DRAFT
INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN UPDATE

NEW YORK ARMY NATIONAL GUARD
YOUNGSTOWN LOCAL TRAINING AREA

~~SEPTEMBER~~ DECEMBER 2016

NEW YORK ARMY NATIONAL GUARD
NEW YORK STATE DIVISION OF MILITARY AND NAVAL AFFAIRS
ENVIRONMENTAL COMPLIANCE BRANCH
LATHAM, NEW YORK

INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN UPDATE NEW YORK ARMY NATIONAL GUARD

YOUNGSTOWN LOCAL TRAINING AREA

DRAFT ~~SEPTEMBER~~ DECEMBER 2016

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INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN UPDATE
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DRAFT DECEMBER ~~JULY~~ 2016

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INTEGRATED NATURAL RESOURCES
MANAGEMENT PLAN UPDATE
NEW YORK ARMY NATIONAL GUARD

YOUNGSTOWN LOCAL TRAINING AREA
DRAFT DECEMBER ~~SEPTEMBER~~ 2016

The U.S. Fish and Wildlife Service and New York Army National Guard are in mutual agreement with regard to the contents of this Integrated Natural Resources Management Plan Update:

Wendi Weber Regional Director, Region 5 U.S. Fish and Wildlife Service	Date

INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN UPDATE NEW YORK ARMY NATIONAL GUARD

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The New York State Department of Environmental Conservation and New York Army National Guard are in mutual agreement with regard to the contents of this Integrated Natural Resources Management Plan Update:

Abby Snyder Regional Director, Region 9 New York State Department of Environmental Conservation	Date

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LIST OF ACRONYMS AND ABBREVIATIONS

AFP	Air Force Plant
AR	Army Regulation
ARNG-~~ILE~~IEZ	Army National Guard ~~Bureau Environmental Programs Division~~Installations & Environment Division
BMP	best management practice
C.F.R.	Code of Federal Regulations
CWA	Clean Water Act
DA	Department of the Army
DoD	Department of Defense
DOE	Department of Energy
DMNA	New York Division of Military and Naval Affairs
EA	Environmental Assessment
EC	Environmental Compliance Branch
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
°F	degrees Fahrenheit
FNSI	Finding of No Significant Impact
GIS	Geographic Information System
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
IPC	Invasive Plant Council
ITAM	Integrated Training Area Management Program
LRAM	Land Rehabilitation and Maintenance
MNAG	Office of the Adjutant General
MNAR	Headquarters New York Army National Guard
MNFE	Facilities Management and Engineering
MNFE-EC	Facilities Management and Engineering, Environmental Compliance Branch

MNFE-FO	Nonmilitary Use Program Branch
MNL	Army Logistics and Maintenance
MNMS	Military Support
MNNOT	Army Training and Readiness Directorate
MNPA	Public Affairs Office
NEPA	National Environmental Policy Act
NGB	National Guard Bureau
NMFS	National Marine Fisheries Service
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYARNG	New York Army National Guard
OIC&C	Officer in Charge and Control
OPRHP	New York State Office of Parks, Recreation, and Historic Preservation
PLS	planning level survey
POTO	Plans, Operations, and Training Officer
REC	record of environmental consideration
RPOM	Real Property Operations and Maintenance
RTLA	Range and Training Land Assessment
RTLP	Range and Training Land Program
SAF	Society of American Foresters
SEQR	State Environmental Quality Review Act
SHPO	State Historic Preservation Office
SRA	Sustainable Range Awareness
TAG	The Adjutant General
TNT	trinitrotoluene
TRI	Training Requirements Integration
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service

SECTION 1
INTRODUCTION

1.1 AUTHORITY

This Integrated Natural Resources Management Plan (INRMP) Update for Youngstown Local Training Area was prepared by the New York Army National Guard (NYARNG) in accordance with requirements specified by the following: the Sikes Act Amendment Act of 2011 (Sikes Act, 16 United States Code [U.S.C.] 670a et. seq.), Department of the Army (DA) policy set forth in the 25 May 2006 memorandum entitled *Guidance for Implementation of the Sikes Act Improvement Act*; Army National Guard Installations and Environment Division (ARNG-IEZ) ~~Army National Guard Environmental Programs Division (ARNG-ILE)~~ policy set forth in the 09 April 2012 memorandum entitled *Guidance for the Creation, Implementation, Review, and Revision and Update of INRMPs*; Department of Defense (DoD) Instruction 4715.03, *Natural Resources Conservation Program*, and Army Regulation (AR) 200-1, *Environmental Protection and Enhancement*. The Sikes Act requires INRMPs for military installations that have significant natural resources. The Youngstown Local Training Area ~~property~~ is owned by the U.S. Army Corps of Engineers (USACE) and is leased to the New York Division of Military and Naval Affairs (DMNA).

1.2 SUMMARY OF INRMP REVIEW AND UPDATE

The Sikes Act specifically directs that INRMPs be reviewed "as to operation and effect," emphasizing that the review is intended to determine whether existing INRMPs are being implemented to meet requirements of the Sikes Act and contribute to conservation and rehabilitation of natural resources on military installations. The NYARNG identified the need to update portions of the plan to reflect changes in existing conditions, available funding, status of some rare species, and program priorities or direction as part of the regular 5-year update of the Plan.~~.~~

The review indicated that the INRMP is being implemented as an effective tool for conservation of natural resources at Youngstown. While some of the project-specific goals established in the previous INRMP have not been fully completed because of various constraints, funding shortfalls, or changes in program priorities, the review indicates that the overall program goals are being met. The following examples of accomplishments made under the previous INRMP demonstrate the effectiveness of the overall program:

- Natural resources planning level surveys were completed at the installation (bat survey, habitat assessment for rare reptiles and amphibians). These surveys

contributed to the overall understanding of the biological resources at the installation and support future natural resources management efforts.

- Information contained in the INRMP is used to support the National Environmental Policy Act (NEPA) process and informal consultation with the U.S. Fish and Wildlife Service (USFWS) and NYDEC for future maintenance projects at Youngstown as they occur.

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1.3 MANAGEMENT PHILOSOPHY

This INRMP was developed under the following five concepts:

- No net loss to training capacity;
- Sustained use of lands for military training;
- Natural resources stewardship;
- Biodiversity protection; and
- Ecosystem management.

To fully support and sustain its military mission at Youngstown, the NYARNG must continue to manage, protect, and enhance the biological integrity of its lands. The NYARNG mission includes both federal and state components. The primary federal mission of the NYARNG is to train and maintain units capable of activation and deployment under Title 10 U.S.C. 12301. These units must be field ready in time of war or national emergency, or when supporting active duty forces. The primary state mission is to support and train civil authorities in the protection of life and property. In order to accomplish these missions, the NYARNG requires sufficient training lands. Therefore, the training lands at Youngstown are some of the most valuable assets of the NYARNG. Sustainable use of these training lands and no net loss to training capacity can be achieved by integrating sound natural resources management programs with installation mission activities.

Natural resources stewardship provides for the management of natural resources with the goal of maintaining or increasing the resource's value indefinitely into the future. The stewardship goal of the NYARNG is to sustain multiple uses of natural resources over the long term while promoting the health of the ecosystems in which these activities occur. NYARNG training lands are primarily used for mission support activities, however, other uses include outdoor recreation, and conservation.

Biodiversity is defined as the variety of life and its processes, including living organisms, the differences among them, and the communities and ecosystems in which they occur. Protecting and enhancing biodiversity is an overall goal of the NYARNG. Biodiversity consists of many elements of the natural environment, including indigenous ecological communities, native species, and their associations, as well as ecosystem functions such as predation, grazing, nutrient cycling, and fire. Biodiversity is best measured or defined in terms of the variety of natural communities or ecosystems and the various natural functions that occur

within and among these communities or ecosystems, rather than simply by the numbers of species present. Management for maximum biodiversity helps to ensure ecosystem health, which in turn ensures sustainable use of lands to accomplish military missions.

Ecosystem management is a process for the NYARNG to use not only in its efforts to protect and enhance biodiversity, but also to sustain the use of its military lands. This process encourages management decisions to focus on natural resources at a community or ecosystem level rather than at a single-species level. By maintaining or improving the quality, integrity, and connectivity of the ecosystem, individual species should prosper. However, individual rare species are not neglected by this management approach. Consideration must be given to rare species during project planning because these species contribute to ecosystem health and to biodiversity, and, in many instances, are provided legal protection.

In accordance with the DA and ARNG policy, the major components of the INRMP include managing natural resources to support the military mission and to provide for multiple use and sustainable yield; identifying natural resources inventory and monitoring needs; protecting, enhancing, and restoring fish and wildlife habitat, including wetlands; and enforcing natural resources laws and regulations. Each of these components is essential to the success of an ecosystem management plan that aims to achieve sustainable military use and promote biodiversity.

1.4 PURPOSE OF PLAN

The purpose of this INRMP is to document the policies and desired future direction of NYARNG's natural resource programs that are consistent with military training and use at Youngstown. Specific expectations of the plan include the following:

- Provide a comprehensive planning document that allows the NYARNG to carry out its mission, promote ecosystem health, and maximize biodiversity;
- Ensure no net loss of training capacity;
- Document specific natural resources management goals, objectives, policies and the desired future direction of natural resources programs;
- Establish the framework for the implementation of natural resources programs and ecosystem management;
- Provide a centralized source of information on the status of natural resources programs;
- Identify mission-related impacts and options for conflict resolution;
- Serve as a baseline for defensible environmental assessments (EAs) and environmental impact statements (EISs), when necessary;
- Ensure that installations comply with environmental regulations; and
- Identify, prioritize, and schedule long-term budget requirements.

1.5 ORGANIZATION OF PLAN

This plan is divided into 12 sections. Sections 1 through 3 provide introductory information, a description of the military mission and environmental setting, and an explanation of the natural resources planning structure. Sections 4 through 10 describe resource-specific management programs at the installation, including management issues and goals. Section 11 includes an implementation plan for each program, and Section 12 contains references.

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SECTION 2
INSTALLATION MISSION AND ENVIRONMENTAL SETTING

2.1 MILITARY MISSION

The Youngstown Local Training Area is in northwest New York State, in the town of Porter in Niagara County (Figure 2-1). The property is the only NYARNG training facility in western New York. The military mission of Youngstown is to support western NYARNG and reserve units for field training, range and weapons familiarization, and qualification firing. The installation is primarily used by Army National Guard, Air National Guard, Air Force Reserve, and other military units, as well as regional law enforcement agencies. The installation was formerly part of Air Force Plant (AFP) 38 and is currently leased to DMNA by the USACE.

2.2 MILITARY LAND USE

The installation is only used by military units on weekends, and no personnel are permanently assigned to or stationed at the installation. The installation is undeveloped except for a network of asphalt roads, drainage ditches, 25 concrete ammunition bunkers, derelict buildings from former AFP 38, pit latrines, tactical vehicle storage area, and other training facilities. No housing, lodging, recreational facilities, or utilities are on the property.

As shown in Figure 2-2, training and support facilities at Youngstown include the following:

- 25-meter small arms range;
- Paved roads for wheeled vehicle driver training;
- Helicopter landing zone;
- Overnight bivouac areas; and
- Concrete storage bunkers.

A high percentage of facility use occurs at the small arms range, where weapons familiarization and qualification firing occur. Driver training for tactical vehicles and combat engineering equipment occurs on the paved roads and cleared areas of the installation. Currently, no tracked vehicle training occurs at Youngstown. A helicopter landing zone is in the northwestern portion of the property near the maintenance storage building. Overnight bivouac and tactical assembly training also occur in cleared areas of the installation. Other training activities such as compass reading, land navigation, leader's reaction, communications, foot maneuvers, and command post exercises may occur throughout the installation.

Concrete bunkers were originally constructed in the 1940s for storage of ammunition and TNT but reportedly were never used for this purpose during that time. Currently, a limited number of bunkers are used for storage of training equipment such as targets and sandbags, and as ammunition supply points only when the range is in use. Permanent storage of explosives or ammunition does not occur on the property. Two bunkers are used as chambers for gas mask training (tear gas) exercises or gas mask confidence training.

A shelter for vehicles is at the corner of Aberdeen and B Streets. This facility is used for short-term storage of training vehicles and for light maintenance. Large quantities of fuels, chemicals, or hazardous materials are not stored on the property. Standard operating procedures require that all wastes generated during training missions be removed by the generators at the end of the training period.

2.3 NONMILITARY USE

There are currently no non-military users at Youngstown. ~~State and local law enforcement agencies routinely use the small arms range at Youngstown. Approximately 75 percent of the small arms range use is by nonmilitary agencies. All nonmilitary users have lease or use agreements with DMNA.~~

2.4 INSTALLATION HISTORY

The 840-acre Youngstown property is owned by the USACE and leased to DMNA. The current training site and adjacent lands south of Balmer Road have served a variety of government uses over the years. In the 1940s, the current installation and land south of Balmer Road were known as the Lake Ontario Ordnance Works. The area north of Balmer Road (now the Youngstown site) was established by the Army as a storage area for an ammunition manufacturing plant located south of Balmer Road. During this time, the 25 concrete storage bunkers were built, but never used, for storage of ammunition and TNT. The USACE built the existing drainage ditches during this period.

Starting in the 1950s, the current training site land was owned by the U.S. Air Force and called AFP 38. From the 1950s to the early 1980s, AFP 38 was a government owned/contractor operated facility. The facility was operated by Bell Textron (formerly Bell Aircraft Corporation) as a rocket, missile, and laser development site and later for the loading of Minuteman missiles, which used liquid-fuel propellants. During these operations, the drainage ditch system collected runoff from test area deluge waters, spills from the testing areas, and drainage from around the maintenance buildings and laboratory. During the mid-1950s, Bell dammed Magazine Ditch to collect and neutralize any spills or discharges from the site. Bell Textron operations ceased at AFP 38 around 1981, and AFP 38 was closed approximately 1983.

FIGURE 2-1 LOCATION MAP

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FIGURE 2-2 INSTALLATION MAP

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Starting in 1979, the Army began acquiring AFP 38 property from the Air Force. The western portion of AFP 38, which included approximately 302 acres, was acquired in 1979, followed by the adjoining 96 acres. In August 1992, the remaining portion of the AFP 38 property was transferred to the Army. This final portion of AFP 38 was closed under the Installation Restoration Program before transfer (Earth Technology Corporation 1991).

The land south of Balmer Road extending to approximately Pletcher Road was owned and operated during the 1940s by the Atomic Energy Commission and Manhattan Engineering District (predecessors to the U.S. Department of Energy [DOE]). Past activities on this tract of land included production of TNT, storage of chemicals and ammunition, storage and burial of radioactive material, and development of high-energy fuels. Currently, only the Niagara Falls Storage Site, a 191-acre property, remains under DOE ownership. Since the 1940s, the Niagara Falls Storage Site primarily has been used for storage of radioactive residues or tailings from the Manhattan Project, as well as contaminated materials from other wartime and post-wartime operations. During early operations of the Lake Ontario Ordnance Works and Atomic Energy Commission storage areas, surface water runoff drained into natural streams in the area, and Six Mile Creek apparently ran through the property. In the mid-1940s, USACE constructed the current drainage ditch system. This project apparently involved diversion of Six Mile Creek near the southwestern corner of the property.

The portion of the former Atomic Energy Commission facility immediately south of Balmer Road and east of Lutts Road is now owned by Chemical Waste Management, Inc. It is operated as a hazardous waste treatment, storage, and disposal facility. The approximately 400-acre site is called the Model City Hazardous Waste Facility.

2.5 GEOGRAPHIC LOCATION AND SIZE

Youngstown Local Training Area consists of approximately 840 acres and is in the Niagara Frontier of New York State (Figure 2-1). The site lies entirely within Niagara County and is bordered to the north and east by Route 93, to the south by Route 104, and to the west by Route 18. Lake Ontario is approximately 2.5 miles north of the installation, and the Niagara River is approximately 4 miles west. Lewiston is located to the south, and Ransomville is located to the east.

2.6 CLIMATE

The climate of western New York is generally the humid, continental type that prevails in the northeastern United States. Cold, dry air masses from the continental interior and prevailing warm, humid, southerly winds provide the dominant characteristics of the climate. Lake Ontario to the north and Lake Erie to the west have a significant moderating influence on the climate in western New York. The mean annual temperature for the area (Buffalo, New York) is 48.2 degrees Fahrenheit (ºF), and the mean annual precipitation is 40.4837.5 inches, which is fairly evenly distributed throughout the year. Average annual snowfall is 94.793 inches, two-thirds of

which occurs during the months of December through February. Severe droughts are rare, but periods of low precipitation occur and cause at least temporary concern over declining water supplies and moisture stress in crops and other vegetation. Winds in the area are predominantly from the southwest or west-southwest, across Lake Erie. The average monthly wind speed ranges from 9.9 to 14.3 miles per hour, with an annual average wind speed of 12 miles per hour. Additional 30-year mean climatic data for the Buffalo Niagara area are presented in Table 2.1.

TABLE 2.1
SUMMARY OF CLIMATE DATA FOR
BUFFALO NIAGARA INTERNATIONAL, NEW YORK

	Temperature (°F)			Precipitation (inches)	
Month	Mean Daily Maximum	Mean Daily Minimum	Average	Mean Rainfall	Mean Snowfall
January	31.2	18.5	24.9	3.18	25.3
February	33.3	19.2	26.3	2.49	17.3
March	42.0	26.0	34.0	2.87	12.9
April	55.0	36.8	45.9	3.01	2.7
May	66.5	47.4	56.9	3.46	0.3
June	75.3	57.3	66.3	3.66	0
July	79.9	62.3	71.1	3.23	0
August	78.4	60.8	69.6	3.26	0
September	71.1	53.4	62.2	3.90	0
October	59.0	42.7	50.8	3.52	0.9
November	47.6	33.9	40.7	4.01	7.9
December	36.1	24.1	30.1	3.89	27.4
Yearly Average	56.3	40.2	48.2	-	-
Total	-	-	-	40.48	94.7

Source: National Oceanic and Atmospheric Administration, Regional Climate Center, 1981 to 2010 climatological data for Buffalo Niagara International, New York (elevation 716 feet).

2.7 TOPOGRAPHY

The land surface in the region is generally flat, with elevations ranging from 300 to 500 feet above mean sea level. It is divided into three step-like plateaus ascending from Lake Ontario to the Allegheny Plateau. Youngstown is in a portion of the lowest of these "steps," the 600,000-acre Ontario shore region, which is composed of Ordovician-aged Queenston formation redbeds (Van Diver 1985). The Ontario Plain terminates abruptly at the 250-foot high Niagara Scarp, approximately 5 miles south of the installation. Numerous glacial drumlins are scattered through most of the Ontario Plain.

Drainage patterns are not well developed due to the flat surface topography of the region. Streams typically follow meandering patterns through relatively narrow floodplains that are only shallowly incised. Within the Ontario Plain are several broad, level, or slightly depressed basin-like areas that have poorly developed outlets. Drainage of these and numerous other level areas in the region has been attempted by ditching. Most constructed ditches are too small and flat to provide effective drainage and become obstructed with shrubs and weeds (U.S. Department of Agriculture, 1972).

Terrain at the installation is essentially flat at an elevation of approximately 300 feet above mean sea level. Naturally occurring topographical features are not present on the site. The land surface and drainage at the site slopes gently toward the north. The only minor topographic relief at Youngstown is provided by surface ditches, munitions bunkers, and berms. A review of current FEMA mapping indicates that no part of the parcel is within either the 100 or 500 year floodplain.

2.8 GEOLOGY

The regional geology is characterized by unconsolidated glacial deposits, which range from a few feet to over 100 feet in thickness, overlying Upper Silurian bedrock. Three types of glacial deposits overlie bedrock in the vicinity: till, glacio-lacustrine, and glacio-fluvial (Van Diver 1985). The till deposits consist of a compact, dense, unsorted and unstratified mix of clay, silt, sand, and gravel that was deposited at the base of glacial ice sheets. Lacustrine deposits were formed in glacial lakes and consist of varved clay, silt, and sand. The fluvial and glacio-fluvial deposits consist of well sorted sand; poorly sorted, gravely sand; silty and clayey, gravely sand; and sandy, gravely clay. The fluvial and glacio-fluvial deposits were deposited by streams in direct contact with glacial ice or downstream of glacial ice as outwash. These deposits often occur in contact with bedrock.

2.9 SOILS

The installation occurs in an area with soils dominated by lacustrine deposits of clay and silt. Many of the soils in the Ontario Plain are somewhat poorly drained to poorly drained (U.S. Department of Agriculture, 1972). Soils are productive derivatives of sedimentary shales and limestones deposited in the former Lake Iroquois, incorporated with alkaline glacial till. The

Rhinebeck-Ovid-Madalin association consists of deep, nearly level, somewhat poorly drained to very poorly drained soils having fine- to moderately fine-textured subsoil that is dominantly brown or olive in color. This association occupies 13 percent of Niagara County. Soil types occurring at Youngstown include the Madalin, Rhinebeck, Minoa, Canadaigua, and "made land" groups. Madalin and Canadaigua types occur on the list of hydric soils in Niagara County, while the other soil types on the site are identified as having potential for hydric inclusions. Utility of these soils for agriculture and development is limited by poor drainage and slow permeability (U.S. Department of Agriculture 1972). Figure 2-3 represents soils found at the facility.

2.10 SURFACE WATER

Ditches have been constructed throughout much of the region to improve drainage for agriculture and other land uses. As discussed in Section 2.4, USACE constructed the current surface water drainage configuration at the site in the 1940s. Before the mid-1940s, surface water runoff from the site and surrounding areas drained into Four Mile, Six Mile, and Twelve Mile Creeks. It appears that Six Mile Creek originally flowed in a northeasterly direction through the former Lake Ontario Ordnance Works properties and on into Lake Ontario. During construction of the drainage network, Six Mile Creek was diverted west into Four Mile Creek at a point near the southeast corner of the former Lake Ontario Ordnance Works.

Currently, most surface water from the installation eventually flows into Lake Ontario via Four Mile Creek. Surface water resources within the installation boundaries include two major drainage ditches (Central Drainage Ditch and Magazine Ditch), a network of small drainage ditches, a portion of Six Mile Creek, and two small manmade ponds (Figure 2-2).

Central Drainage Ditch originates south of Balmer Road and flows north through the western portion of the installation between Lutts Road and Aberdeen Street. After leaving the property, it flows northwest into Four Mile Creek. The creek flows north into Lake Ontario approximately 3.5 miles downstream of the installation. The majority of the flow in Central Drainage Ditch originates off site. The only installation lands that drain directly into the ditch are limited to areas between Lutts Road and Aberdeen Street. Consequently, past and current upstream activities influence water quality (see Sections 2.4 and 2.19 for descriptions of past and current surrounding land uses). During an investigation of areas surrounding the DOE Niagara Falls Storage Site, the portion of Central Drainage Ditch on the Youngstown Site was found to be contaminated with radioactive materials. In 1983 and 1984, radioactive contaminated sediments in the ditch were removed as part of a DOE cleanup program. The DOE has certified that the portion of the Central Drainage Ditch within installation boundaries complies with DOE decontamination criteria and standards (U.S. Army Environmental Center 1993; Price 1991).

Magazine Ditch is the major drainage pathway for the installation. It originates south of Balmer Road and flows northeasterly until it crosses A Street. The portion of the ditch between Balmer Road and A Street is believed to be the original channel of Six Mile Creek. Just north of A Street, the ditch turns and flows west along the northern installation boundary and eventually

discharges into Central Drainage Ditch at the northwest corner of the property. A network of smaller drainage ditches along the installation's roads discharge into Magazine Ditch.

A concrete dam is on Magazine Ditch immediately upstream of its confluence with Central Drainage Ditch. The dam was constructed in the mid-1950s to allow collection and neutralization of any spills or discharges from the AFP 38.

Central Drainage Ditch and Magazine Ditch are similar in character, and both appear to maintain flowing or standing water all year. Channel widths vary from 10 to 30 feet, with rather steeply sloping, moderately unstable, unconsolidated earthen banks. However, watershed erosion on the Youngstown site is considered minimal due to the presence of well-established, dense vegetative cover and absence of significant topographic relief. Potential off-site non-point sources appear to contribute to the high turbidity observed in both ditches. Depth and water velocity in Magazine Ditch are controlled by the dam, resulting in a relatively static, low-velocity depositional pool environment. Naturally occurring stream alteration mechanisms associated with highly variable seasonal flows are not evident on either ditch. Bottom scouring, sediment bars, sinuosity, riffles, and pools are generally absent. Inorganic substrate components consist of sand, silt, and clay. Organic substrate consists of both coarse and fine particle organic matter (woody plant parts, leaves, and other plant fragments along with thoroughly decayed organic matter).

Remnants of the original Six Mile Creek channel appear in the northeast corner of the installation. The United States Geological Survey Ransomville quadrangle (1980) shows the portion Six Mile Creek within the boundaries as an intermittent stream. After leaving the property, the creek flows north into Lake Ontario. Two small, man-made ponds in the northwest portion of the installation behind the small arms range have developed in borrow pits where dirt was obtained to construct the small arms range backstops.

Twelve Mile Creek is approximately 0.5 miles east of the installation and flows northeast into Lake Ontario. The Niagara River is approximately 4 miles west of the installation. The river flows north from Lake Erie into Lake Ontario.

FIGURE 2-3 SOILS

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2.11 HISTORIC VEGETATION

In the pre-settlement era, western New York was covered extensively by forest. Historically, dry soil areas of the region supported a dense forest of sugar maple (*Acer saccharum*), red maple (*Acer rubrum*), black walnut (*Juglans nigra*), white oak (*Quercus alba*), red oak (*Quercus rubra*), American basswood (*Tilia americana*), hickories (*Carya* spp.), American beech (*Fagus grandifolia*), birch (*Betula* sp.), black cherry (*Prunus serotina*), and American chestnut (*Castanea dentata*). More poorly drained sites supported American elm (*Ulmus americana*), red maple, black ash (*Fraxinus nigra*), green ash (*Fraxinus pennsylvanica*), alder (*Alnus* sp.), huckleberry (*Gaylussacia* sp.), and cranberry (*Vaccinium* sp. or *Viburnum* sp.). Much of the low and level landscape was covered with water during much of the growing season before ditching for agriculture. By 1958, 54 percent of the land in Niagara County was cleared for agriculture (Society of American Foresters [SAF] 1976). Most forested areas have been cut over at least once, and some areas have been cut over several times. By 1967, 17 percent of the county remained forested (U.S. Department of Agriculture 1972). Most of the remaining forests occur as small and isolated pockets on farms.

Forest vegetation was cut from all but the wettest areas of the installation prior to constructing the network of roads, drainage ditches, and bunkers in the 1940s. These areas later became the active portion of AFP 38 and were routinely maintained until the early 1980s.

2.12 ECOLOGICAL COMMUNITIES

2.12.1 Introduction

The existing ecological communities at Youngstown have been mapped and classified using the New York State Department of Environmental Conservation (NYSDEC) Natural Heritage Program community classification with appropriate modifications (Reschke 1990). This classification defines New York's ecological communities primarily by vegetation as well as other natural features such as topography, soils, and hydrology. The ecological community mapping at Youngstown was conducted during 1996. Details of this work are provided in the *Youngstown Weekend Training Site Ecological Characterization Report* (Parsons ES 1997). The USACE, Waterways Experiment Station (now named Engineering Research and Development Center) also conducted wetland surveys in 1999.

Nearly all of the vegetation at Youngstown has developed as a result of vegetative succession following disturbance. In some small areas that are rendered unsuitable for almost any agricultural or developmental use by the continual saturation of the soil, the forest community may closely resemble that which occurred prior to any human alterations. The remainder of the site represents various stages of succession that follow either complete removal of vegetation (e.g., by grading) or some level of clearing of aboveground plant parts (e.g., mowing). The composition and stature of the vegetation at any particular place on the site is determined almost entirely by the nature of disturbance and the time elapsed since disturbance has ceased.

The following ecological systems exist at Youngstown: terrestrial, subterranean, palustrine, riverine, and lacustrine. The subsystems and communities within each system are presented in Table 2.2~~1~~. Ecological community mapping for the installation is presented in Figure 2-4, and wetlands identified by the USACE are shown in Figure 2-5.

TABLE 2.~~1~~2

ECOLOGICAL COMMUNITIES AT YOUNGSTOWN WEEKEND TRAINING SITE

System	Subsystem	Community
Terrestrial	Terrestrial Cultural	Paved and Unpaved Roads Paths Building Exteriors and Interiors
Subterranean	Subterranean Cultural	Munitions Bunker
Palustrine	Open Mineral Soil Wetlands	Shrub Swamp Shallow Emergent Marsh Wet Meadows
	Forested Mineral Soil Wetlands	Hardwood Swamp Forest
Riverine	Riverine Cultural	Ditch/Artificial Stream
Lacustrine	Lacustrine Cultural	Artificial Pond

Vegetative descriptions for environments at the installation differ, in some cases, from the definitions presented in Natural Heritage Program classification (Reschke 1990). Departures were deemed necessary because successional patterns in palustrine environments are not addressed in the state classification. Thorough and detailed comparison of vegetation at the site with the descriptions of plant communities presented in the Natural Heritage Program classification demonstrated that no communities described therein accommodated either the wet meadows or hardwood swamp forest communities observed. The shrubby swamps at Youngstown corresponded generally to the Natural Heritage Program "shrub swamp" community, although these communities were dominated entirely by species not listed as possible dominants in the state classification. In addition, the communities observed represented a successional rather than "transitional" (meaning ecologically intermediate, but stable) community. The wet meadows on site represent an unequivocally palustrine cultural community, but no such community dominated by mixed grasses, sedges, and rushes is described in the Natural Heritage Program classification. Finally, the hardwood swamp forest at Youngstown is generally similar in physical characteristics to the Natural Heritage Program

FIGURE 2-4 ECOLOGICAL COMMUNITIES

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FIGURE 2-5 WETLANDS

"silver maple-ash swamp" community, but the forest community at Youngstown included very few individuals of silver maple (*Acer saccharinum)* and featured many important dominant species not mentioned by the state classification.

Successional patterns that occur in generally palustrine sites at Youngstown have been described in terms consistent with the methods presented in Reschke (1990). The remaining portion of this section presents a general description of the five systems and their subsystem/community types.

2.12.2 Terrestrial System

The terrestrial system consists of upland habitats with well-drained soils that are dry to mesic (never hydric). In addition, vegetative cover in this system is never predominantly hydrophytic, even if the soil surface is occasionally or seasonally flooded or saturated (Reschke 1990). Due to the wet conditions, hydric soils, and predominately hydrophytic vegetation at Youngstown, the terrestrial system is limited to approximately 2 percent of the installation. All of the terrestrial communities at the installation are classified in the terrestrial cultural subsystem because the biological composition is quite different from the composition before human disturbance. These communities include roads, paths, and building exteriors and interiors. Although these communities provide habitat elements and opportunities for various kinds of wildlife, they do not independently support populations of wildlife distinct from the surrounding habitats.

2.12.2.1 Roads

Paved and unpaved roads, devoid of vegetation, are present in a rectilinear pattern connecting munitions bunkers, abandoned buildings, and active facilities. Roads provide foraging sites for seed-eating birds, which glean the surface for seeds deposited by wind. The paved roads on site provide opportunities for basking reptiles and amphibians. Raptors and other predators exploit the increased visibility along these corridors.

2.12.2.2 Paths

Manmade paths exist in several areas of the site, the most significant being the abandoned loop railroad connecting to Balmer Road. Paths and trails create important edge effect exploited by both plants and animals. Paths through over story forest frequently provide gaps large enough for sunlight to penetrate to the forest floor, facilitating growth of shade-intolerant species and resulting in an increase in diversity. Larger animals such as white-tailed deer (*Odocoileus virginianus*), wild turkey (*Meleagris gallopavo silvestris*), coyotes (*Canis latrans*), and foxes (*Vulpes vulpes* or *Urocyon cinereoargenteus*) use paths opportunistically, either as escape routes, foraging routes, or ambush locations.

2.12.2.3 Building Exteriors and Interiors

Approximately five derelict aboveground structures are present at Youngstown, mostly concentrated in the eastern half of the site. Many of the former AFP 38 buildings have been demolished in the past 10 years.

The suitability of the remaining buildings to provide habitat for individual species varies greatly in terms of exterior surface area, interior wall and ceiling area, building material composition, abundance of crevices, degree of exposure (building integrity), and presence of basements and subsurface cavities. Building exteriors and interiors provide cover for small mammals and potential roosting and nesting sites for owls, other birds, and bats. Concrete structures provide thermal mass to act as a buffer to diurnal temperature changes and shelter from the elements.

2.12.3 Subterranean System

The subterranean cultural habitats available at Youngstown consist of concrete storage bunkers. The bunkers potentially provide dry, isolated, thermally protected roosting habitat for bats and refuge for small rodents. Access to the bunkers is limited to drain holes at floor level and ventilation shafts.

2.12.4 Palustrine System

The palustrine system, which makes up 98 percent of the installation, consists of non-tidal wetlands, swamps, peatlands, and marshes and is characterized by emergent vegetation. As shown in Table 2.2~~1~~ and Figure 2-4, two palustrine subsystems and four palustrine communities occur at Youngstown. The open mineral soil wetlands subsystem includes wetlands that are typically dominated by shrubs or herbs and have less than 50 percent canopy cover of trees. The forested mineral soil wetlands subsystem is characterized by seasonal or permanent flooding and at least 50 percent canopy cover of trees. These subsystems and their respective community types are discussed in the following paragraphs.

2.12.4.1 Open Mineral Soil Wetlands

The open mineral soil wetland communities occurring at Youngstown include shrub swamp, shallow emergent marsh, and wet meadow. These communities also could be classified under the palustrine cultural subsystem because they have been created and/or maintained by human activities. The shrub swamp community comprises 46 percent of the installation and exhibits a thick, ground shading growth of shrub species, principally stiff dogwood (*Cornus foemina)*, in dense monotypic stands. Overstory trees are sparse and limited to fast-growing pioneer species such as eastern cottonwood (*Populus deltoids*) and green ash. Herbaceous growth beneath the dense shrub layer is absent almost everywhere.

The shallow emergent marsh community is composed of a few scattered and isolated open water depressions commonly associated with the wet meadow community (discussed

below). This community occupies less than 2 percent of the site. Perimeter ditches at road edges also support marsh vegetation. While vegetation in deeper water is usually dominated by robust species such as bulrush (*Scirpus* sp.), cattail (*Typha* sp.), and reedgrass (*Calamagrostis* sp.), that of shallower areas usually consists of spikerush (*Eleocharis* sp.) and various grasses, rushes (*Juncus* spp), and sedges (*Carex* spp) similar in composition to the adjacent wet meadow environments. The shallow emergent marsh at Youngstown differs from wet meadows in that it contains standing water to a depth 6 to 36 inches.

The wet meadow community, which occupies 6 percent of the installation, was created and maintained by clearing of formerly wooded and shrub swamp habitats. Grasses, forbes, sedges, and rushes dominate the wet meadows. Mowing continues in some areas to provide helicopter landing zones and training areas. Mowed meadows, where successional progress is deterred by regular cutting of any woody vegetation that may colonize, support perennial herbaceous vegetation composed of grasses, sedges, and forbes tolerant of both inundation and frequent mowing. These areas consist of saturated soils and lack shrub and tree strata. Areas that have not been mowed recently succeed either to ruderal (weedy) vegetation (e.g., along roadsides), or continue the native-species successional process as shrub swamps.

2.12.4.2 Forested Mineral Soil Wetland

The hardwood swamp forest is the only forested mineral soil wetland community found at Youngstown. This community comprises 44 percent of the site and exhibits a largely closed canopy over saturated soils. Understory vegetation is sparse due to the combined effects of shading and wet soils. Dominant canopy species consist of American elm, green ash, pin oak (*Quercus palustris*), and eastern cottonwood, with occasional occurrence of swamp white oak (*Quercus bicolor*) and red maple. Small inclusions of better drained soils exhibit greater occurrences of white oak, sugar maple, silver maple, shagbark hickory (*Carya ovata*), American beech, and bigtooth poplar (*Populus grandidentata*). This cover type exhibits the least observable impact from recent disturbance of any cover type on the site. Aerial photographs indicate that large areas of this cover type, particularly in the central portion of the site and north of A Street, have remained relatively undisturbed for two decades.

2.12.5 Riverine System

The drainage ditches and streams at Youngstown are classified under the riverine cultural subsystem because they have been created or modified by human activities. Central Drainage Ditch, Magazine Drainage Ditch, and the network of smaller drainage ditches are classified as ditch communities. The portion of Six Mile Creek within the installation boundaries is classified as an artificial intermittent stream. Descriptions of these water bodies are provided in Section 2.10.

2.12.6 Lacustrine System

Two small ponds make up the lacustrine community at the installation. These ponds have developed in borrow pits where dirt was obtained to construct the small arms range backstops. They are classified as artificial pond communities under the lacustrine cultural subsystem.

2.13 WILDLIFE

A variety of game and non-game wildlife species inhabit the installation. The site is attractive to wildlife because it offers diverse habitats, good forage, and cover. The site represents somewhat of a refuge from human disturbance because training exercises conducted at the site are usually of short duration, the site is fenced and posted against trespass, and small game and big game hunting on the site are currently prohibited.

White-tailed deer are common on the site. Deer frequent the tops of munitions bunkers and bed down during the midday period on these structures, most likely attracted by planted grasses, relative isolation, elevated perspective, and some relief from biting insects. Other bedding areas are in the meadows at the northwest corner of the site, north of A Street. Prominent deer trails are apparent throughout the site. Other mammals on site include bats, red fox, eastern cottontail (*Sylvilagus floridanus*), raccoon (*Procyon lotor*), eastern chipmunk (*Tamias striatus*), gray squirrel (*Sciurus caroliniensis*), and eastern coyote.

Wild turkey forage throughout the installation and in the croplands adjacent to the site. Canada geese (*Branta canadensis*) are found in the impounded section of Magazine Ditch. The site offers attractive habitat for various waterfowl, flycatchers, swallows, warblers, thrushes, wrens, finches, sparrows, starlings, and crows. Other birds such as the killdeer (*Charadrius vociferus*), great horned owl (*Bubo virginianus*), American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), and great blue heron (*Ardea herodias*) are known to occur at the installation.

A variety of amphibians and reptiles also occupy the communities at Youngstown including the northern leopard frog (*Rana pipiens*), green frog (*Rana clamitans*), American toad (*Bufo americanus*), painted turtle (*Chrysemys picta*), and snapping turtle (*Chelydra serpentine*).

2.14 AQUATIC LIFE

The surface waters at Youngstown provide marginal habitat for aquatic life. Central Drainage Ditch and Magazine Ditch contain flowing or standing water year round and support macroinvertebrate species such as dragonflies (Odonata), mosquitoes (Dipetra), mayflies (Ephemeroptera), midges (Diptera), hellgrammites (Megaloptera), and waterboatmen (Hemiptera). The ditches also contain various amphibians and turtles. Carp (*Cyprinus carpio*) and unidentified fish fry have been reported in Magazine Ditch. A variety of fish have the potential to move upstream from Four Mile Creek and Lake Ontario into Central Drainage Ditch. The dam on Magazine Ditch is likely to impede fish migration. Fish such as brown bullhead

(*Ameiurus nebulosus*), largemouth bass (*Micropterus salmoides*), rock bass (*Ambloplites rupestris*), and other sunfish (*Lepomis* spp) could occur in the ditches. However, the surface waters at Youngstown show little potential to support a quality recreational fishery.

Four Mile Creek, which Central Drainage Ditch flows into, reportedly has significant runs of steelhead (*Oncorhynchus mykiss*), brown trout (*Salmo trutta*), and salmon (*Oncorhynchus* spp.). The creek flows into Lake Ontario approximately 3.5 miles from the installation. Lake Ontario supports a diverse recreational fishery including trout, salmon, northern pike (*Esox lucius*), and largemouth bass.

2.15 BIODIVERSITY

As mentioned in Section 1, protection and enhancement of biodiversity through ecosystem management is an overall goal of the NYARNG. Although biodiversity at Youngstown has been significantly altered by past activities, the installation now represents one of the few relatively sizable tracts of land in the immediate vicinity that is not intensely managed for agriculture or industrial activities. The hardwood swamp forest community at Youngstown is a regionally scarce habitat type and probably represents the dominant historical vegetative cover type for this area prior to human disturbance. This community occupies approximately 44 percent of the installation and supports indigenous species and ecosystem functions.

2.16 RARE SPECIES

For this INRMP, the term "rare species" refers to various plants and animals that are protected by law or warrant special management consideration. Rare species include the following:

- Species listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS) under the Endangered Species Act (ESA) of 1973 (Public Law 93-205), species proposed for such listing, and species designated as candidates for listing;
- Plant species listed as protected native plants (endangered, threatened, rare, and exploitably vulnerable) by NYSDEC under New York State Environmental Conservation Law (New York Code § 9-1503);
- Fish and wildlife species listed as endangered, threatened, and special concern by NYSDEC under New York State Environmental Conservation Law (New York Code § 11-0535); and
- Species actively inventoried by NYSDEC or are on the NYSDEC watch list.

Rare species evaluations and limited surveys were conducted at the installation during 1996. The findings of these surveys are detailed in the *Youngstown Weekend Training Site Ecological Characterization Report* (Parsons ES 1997). In addition, avian surveys were conducted during 2003 and 2005 (Parsons 2003, 2005), a bat acoustic survey conducted in 2015 (Ecology and Environment, Inc. 2015) and a Reptile and Amphibian Habitat Assessment and

Presence/Absence Survey was also conducted in 2015 (Clough Harbor Associates 2015). The yellow-breasted chat (*Icteria virens*), which is designated as a state species of special concern, was observed at the installation during surveys conducted in 2005. No other rare species have been documented within the installation boundaries. Based on survey results and records for rare plant occurrences in Niagara County, there appears to be little potential for rare plants to occur at the installation.

Based on information provided by NYSDEC, potential exists for two state-listed turtle species to occur on the site. Blanding's turtle (*Emydoidea blandingii*) is state-listed as threatened and has been found in Four Mile Creek, which is downstream of the installation's drainage ditches. Spotted turtles (*Clemmys guttata*), classified as species of special concern, have also been historically reported in the region. These species are secretive and usually require specific surveys to detect their presence. S~~To date, s~~pecies-specific surveys ~~have not been~~were conducted at Youngstown for both of these turtles in 2015 (CHA 2015). Results are discussed in Section 6.

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NYSDEC also indicated in the 2012 INRMP that the western chorus frog (*Pseudacris triseriata*) is likely occurs on the site. Early spring surveys, which have not been conducted at the site, are required to detect this species. The western chorus frog is classified as a species of greatest conservation need under the Comprehensive Wildlife Conservation Strategy for New York, and NYSDEC is concerned for maintaining habitats for this species. A survey for this species was conducted concurrently with the aforementioned turtle species -surveys. Results are discussed in Section 6.

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TABLE 2.3
RARE SPECIES POTENTIALLY OCCURRING AT OR NEAR YOUNGSTOWN

Common Name	Scientific Name	Federal Status	State Status	Historically Documented at Youngstown
Birds				
Bald eagle	*Haliaeetus leucocephalus*	None	T	No~~Ye~~[1]
Cooper's hawk	*Accipiter cooperii*	None	SC	No~~Yes~~
Whip-poor-will	*Caprimulgus vociferous*	None	SC	No
Yellow breasted Chat	*Icteria virens*	None	SC	Yes[1]~~Yes~~
Mammals				
Northern long-eared bat	~~*Myotis sodalis*~~*Myotis septentrionalis*	~~E~~ T	~~E~~ T	~~No~~ Yes[2]
Reptiles				
Blanding's turtle	*Clemmys insculpta*	None	T	No ~~UPDATE~~
Spotted turtle	*Clemmys guttata*	None	SC	No
Western chorus frog	*Pseudacris triseriata*	None	GC	No

Status Codes: E = endangered, T = threatened, SC = species of special concern, GC= greatest conservation need.
(1) Observed atperiodically flying over the installation during 2015 survey~~, nesting activity has not been observed at the installation~~.
(2) 2015 acoustic surveys resulted in two call files indicating "possible" NLEB presence.~~Atlantic and shortnose sturgeon inhabit the Hudson River. The confluence of Normans Kill and Hudson River is approximately 10 miles downstream of the installation.~~

2.17 UNIQUE ENVIRONMENTAL AREAS

None of the ecological communities that occur at Youngstown are considered rare communities by the Natural Heritage Program. However, as discussed above in Section 2.15, the hardwood swamp forest is a regionally scarce habitat type. Generally low-impact training activities currently take place in this community.

Unique environmental areas that occur in the vicinity of the installation include Four Mile Creek, Four Mile Creek Bay, and Lake Ontario. Four Mile Creek is located northwest of the installation and flows into Lake Ontario approximately 3.5 miles from the site. The Creek has significant runs of steelhead, brown trout, and salmon. Four Mile Creek Bay occurs at the confluence of Four Mile Creek and Lake Ontario, and is recognized by the state as a significant coastal fish and wildlife habitat. Four Mile Creek Bay includes a 20-acre wetland that is one of the few sizable areas of undisturbed freshwater coastal wetland remaining in Niagara County. The wetland provides habitat for many plant and wildlife species, including the bushy cinquefoil (*Potentilla paradoxa*), a state endangered plant. Most surface water runoff from the installation enters the Four Mile Creek watershed by Central Drainage Ditch. The Lake Ontario shoreline in

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Niagara County is an important waterfowl habitat, and Lake Ontario supports an important recreational fishery for species such as trout, salmon, largemouth bass, and northern pike.

2.18 OUTDOOR RECREATION AREAS

Currently, no formal outdoor recreation programs or designated outdoor recreation areas exist at the installation. This is primarily due to the lack of a permanent presence at the installation, which limits the ability to administer such a program. Access to the site is limited to military and nonmilitary users participating in training exercises.

Natural resources-based outdoor recreation areas in the vicinity of the installation include Joseph Davis State Park, 4 miles southwest on the Niagara River; Fort Niagara State Park, 5 miles northwest on the Niagara River and Lake Ontario; Four Mile Creek State Park, 4 miles northwest on Lake Ontario; and Earl W. Brydges Artpark State Park, 4 miles southwest on the Niagara River. Except for Four Mile Creek State Park, which has overnight camping facilities, all of the parks are designated for daily recreational use. Other state parks and beaches are the area along the Lake Ontario shoreline.

2.19 SURROUNDING LAND USE

Land uses within a 3-mile radius of the installation include residential, educational, agricultural, industrial, commercial, and governmental. Approximately 75 percent of the land in Niagara County is used for agriculture. Cultivated fields and rural residential areas are immediately to the west, north, and east of the installation. Apple, grape, and pear orchards are common in the area.

The Model City Hazardous Waste Facility, owned and operated by Waste Management Solutions, Inc., is directly south of the installation across Balmer Road. This facility receives hazardous wastes for on-site treatment, storage, and disposal. The property includes pits, ponds, lagoons, impoundments, and a landfill. Surface drainage from the site discharges to Central Drainage Ditch, which flows through the installation. The Washuta landfill and another landfill are south of the Model City Hazardous Waste Facility. The Niagara Falls Storage Site, which is operated by DOE, is also just south of the Model City Hazardous Waste Facility. The approximately 191-acre site has been used since the 1940s for storage of low-level radioactive waste containing radium and uranium residues produced during the Manhattan Project.

The City of Niagara Falls, NY is approximately 8 miles southwest of the installation and is the closest urbanized area with a 2014 population of approximately 50,000 (http://www.city-data.com/city/Niagara-Falls-New-York.html). The closest residential area is Porter Center, an unincorporated rural residential area within the town of Porter, approximately 1 mile northeast of the installation. The population of less than 1,000 is evenly distributed throughout the area.

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2.20 CULTURAL RESOURCES

2.20.1 General

The NYARNG prepared an integrated cultural resources management plan (ICRMP), which includes Youngstown. The ICRMP serves as NYARNG's comprehensive plan for managing cultural resources. It includes detailed information regarding applicable cultural resources management laws, regulations, and NYARNG management procedures, as well as descriptions of known and potential resources present. The ICRMP was developed in consultation with the State Historic Preservation Office (SHPO) and Native American groups.

The United States has a unique legal relationship with Indian tribal governments as set forth in the Constitution of the United States, treaties, statues, executive orders, and court decisions. Since the formation of the Union, the United States has recognized Indian tribes as domestic dependeant nations under its protection. Executive Order (EO) 13175, *Consultation and Coordination with Indian Tribal Governments* (January 5, 2001) and the October 27, 1999 *Annotated Policy Document for the DoD American Indian and Alaska Native Policy* establish regular and meaningful consultation and coordination with federally recognized Indian tribal governments. The NYARNG ICRMP provides procedures that permit elected officials and other representatives of Indian tribal governments to provide meaningful and timely input on actions or policies that might be of tribal interest, such as those that affect sacred or Indian cultural sites. In accordance with EO 13175 and DoD policy, the NYARNG initiated consultation with federally recognized Indian tribes during preparation of the ICRMP. In New York, there are twelve federally recognized Indian tribes:

- Cayuga Nation;
- Delaware Nation;
- Delaware Tribe of Indians;
- Oneida Nation;
- Onondaga Nation ;
- Seneca-Cayuga Tribe;
- Seneca Nation;
- St. Regis Band of Mohawk Indians;
- Shinnecock Nation;
- Stockbridge-Munsee Community Band of Indians;
- Tonawanda Band of Seneca Indians; and
- Tuscarora Nation.

Cultural resources could present constraints to various natural resources management activities at Youngstown. Future ground-disturbing activities associated with the INRMP could require National Historic Preservation Act Section 106 consultation. When necessary, the NYARNG would initiate the Section 106 process with the SHPO to ensure that impacts on

cultural resources are avoided. In addition, the initial draft INRMP and draft EA for the INRMP were submitted to the SHPO for review. Specific procedures for Section 106 consultation and procedures for inadvertent discovery are specified in the ICRMP, and these procedures are incorporated into this INRMP by reference. In addition, the NYARNG will consult with appropriate Indian tribal governments for any INRMP activities that may have a potential to significantly affect protected tribal resources, tribal rights, or Indian land. The ICRMP includes contact information for the tribes and consultation procedures, which are incorporated into this INRMP by reference.

2.20.2 Existing Resources

Background research was conducted at the New York State Museum and SHPO in the winter of 1997 to determine if previously recorded archaeological sites or historic architectural resources were located within the Youngstown Weekend Training Site, Niagara County. Review of the files and records maintained by the New York SHPO and the State Museum indicate that no prehistoric or historic archaeological sites are located at the installation. Although no sites have been recorded within a 2-mile radius of the facility, several sites have been recorded south of the facility on or near the Niagara Scarp. No historic architectural resources have been recorded within or adjacent to the facility.

The Niagara Scarp, which rises 250 feet above the Ontario Plain, is 3.5 miles south of the facility. Review of the state files and records at the New York SHPO indicates that eight archaeological sites are within a 2 to 3 mile stretch along the Niagara Scarp, directly south of the installation. All eight sites contain one or more prehistoric components, and one site contains two historic components. Six of the sites are on top of the Niagara Scarp (near the edge), and two sites are at the base adjacent to streams that bisect the face. Site types include lithic scatters, small camps, large villages, ossuaries, and burial mounds. Based on diagnostic artifacts, these sites represent several thousand years of occupation, including the Archaic, Woodland, and Protohistoric periods.

As noted in the above sections, Youngstown is within the level to nearly level Ontario Plain. The Ontario Plain consists of poorly drained or somewhat poorly drained lacustrine deposits of clay and silt, glacial till deposits, and glacio-fluvial deposits. Soils at the installation represent both lacustrine deposits from Lake Iroquois and glacial till deposits that were initially formed from weathered shale and limestone. During prehistoric and early historic times, the area was drained by Six Mile Creek, which flows northeast into Lake Ontario. Twelve Mile Creek is immediately east of the facility and also drains into Lake Ontario. Native vegetation consisted of a mixed deciduous forest in areas that were better drained, and marsh and swamp vegetation dominated in areas that were poorly drained.

The New York State Museum considers the project area to have a "mixed probability" of containing prehistoric sites, based on the presence of former stream channels (Six Mile Creek and Twelve Mile Creek) within or adjacent to the facility. It should be pointed out that several of

the soils at Youngstown are classified as hydric soils, and others have the potential for hydric inclusions. Although it is possible that archaeological sites may have been located at one time within the property boundaries of the facility, given the magnitude and extent of historic disturbances (e.g., construction of roads, ammunition bunkers, and buildings; rechannelization of former stream courses; drainage of wetlands; construction of drainage ditches), it is unlikely that undisturbed archaeological deposits remain within the confines of the installation.

Youngstown contains several World War II concrete-slab and aluminum-sided industrial buildings that meet or exceed the National Register of Historic Places 50-year age consideration. These buildings have been abandoned for the last several years and are currently in a poor state of repair. Because these buildings lack both significance (i.e., they are not associated with important events or people or do not exhibit outstanding architectural design) and integrity, they are recommended not eligible for the National Register of Historic Places. The facility also contains several buildings that date to the Cold War era. The Cold War-era buildings are less than 50 years of age, and therefore to be eligible for the National Register, these buildings must meet one of the seven National Register criteria considerations or be of exceptional significance under criteria A, B or C (i.e., associated with significant events or people, or of a distinctive design, respectively). The Cold War buildings at Youngstown do not meet any of the National Register criteria of significance, nor do they meet any criteria considerations; therefore these buildings are not eligible for the National Register.

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SECTION 3
NATURAL RESOURCES PLANNING STRUCTURE

3.1 INTRODUCTION

This section presents the framework for natural resources planning and INRMP development and implementation at Youngstown. There are four key steps to developing an effective INRMP:

- Forming a planning team and identifying stakeholders;
- Assessing current natural resources programs;
- Identifying management issues and concerns; and
- Developing general and specific natural resources goals and objectives.

3.2 RESPONSIBILITIES AND REQUIREMENTS

This INRMP was prepared in accordance with requirements specified by the Sikes Act, DA policy, ARNG ~~ILE~~ IEZ policy, DoD Instruction 4715.03 *Natural Resources Conservation Program*, and AR 200-1. As discussed in Section 1, the Sikes Act requires INRMPs for military installations, unless the lack of significant resources makes preparation of a plan inappropriate. Youngstown is considered a "military installation" under the Sikes Act because the land is federally owned.

The Adjutant General (TAG) of the NYARNG has overall responsibility for the preparation and implementation of an INRMP that fulfills both stewardship and legal requirements. The Environmental Compliance Branch (Environmental Office), within DMNA Facilities Management and Engineering, is assigned day-to-day responsibility for developing and implementing the INRMP. The officer in charge and control (OIC&C) for Youngstown is responsible for providing input to the plan and implementing specific elements of the plan.

3.3 NATURAL RESOURCES PLANNING COMMITTEE

The Youngstown Natural Resources Planning Committee was established in 1997 to ensure that use of natural resources at Youngstown is consistent with the military mission and sound conservation and environmental concerns. Specific responsibilities of the Youngstown planning committee include the following:

- Identifying military training and land use needs;
- Identifying and evaluating management issues and concerns;
- Providing policy, guidance, and oversight for development of goals and objectives;
- Identifying staffing and funding resources for implementing the INRMP;
- Overseeing development, implementation, and revision of the INRMP; and

- Fostering environmental awareness and good stewardship at Youngstown.

The committee is a multidisciplinary group that represents military land use needs and provides natural resources subject matter expertise. The natural resources manager within the Environmental Office serves as the committee chair. The committee meets quarterly, or as scheduled by the committee chair, at the NYARNG Environmental Office to discuss management issues and concerns. Meeting minutes are distributed to all members to keep them informed of the latest changes and current issues. The committee membership is composed of the following positions:

- NYARNG Environmental Office, Natural Resources Manager, Latham;
- NYARNG Environmental Office, Branch Chief, Latham;
- Army Training and Readiness Directorate (MNOT), Latham;
- OIC&C, Youngstown Local Training Area;
- AOIC&C, Youngstown Weekend Training Site; and
- District maintenance supervisor.

3.4 STAKEHOLDERS

In addition to the Natural Resources Planning Committee, internal and external stakeholders are involved in the natural resources planning process. Internal stakeholders include all Youngstown users and managers. External stakeholders include various government agencies and nongovernmental organizations. These stakeholders have a vested interest in how the natural resources at Youngstown are managed. As such, stakeholders are included in the natural resources planning process and have the opportunity to provide technical or/and regulatory input. All requests for external stakeholder involvement are coordinated through the NYARNG Public Affairs Office. Internal and external stakeholders include the following:

3.4.1 Internal Stakeholders

- Office of the Adjutant General (MNAG), Latham;
- Facilities Management and Engineering (MNFE), Latham;
- Facilities Management and Engineering, Environmental Compliance Branch (MNFE-EC), Latham;
- Military Support (MNMS), Latham;
- Public Affairs Office (MNPA), Latham;
- Headquarters NYARNG (MNAR), Latham;
- Nonmilitary Use Program Branch (MNFE-FO), Latham;
- Army Logistics and Maintenance (MNL), Latham;
- Army Training and Readiness (MNOT), Latham;
- ARNG; and
- Department of the Army.

3.4.2 External Stakeholders

- NYSDEC;
- New York State Office of Parks, Recreation, and Historic Preservation (OPRHP);
- New York State Department of State;
- Niagara County Planning Commission;
- Town of Porter; and
- USFWS.

3.5 AGENCY COORDINATION

In accordance with DA and ARNG policy, this INRMP has been submitted to the USFWS Region 5 and NYSDEC Region 9 for review and input for the five year update. Input from both of these agencies has been incorporated into the INRMP. Interagency coordination and review occurs under the current Department of the Army Memorandum on *Guidelines for Streamlined INRMP Review*, dated 20 July, 2015 (DA 2015). Copies of correspondence with these agencies are provided in Appendix A.

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3.6 MANAGEMENT PROGRAM OVERVIEW

Seven resource-specific natural resources management programs have been developed to address issues at Youngstown. The program structure has been developed based on the installation-specific management situation and is designed to facilitate issue identification and prioritization, as well as project funding, implementation, and tracking. Due to the inherent interaction of natural resources, significant overlap exists among programs. Therefore, all programs are integrated with each other, as well as the overall land use and mission planning processes at the NYARNG. Management programs are covered separately in Sections 4 through 10 and include the following:

- NYARNG Integrated Training Area Management (ITAM) Program, which includes the following:
  - Range and Training Land Assessment (RTLA),~~;~~
  - Land Rehabilitation and Maintenance (LRAM),~~;~~
  - Training Requirements Integration (TRI),~~;~~ and
  - Sustainable Range Awareness (SRA);~~.~~
- Fish and Wildlife Management Program;
- Rare Species Management Program;
- Outdoor Recreation Program;
- Wetlands Management Program;
- Forest Management Program; and
- Invasive Species Management Program.

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3.7 NATURAL RESOURCES PLANNING PROCESS

3.7.1 Assessing Natural Resources Programs

Periodic assessment is a necessary part of the natural resources planning process that evaluates program status, measures progress, and identifies new management issues, concerns, goals, and objectives. The natural resources planning framework, programs, issues, concerns, goals, and objectives presented in this INRMP are based on an assessment of existing information on the military mission, current programs, and natural resources. The current status of programs or management activities that have been previously established at Youngstown is provided in Sections 4 through 10, along with recently identified natural resources issues and program development needs. The INRMP review and revision process is described in Section 3.11.

3.7.2 Identifying Natural Resources Issues and Concerns

Natural resources issues and concerns, which are discussed in detail for each management program in Sections 4 through 10, are defined as any action, process, activity, program, etc. that might present constraints to operations and mission activities, readiness, and future planning at Youngstown. The Environmental Office and Natural Resources Planning Committee are responsible for identifying issues and concerns by assessing current programs and evaluating the status and trends of natural resources.

3.7.3 Developing Natural Resources Goals and Objectives

Goals, objectives, and projects are established for each management issue and concern to provide a clear direction and concrete approach to natural resources planning. As with the management issues and concerns, the Environmental Office and Natural Resources Planning Committee are responsible for developing management goals and objectives. Measurable goals have been developed where appropriate for each management program. Objectives and specific projects under each goal represent activities that the NYARNG intends to implement, if funding is available, in an effort to fulfill the goals. Specific goals are prioritized for implementation using the following criteria:

- High Priority: Issues required to sustain or improve training and readiness or issues driven by legislation that must be addressed to ensure compliance or to prevent potential situations involving compliance;
- Medium Priority: Issues that are not compliance driven and will not impede the military mission of Youngstown but will significantly enhance ecosystem health and environmental awareness; and
- Low Priority: Issues that are not compliance driven and will not impede the military mission of Youngstown but will enhance ecosystem health and environmental awareness, but to a lesser extent compared to high- and medium-priority goals.

3.8 STAFFING

Primary staffing for developing and implementing the INRMP comes from the DMNA Environmental Office. The natural resources manager at ARNG-~~ILE~~ IEZ provides technical guidance and support to implement various aspects of the INRMP. In light of the goals stated in the INRMP, additional staffing will be used for implementation of some programs. Staffing requirements for implementing specific INRMP goals and programs are presented in Section 11. Possible staffing sources for natural resources programs at Youngstown include:

- Permanent DMNA staff:
  - NYARNG Environmental Office (full-time staff and part-time table of distribution allowances); and
  - Various NYARNG units.
- Temporary DMNA staff:
  - Military mandays; and
  - Students/interns.
- NYSDEC representatives in cooperation with DMNA; and
- Contractors and consultants.

3.9 FUNDING

Funding for the Environmental Office staff and standard supplies comes from direct funding sources. A variety of funding sources, including the following, may be used to implement specific projects:

- Army Conservation Program;
- ITAM Program;
- Real Property Operations and Maintenance (RPOM);
- Range and Training Land Program (RTLP);
- DoD Legacy Program; and
- New York State legislature and other state funds.

Estimated funding requirements for implementing specific INRMP goals and programs are presented in Section 11.

3.10 PUBLIC REVIEW AND NATIONAL ENVIRONMENTAL POLICY ACT PROCESS

The National Guard Bureau (NGB) Office of General Counsel has determined that AR 200-1 requirements for INRMP implementation necessitate the preparation of National Environmental Policy Act (NEPA) of 1969 documentation prior to plan approval. In addition, AR 200-1 requires that INRMPs be made available to the public for review.

NEPA requires federal agencies to consider the potential environmental consequences in the decision-making process. The intent of NEPA is to protect, restore, and enhance the environment through well-informed federal decisions. As outlined in the ARNG NEPA handbook (NGB 2006) and National Guard Bureau ARNG NEPA Guidance Memorandum (NGB 2016), the NEPA process involves one of three levels of analysis, as well as accompanying documentation:

- A record of environmental consideration (REC) is a signed statement submitted with project documentation that briefly documents that an action has received environmental review. RECs are prepared for actions that (1) fall under the Categorical Exclusion requirements specified in 32 Code of Federal Regulations (C.F.R.) Part 651 or (2) have been appropriately analyzed in another NEPA document.
- An EA is prepared to determine the magnitude of the impacts, both individually and cumulatively, of a proposed project's implementation. An EA is required when the conditions for a categorical exclusion are not met. If the analysis in the EA indicates there is no significant impact to the quality of the environment, a finding of no significant impact (FNSI) is issued and then the proposed action may proceed as planned. A public comment period is provided after the EA is developed. After the comment period concludes, and if a FNSI is proposed and issued, another comment period is held before initiating the action.
- An EIS is necessary when any federal agency or department proposes a "major action significantly affecting the quality of the human environment" (NEPA, Section 102(a)). An EIS is the typical course of action when an EA does not result in a FNSI.

In accordance with 32 C.F.R. Part 651 and NEPA, an EA was prepared to evaluate the potential environmental consequences of implementing the initial Youngstown INRMP that was finalized in October 2001, and a FNSI was issued. The NYARNG has reviewed the actions proposed under this INRMP update and has determined that the biophysical consequences of implementing this INRMP update are not materially different than those that were analyzed for the 2001 INRMP. Therefore, preparation of an EA is not required for this INRMP update. Accordingly, the NYARNG has prepared a REC for this INRMP update that tiers off the previously completed INRMP EA.

3.11 PLAN EVALUATION AND REVISION

This INRMP covers a five-year planning period from the date of approval. The Sikes Act requires that INRMPs be reviewed as to operation and effect by the parties thereto on a regular basis, but not less often than every five years. Army and ARNG ~~ILE~~ ILEZ policy requires annual review of INRMPs. The Environmental Office will review the plan annually (at a minimum) in consultation with the Natural Resources Planning Committee, USFWS, and

NYSDEC. The need for revisions or updates to the INRMP will be determined during these annual reviews. In addition, the Environmental Office will formally request a comprehensive review of the plan by USFWS and NYSDEC not less often than every five years. The Environmental Office will document INRMP reviews and subsequent written comments in a memorandum for the record.

The INRMP will be revised, as needed, based on various factors such as changes in conditions and the effectiveness of ongoing management practices. Revisions will be submitted to the USFWS and NYSDEC for review and written concurrence. The Environmental Office will evaluate all proposed INRMP revisions to determine if public review and NEPA documentation are appropriate and necessary. Generally, any INRMP revisions that would result in materially different biophysical consequences than previously considered would be subject to public review and the NEPA process.

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SECTION 4
INTEGRATED TRAINING AREA MANAGEMENT PROGRAM

The only NYARNG training site classified as an "ITAM installation" is Camp Smith Training Site in Westchester County, New York. Camp Smith is a Category IV installation and the primary focus of the NYARNG ITAM Program. Youngstown is considered a sub-installation from an ITAM Program implementation perspective. Such classification recognizes that ITAM issues might arise at Youngstown but maintains the priority at Camp Smith. The Camp Smith INRMP provides details regarding the NYARNG ITAM Program. No specific ITAM activities are currently planned for Youngstown; therefore, further discussion of the ITAM Program is not required in this section. Future ITAM issues or needs that arise at Youngstown will be addressed in accordance with the process described in the NYARNG Camp Smith INRMP.

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SECTION 5
FISH AND WILDLIFE MANAGEMENT PROGRAM

5.1 INTRODUCTION AND PROGRAM OVERVIEW

5.1.1 Administrative Responsibilities and Requirements

The DMNA Environmental Office is primarily responsible for the Fish and Wildlife Management Program. The natural resources manager coordinates planning and general administrative functions of the program with other NYARNG staff, USFWS, and NYSDEC, as necessary. Management of fish and wildlife resources is directed by Army and NGB policy, DoD Directive 4700.4, AR 200-~~3~~1, and New York State Environmental Conservation Law.

5.1.2 Program Description

The Fish and Wildlife Management Program addresses game management, non-game management, nuisance wildlife management, habitat management, and fisheries management issues at Youngstown. In accordance with the overall natural resources management approach of the NYARNG, fish and wildlife management focuses on protecting and enhancing biodiversity through ecosystem management. Biodiversity consists of all elements of the natural environment, and ecosystem management is a tool that encourages management decisions to focus on natural resources at a community or ecosystem level rather than at a single-species level. By maintaining or improving the quality, integrity, and connectivity of the ecosystem, individual species should prosper. While species-specific management actions might be implemented under the Fish and Wildlife Management Program, they are done so within the broader context of ecosystem management. It should be recognized that virtually every management program contributes to the management of fish and wildlife at the installation and that there is significant overlap with other programs. For example, rare species are a component of non-game management, but they are also addressed separately under the Rare Species Management Program (Section 6).

5.1.3 Program Status and Issues

5.1.3.1 Planning Level Surveys

The results of planning level surveys (PLSs) conducted at Youngstown provide important information to support the Fish and Wildlife Management Program. Surveys completed at the installation include ecological community surveys, terrestrial flora and fauna inventories, avian surveys, wetland surveys, and rare species surveys. Information obtained during the surveys has been incorporated into the NYARNG Geographic Information System (GIS). In addition, surface water and soils data have been mapped in the NYARNG GIS. Specific descriptions of resources covered by these surveys are provided in Section 2, the *Youngstown*

Weekend Training Site Ecological Characterization Report (Parsons ES, 1997), ~~and~~ *Avian Surveys at New York Army National Guard Installations* (Parsons 2003, 2005), Acoustic Bat Surveys (Ecology and Environment 2015) and a Habitat Assessment and Presence Absence/Survey for Rare Reptiles and Amphibians (CHA 2015). The ecological community survey and mapping and flora and fauna inventories for Youngstown were completed more than 1~~0~~3 years ago and are ~~becoming~~ dated.

5.1.3.2 ~~General~~ Wildlife Management

As described in Section 2, a variety of game and non-game wildlife species inhabit the installation. The site is attractive to wildlife because it offers diverse habitats, good forage, and cover. The site offers somewhat of a refuge from human disturbance because training exercises are typically of short duration, the site is fenced and posted against trespass, and game hunting is currently prohibited. Active wildlife management at Youngstown is minimal due to the limited use of the installation and lack of onsite staff. Management primarily focuses on biodiversity and habitat protection through appropriate planning and impact avoidance. The natural resources manager reviews all proposed activities that could potentially affect wildlife habitat.

Game populations (e.g., white-tailed deer, wild turkey, and gray squirrel) at the installation could support a recreational hunting program. However, development of such a program is not currently feasible due to the lack of onsite staff.

5.1.3.3 Migratory Bird Treaty Act Compliance

The Migratory Bird Treaty Act of 1918 (16 U.S.C. 703 et seq.) and the Migratory Bird Conservation Act (16 U.S.C. 715–715d, 715e, 715f–715r) of 18 February 1929 (45 Stat. 1222) are the primary legislation in the United States established to conserve migratory birds. The Migratory Bird Treaty Act prohibits the taking, killing, or possessing of migratory birds or the parts, nests, or eggs of such birds, unless permitted by regulation. The list of species protected by the Migratory Bird Treaty Act appears in 50 C.F.R. 10.13 and represents almost all avian families found in North America.

Pursuant to EO 13186 (17 January 2001), Responsibilities of Federal Agencies to Protect Migratory Birds, DoD and USFWS developed the Memorandum of Understanding to Promote the Conservation of Migratory Birds. The original memorandum was signed in July 2006, and an extension was signed in October 2011. The memorandum of understanding describes specific actions that should be taken by DoD to advance migratory bird conservation, avoid or minimize the take of migratory birds, and ensure DoD activities (other than military readiness activities) are consistent with the Migratory Bird Treaty Act. The memorandum of understanding also describes how DoD and USFWS will work together cooperatively to achieve these ends. This INRMP is designed to comply with the requirements of the DoD and USFWS memorandum of understanding.

On 2 December 2003, the President signed the 2003 National Defense Authorization Act. The act provides that the Secretary of the Interior shall exercise his/her authority under the Migratory Bird Treaty Act to prescribe regulations to allow the incidental taking of migratory birds by the armed forces during military readiness activities authorized by the Secretary of Defense. Congress defined military readiness activities as all training and operations of the armed forces that relate to combat and the adequate and realistic testing of military equipment, vehicles, weapons, and sensors for proper operation and suitability for combat use. Congress further provided that military readiness activities do not include routine operation of installation operating support functions or construction activities.

The Final Rule authorizing the DoD to take migratory birds during military readiness activities was published in the Federal Register on 28 February 2007 (50 C.F.R. Part 21). The regulation provides that the Armed Forces must confer and cooperate with USFWS on the development and implementation of conservation measures to minimize or mitigate adverse effects of a military readiness activity if it determines that such activity may have a "significant adverse effect" on a population of a migratory bird species. An activity has a significant adverse effect if, over a reasonable period of time, it diminishes the capacity of a population of a migratory bird species to maintain genetic diversity, to reproduce, and to function effectively in its native ecosystem. As used here, population means a group of distinct, coexisting, conspecific individuals (i.e., organisms of the same species) whose breeding site fidelity, migration routes, and wintering areas are temporally and spatially stable, sufficiently distinct geographically (at some time of the year), and adequately described so that the population can be effectively monitored to discern changes in its status.

Based on the types of military readiness activities that currently take place at Youngstown, it is highly unlikely that military readiness activities could have a significant adverse effect on a population of a migratory bird species. The effects of any future changes in military readiness activities at Youngstown on migratory birds would be analyzed as part of the NEPA process, in coordination with USFWS, as necessary.

In accordance with the DoD and USFWS Memorandum of Understanding to Promote the Conservation of Migratory Birds, the NYARNG will continue to advance migratory bird conservation at Youngstown by continuing to conduct periodic breeding bird surveys (see Section 6.2 for planned project) and implement management actions as appropriate based on findings. In addition, best management practices (BMPs) will be used as necessary to avoid take of migratory birds during proposed nonmilitary readiness activities that have the potential to impact migratory birds. While no specific activities are currently planned, future activities that could impact migratory birds include construction or demolition of facilities and tree maintenance or clearing. Potential impacts of proposed nonmilitary readiness activities on migratory birds would be analyzed as part of the NEPA process, and activity-specific BMPs would be developed and implemented. Examples of effective BMPs include scheduling activities

outside the breeding season to avoid disturbance or destruction of active nests or establishing buffers between proposed activities and known nesting sites.

~~5.1.3.4 Bats~~5.1.3.4 Bats

As mentioned in Section 2.12.3, old concrete storage bunkers at Youngstown potentially provide dry, isolated, thermally protected roosting habitat or hibernating sites for bats. ~~However, surveys have not been conducted to determine the extent, if any, that bats use these structures.~~Northern long-eared bat surveys were conducted in July 2015. The importance of protecting bat hibernating sites in New York is increasing because of the current threat imposed by white nose syndrome, an emerging disease threatening bats. The bunkers could provide suitable habitat for bat species. This INRMP ~~includes a~~references a July 2015 project to investigate the habitat value of the bunkers at Youngstown by conducting acoustic surveys to determine if bats are using the bunkers as summer roosting sites~~ or winter hibernating sites~~. Results of this survey are in Section 6.

Commented [BERMCNNA1]: Jay Rubinoff: States that the acoustic surveys were to investigate the habitat value of the bunkers at Youngstown. Section 6 does not address if the bunkers are being used by bats. Very important to know if NLEB are using them as hibernacula.

5.1.3.5 Nuisance Wildlife Management

Currently, no nuisance wildlife problems exist at the installation.

5.1.3.6 Fisheries Management

As described in Section 2, fisheries resources are limited at the installation and the potential to develop a quality recreational fishery is low. Consequently, fisheries management is limited to general biodiversity and habitat protection through appropriate planning and impact avoidance. The natural resources manager reviews all proposed activities that could potentially affect fish habitat.

5.2 MANAGEMENT GOALS AND OBJECTIVES

Management goals, objectives, and projects for the Wildlife Management Program are outlined in this section. Implementation information is provided in Section 11.

Fish and Wildlife Goal #1: Maintain accurate, updated survey information for wildlife and wildlife habitat and integrating this information into installation planning processes.

Objective #1: Conduct flora and fauna surveys.

1. Update vegetation and ecological community mapping.
2. Conduct plant inventory.
3. Conduct fauna inventory.
4. Prepare survey report, update GIS, and share data with USFWS and NYSDEC, as appropriate. Develop species-specific management actions, as necessary.

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SECTION 6
RARE SPECIES MANAGEMENT PROGRAM

6.1 INTRODUCTION AND PROGRAM OVERVIEW

6.1.1 Administrative Responsibilities and Requirements

The Rare Species Management Program is primarily the responsibility of the Environmental Office, which conducts and oversees species surveys, monitoring, and GIS mapping. This program is integrated with the NYARNG ITAM Program, real property master planning, and Range and Training Land Program processes through continuous coordination with the Facilities Management and Engineering Office; plans, operations, and training officer (POTO); and training site staff. When necessary, the Environmental Office coordinates rare species management activities with federal and state agencies such as USFWS Region 5 and NYSDEC Region 9.

The program ensures compliance with ESA and the New York State Environmental Conservation Law (New York Code § 9-1503 and § 11-0535). ESA established protection over and conservation of federally listed threatened and endangered species and the ecosystems on which they depend. USFWS and NMFS administer ESA. USFWS has primary responsibility for terrestrial and freshwater species, while the NMFS has primary responsibility for marine species and anadromous fish species (species that migrate from saltwater to freshwater to spawn). Section 7(a) (1) of ESA directs federal agencies to use their authorities to further the purposes of the act by carrying out conservation programs for the benefit of endangered and threatened species. Section 7(a) (2) requires each federal agency to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species. When a federal agency's action "is likely to adversely affect" a listed species, that agency is required to consult formally with USFWS or the NMFS, depending upon the species or designated critical habitat that may be affected by the action (50 C.F.R. 402.14(a)). Under the terms of Section 7(b)(4) and Section 7(o)(2) of the ESA, taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the act, provided that such taking is in compliance with the terms and conditions of an incidental take statement. For species that are proposed for listing as endangered or threatened, Section 7(a) (4) of the ESA requires agencies to confer with the USFWS or NMFS on any agency action that is likely to jeopardize the continued existence of the species. Candidate species receive no statutory protection under ESA. Therefore, consultation under Section 7 of the ESA is not required. USFWS encourages cooperative conservation efforts for candidate species because they may warrant future protection under ESA.

Regulations implementing New York State Environmental Conservation Law are found in Title 6 New York Codes, Rules, and Regulations (6 NYCRR). Lists of protected native plants, which are designated as endangered, threatened, rare, and exploitably vulnerable are established in 6 NYCRR Part 193.3. In addition, all native clubmosses, all native orchids, and most native ferns are protected native plants under Part 193.3. It is illegal to pick, pluck, sever, remove, damage by the application of herbicides or defoliants, or carry away, without the consent of the owner, any protected plant. The New York Natural Heritage Program also maintains the New York Rare Plant Status List, which includes all plants that the Heritage Program actively inventories. A "watch list" is also maintained for taxa that are considered rare, uncommon, or declining in numbers. Additional information or monitoring is required for watch list species to decide if they should be actively inventoried or listed.

Part 182 of 6 NYCRR establishes lists of endangered and threatened species of fish and wildlife, as well as species of special concern. It is illegal to take, import, transport, possess, or sell any endangered or threatened species. Species of special concern warrant attention and consideration but current information does not justify listing these species as either endangered or threatened. Special concern species are not afforded the legal protection provided to endangered and threatened species. The New York State Environmental Quality Review (SEQR) Act requires consideration of impacts on protected native plants and endangered and threatened fish and wildlife for actions on state owned land.

6.1.2 Program Description

For this INRMP, the term "rare species" refers to various plants and animals that are protected by law or warrant special management consideration. Rare species include the following:

- Species listed as endangered or threatened by USFWS or NMFS under ESA, species proposed for such listing, and species designated as candidates for listing;
- Plant species listed as protected native plants (endangered, threatened, rare, and exploitably vulnerable) by NYSDEC under New York State Environmental Conservation Law (New York Code § 9-1503);
- Fish and wildlife species listed as endangered, threatened, and special concern by NYSDEC under New York State Environmental Conservation Law (New York Code § 11-0535); and
- Species actively inventoried by NYSDEC or are on the NYSDEC watch list.

The focus of the Rare Species Management Program at Youngstown is to maintain updated information about the presence of rare species at the installation and to avoid potential impacts on rare species through appropriate planning. The program is applicable to the entire installation and interacts with all of the other natural resources management programs. Information on the location of rare species and their habitat has been incorporated into the NYARNG GIS and is used to help define natural resource management areas of high protection

priority. This information allows NYARNG to integrate rare species management into its ITAM, real property master planning, Range and Training Land Program, and Range Development Plan processes.

6.1.3 Program Status and Issues

Endangered, threatened, and rare species (collectively referred to as "rare species") are important components of biodiversity and are legally protected in many instances. Rare species surveys were conducted at the installation during 1996. The findings of these surveys are detailed in the *Youngstown Weekend Training Site Ecological Characterization Report* (Parsons ES 1997). In addition, avian surveys were conducted during 2003 and 2005 (Parsons 2003, 2005). During the 2005 avian survey a yellow-breasted chat, which is designated as a state species of special concern, was observed at the installation. An acoustic survey for Northern long-eared bat survey was conducted in July 2015 (Ecology and Environment, Inc., 2015). No other rare species have been documented within the installation boundaries. An updated breeding bird survey is proposed for all three NYARNG training sites in 2018.

Based on survey results and records for rare plant occurrences in Niagara County, there appears to be little potential for rare plants to occur at the installation.

No federally listed animal species are known to occur on the installation, however, the potential exists for two state-listed turtle species to occur on the site, based on information previously provided by NYSDEC in the 20102 INRMP. Blanding's turtle is state-listed as threatened and has been found in Four Mile Creek, which is located east of the installation.. Spotted turtles, classified as species of special concern, have also been historically reported in the region.

Commented [BERMCNNA2]: Jay Rubinoff: States that there are no federally listed animals on Youngstown, however, it mentions that there were acoustic hits of the Threatened NLEB. Were these detections not confirmed as NLEB?

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The 2~~0~~012 INRMP indicated that NYSDEC has ~~also~~ indicated that the western chorus frog is likely to occur~~s~~ on the site. The western chorus frog is classified as a species of greatest conservation need under the Comprehensive Wildlife Conservation Strategy for New York, and NYSDEC is concerned for maintaining habitats for this species.

A Habitat Assessment and Rare Species Survey was conducted in April 2015 for the spotted turtle, Blanding's Turtle, and Chorus frog (CHA 2015). The three Herp species were searched for visually, with an additional call survey conducted for the chorus frog. Chorus frogs were identified on site. Neither Spotted nor Blanding's turtles were detected during these surveys.

Rare Species Goal #1 has been established to update rare species surveys at Youngstown. Planned surveys will focus on state-listed turtles, amphibians, and birds. The Herp surveys were completed in ~~-~~April of 2015. The INRMP incorporates a proposed updated bird survey in 2018.

6.2 MANAGEMENT GOALS AND OBJECTIVES

6.2.1 Overall Program Goals

Management goals, objectives, and projects for the Rare Species Management Program are outlined in this section. Implementation information is provided in Section 11.

Rare Species Goal #1: Avoid impacts on rare species and their habitat by maintaining accurate, updated information on the presence of rare species and integrating this information into installation planning processes.

Objective #1: Conduct breeding bird surveys with emphasis on state-listed species and birds of conservation concern that have potential to occur on the installation.

1. Conduct ~~-~~surveys during the 2018~~5~~ breeding season.
2. Prepare survey report, update GIS, and share data with USFWS and NYSDEC. Develop species-specific management actions if follow-up studies warrant.~~, as necessary.~~

Objective #2: Conduct Blanding's turtle and spotted turtle surveys.

1. Conducted surveys in April~~spring~~ 2015~~4~~.
2. Prepared survey report, updated GIS, and shared data with USFWS and NYSDEC. Develop species-specific management actions if 2018 follow-up studies warrant.~~, as necessary~~.

Objective #3: Conduct amphibian surveys, including western chorus frog surveys.

1. Conducted surveys in ~~spring~~ April 2015~~4~~.
2. Prepared survey report, updated GIS, and shared data with USFWS and NYSDEC. Develop species-specific management actions if 2018 follow-up studies warrant.

Objective #4: Investigate bat habitat value of the bunkers at Youngstown by conducting surveys to determine if bats are using the bunkers as summer roosting sites or winter hibernating sites.

1. Coordinated with USFWS Region 5 and NYSDEC Region 9 to determine appropriate methods and identify opportunities for cooperative efforts.
2. Conducted ~~summer~~ July 2015 acoustic survey to determine if bats are using bunkers as roosting sites. Surveys were completed with two "possible" identification incidences of Northern long-eared bats.
3. Prepared survey report, updated GIS, and shared data with USFWS and NYSDEC~~, as appropriate~~. Develop species-specific management actions if 2018 follow-up studies warrant.

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SECTION 7
OUTDOOR RECREATION PROGRAM

7.1 INTRODUCTION AND PROGRAM OVERVIEW

Currently, a formal Outdoor Recreation Program does not exist at Youngstown. The installation has resources that could support recreational activities such as hunting, hiking, and wildlife viewing. However, implementation of such activities in a manner that ensures safety and military security is not currently feasible due to the lack of full-time staffing at the installation. Therefore, specific management issues and goals are not provided for this program.

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SECTION 8
WETLANDS MANAGEMENT PROGRAM

8.1 INTRODUCTION AND PROGRAM OVERVIEW

8.1.1 Administrative Responsibilities and Requirements

The Wetlands Management Program is primarily the responsibility of the Environmental Office, which conducts and oversees wetland surveys, delineations, and GIS mapping. This program is integrated with the ITAM, real property master planning, Range and Training Land Program, and range development plan processes through continuous coordination with the Facilities Management and Engineering Office, POTO, and training site staff. In addition, individual training site users are responsible for ensuring that their activities do not impact wetlands. When necessary, the Environmental Office coordinates wetland permitting and management activities with federal and state agencies such as USACE and NYSDEC.

Wetland areas at Youngstown are regulated as Waters of the United States under Section 404 of the Clean Water Act (CWA); EO 11990, *Wetland Protection*; and EO 11988, *Floodplain Protection*. USACE regulates dredging, discharges of dredged or fill material, and construction of certain structures in waterways and wetlands; it issues permits through a joint permit application procedure. Information about permitting procedures and application forms can be obtained from USACE New York District's Civil Works web page (http://www.usace.army.mil/Missions/Civil-Works/).

Wetlands in New York State are also regulated by NYSDEC under the Freshwater Wetlands Act (Article 24 of the Environmental Conservation Law) and the Tidal Wetlands Act (Article 25 of the Environmental Conservation Law). The Freshwater Wetlands Act regulates wetland areas that have been mapped by NYSDEC in accordance with the Act and are 12.4 acres or larger. Wetlands identified under Article 24 are limited to the western half of the installation between A Street and the northern property boundary. However, much more of the site than is currently mapped by the state meets criteria for wetlands. A NYSDEC protection of waters permit is also required for disturbing the bed or banks of a stream with a classification and standard of C(T) or higher. Classification C is for waters supporting fisheries and suitable for noncontact activities. A standard of (T) indicates that the waters may support a trout population. Tidal wetlands do not exist at the installation.

In addition, ARNG policy requires that an EA be prepared for all actions that require a wetland permit. An abbreviated EA can be prepared for projects where the proposed action has no potential to affect resources other than wetlands. Guidance for preparing EA documents is provided in the ARNG NEPA handbook (NGB 2006).

8.1.2 Program Description

The focus of the Wetlands Management Program at Youngstown is to ensure compliance with federal and state regulations. This involves obtaining accurate information regarding the presence of wetlands and integrating this information into the overall planning processes at the installation to ensure that potential impacts on wetlands are avoided. Many of the other natural resources management programs at the installations are integrated with wetland management activities.

8.1.3 Program Status and Issues

8.1.3.1 Wetlands Surveys and Mapping

A key component to this program is having accurate and accessible information about the location of wetlands at Youngstown. Wetlands and other areas regulated by Section 404 of the CWA were identified and mapped in the NYARNG GIS during PLSs conducted by USACE in 1999. Section 2.12 describes wetlands identified at the installation during these surveys. The survey methods used aerial photography and extensive ground verification to identify wetlands based on criteria in the *USACE Wetlands Delineation Manual* (Environmental Laboratory, 1987). The data from these surveys are suitable for planning purposes. However, project-specific wetland delineations and jurisdictional determinations are required for proposed actions that require a Section 404 permit. Almost all of the installation is classified as wetlands with the exception of roads, bunkers, and berms.

Project-specific wetlands delineations are conducted at Youngstown in accordance with the *USACE Wetlands Delineation Manual* on an as-needed basis for all proposed activities that could potentially require a Section 404 permit. GIS mapping, attribute data, and metadata will be produced for all wetland delineations in accordance with Army standards.

8.1.3.2 Wetlands Planning, Protection, and Impact Avoidance

Due to the extensive wetlands present at the installation, virtually all proposed activities must be reviewed to ensure compliance with state and federal wetland regulations. The wetland survey data contained in the NYARNG GIS are available to a variety of users to ensure that wetlands issues are integrated into the range development plan, real property master plan, ITAM Program, and other mission planning processes at Youngstown LTA. All proposed development and training activities at Youngstown are coordinated with the Environmental Office early in the planning process to ensure that wetlands issues do not impact mission activities. The Environmental Office provides assistance in identifying potential alternatives to ensure compliance with regulations and to ensure that impacts on wetlands are avoided and minimized to the extent possible. In addition, the Environmental Office also coordinates with NYSDEC and USACE early in the planning process to ensure that all potential wetlands issues are identified and appropriate permits are obtained.

The Environmental Office also coordinates with the Facilities Management and Engineering Office, POTO, training site staff, engineer units, and contractors to ensure that BMPs are incorporated into project design and implementation. Potential training-related impacts on wetlands include erosion and direct impacts associated with road maintenance and/or improvement. Wetlands issues associated with road maintenance and improvement are addressed through implementation of BMPs and the permitting process, if necessary. BMPs such as sedimentation basins, rock filters, riprap, and silt fences are incorporated into project designs to reduce runoff into wetlands and surface waters. The New York Natural Resources Conservation Service provides guidance on wetland protection measures and BMPs. In some areas, the protection of wetlands may also involve protecting wetland communities from threats such as erosion or sediment deposition and invasive species. Erosion issues are addressed under the ITAM Program (Section 4), and invasive species issues are addressed under the Invasive Species Management Program (Section 10).

Current training activities at Youngstown have little potential to impacts wetlands. All wheeled vehicle maneuver and driver training is limited to existing installation roads and maneuver trails. Limited dismounted maneuver and land navigation training occasionally occurs in wetland areas at the installation. This occasional foot traffic is considered compatible.

8.2 MANAGEMENT GOALS AND OBJECTIVES

The overall goal of the program is to support the mission through compliance with Section 404 of the CWA, EO 11990, EO 11988, and state wetland regulations. Overall management goals for the program include the following:

- Comply with existing federal and state wetlands regulations;
- Maintain no net loss of installation wetlands;
- Protect and enhance the biodiversity, functions, values, and habitat availability of wetland communities; and
- Implement ecosystem management practices to achieve program goals.

Currently, no project-specific goals have been identified for the Wetlands Management Program. As discussed above, project-specific wetland issues will continue to be evaluated and addressed on an as needed basis to achieve the overall program goals.

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SECTION 9
FOREST MANAGEMENT PROGRAM

9.1 INTRODUCTION AND PROGRAM OVERVIEW

9.1.1 Administrative Responsibilities and Requirements

The Forest Management Program is primarily the responsibility of the Environmental Office. The natural resources manager oversees all aspects of the program. When necessary, the Environmental Office coordinates forest management activities with NYSDEC and the U.S. Department of Agriculture (USDA) Forest Service.

9.1.2 Program Description

In accordance with DA policy, the Forest Management Program is designed to maintain, restore, and manage its forest lands on an ecosystem basis. It addresses issues related to the management of all forests at Youngstown. Within the tenets of this program, issues related to military training, biodiversity conservation, wildlife habitat management, forest pest management, water quality protection, wildfire management, and human health and safety are also addressed. The program is applicable to all forested areas at the installation and is integrated with all the other natural resources management programs.

9.1.3 Program Status and Issues

9.1.3.1 Natural Forest Management

Forested communities at Youngstown were described and mapped in the NYARNG GIS as part of the ecological community surveys conducted in 1996. All of the forested areas at the installation are classified as hardwood swamp forest, which comprises approximately 44 percent (367 acres) of the installation. Descriptions of the forested communities are provided in Section 2.12 of this INRMP and in the *Youngstown Weekend Training Site Ecological Characterization Report* (Parsons ES 1997). The installation's forests provide many important functions, including a realistic training environment for dismounted maneuvers, tactical concealment, wildlife habitat, watershed protection, and visual and noise buffering.

The potential for commercial timber management at Youngstown is limited because all forested areas are classified as wetlands. Therefore, forest management at Youngstown focuses on meeting military training needs and protecting the hardwood forest swamps, as discussed under the Wetlands Management Program (Section 8). Specific military training needs that can be met through forest management practices are identified through the TRI component of the NYARNG ITAM Program and implemented through the Forest Management Program.

9.1.3.2 Forest Pest Management

Currently, no forest pest problems have been identified at Youngstown. Pest Management, when required, is in accordance with the September 2013 Integrated Pest Management Plan which covers all NYARNG installations.

9.1.3.3 Forest Wildfire Management

There is relatively low potential for forest fires at Youngstown due to the wet environment and limited training. No training-related fires have occurred at the installation. ARNG and NYARNG have determined that Youngstown is exempt from DA requirements for preparation of an integrated wildland fire management plan.

9.1.3.4 Urban Forestry

No urban forests are present at the installation.

9.2 MANAGEMENT GOALS AND OBJECTIVES

9.2.1 Overall Program Goals

The overall goal of the Forest Management Program is to employ ecosystem management techniques to promote healthy and diverse forest communities at Youngstown to meet military training requirements and protect the hardwood forest swamps. Management criteria for the program include the following:

- Sustain healthy forests to meet military training needs;
- Sustain non-fragmented forest habitat for existing wildlife;
- Sustain ecological values and function of the forested landscape; and
- Protect real property investments for the installation.

No project-specific management goals have been established for the Youngstown Forest Management Program at this time.

SECTION 10
INVASIVE SPECIES MANAGEMENT PROGRAM

10.1 INTRODUCTION AND PROGRAM OVERVIEW

10.1.1 Administrative Responsibilities and Requirements

The Environmental Office is primarily responsible for the Invasive Species Management Program. The natural resources manager coordinates invasive species inventories, monitoring, and control. The District Maintenance Supervisor and maintenance staff provides program support.

The development of this program allows NYARNG to comply with EO 13112, *Invasive Species*, which was issued on 3 February 1999. The EO requires that federal agencies coordinate complementary, cost-effective activities concerning invasive species with existing organizations addressing invasive species. A copy of the EO can be obtained on the Internet at http://www.gsa.gov/portal/content/101587.

The Invasive Plant Council (IPC) of New York State provides coordination and guidance on the management of invasive plants in the state. The IPC was incorporated in 1999 based on needs identified by state and federal agencies and nonprofit organizations. The goal of the IPC is to organize an effective partnership among public and private organizations to address the need for invasive species information and control across the state.

10.1.2 Program Description

The Invasive Species Management Program is applicable to all areas of Youngstown that are affected by invasive plant or animal species, with a particular emphasis on plant species. At this time, no invasive animal species have been identified at the installation. The term "invasive species" may refer to any alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health (EO 13112). The primary focus of the program is to reduce or eliminate invasive plant populations to protect biodiversity and ecosystem stability. Invasive species management is closely linked with other natural resources management programs and produces benefits for military training and the Fish and Wildlife, Rare Species, Wetlands, and Forest Management Programs.

10.1.3 Program Status and Issues

10.1.3.1 Background

Invasive species are typically alien plants or animals that have been intentionally or accidentally introduced by human activity into a region in which they did not evolve. Unlike

many exotic species, invasive species escape cultivation and result in a variety of negative impacts. They become agricultural pests, infest lawns as weeds, displace native plant species, reduce wildlife habitat, and alter ecosystem processes. The economic costs of invasive species include loss of military and recreational land value, clogging of important waterways, and increased costs in agriculture and maintaining open powerline rights-of-way. Invasive alien plants typically exhibit the following characteristics:

- Rapid growth and maturity;
- Prolific seed production;
- Highly successful seed dispersal, germination and colonization;
- Rampant vegetative spread;
- Ability to out-compete native species; and
- High cost to remove or control.

Invasive plants were once thought to be a problem only on farms or in lawns but are now recognized as a threat to undisturbed natural areas. At Youngstown, invasive plant species can not only degrade ecosystems and wildlife habitat but can also increase the cost of maintaining training areas. In the 2016-2018 management plan developed by the National Invasive Species Council (NISC), actions to combat invasive species include prevention, early detection and rapid response, control and management, and restoration are presented (NISC, 2016).

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10.1.3.2 Invasive Plant Inventorying

A summary of invasive plants that have been identified at Youngstown during surveys conducted in 1997 is provided in Table 10.1. Many of the invasive species identified to date is on the IPC's list of the top 20 most invasive species in New York State. Table 10.1 also contains general information on the habitat, degree of invasion, and preliminary control priorities for each species. Additional species-specific information can be found ~~at~~ at ~~http://www.invasivespecies.gov~~http://www.invasivespecies.gov. The INRMP incorporates a proposed 2018 floral survey for all three NYARNG training areas.

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TABLE 10.1
INVASIVE PLANTS IDENTIFIED AT YOUNGSTOWN

Scientific Name	Common Name	Habitat	Degree of Invasion	Preliminary Control Priority
Ailanthus altissima	Tree of heaven	Hardwood swamp forest	Low	Low
Lonicera tatarica	Honeysuckle	Shrub swamp	Low	Low
Lythrum salicaria	Purple loosestrife	Hardwood swamp forest, shallow emergent marsh, wet meadow	High	High
Phragmites australis	Common reed	Shallow emergent marsh, wet meadow, riverine cultural	Moderate	Moderate
Robinia pseudoacacia	Black locust	Shrub swamp, hardwood swamp forest	Low	Low
Rosa multiflora	Multiflora rose	Shrub swamp	Low	Low

Purple loosestrife (*Lythrum salicaria*) is currently the most prolific invasive plant at the installation. The most severe invasion has occurred in the area of the former LAW/M203 range. The range is no longer in use, and woody vegetation is currently becoming established in the area. Natural succession will be allowed to continue in this area, and the woody vegetation should eventually shade out the purple loosestrife.

The natural resources manager will conduct annual qualitative surveys for the entire installation to identify and map invasive species problem areas. Information obtained will be used to direct future management practices. In addition, routine monitoring will be conducted to evaluate the effectiveness of controls and to quickly identify any new invasions.

10.1.3.3 Invasive Plant Control and Management

In accordance with EO 13112, *Invasive Species*, the 2013 Integrated Pest Management Plan (IPMP) and the goals of this program, the NYARNG will control populations of invasive plants in a cost-effective and environmentally sound manner. When practicable, control efforts will follow the recommendations of the IPC, and the NYARNG will work cooperatively with agencies and organizations involved with invasive species management. A variety of control measures will be employed based on species-specific and site-specific requirements. These measures are further described and directed within the IPMP which applies to all NYARNG installations (US ARMY 2013). In some cases, a combination of control measures may be appropriate. Options for invasive plant control include the following:

- **Prevention:** Several prevention measures are already in place at Youngstown and include prohibiting the use of invasive plants for landscaping or other purposes, implementing BMPs to minimize land disturbances that promote invasion, and re-vegetating disturbed areas with native species. Avoidance will remain the preferred control measure.
- **Mechanical Controls:** This method involves physical removal of invasive plants through means such as hand pulling of individual stems, digging, cutting, and mowing. This method can be very effective for certain species on a localized basis and is often preferred to avoid impacts on non-target species and the use of herbicides. However, it can be labor intensive on a larger scale, and repeated removal is typically required to ensure success. When implemented on a large scale, measures must be taken to avoid impacts on non-target species, minimize the potential for erosion, and avoid impacts on cultural resources. Mechanical methods are often used in combination with selective use of a glyphosate-based herbicide.
- **Biological Controls:** Biological controls typically involve the introduction of a species (biological control agent) that feeds on or impedes the growth of the target invasive plant. The science of biological controls has made significant advances in recent years, but effective and approved methods are currently limited. Where applicable, this method can be very cost effective and avoids potential impacts associated with chemical and mechanical controls. However, many biological control agents are nonnative species, which raises additional concerns. Biological control measures may be used at Youngstown when they are determined to be the most appropriate measure available. Use of biological controls will be limited to those agents that are USDA-approved and for which NEPA documentation already exists.
- **Chemical Controls:** Herbicide application can be a very effective means of controlling invasive plants. However, herbicides have the potential to impact non-target plants, as well as fish and wildlife resources. When appropriately used, nonpersistent herbicides can be the most appropriate control measure for many circumstances. Selective glyphosate-based herbicide application, in combination with mechanical methods and/or prescribed burning, is an effective method for many common invasive plants. In accordance with DoD pest management guidelines and the NYARNG pest management plan, herbicide use to control invasive plants will be limited to the extent possible. All herbicide use will be conducted in accordance with the NYARNG pest management plan, and a DoD-certified applicator (or equivalent) will perform all applications. Only licensed herbicides will be utilized in accordance with their approved uses. Herbicides used to control wetland or aquatic plants must be licensed for use in wetlands.
- **Prescribed Burning:** This method is typically only used in combination with selective herbicide applications and may promote the invasion of some species. At

this time, prescribed burning for invasive plant control is not proposed for Youngstown.

Currently, no invasive plant controls are planned for Youngstown. The need for controls will continue to be evaluated based on qualitative monitoring.

10.2 MANAGEMENT GOALS AND OBJECTIVES

Management goals, objectives, and projects for the NYARNG Invasive Species Management Program are outlined in this section. Implementation information is provided in Section 11.

Invasive Species Goal #1: Protect ecosystems and native plant and animal species from invasive species through compliance with EO 13112.

Objective #1: Monitor invasive plants and implement invasive plant controls.

1. Monitor invasive plants annually.
2. Implement invasive plant controls based on findings of qualitative monitoring with a focus on relatively small, new infestations that are easily controlled.
3. Monitor effectiveness of controls and adapt management practices, as necessary.

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SECTION 11
PLAN IMPLEMENTATION SUMMARY

11.1 OVERVIEW

This section discusses staffing and funding requirements for implementation of the Youngstown INRMP, as well as the implementation schedule. The NYARNG intends to implement the overall management approach and projects contained in this INRMP based on authorized funding, resource availability, and time constraints. The NYARNG recognizes the need for an adaptive management approach to address changing land use requirements, natural resources conditions, and other unforeseen factors. Consequently, unforeseen factors might prohibit the NYARNG from implementing some or all of the projects in accordance with the implementation schedule. In addition, implementation of projects is contingent upon the availability of funding and other project funding priorities within the DA, ARNG-ILEZ~~E~~, and NYARNG. As discussed in Section 3, the INRMP will be routinely reviewed and updated to address changing conditions.

11.2 STAFFING REQUIREMENTS

11.2.1 NYARNG/DMNA Staff

Currently, the natural resources manager within the DMNA Environmental Office is the primary source of labor for implementing routine INRMP activities. The natural resources manager is responsible for routine coordination of INRMP activities, program administration, and other conservation related activities. These activities include, but are not limited to, reviewing and updating the INRMP; providing input for program funding requirements; coordinating efforts with cooperating agencies, contractors, installation personnel, and the general public; providing technical support to internal stakeholders; providing natural resources subject matter expertise and input to the real property and mission planning processes; implementing the NEPA process; and obtaining environmental permits, when necessary.

11.2.2 Contractors and Cooperating Agencies/Organizations

The natural resources surveys identified in Sections 5 and 6 are the only projects that require direct support from contractors or cooperating agencies/organizations.

11.3 FUNDING REQUIREMENTS

Primary funding sources include ARNG Conservation Program, RPOM, and RTLP. Funding from alternative sources such as the DoD Legacy Program and the USDA Wildlife Habitat Incentive Program will be sought, if appropriate. Estimated funding requirements are included in Table 11.1.

11.4 INRMP IMPLEMENTATION SCHEDULE

All of the INRMP goals, objectives, and projects are listed in Table 11.1 along with estimated implementation costs and the implementation schedule.

TABLE 11.1
YOUNGSTOWN INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN GOALS, OBJECTIVES, PROJECTS, COSTS, AND IMPLEMENTATION SCHEDULE

Goals, Objectives, and Projects	Estimated Cost	Implementation (Fiscal Year)
Fish and Wildlife Goal #1 – Maintain accurate, updated survey information for wildlife and wildlife habitat and integrating this information into installation planning processes.		
Objective #1 – Conduct flora and fauna surveys.	$50,000	20181~~14~~
1. Update vegetation and ecological community mapping.		
2. Conduct plant inventory.		
3. Conduct fauna inventory.		
4. Prepare survey report, update GIS, and share data with USFWS and NYSDEC, as appropriate. Develop species-specific management actions, as necessary.		
Rare Species Goal #1 – Avoid impacts on rare species and their habitat by maintaining accurate, updated information on the presence of rare species and integrating this information into installation planning processes.		
Objective #1 – Conduct breeding bird surveys with emphasis on state-listed species and birds of conservation concern that have potential to occur on the installation.	$20,000	~~20142~~2018
1. Conduct surveys during the 2015 breeding season.		
2. Prepare survey report, update GIS, and share data with USFWS and NYSDEC. Develop species-specific management actions, as necessary.		
Objective #2 – Conduct Blanding's turtle and spotted turtle surveys.	$10,000	~~2013~~2015 update in 2018
1. Conducted surveys in April~~spring~~ 20154.		
2. Prepared survey report, updated GIS, and shared data with USFWS and NYSDEC. Develop species-specific management actions, as necessary.		
Objective #3 – Conduct amphibian surveys, including western chorus frog surveys.	$see turtles above~~10,000~~	~~2013~~2015 update in 2018
1. Conducted surveys in April~~spring~~ 20154.		
2. Prepare survey report, update GIS, and share data with USFWS and NYSDEC. Develop species-specific management actions, as necessary.		
3.		
Objective #4 – Investigate bat habitat value of the bunkers at Youngstown by conducting surveys to determine if bats are using the bunkers as summer roosting sites~~ or winter hibernating sites.~~	$19,000 DMNA Labor	2015, update in 2018
1. Coordinated with USFWS and NYSDEC Region 9 to determine appropriate methods and identify opportunities for cooperative efforts.		
2. Conducted summer survey to determine if bats are using bunkers as roosting sites.		
3. Prepared survey report, updated GIS, and shared data with USFWS and NYSDEC, as appropriate. Develop species-specific management actions, as necessary.		
Invasive Species Goal #1 – Protect ecosystems and native plant and animal species from invasive species through compliance with EO 13112.		
Objective #1 – Monitor invasive plants and implement invasive plant controls as needed.	$1,250 ($250/year) DMNA Labor	2017~~3~~-2021~~17~~
1. Qualitatively monitor invasive plants annually.		
2. Implement invasive plant controls based on findings of qualitative monitoring with a focus on relatively small, new infestations that are easily controlled.		
3. Evaluate the feasibility of implementing approved biological controls for purple loosestrife and multiflora rose.		
4. Monitor effectiveness of control and adapt management practices, as necessary.		

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SECTION 12
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APPENDIX A

AGENCY CORRESPONDENCE

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APPENDIX B

SPECIES OF CONCERN SURVEY

APPENDIX C

BAT SURVEY