M
6840-01-104-0780	Insecticide, Pyrethrins, 3% pyrethrins with synergists, liquid (ULD BP-300, Pyronyl Oil Concentrate OR-3610A, or Pyrethrins Fogging Concentrate 3610)	1-gal bot	H	227.48	GL	A, N, F, M
6840-01-359-8533	Insecticide, Resmethrin (Scourge) ***Restricted Use Pesticide***	5-gal can	H	772.38	CN	A, N, F
6840-01-474-7751	Insecticide, Sumithrin-Piperonyl Butoxide, 10%-10%, (Anvil 10+10 ULV)	(2) 2.5-gal/box	H	2379.58	BX	A, M, N
6840-00-926-1481	Insecticide, Malathion, 96.5%, liquid, (Fyfanon ULV)	54-gal drum	H	4018.39	DR	A, N, F, M
6840-01-169-1842	Insecticide, Malathion, 96.5%, liquid, (Fyfanon ULV)	5-gal can	H	354.13	CN	A, N, F, M

b. Insecticides for use with Thermal Fogging Equipment

National Stock Number (NSN)	Item (Alternative trade name)	Unit Package	ACC	Price	Unit Issue	Users+
6840-01-573-4964	Insecticide, Etofenprox, 20% (Zenivex E20)	(2) 2.5-gal co	H	2875.38	BX	A, N, M
6840-01-606-8581	Insecticide, Permethrin-Piperonyl Butoxide (20.6+ 20.6%), All Pro Aqualuer 20-20	(2)-2.5 gal co/box	H	1592.33	BX	A, N, F, M
6840-01-550-5660	Insecticide, Permethrin-Piperonyl Butoxide (4.6+4.6%) , (Kontrol 4-4)	(2) 2.5-gal co	H	343.98	BX	A, N, F, M
6840-01-104-0780	Insecticide, Pyrethrins, 3% pyrethrins with synergists, liquid (ULD BP-300)	1-gal bot	H	227.48	GL	A, N, F, M
6840-01-474-7751	Insecticide, Sumithrin-Piperonyl Butoxide, 10%-10%, (Anvil 10+10 ULV)	(2) 2.5-gal/box	H	2379.58	BX	A, M, N
6840-00-926-1481	Insecticide, Malathion, 96.5%, liquid, (Fyfanon ULV)	54-gal drum	H	4018.39	DR	A, N, F, M
6840-01-169-1842	Insecticide, Malathion, 96.5%, liquid, (Fyfanon ULV)	5-gal can	H	354.13	CN	A, N, F, M

c. Insecticides for use with Backpack and Hand-Compressed Spraying Equipment for Barrier Treatments and Residual Application around Structures

National Stock Number (NSN)	Item (Alternative trade name)	Unit Package	ACC	Price	Unit Issue	Users+
6840-01-606-8581	Insecticide, Permethrin-Piperonyl Butoxide (20.6+ 20.6%), All Pro Aqualuer 20-20	(2)-2.5 gal co/box	H	1592.33	BX	A, N, F, M
6840-01-550-5660	Insecticide, Permethrin-Piperonyl Butoxide (4.6+4.6%) , (Kontrol 4-4)	(2) 2.5-gal co	H	343.98	BX	A, N, F, M
6840-01-428-6646	Insecticide, Lambda-cyhalothrin, 9.7% (Demand CS)	(8) 8 oz bottle	H	495.72	BX	A, N, F, M
6840-01-431-3357	Insecticide, Lambda-cyhalothrin (Surrender	40 tablets	V	74.90	CO	A, N, F, M

	Pestab)					
6840-01-313-7359	Insecticide, beta-cyfluthrin, 11.8% (Tempo SC Ultra)	(12) 240-ml bot	H	634.37	BX	A, N, F, M
6840-01-383-6251	Insecticide, beta-cyfluthrin, 10% (Tempo Ultra WSP)	(32) 50 gm packs	H	461.77	BX	A, N, F, M
6840-01-390-4822	Insecticide, Cypermethrin, 40% (Demon WP)	1-lb jar	H	84.82	LB	A, N, F, M
6840-01-525-6888	Insecticide, Bifenthrin, 7.9% liquid (Talstar P Professional)	1-qt co	H	68.00	QT	A, N, F, M

d. Lethal Ovitrap

National Stock Number (NSN)	Item (Alternative trade name)	Unit Package	ACC	Price	Unit Issue	Users+
6840-01-628-4751	Insecticide, Dichlorvos, 10.75% (Ovitrap Mosquito Trap-N-Kill)	12 traps per box	H	99.29	BX	A, F, N, M

Appendix J. Educational Resources and References

(Note: click on hyperlinks to access documents electronically)

Websites:

- APHC Website: [Zika Virus](#)
- APHC Website: [Mosquito Borne Disease and Control Resources](#)
- AFPMB Website: [Zika Preparation](#)
- CDC Website: [Zika Virus](#)
- PAHO Website: [Zika Virus Infection](#)
- WHO Website: [Zika Virus](#)

Videos:

- APHC Video: [Control of Mosquitoes in and around the Home](#)
- APHC Video: [DEET Works](#)
- APHC Video: [How to Apply DEET](#)
- APHC Video: [Permethrin Effectiveness – Mosquitoes on ACU that has been treated with permethrin](#)
- APHC Video: [Treating Civilian Clothing with Permethrin Repellent](#)
- APHC Video: [Deploying a pop-up bed net](#)
- APHC Video: [Deploying a bed net with poles](#)
- APHC Video: [CDC Miniature Light Trap Setup](#)

Fact Sheets:

- APHC Fact Sheet: [Zika Virus](#)
- APHC Fact Sheet: [Mosquito Control Around the Home](#)
- APHC Fact Sheet: [Mosquito Trap-N-Kill Lethal Ovitrap](#)
- APHC Fact Sheet: [DoD Insect Repellent System](#)
- APHC Fact Sheet: [DoD Insect Repellent System and Permethrin Treatment of Military Uniforms](#)

Brochures:

- APHC Brochure: [Use the DoD Insect Repellent System](#)

Posters:

- APHC Poster: [Mosquitoes SUCK – Mosquitoes Carry Deadly Diseases](#)
- APHC Poster: [We've Got Your Back](#)

Technical Guides:

- AFPMB TG 13, [Dispersal of Ultra Low Volume \(ULV\) Insecticides by Cold Aerosol and Thermal Fog Ground Application Equipment](#), July 2011

AFPMB TG 36, [Personal Protective Measures Against Insects and Other Arthropods of Military Significance](#), November 2015

AFPMB TG 46, [DoD Entomological Risk Assessments](#), April 2011

AFPMB TG 47, [Dengue and Chikungunya Vector Control Pocket Guide](#), January 2012

Scientific Journal Articles:

Fonseca, et. al, February 2013. Area-wide management of *Aedes albopictus*. Part 2: Gauging the efficacy of traditional integrated pest control measures against urban container mosquitoes. Pest Manag Sci, available online:

<http://vectorbio.rutgers.edu/publications/Fonseca2013AreawideManagementATMPart2.pdf>

Appendix K. Personnel to Contact When Implementing the Emergency Plan for Disease Vector and Pest Control (Blank Template)

(a) Commanding Officer who can authorize additional resources to support emergency vector control:

Name:
COMM: DSN:

(b) Officer in Charge, Branch Clinic:

Name:
COMM: DSN:

(c) Environmental Health Officer:

Name:
COMM: DSN:

(d) Pest Control Supervisor, DPW:

Name:
COMM: DSN:

(e) Pest Control Shop:

Name:
COMM: DSN:

(f) Public Health Command POC:

Name:
COMM: DSN:

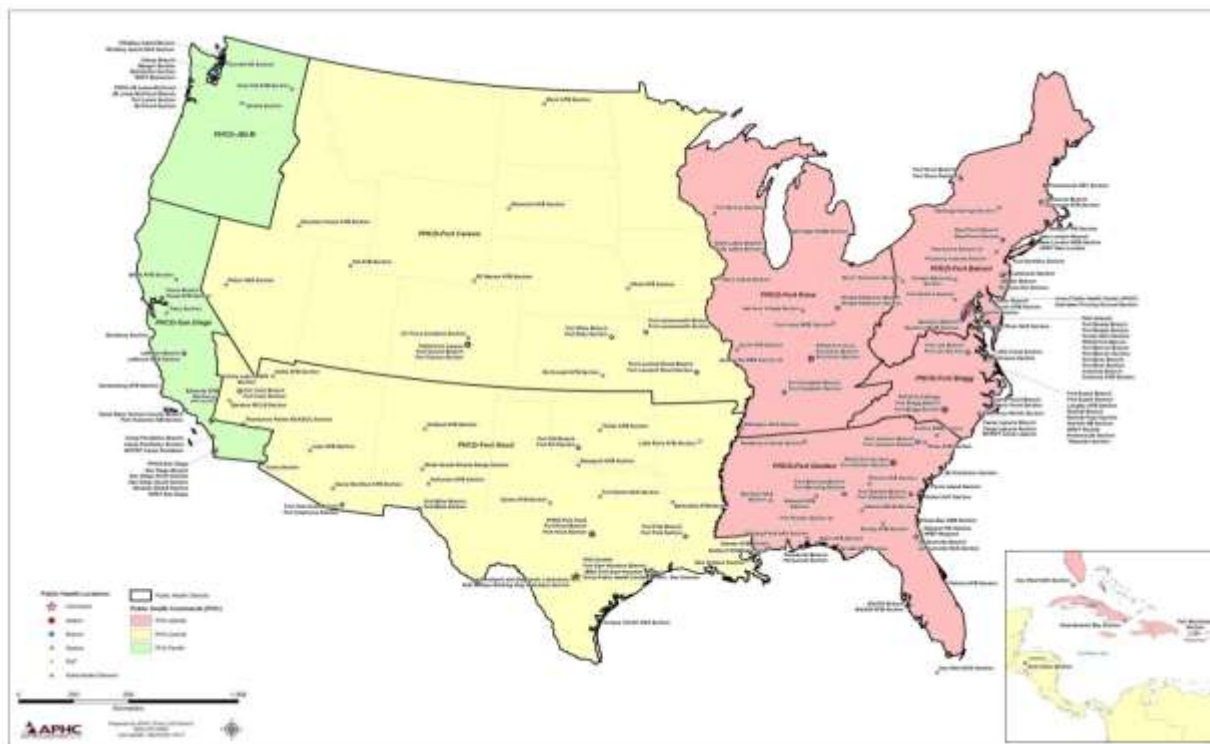
(g) Army Environmental Command

Name:
COMM: DSN:
E-Mail:

(h) Local Health Department, Infectious Disease Surveillance Branch:

Name:
COMM: DSN:
Email:

Appendix L. Points of Contact, Public Health Commands



Public Health Command-Atlantic
Entomological Sciences Branch
POC: Mr. Ben Pagac
E-mail: benedict.pagac.civ@mail.mil
Phone: 301-677-3932
Address:
4411 Llewellyn Avenue,
Fort Meade, MD 20755

Public Health Command-Europe
Entomological Sciences Branch
POC: LTC Richard McNemee
E-mail: richard.b.mcnemee.mil@mail.mil
DSN: 314-590-9813
Comm: +49(0)6371-9464-9813
Address:
Landstuhl, Germany
CMR 402
APO, AE 09180

Public Health Command-Central
Entomological Sciences Branch
POC: CPT David Nielsen
E-mail: david.h.nielsen.mil@mail.mil
Phone: 210-221-4853
Address:
2899 Schofield Road
JBSA Fort Sam Houston, TX 78234

Public Health Command-Pacific
Entomological Sciences Branch
POC: MAJ Lewis Long
E-mail: lewis.s.long@mail.mil
DSN: (315) 263-4194
COM (Japan): 046-407-8586
COM (CONUS): 011-81-46-407-4194
Camp Zama, Japan

Alternate Form for Reporting Zika Virus Presence

This information can also be reported at:

<https://gkoportal.ng.mil/arng/ie/D01/Lists/ZikaReporting/AllItems.aspx>

State: _____ Site: _____

Address of Site: _____

City: _____ Zip Code: _____ County: _____

Name: _____

Job Title: _____

Office: _____

Phone number: _____ Email Address: _____

Reporting of Positive Zika virus in Mosquito

Mosquito Trap location: _____

Date mosquito collected: _____ Species: _____

Mosquito Testing Agency: _____

Test Results: _____

(May also attach copy of results from testing agency)

Initial Reporting of Human Infection of Zika virus

Check one:

___ Infection of individual(s) stationed/employed at ARNG site

___ Infection of individual(s) in adjacent county or in vicinity of ARNG site

Date initially reported: _____

APPENDIX I

Laws, Regulations and Policies

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LAWS, REGULATIONS AND POLICIES

Federal.....	Page 1
State.....	Page 5
DoD Regulations and Guidance.....	Page 7
IDNR Tree Cutting Policy	Page 9
IDNR Prescribed Burn Policy.....	Page 17

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LAWS, REGULATIONS, EXECUTIVE ORDERS, AND IDNR POLICIES

Federal

American Indian Religious Freedom Act (42 USC §1196) – requires the U.S. to protect and preserve religious rights of the American Indian, Eskimo, Aleut, and Native Hawaiians, including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

Animal Damage Control Act (7 USC §426 *et seq.*) – provides broad authority for investigation, demonstrations and control of mammalian predators, rodents and birds.

Authorization of Take Incidental to Military Readiness Activities (50 CFR 21.15) – allows incidental take by DoD in the course of military readiness activities under certain conditions specified in Paragraph (a) *Take Authorization and Monitoring*:

- (1) Except to the extent authorization is withdrawn or suspended pursuant to paragraph (b) of this section, the Armed Forces may take migratory birds incidental to military readiness activities provided that, for those ongoing or proposed activities that the Armed Forces determine may result in a significant adverse effect on a population of a migratory bird species, the Armed Forces must confer and cooperate with the Service to develop and implement appropriate conservation measures to minimize or mitigate such significant adverse effects.
- (2) When conservation measures implemented under paragraph (a)(1) of this section require monitoring, the Armed Forces must retain records of any monitoring data for five years from the date the Armed Forces commence their action. During INRMP reviews, the Armed Forces will also report to the Service migratory bird conservation measures implemented and the effectiveness of the conservation measures in avoiding, minimizing, or mitigating take of migratory birds.

Environmental Safeguard for Activities for Animal Damage Control on Federal Lands (EO 11870) restricts the use of chemical toxicants for mammal and bird control.

American Antiquities Act of 1906 (16 USC §431-433) – provides for the protection of items of archeological significance, both historic and prehistoric.

Archeological and Historical Preservation Act of 1974 (16 U.S.C 469 *et seq.*) – provides for the preservation of historical and archeological data (including relics and specimens).

Archeological Resources Protection Act of 1979 (16 USC §470 *et seq.*) – prohibits the excavation or removal from Federal or Indian lands any archeological resources without a permit from the land manager.

Bald Eagle Protection Act (16 USC §668a-d) – prohibits taking or harming bald or golden eagles, their eggs, nests, or young without appropriate permit.

Clean Air Act, as amended (42 USC §7401 *et seq.*) – regulates air emissions from area, stationary, and mobile sources. This law authorizes the USEPA to establish NAAQS to protect public health and the environment.

Clean Water Act (CWA): Section 401 Water Quality Certification, 1986, 33 USC §1341 – requires state certification of federal permits that result in actions that discharge into navigable waters. Under Section 401, states have authority to review federal permits that may result in a discharge to wetlands or waterbodies under state jurisdiction.

Clean Water Act (CWA): Section 404, Permits for Dredged or Fill Material, 1977, 33 USC §1344 – establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g. certain farming and forestry activities).

Endangered Species Act of 1973, as amended (16 USC §1531 *et seq.*) – provides for the identification and protection of threatened and endangered plants and animals and their critical habitats. Requires federal agencies to conserve T/E species and cooperate with State and local authorities to resolve water resources issues in concert with the conservation of T/E species.

Federal Insecticide, Fungicide, and Rodenticide Act (7 USC §136) – Governs the use and application of pesticides in natural resource management programs.

Federal Land Policy and Management Act (43 USC §1701) – Establishes public land policy and guidelines for its administration and provides for the management, protection, development, and enhancement of the public lands.

Federal Noxious Weed Act of 1974 (7 USC §2801 *et seq.*) – Establishes control and eradication of noxious weeds and regulates them in interstate and foreign commerce.

Federal Water Pollution Control Act as amended by the CWA of 1977 (33 USC §1251) – Regulates dredging and filling of wetlands and waterbodies and establishes procedures for identifying and regulating non-point sources of pollutants, including turbidity, into waterways.

Federal Water Pollution Control Act: Section 404, as amended by the CWA of 1977 (33 USC §1251) Prohibits the discharge of dredged or filled materials into waters of the United States, including wetlands, without first obtaining a permit from USACE. Activities in wetlands that require federal permits include, but are not limited to: placement of fill material; ditching activities when the excavated material is sidecast, mechanized land clearing; land leveling; and most road construction.

Fish and Wildlife Conservation Act (16 USC §2901) – Provides for the protection of non-game fish and wildlife.

Fish and Wildlife Coordination Act (16 USC §661 *et seq.*) – Provides mechanism for wildlife conservation to receive equal consideration and be coordinated with water-resource development programs.

Floodplain Management (EO 11988) – Requires agencies to assess the effects that their actions may have on floodplains and to consider alternatives to avoid adverse effects and incompatible development on floodplains.

Forest and Rangeland Renewable Resources Planning Act (16 USC §1601 *et seq.*) – Requires and inventory of potential renewable resources and an evaluation of opportunities for improving their yield on goods and services. Agencies must provide an opportunity for public involvement and consultation with other agencies in establishing policies for multiple use and sustained yield.

Greening the Government through Leadership in Environmental Management (EO 13148) – This EO (Section 207, Environmentally and Economically Beneficial Landscaping) states that “each agency shall strive to promote the sustainable management of Federal facility lands through the implementation of cost-effective, environmentally sound landscaping practices, and programs to reduce adverse impacts to the natural environment.” In addition, this EO (Section 205, Use Reduction: Toxic Chemicals and Hazardous Substances and Other Pollutants) states that “through identification of proven substitutes and established facility management practices, including pollution prevention, each agency shall reduce its use of selected toxic chemicals, hazardous substances, and pollutants, or its generation of hazardous and radioactive waste types at its facilities by 50 percent by December 31, 2006. If an agency is unable to reduce the use of selected chemicals, that agency will reduce the use of selected hazardous substances or its generation of other pollutants, such as hazardous and radioactive waste types, at its facilities by 50 percent by December 31, 2006.

Hunting and Fishing on Federal Lands (10 USC §2671 *et seq.*) – establishes requirements for regulating hunting, fishing, and trapping on military lands.

Indian Sacred Sites (EO 13007) – Provides for the protection of and access to Indian sacred sites.

Invasive Species (EO 13112) – Requires Federal agencies to: “prevent the introduction of invasive species”; “detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner”; “monitor invasive species populations accurately and reliably, provide for restoration of native species and habitat conditions in ecosystems that have been invaded”; “conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species”; and “promote public education on invasive species and the means to address them.”

Land and Water Conservation Act of 1965 (16 USC §4601 *et seq.*) – assists in preserving, developing, and assuring accessibility to outdoor recreation resources.

Legacy Resource Protection Program Act (P.L. 101-511) – established a program for the stewardship of biological, geophysical, cultural and historic resources on DoD lands.

Migratory Bird Conservation Act (16 USC §715 *et seq.*) – Establishes a Migratory Bird Conservation Commission to approve areas recommended by the Secretary of the Interior for acquisition with Migratory Bird Conservation Funds.

Migratory Bird Treaty Act, as amended (16 USC §703-712) – Prohibits the taking or harming of a migratory bird, its eggs, nests, or young without the appropriate permit.

National Environmental Policy Act of 1969, as amended (42 USC §4321) – Provides a national charter for protection of the environment and requires Federal agencies to prepare a statement of environmental impact in advance of each major action that may significantly affect the quality of the human environment.

National Historic Preservation Act of 1966 (16 USC §470 *et seq.*) – provides for the preservation of historic properties throughout the U.S.

Non-indigenous Aquatic Nuisance Prevention and Control Act of 1990, as amended (16 U.S.C 4701 *et seq.*) – established a program to prevent the introduction of and to control the spread of introduced aquatic nuisance species and the brown tree snake.

Off Road Vehicle Use on Public Lands (EO 11989) – limits the use of off-road vehicles on federal lands soil, water, or natural resources could be adversely affected.

Oil Pollution Prevention Act of 1990, Public Law 101-380 – Redefines the requirements of the National Contingency Plan to include planning for, rescue of, minimization of injury to, and assessment of damages for injury to fish and wildlife resources.

Outleasing for Grazing and Agriculture on Military Lands (10 USC §2667) – provides for the outleasing of public lands.

Protection and Enhancement of Environmental Quality (EO 11514) – provides for environmental protection of federal lands and enforces requirements of NEPA.

Protection and Enhancement of the Cultural Environment (EO 11593) – supports previous laws and provides for additional protection of cultural resources.

Protection of Wetlands (EO 11990) – requires agencies to take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the beneficial values of wetlands.

Recreational Fisheries (EO 12962) – requires Federal agencies, to the extent practicable and where permitted by law, "to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities".

Sale of Certain Interests in Land, Logs (10 USC §2665) – Authorizes the sale of forest products and the reimbursement of the costs of managing forest resources for timber production.

Sikes Act “Conservation Programs on Military Reservations” (16 USC §670a *et seq.*) – Requires Federal military installations with adequate wildlife habitat to implement cooperative agreements with other agencies and develop long-range integrated natural resources management plans. Thereby, it is appropriate to manage natural resources for multipurpose uses and provide the public access to those uses to the extent consistent with the military mission. The act also sets guidelines for the collection of fees for the use of natural resources such as hunting and fishing.

Soil Conservation Act (16 USC §590a *et seq.*) – provides for soil conservation practices on Federal lands.

State

Illinois Water Quality Standards (35 IAC 302). Water quality standards applicable to lakes and streams.

- Subpart A: General water quality provisions
- Subpart B: General use water quality standards
- Subpart C: Public and food processing water supply
- Subpart D: Secondary contact and indigenous aquatic life standards
- Subpart E: Lake Michigan Basin water quality standards
- Subpart F: Procedures for determining water quality criteria

Environmental Protection Act (415 ILCS 5/). The purpose of this act is “to establish a unified, state-wide program supplemented by private remedies, to restore, protect and enhance the quality of the environment, and to assure that adverse effects upon the environment are fully considered and borne by those who cause them.”

Fish and Aquatic Life Code (515 ILCS 5/) provides protection for all fish, reptiles, amphibians, crayfish, and mussels

Flood Control Act of 1945 (615 ILCS 15/). This act recognizes the destructive nature of floods on industry, agriculture, and life in general. It gives the Department of Natural Resources authorization to examine, prepare plans, construct, and supervise construction, maintenance, and all operations concerning the control of floods.

Harmful Aquatic Organisms Act (92 SB0957). This act is concerning harmful aquatic organisms.

Illinois Conservation Enhancement Act (505 ILCS 35/). This act created both the Save Illinois Topsoil Program and the Illinois Natural Resource Enhancement Program. “It is the purpose of this Act that certain marginal agricultural land be kept or taken out of crop production or pasture to protect soil and water quality and to protect and support fish and wildlife habitat.”

Illinois Endangered Species Protection Act (520 ILCS 10/) requires the protection of animals and plants listed by the Endangered Species Protection Board as endangered or threatened

Illinois Exotic Weed Act (525 ILCS 10/). This law prohibits the distribution of seeds or plant parts from plants not native to North America without a permit issued by the Department of Natural Resources. Species designated in Section 3 of this Act include: Japanese honeysuckle (*Lonicera japonica*), multiflora rose (*Rosa multiflora*), purple loosestrife (*Lythrum salicaria*), common buckthorn (*Rhamnus cathartica*), glossy buckthorn (*Rhamnus frangula*), saw-toothed buckthorn (*Rhamnus arguta*), dahurian buckthorn (*Rhamnus davurica*), Japanese buckthorn (*Rhamnus japonica*), Chinese buckthorn (*Rhamnus utilis*), and kudzu (*Pueraria lobata*) are hereby designated exotic weeds.

Illinois Forestry Development Act (525 ILCS 15/) establishes policy for acceptable forestry management practices that can include site preparation, planting, weed and pest control, fire control, and all other practices deemed by the Department of Natural Resources.

The Illinois Interagency Wetlands Policy Act of 1989. This act established the IDNR as the direct regulatory authority over wetlands in Illinois. Peripheral authority is provided in the

Rivers, Lakes, and Streams Act which provides the Department with regulatory authority over activities in floodplains.

Illinois Lake Management Program Act (525 ILCS 25/) requires the state to develop lake management strategies that address all potential causes of lake degradation.

Illinois Natural Areas Preservation Act (525 ILCS 30/17). This act requires the State of Illinois to preserve natural lands and waters and the plants and animals living in these natural communities for both present and future generations.

Insect Pest and Plant Disease Act (505 ILCS 90/). This act prevents the “introduction into and the dissemination within this State of insect pests and plant diseases and to provide for their repression and control.”

Illinois Pesticide Act (415 ILCS 60). This act deals with licensing, record keeping, permits, application, and registration of pesticides in Illinois.

Illinois Pollution Prevention Act (415 ILCS 115/). “It is the purpose of this Act (i) to reduce the disposal and release of toxic or hazardous materials, (ii) to promote pollution prevention as the preferred means for achieving compliance with environmental laws and regulations, (iii) to establish State programs that provide high-level attention to pollution prevention policy initiatives, (iv) to integrate existing regulatory programs to promote pollution prevention, and (v) to stimulate pollution prevention strategies by industry.”

Illinois Seed Law (505 ILCS 110/). This act regulates “the labeling, sale, offering, exposing or transporting for sale of agricultural, vegetable and other seeds; to prevent misrepresentation.”

Rivers, Lakes, and Streams Act (615 ILCS 5/). This act gives the Department of Natural Resources jurisdiction and supervision over all rivers and lakes within the State of Illinois.

Soil and Water Conservation Districts Act (70 ILCS 405/). “Declaration of policy. The General Assembly declares it to be in the public interest to provide (a) for the conservation of the soil, soil resources, water and water resources of this State, (b) for the control and prevention of soil erosion, (c) for the prevention of air and water pollution, and (d) for the prevention of erosion, floodwater and sediment damages, and thereby to conserve natural resources, control floods, prevent impairment of dams and reservoirs, assist in maintaining the navigability of rivers and harbors, conserve wild life and forests, protect the tax base, protect public lands, and protect and promote the health, safety and general welfare of the people of this State.”

Water Pollutant Discharge Act (415 ILCS 25/). “It is hereby declared that it is the public policy of the State of Illinois that there should be no discharges of oil or other pollutants into or upon any waters which are or may be used for the purposes of providing a water supply for any city, town or village, or for purposes of recreation or navigation and that those persons responsible for such discharges shall bear the costs of removal.”

Watershed Improvement Act (505 ILCS 140/) provides policy for the protection of Illinois watersheds and authorizes the Department of Agriculture to enter into any agreements with all federal, state, and local organizations in order to maintain and improve any approved watershed in the State.

Water Use Act of 1983 (525 ILCS 45/). The policy of this act is to better conserve and manage water.

Wildlife Code (520 ILCS 5/) governs the conservation, distribution, introduction and restoration of birds and mammals in the State of Illinois.

DoD Regulations and Guidance

AR 200-4	Cultural Resources Management
DoDI 4715.3	Environmental Conservation Program
32 CFR 651	Environmental Effects of Army Actions
AR 200-1	Environmental Protection and Enhancement
TM 5-633	Fish and Wildlife Management
TM 5-631	Forest Management
AR 405-80	Granting Use of Real Estate
AR 420-40	Historic Preservation
TM 5-630	Land Management
AR 200-3	Natural Resources Management
AR 200-5	Pest Management
TC 25-1	Training Land
AR 210-9	Use of Off-Road Vehicles on Army Lands
DoDI 4150.7M	DoD Pest Management Training and Certification
DoDI 4150.7P	DoD Plan for the Certification of Pesticide Applicators

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ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Policy and Procedures Manual

Chapter 5 **Resources**
Subchapter D **Forests**
Section 5D-4 **Tree Cutting**

Policy: The Department recognizes the need to engage in active management of lands to support the recreation, preservation, and other natural resource goals established in statute and contained within its mission. Tree removal is often necessary for forest stand improvement, wildlife management, and natural community restoration or to protect the safety of our visitors. To combat the known or anticipated consequences of unwanted change in plant species composition or structure, land managers can use a combination of management practices to effect selective woody vegetation removal (e.g. prescribed burning, herbicides, cutting, mowing, discing, timber harvest, bulldozing) to maintain or return communities to a desired species composition. The Department shall exercise the judicious use of tree cutting activities in order to achieve specified natural resource management goals.

The reasons for tree cutting on Department properties are guided by statutory mandates, statutory authorities, administrative rules, court decision(s), Department policy and programs and falls under five categories:

1. Public health and safety issues that involve the elimination of hazards to visitors, employees and /or existing buildings, structures or other improvements.
2. Natural resource management such as timber harvest, preservation or restoration of natural communities and endangered or threatened species habitat, wildlife management, and control of exotics species or noxious weeds .
3. Protection and preservation of archaeological resources requiring the removal of trees.

New Policy Date: June 1, 2006

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4. Capital projects involving the removal of trees only where necessary for planned or on going construction of trails, buildings, structures or other recreational oriented improvements.

5. Containment of disease/insect outbreaks

It is the purpose of this policy and associated procedures to establish a process that will keep the Department's actions and activities within the bounds of these guiding documents, while providing the latitude necessary to efficiently and successfully manage our properties. This policy applies to state funded activities and projects occurring on lands where the Department either manages the property or has a legal interest. This policy should also be used to guide our technical recommendations to other agencies, organizations and landowners in their management

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

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Chapter 5	Resources
Subchapter D	Forests
Section 5D-4	Tree Cutting

Procedure:

I. Tree Cutting on DNR Owned, Leased or Managed Sites

The authority for tree cutting on Department sites varies by site classification. Therefore, procedures to approve tree cutting may differ slightly for each site classification or groups of classifications. Reference is often given to statute, ad rule, and court rulings. These should be consulted as necessary to further clarify these procedures. These procedures apply to land where the Department has jurisdictional management responsibility.

The Department shall replace or otherwise mitigate, subject to available funds, all trees that are either lost, cut or removed under categories 1, 3 and 4, in the Policy Section. Tree cutting activities associated with sound natural resource management in categories 2 and 5 result in improvements to the desired natural community. This management is often a disturbance aimed at altering the anticipated succession and/or to preserve the existing natural community from further degradation. However, the Department recognizes these trees may have provided some benefit and will thus employ a no net loss policy in regards to tree removal associated with categories 2 and 5. Projects involving the loss of more that 50 native trees over 6" DBH will be replaced on an acre basis at a 1:1 ratio. Projects involving fewer than 50 native trees over 6" DBH will be replaced on an individual tree basis at a 1:1 ratio. Tree planting associated with this no net loss policy will occur on state owned or managed land and the records will be maintained on a regional basis.

- A. Dedicated Nature Preserves:** Management activities, including all tree cutting regardless of the number or size of trees, within Department Owned Nature Preserves are governed by the Illinois Natural Areas Preservation Act, (525 ILCS 30/1) and the Rules for Management of Nature Preserves, 17 Ill. Adm. Code Ch. V Part 4000 and summarized as follows:

Control of plant succession, including the control of invading native woody species, noxious weeds and all exotic vegetation by deliberate chemical or mechanical manipulation may be undertaken to preserve or restore a natural community or a threatened or endangered species. Plant succession control measures may be undertaken as provided in the approved master plan or

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management schedule or a specific activity approved by the INPC and the Department. Methods of control may include prescribed burning, mowing, grazing, cutting of shrubs and trees, girdling of trees, hand-pulling or cutting of invasive herbaceous species, application of herbicide as specified, and other management practices to alter plant succession.

Additionally, all INPC approved management activities are approved through the Department's annual plan of work process for state sites.

- B. Registered Land and Water Reserves:** Management activities for Registered Land and Water Reserves are governed by Administrative Rule, 17 Ill. Adm. Code Ch. V Part 4010. Management activities allowed within the Rules for Management of Nature Preserves (see above) are also allowed on Registered Areas. In addition, provisions are made to benefit threatened and endangered species, restore the quality or extent of natural communities, promote conservative species, or restore natural conditions within disturbed areas as provided in the approved master plan, management schedule or a specific activity approved by the INPC and the Department.

Additionally, all INPC approved management activities are approved through the Department's annual plan of work process for state sites.

- C. State Parks** - Tree cutting is allowed to further the following legislative mandates:

- 1) To preserve the most important historic sites and events....
- 2) To set aside as public reservations those locations which have unusual scenic attractions..., and points of scientific interest to botanists and naturalists.
- 3) To preserve large forested areas and marginal lands along the rivers, small water courses, and lakes for a recreation use different from that given by the typical city park, and so that these tracts may remain unchanged by civilization, so far as possible, and be kept for future generations.

Management activities, including tree cutting, is governed by Illinois State Park Act 20 ILCS 835/ Ch. 105 which was clarified in the Supreme Court decision, *Sierra Club v. Kenney*, Sup., 57 Ill. Dec. 851, 429 N.E.2d 1214, Dec. 18th, 1981. Tree cutting is limited to recreational or preservation purposes.

- D. State Forests** - State Forest properties will be managed in accordance with the State Forest Act, 525 ILCS 40/0.01, Ch. 96 ½, and summarized as:

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Acceptable management practices allow tree cutting, harvesting, and other timber management activities. State Forests are to be “ managed as to produce continuous crops of timber for use of the people and industries of the State.” “ Timber grown on such forests may be sold under rules and regulations of the Department, but all cutting and removal of forest products shall be in accordance with the best practices of forestry”

- E. Other Classifications:** Tree removal needs on site classifications other than those listed above would include a diverse mix of activities such as wildlife habitat enhancement, fire break construction, dam, ditch or levee maintenance, or others supported by the five (5) categories in the policy.

II. Approval of Tree Cutting

A. Hazardous trees

As described above, tree cutting needs and authorities differ based on site classification. Despite these differences and in order to simplify this procedure, the Department will utilize the same procedure for all DNR classifications. When cutting trees less than 6" diameter at breast height (DBH) is necessary for the safety of staff and visitors, no documentation is necessary. When cutting trees over 6" diameter at breast height (DBH) is necessary for the safety of staff and visitors, site staff should document the location, size and number of tree(s) removed, and evidence supporting the action such as photographs or a written description using the attached form, although no advance approvals are required. This documentation should be forwarded to the Regional Office for their records. Method of disposal of cut trees must be included on the approval form. The methods and plans of replacement for trees will be detailed on the form and approved by the District Forester. This action can be approved locally by the Site Superintendent and the District Forester.

B. All other tree cutting

Management activities, programs, and developments that involve tree cutting require advance approval through the annual Plan of Work process or through the special fund review and approval process. Tree cutting on Department owned, managed or leased lands for which there is no annual Plan of Work and/or for which no special funds will be used, requires advance approval of the site manager after consultation with the District Forester.

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Tree cutting shall be approved through the annual Plan of Work (POW) process. Large projects, or those which may be controversial must be noted in the POW summary. Disposal and/or use of merchantable portions of any tree(s) downed from either cutting or natural causes shall be determined by supervisory staff within Forestry based upon the recommendation of the Site Superintendent and District Forester and other resource managers as necessary and described in the POW or other review documents. In all cases involving tree cutting and/or disposal, complete records will be maintained on-site and copied to the Regional and Land Management's central office files. Furthermore, records will be maintained regarding replacement of hazardous trees, mitigation associated with capital projects and reforestation associated with timber harvests.

III. Using Mechanical or Chemical Treatments Resulting in Dead Standing Trees

The following procedures shall be followed at all sites where forest stand improvement projects include tree-killing treatments that will leave trees standing until they naturally decay and/or become weak enough to fall. These procedures are intended to notify the public about increased hazards that exist around treatment areas whenever the physical evidence of tree decay isn't obvious to a reasonable observer/user/visitor. These procedures are necessary to protect public and staff safety and to minimize the Department's liability stemming from intentional tree treatments.

- A.** On areas where the practices described above are appropriate and are approved through the Department's POW process, trees greater than 12 inches DBH shall be clearly marked with paint to indicate they have been treated. All treated trees shall be marked with an orange paint line around the trunk of the tree (on or near the girdling cut, if applicable). This task of marking trees may be made part of any tree removal contract.
- B.** On areas treated by the methods described above that are open to the public, the public shall be notified of such treatments through means such as local press releases, printed materials, hunter fact sheets, site signs or by any other appropriate means. Such notification shall include information on the paint markings, including the color and style of the mark; and, a general warning that treated trees and/or tree limbs could fall without notice, especially on windy days. If the site users are known, such as through site-issued permits, a notice should be sent to users in advance of their visit or handed to them at check in.
- C.** Treatment zones along trails and boundaries, adjacent to parking lots, within campgrounds and day use areas, or anywhere else where user densities are high

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relative to the rest of the site shall have all trees requiring treatment felled within a distance of 1 1/2 times the height of the tree from the public use area.

- D.** Public access to treated areas may be restricted for some period of time when densities of treated trees are particularly high or the stage of decay results in a higher probability of falling trees within a short amount of time. If possible, such closures should be discussed at the annual plan of work process so hunting ad rules, fact sheets, site applications, etc., if applicable, can be altered in advance of the closure date. Recommendations for closure should be made by the Site Manager and the District Forester and forwarded through the chain of command for approval by both Office Directors for Land Management and Resource Conservation. The Site Manager and District Forester shall be responsible for determining when the condition of treated trees is such that re-opening an area to public access and/or termination of marking and notice to visitors is appropriate.

Illinois Department of Natural Resources
HAZARDOUS TREE CUTTING DOCUMENTATION

Site: _____ Date: _____

Project Area: _____

Nature Preserve or Land and Water Reserve YES NO (Circle One) Name of Preserve/Reserve: _____

Nature Preserve Commission Approval Date

LOCATION SKETCH (or attach site brochure map)

Tree Number:

Species _____ DBH _____ Height _____ Spread _____

Species _____ DBH _____ Height _____ Spread _____

Species _____ DBH _____ Height _____ Spread _____

Species _____ DBH _____ Height _____ Spread _____

Could this project have potential controversial implications? YES NO (Circle One) If yes, explain in detail. _____

Justification of Removal: _____

Disposal or Utilization of Tree(s): _____

Replacement Plan for Tree(s): _____

APPROVED BY:

Site Superintendent Date District Forester Date

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

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Chapter 5 Resources
Subchapter D Forests
Section 5D-2 Prescribed Burns

POLICY: The Department recognizes the use of prescribed burning as an essential part of implementing ecosystem management on public and private lands. Prescribed burning is the planned application of fire to natural or planted vegetative fuels in either their natural or modified state, under specified environmental conditions and following appropriate precautionary measures, which causes the fire to be confined to a predetermined area and accomplish planned land management objectives.

The singular role of fire in the creation, maintenance, restoration, management and re-creation of the prairies, savannas, wetlands, and oak forests of the Midwest has been well researched. Prescribed burning is widely used by land managers, foresters, wildlife managers, conservation biologists and restoration ecologists to accomplish a wide variety of ecological and management goals and objectives^{1 2 3 4 5}

Prescribed burning is widely used by land managers, foresters, wildlife managers, conservation biologists and restoration ecologists to accomplish a wide variety of ecological and management goals and objectives^{6 7 8 9}

In Illinois, prescribed burning is used by the U.S. Department of Agriculture, Forest Service and Natural Resources Conservation Service; U.S. Fish and Wildlife Service; Illinois Department of Natural Resources and the Illinois Department of Transportation. Other governmental agencies that use prescribed burning include Soil and Water Conservation Districts, Forest Preserve Districts, Conservation Districts, and Park Districts. Several non-government conservation organizations also conduct prescribed burning.

The Department may use prescribed burning on lands owned, leased or managed under agreement, on lands where the Department has management responsibility, and

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on private lands and other public lands in accordance with the procedures provided in the Procedures Section of this policy. Prescribed burning shall be applied based on ecological principles relying on the best research available that will provide for the long term viability of plant and animal communities.

¹ Stewart, O.C., 1956. *Fire as the first great force employed by man*. pp. 115-133 in: Man's role in changing the face of the earth. Ed by: W.L. Thomas. Jr. The University of Chicago Press. 1,193pp.

² Pyne, S.J., 1983. *Indian fires* . Natural History 2:6-11.

³ Pyne, S.J., 1982. *Fire in America: A cultural history of wildland and rural fire*. Princeton University Press. 654pp.

⁴ Steele, E.R., 1841. *Summer journey in the West*. Arno Press. New York Times. 278pp.

⁵ Wright, H.A. and A.W. Bailey. 1982. *Fire ecology. United States and Southern Canada*. John Wiley and Sons. New York. 501.

⁶ Collins, S.L. and L.L. Wallace, Eds. 1990. *Fire in North American prairies*. University of Oklahoma Press. 175pp.

⁷ Packard, S. and C.F. Mutel eds. 1997. *The tallgrass restoration handbook; for prairies, savannas, and woodlands*. Island Press. 463pp.

⁸ Anderson, R.C., J.S. Fralish and J.M. Baskin., Eds. 1999. *Savannas, barrens, and rock outcrop plant communities of North America*. Cambridge University Press. 470pp.

⁹ Johnson, P.S., S.R. Shifley, and R. Rogers. 2002. *The ecology and silviculture of oaks*. CABI Publishing. 503pp.

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Section 5D-2	Prescribed Burns

PROCEDURE:

The Office of Resource Conservation (ORC) is the principal Office within the Department responsible for prescribed burning and the Habitat Resources Division within ORC is the principal Division responsible for planning, training, executing and evaluating the Department's Prescribed Burning Program. The Director of the ORC shall appoint a Fire Working Group within ORC, including personnel from Divisions within ORC, the Illinois Nature Preserves Commission (INPC), Illinois Endangered Species Protection Board (ESPB), and Office of Land Management and Education, to periodically review and make recommendations on prescribed fire issues.

I. Definitions

“Prescribed burning” means the planned application of fire to natural or planted vegetative fuels under specified environmental conditions and following appropriate precautionary measures, which causes the fire to be confined to a predetermined area and accomplish the planned land management or ecological objectives.

“Escaped fire” means any fire that goes beyond the predetermined area and (a) requires outside resources to contain or (b) burns onto an adjoining landowner not covered by the prescribed burn.

“Personnel” means employees of the Illinois Department of Natural Resources, Illinois Nature Preserves Commission, or Illinois Endangered Species Protection Board.

II. Safety

The safety of personnel and volunteers is paramount. All personnel and volunteers working on prescribed burns near open flames shall have access to and wear Nomex clothing, Nomex shrouds, helmets, gloves, goggles

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and/or face shields, and leather boots. All personnel and volunteers working on prescribed burns have access to drinking water. Volunteers and personnel not wearing the protective gear listed above shall not be assigned by the Burn Boss to work near open flames. In order to carry out assignments, the Burn Boss shall assign two-way radios, cell phones, or any other equipment necessary.

III. Training

- A. Within two years of the approval of this Policy or within one year of being hired, all personnel working on prescribed burns shall successfully complete the following USDA Forest Service Wildland Fire Training courses: Basic Incident Command System (I-100), Fire Fighter Training (S-130) and Wildland Fire Behavior (S-190). Subject to supervisor's approval and prior to passing the above required courses, personnel may continue to work on prescribed burns until requirements of this Section are met. The Burn Boss shall make appropriate assignments to personnel hired after the approval date of this policy who have not yet passed the above courses. Such assignments shall be based on the new personnel's observable or known physical condition, stated experience, level of training and observable leadership qualities.
- B. Personnel who have passed the I-100, S-130 and S-190 courses prior to the approval date of this Policy will be considered in compliance with this Section of the Policy.
- C. It is Policy to provide additional training beyond the minimum requirements to build upon and enhance the skills of personnel working on prescribed burns.

IV. Seasonality of Prescribed Burns

All prescribed burns will be executed within the following time constraints statewide: October 1 through April 30. The time constraints and zones for burning are based upon phenology of plant development, animal reproductive and other surface activity, long-term climatic data and field experience. Special approval for burning later than the Spring cutoff dates or earlier than Fall starting dates may be given by the Director of the ORC.

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V. Planning Prescribed Burns

- A. It is a violation of this Policy for personnel to initiate, start, or conduct a burn on public or private land without an IDNR approved Prescribed Burn Plan (F1).
- B. When planning for prescribed burning, personnel shall strive to designate burn units, develop burn frequencies, and schedule the timing of burns to provide for the long-term viability of plants and animals, including but not limited to federal and State listed species, invertebrate species, and species whose temperature is regulated by the environment such as reptiles and amphibians.
- C. The Prescribed Burn Plan (F1) requires the pertinent information to plan and conduct a prescribed burn within this Policy. Prescribed Burn Plans (F1) will be reviewed and approved by the appropriate Regional Supervisors. An approved burn plan will be submitted through the Regional Forester to the Illinois Environmental Protection Agency.
- D. All prescribed burns conducted on INDR owned, leased, or managed lands, except privately owned lands enrolled in INPC programs, must go through the annual plan of work process. Exceptions may be addressed outside the annual plan of work process (for example when new property is purchased), but required permits and approval signatures on the Prescribed Burn Plan (F1) are still required.
- E. The Department will follow guidance from the National Weather Service (NWS) in identifying Fire Weather Watch and Red Flag Warning conditions as available through the regional National Weather Service offices of the National Oceanic and Atmospheric Agency (NOAA). The determination by the NWS of such conditions for a designated area will require that Department staff exercise elevated caution during Fire Weather Watch conditions and observe “no prescribed burning” status during Red Flag Warning conditions for the area of consideration until the Watch or Warning is lifted. An exception to the prohibition of burning during Red Flag Warning periods may be approved by the Director of ORC or his designee.

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VI. Prescribed Burn Reporting

- A. After each prescribed burn, a Prescribed Burning Report Form (F2) must be completed by the Burn Boss and submitted as outlined in the Prescribed Burning Report Form (F2).
- B. If there are any injuries that require professional medical attention, damage to public or private property, or the prescribed burn becomes an escaped fire, the Burn Boss must contact his immediate supervisor with an oral report as soon as reasonable in the judgment of the Burn Boss and provide a written report attached to the Prescribed Burning Report Form (F2).

VII. DNR Assistance and Role on Private and Other Public Lands

- A. Lands with written protection agreements (Illinois Nature Preserves, Land and Water Reserves and Natural Heritage Landmarks).

Personnel may assist in the planning, permitting, execution and report writing for prescribed burns conducted on lands enrolled in a state sponsored land protection program; provided there is a Prescribed Burn Plan (F1). If the landowner or authorized representative has approved a Management Schedule pursuant to 17 IL. Administration Code 4000.150 or 4010.220 that includes prescribed fire, the landowner's signature on the prescribed Burn Plan (F1) is not required annually. However, a Prescribed Burn Plan (F1) and Prescribed Burn Report (F2) are required for each burn scheduled and executed. Personnel shall assume the role of Burn Boss unless Subsection D applies.

- B. Other private lands.

Personnel may assist in the planning, permitting, execution and report writing for prescribed burns conducted on private lands; provided there is an approved management plan (e.g. Acres for Wildlife Plan, Forestry Development Act Plan, or Conservation Reserve Program plan) and Prescribed Burn Plan (F1). If the landowner or authorized representative has approved a Management Schedule that includes prescribed fire, the landowner's signature on the Prescribed Burn Plan (F1) is not required annually. However, a Prescribed Burn Plan (F1) and Prescribed Burn Report (F2) are required for each burn scheduled and executed. Personnel shall assume the role of Burn Boss unless

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Subsection D applies.

C. Other public lands.

Personnel may assist in the planning, permitting, execution and report writing for prescribed burns on public lands; provided there is an approved management plan as referenced in VII B., and Prescribed Burn Plan (F1). If the landowner or authorized representative has approved a Management Schedule that includes prescribed fire, the landowner's signature on the Prescribed Burn Plan is not required annually. However, a Prescribed Burn Plan (F1) and Prescribed Burn Report (F2) are required for each burn scheduled and executed. Personnel shall assume the role of Burn Boss unless Subsection D applies.

D. The Department may find it to be in the Agency's best interest to enter into other management agreements with private landowners, other agencies, and non-governmental organizations to manage land. Personnel may assist in all aspects of the planning and execution of prescribed burns if the conditions of the jointly approved agreement are followed.

VIII. Requirements and Role of the Burn Boss

A. A Burn Boss must meet the following requirements: have the minimum training stated under Section III. Training (I-100, S-130 and S-190); participated in five (5) prescribed burns; and in addition to the five (5) above successfully completed an apprenticeship under a Burn Boss on two (2) burns prior to a first assignment as a Burn Boss. Each time an apprenticeship is served, the apprentice shall sign the Prescribed Burning Report (F2) as the "Apprentice Burn Boss" and note the apprenticeship on the Burn Boss Qualification Form (F3). The signature on the F2 and F3 shall serve as documentation of the number of times an apprentice serves as an Apprentice Burn Boss. Copies of the relevant F1 and F2 forms shall be attached to the F3 as further proof of apprenticeship. All Burn Boss qualifications shall be reported on the Burn Boss Qualification Form (F-3).

B. In order to insure the safety of personnel and volunteers, the Burn Boss designated on the Prescribed Burn Plan (F1) is the supervisor for all personnel and volunteers working the burn. The Burn Boss shall assign staff and volunteers to specific jobs, designate line bosses

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and other duties as needed. Assignments shall be based on the participant's observable or known physical condition, stated experience, level of training and observable leadership qualities.

- C. It is a violation of this Policy for any personnel to leave a burn, including "mop-up," without the expressed permission of the Burn Boss.
- D. The Burn Boss has the authority to authorize overtime associated with the prescribed burn being overseen for all personnel across Division and Office lines.
- E. The Burn Boss is responsible for reviewing the Day of the Burn Checklist (Appendix 1 to F2) with the crew and for the completion and timely submission of the Prescribed Burn Report (F2).
- F. Personnel employed on the approval date of this Policy who have completed the training requirements and have the experience comparable to the requirements of this Policy to be a Burn Boss, subject to the discretion of their supervisor, shall be grandfathered in under the Policy. The employee's supervisor shall indicate that the employee is eligible to be grandfathered in on the Burn Boss Qualification Form (F3).
- G. Additional training beyond the minimum requirements shall be provided to build upon and enhance Burn Boss skills.

IX. Volunteers

Volunteers may only be utilized in the execution of prescribed burns under the following conditions:

- A. All volunteers must be 18 years of age and sign an IDNR Volunteer Form.
- B. It is the Burn Boss' responsibility to assess each volunteer, provide necessary minimal training on the day of the burn, and assign the volunteer to a job or duty that best fits the volunteer's observable or known physical condition, stated experience, level of training, and observable leadership qualities. (Note: Training for purposes of this subsection does not mean Section III. Training [I-100, S-130 and S-190]).

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D. Volunteers shall not be designated as a Burn Boss on Department owned, leased, and managed lands.

X. Cooperation with Other Agencies and Non-governmental Organizations

Personnel are encouraged to take full advantage of the mutual benefits of cooperating with other agencies and non-governmental organizations that use prescribed burning as a land management tool or are experts in fire science and training. Many offer funding and or training opportunities for personnel. Examples include but are not limited to: the U.S. Department of Agriculture, Forest Service and Natural Resources Conservation Service; U.S. Fish Wildlife Service; U. S. Army Corps of Engineers; National Wildfire Coordinating Group; Soil and Water Conservation Districts; State Fire Marshall; local Fire Departments; Rural Fire Protection Districts; Forest Preserve and Conservation Districts; Park Districts; Grand Prairie Friends; Natural Land Institute; The Nature Conservancy; Pheasants Forever; Wild Turkey Federation; Parklands Foundation; The Nature Institute; Illinois Audubon Society; Save The Prairie Society; Quail Unlimited; Ducks Unlimited; County Natural Areas Guardians; and Northwest Illinois Prairie Enthusiasts.

XI. Moratorium

The Director of the Office of Resource Conservation, after consultation with the Chief of the Habitat Resources Division, may place a moratorium on the use of prescribed burning by personnel. The moratorium may be placed by region, county, ownership, a specific site basis, or statewide as conditions dictate.

XII. Emergency Procedures

A. The Prescribed Burn Plan (F1) must include procedures and contingency plans for escaped fires, including water sources, rendezvous location for fire departments and paramedics, other fire fighting resources available, vulnerable infrastructure and safety zones. The Burn Boss shall discuss these procedures and plans with the crew and modify procedures and contingency plans if necessary when reviewing the Day of the Burn Checklist found in Appendix 1 of the Prescribed Burning Report (F2). In the case of an escaped fire, the Burn Boss or his designee shall assess crew status, contact outside agencies if necessary, and share information (e.g. aerial photos, Prescribed Burn Plan, resources available and access routes) with

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other agencies at the scene.

- B. The Burn Boss or his/her designee shall serve as Incident Commander on all escaped fires and remain until command is transferred to another qualified person.
- C. The Burn Boss or his/her designee may relinquish Incident Command authority to other firefighting authorities at his/her discretion, but shall immediately notify his/her supervisor that such command has been relinquished.

APPENDIX J

GLOSSARY

AND

ADDITIONAL INFORMATION SOURCES

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GLOSSARY

Adaptive management - A style of natural resource management that sets specific goals and objectives for managing, protecting, monitoring, and utilizing natural resources, but uses a “trial and error” type of management to achieve the desired results. The types of management activities used may change based on their prior success or failure in producing the desired results. Managers adapt to ever-changing situations to ensure the desired management results are achieved.

Air quality attainment area - Areas designated by the EPA as having met national air quality standards.

Alluvium - Sand, clay, or similar material gradually deposited by moving water, as along a river or the shore of a lake.

Annual Training - Two week yearly training period required for National Guard troops.

Battalion - A military unit consisting of a headquarters company and three to five functional (combat arms, combat support, or combat service support) companies consisting of approximately 250 to 1,000 persons, depending on the type of unit.

Benchmark - A standard used for comparison.

Berm - An earthen ridge created to provide concealment or to protect an emplacement from enemy fire.

Best Management Practices (BMPs) - Resource management decisions that are based on the latest professional and technical standards for the protection, enhancement, and rehabilitation of natural and cultural resources.

Biodiversity - The variety of life and its processes, including genetic combinations, species functions and associations occurring in an area, the differences among species, and the communities and ecosystems in which they occur.

Bivouac - A temporary encampment made by soldiers in the field. On permanent training installations, several bivouac sites may be established throughout the area to avoid overuse of any given site.

Brigade - A military unit composed of several battalions, augmented by specialized units (up to approximately 5,000 persons, depending on the type of unit).

Cantonment area - The developed portions (city-like areas) of a permanent military installation.

Claystone - Fine-grained rock consisting of compacted clay particles.

Coal - A member of a group of easily combustible, organic sedimentary rocks composed mostly of plant remains and containing a high proportion of carbon.

Colluvial - Soil material that has been transported downhill and accumulated on lower slopes and/or at the bottom of the hill.

Company - A military unit that is the next smaller unit of a battalion; the most basic administrative and tactical unit (approximately 50 to 200 persons, depending on the type of unit).

Convoy - A group of vehicles traveling together for mutual protection and convenience.

Cultural resources - Buildings, structures, sites, districts, sacred sites, artifacts, and any objects eligible for or included in the National Register of Historic Places.

Demolitions training - Training that teaches individuals how to utilize demolitions in the course of their duties. Specific training actions may include use of blasting caps, C4, TNT, military dynamite, detonation cord, fuses, and both electrical and non-electrical detonating systems.

Dud (ammunition) - A bomb, shell, or other round that fails to explode when intended.

Dudded impact area - any portion of a training installation known to have the potential to contain unexploded ordnance (UXO) that has residual or remaining kinetic energy.

Ecosystem - A dynamic and natural complex of living organisms interacting with each other and with their associated nonliving environment.

Edge - Interface or transition zone between closed forest and clearings or roadways; a favored habitat of several wildlife species including many game species.

Endangered species - Any species which is in danger of extinction throughout all or a significant portion of its range.

Ecosystem management - A style of natural resource management that uses a broad approach to integrate the relationships of all organisms, including humans, with each other and with the nonliving elements of their environment. Managers identify and integrate human activities, natural communities, ecosystems, and the natural disturbances found in those ecosystems. Management is goal-driven; preserves ecosystem integrity; is at a scale compatible with natural processes; is cognizant of nature's timeframes; recognizes social and economic viability within functioning ecosystems; is adaptable to complex and changing requirements; and is realized through effective partnerships among private, local, State, tribal, and Federal interests.

Evapotranspiration - The water lost from an area through the combined effects of evaporation from the ground surface and transpiration from the vegetation.

Exotic species - Species that occur in a given place, area, or region as the result of direct or indirect, deliberate or accidental introduction of the species by human activity. These species often spread rapidly, reduce populations of native species, and cause substantial detrimental changes to natural communities.

Firing range - The area or group of practice firing points designed for use by particular types of weapons.

Geographic information system (GIS) - A computer system which enables a person to process natural resource and a variety of other data collected from various surveys and inventories. High quality color maps and management documents can be conveniently produced and manipulated and used for data and inventory management, education, and a variety of planning purposes.

Glacial till - An unsorted, unstratified mixture of fine and coarse rock debris deposited by a glacier.

Hectare - Metric unit of area equal to 10,000 square meters, or 2.471 acres.

Hydric - Relating to, marked by, or requiring considerable moisture.

Hydrogeological - Of, or pertaining to, subsurface waters with related geologic aspects of surface waters.

Impact area - The area where projectiles fired in gunnery practice are aimed.

Inactive duty training - Training normally accomplished during a weekend training period.

Integrated Cultural Resources Management Plan (ICRMP) - A plan that defines the process for the management and protection of cultural resources on military installations.

Integrated Natural Resources Management Plan (INRMP) - A plan written to provide an overall framework and approach for managing, monitoring, protecting, and utilizing natural resources on military installations. These plans typically use an ecosystem-based approach to support sustainable military use of installation lands, while protecting and enhancing resources for multiple use, sustainable yield, and biodiversity.

Integrated Training Area Management (ITAM) – A program designed by USACERL to help determine the land’s ability to support training with the least impact on natural resources, including wildlife habitats.

Land Rehabilitation and Maintenance (LRAM) - A component of the ITAM program which provides a means to repair, restore, and maintain land impacted by training activities through the use of erosion control practices and revegetation.

Legacy Program - DOD program designed to encourage and promote research, conservation, and preservation of natural, cultural, and historical resources on military installations.

Lentic ecosystems - Relating to standing waters, such as ponds, lakes, and reservoirs.

Listed species - Any plant or animal designated as a state or federal threatened, endangered, special concern, or candidate species.

Loess - Unconsolidated sediment deposited by wind. Loess is usually composed of unstratified fine sand or silt.

Maneuver - The planned and controlled tactical movement of troops, vehicles, and aircraft.

Mesic - Of or concerning plants and/or areas with a moderate water supply.

Mitigation - Lessening the effects to natural or cultural resources caused by implementation of projects or activities that result in adverse impacts. Mitigation can include limiting the magnitude of the action; repairing, rehabilitating, or restoring the affected resource; avoiding the effect altogether; reducing or eliminating the effect over time by preservation and maintenance operations during the life of the action; and/or compensating for the effect by providing substitute resources or environments.

Moraine - An accumulation of boulders, stones and other debris carried and deposited by a glacier.

Multiple use - The integrated, coordinated, and compatible use of natural resources so as to achieve a sustainable yield of a mix of desired goods, services, and direct and indirect benefits while protecting the primary purpose of supporting and enhancing the military mission and observing stewardship responsibilities.

National Environmental Policy Act (NEPA) PL 91-190, 1 Jan 1970 - The law requiring Federal governmental agencies to consider the potential impacts to the environment when planning and executing major actions.

National Register of Historic Places (NRHP) - The listing of officially recognized historical structures, places, buildings, objects, and districts; under the authority of the U.S. Department of the Interior; operated by the National Park Service. Items on this list are worthy of preservation consideration because of significance in American history, architecture, archaeology, engineering, or culture. Significance may be local, state, or national in scope.

Natural communities - Interrelated assemblages of plants and animals found in a given area.

Natural resources - All elements of nature and their environments of soil, air, and water. Those consist of two general types: earth resources, which consist of the nonliving resources such as minerals, water, and soil components and biological resources, which consist of living resources such as plants and animals.

Nondudded impact area - Areas on training installations that do not have the potential to contain unexploded ordnance (UXO) that has residual or remaining kinetic energy.

Permeability - The capability of soil or other geologic formations to transmit water.

Platoon - A subdivision of a military company divided into squads or sections and usually commanded by a lieutenant.

Prime farmland - A special category of highly productive cropland that is recognized and described by the US Department of Agriculture's Soil Conservation Service and receives special protection under the Surface Mining Law.

Range and Training Land Assessment (RTLTA) - A component of the ITAM program which was designed to inventory, monitor, and evaluate the natural resources on Army lands.

Resource Conservation and Recovery Act (RCRA) - Act which established criteria for the management of hazardous wastes; that is, handling, disposal, and record keeping.

Riparian - Relating to, living, or located along the bank of a natural watercourse such as a river, stream, or sometimes a lake.

Safety fan - The access exclusion zone set around target areas on a firing range.

Sandstone - A rock formed from sand or quartz particles cemented together with clay, calcium carbonate and iron oxide.

Sensitive species - Those plant and animal species for which population viability is a concern because they are highly responsive or susceptible to modification by external agents or influences. These species often show decreases in population numbers or densities following modifications to their natural environments such as habitat fragmentation, changes in water quality, or increased human activities.

Shale - A fine-grained sedimentary rock formed from mud and silt, commonly gray to black; tends to split into thin layers.

Shrink-well - The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Siltstone - A fine-grained, layered sedimentary rock composed primarily of grains between 1/256 mm and 1/16 mm in size. Siltstones tend to be "flaggy" and contain hard thin layers.

Slumping - The slow and gradual slippage of all layers of soil so that the bottom of a hillside becomes level with the lowlands or even tipped upward.

Small arms - Weapons carried and operated by individuals. This group of weapons includes pistols and rifles carried and operated by individuals.

Snags - Dead, but standing, trees.

Stewardship - The management of resources entrusted to one's care in a way to preserves and/or enhances the resources and their benefits for present and future generations.

Subsidence - When land or buildings sink to a lower level

Succession - The gradual replacement of one plant community by another through natural processes over time.

Surficial - Pertaining to or occurring on or near the earth's surface.

Sustainable Range Awareness (SRA) – The component of the ITAM program that provides a means to develop and distribute educational materials and conduct operational awareness activities.

sustainable use - Managing to provide long-term availability and quality of installation lands for military training operations by not degrading existing natural resources, including living and non-living components and the processes that tie them together.

Sustainable yield - Managing a renewable natural resource to provide an annual or periodic yield of goods, services, and direct and indirect benefits, into perpetuity. That may include, but is not limited to, maintaining economic benefits, ecological processes and functions, and biodiversity.

Threatened species - Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Watershed - The region draining into a particular stream, river, or entire river system.

Wetlands - areas that are inundated or saturated with surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soils. This classification includes swamps, marshes, bogs, wet meadows, and similar areas.

Xeric - Of or concerning plants and/or areas with low or irregular supplies of water.

ADDITIONAL INFORMATION SOURCES

Land Use Planning and Maintenance

Internet Addresses:

Landscaping with native plants: <http://www.grownative.org/>
Native Plants Guide: <http://www.nwf.org/backyardwildlifehabitat/nativeplants.cfm>
Illinois Native Plant Society: <http://www.inhs.uiuc.edu/inps/>
USDA, NRCS Plant Database: <http://plants.usda.gov>

Water Quality and Soil Conservation

Contacts:

Alan Keller, IEPA (217.782.0610) - Information on specific stormwater or land disturbance permit requirements.
Jerry Kuhn, IEPA (217.782.9470) - public water supply permit requirements.

Internet Addresses:

National Soil Erosion Research Laboratory: <http://topsoil.nserl.purdue.edu/nserlweb/>
Natural Resources Conservation Service: <http://www.nrcs.usda.gov/>
Illinois Urban Manual: <http://www.il.nrcs.usda.gov/technical/engineer/urban/contents.html>
Illinois Non-Point Source Unit: <http://www.epa.state.il.us/water/watershed/nonpoint-source.html>
Illinois Environmental Protection Agency, Water Pollution Information:
<http://www.epa.state.il.us/water/>
Illinois Natural Resources Conservation Service: <http://www.il.nrcs.usda.gov/technical/soils/>
Illinois Department of Natural Resources: <http://www.dnr.state.il.us/offices/index.htm>
Soils and Water Publications:
[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex3918?opendocument](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex3918?opendocument)
Status of Reforestation Technology in Southern Illinois:
<http://www.mcrc.org/PDF/Forums/Reforestation/Session%203/3-2.pdf>

Grassland, Forest, and Fire Management

Internet Addresses

A Guide for Prescribed Fire in Southern Forests: www.pfmt.org/standman/prescrib.htm
Fire Effects on Plants and Wildlife: <http://www.fs.fed.us/database/feis/>
Firing Techniques: www.pfmt.org/standman/firingtech.htm
Forest Pests in the Southern Region: <http://fhpr8.srs.fs.fed.us/forstpst.html>
Exotic Forest Pests: <http://www.spfnic.fs.fed.us/exfor/>
USDA Forest Service: <http://www.fs.fed.us/>
Prescribed Burning Guidelines in the Northern Great Plains:
<http://www.npwr.usgs.gov/resource/tools/burning/conintro.htm>
Illinois Prescribed Burning and Wildfire Control: <http://www.siu.edu/~ilbmp/burn.html> Guide
to a Successful Prescribed Burn: <http://www.wildlandfire.com/docs/rxburn04.htm> Nebraska
Cooperative Extension EC 98-148-A: Grassland Management with Prescribed Fire:
<http://ianrpubs.unl.edu/range/ec148.htm#t5>
Tree Planting Guide: <http://www.treecouncil.org.uk/info/packng2.html>
Status of Reforestation Technology in Southern Illinois (by W.C. Ashby):
<http://www.mcrc.org/PDF/Forums/Reforestation/Session%203/3-2.pdf>

United States Geological Survey, Northern Prairie Wildlife Research Center
<http://www.npwrc.usgs.gov/>

Fish and Wildlife Management

Contacts:

The Fish and Wildlife Service's Carterville Fisheries Resource Office may be contacted [618-997-6869] for assistance in developing a fisheries management program as well as to conduct monitoring of the fisheries resources within the project boundaries.

Internet addresses:

Illinois Department of Natural Resources: <http://dnr.state.il.us>
Southeastern Cooperative Wildlife Disease Study: <http://www.scwds.org/>
Hunting Licenses and Information: <http://dnr.state.il.us/admin/systems/>
Fishing Licenses and Information: <http://dnr.state.il.us/admin/systems/fishing.htm>

Floodplain, Riparian Zone, Wetland, and Aquatic Habitat Management

Internet addresses:

Wetland and riparian zone management: <http://www.epa.gov/OWOW/NPS/riparian.html>
EO 11988: <http://www.afbca.hq.af.mil/handbook/basis/eo/eo11988.htm>
Floodplain Management: <http://www.fema.gov/mit/flmit.htm>
EPA Wetlands page: <http://www.epa.gov/owow/wetlands/>
EO 11990: <http://www.afbca.hq.af.mil/handbook/basis/eo/eo11990.htm>
National Wetlands Research Center: <http://www.nwrc.usgs.gov/>
Classification of Wetlands and Deepwater Habitats of the United States Manual:
<http://www.nwi.fws.gov/classifman/classman9.html>
Wetland Laws and Regulations: <http://www.epa.gov/owow/wetlands/laws/>
Illinois Wetlands Information: <http://dnr.state.il.us/wetlands/ch4e.htm>

Invasive Species and Integrated Pest Management

Internet addresses:

Federal

Invasive and Exotic Species of North America: <http://www.invasive.org/index.cfm>
National Invasive Species Information Center:
<http://www.invasivespecies.gov/>
USDA, NRCS Plant Database – Noxious Weeds: <http://plants.usda.gov/java/noxiousDriver>
Defense Environmental Network Information Exchange, Pest Management:
<https://www.denix.osd.mil/denix/Public/Library/Forestry/nine.html>
National IPM Network:
<http://www.reeusda.gov/agsys/nipmn/index.htm>
IPM Information Service: <http://www.efn.org/~ipmpa/>
Exotic Forest Pests: <http://www.spfnic.fs.fed.us/exfor/>
Animal and Plant Health Inspection Service (APHIS) Regulated Pest List:
<http://www.invasivespecies.org/RegulatedPestList.pdf>
Native Plants Guide: <http://www.nwf.org/backyardwildlifehabitat/nativeplants.cfm>
National Agricultural Pest Information System (NAPIS): Public Access Site:
<http://ceris.purdue.edu/napis/>

Black locust management: <http://www.fs.fed.us/database/feis/plants/tree/robpse/all.html>
National Park Service Integrated Pest Management Manual, 2002. <http://www.nature.nps.gov>

Illinois

Invasive and Exotic Species of Illinois:

<http://www.invasivespecies.gov/geog/state/il.shtml>

Invasive and Exotic Species Information:

<http://www.ipm.uiuc.edu/pubs/iapmh/index.html>

Illinois Nature Preserves Commission, 2002. Vegetation Management Guideline:

<http://www.inhs.uiuc.edu/chf/outreach/VMG/VMGintro.html>

Illinois Agricultural Pest Management Handbook:

<http://www.ipm.uiuc.edu/pubs/iapmh/index.html>

Illinois Plant Information Network (ILPIN): <http://www.fs.fed.us/ne/delaware/ilpin/ilpin.html>

Illinois Environmental Pests: <http://www.agr.state.il.us/Environment/Pest/>

Illinois Emerald Ash borer Readiness Plan:

<http://www.agr.state.il.us/Environment/Pest/emeraldashborer.pdf>

Emerald Ash Borer Information: <http://www.emeraldashborer.info/>

The University of Illinois's pesticide safety education Web site:

<http://www.pesticidesafety.uiuc.edu>

Illinois State Comprehensive Management Plan for Aquatic Nuisance Species:

http://www.anstaskforce.gov/illinois_state_plan.htm

Aquatic Plant Management: http://www.ces.purdue.edu/extmedia/WS/WS_21.pdf

Other States

Virginia Natural Heritage Program: <http://www.vnps.org/invasive/invphrag.htm>

Missouri Vegetation Management Manual: www.conservation.state.mo.us/nathis/exotic/vegman

Threatened and Endangered Species Management

Internet addresses:

USFWS: <http://www.fws.gov/>

Illinois Endangered Species Protection Board: <http://dnr.state.il.us/ESPB/>

Illinois Natural History Survey: <http://www.inhs.uiuc.edu/welcome/index.html>

Illinois Natural Resources Information Network (INRIN). 2004

<http://www.inhs.uiuc.edu/chf/pub/ifwis/birds/>

Recreation and Public Outreach

Contacts

For more information on tourism in Illinois, call the Illinois Department of Commerce and Community Affairs' Bureau of Tourism at 1-800-2Connect.

Internet addresses:

Marseilles Fish and Wildlife Area:

<http://dnr.state.il.us/lands/Landmgt/PARKS/R1/MARSEIL.HTM>

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