Final Integrated Natural Resources Management Plan (INRMP)
182d Airlift Wing
Air National Guard Base

December 2018

Prepared for:

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SIGNATURE PAGE

The 182d Airlift Wing (hereafter 182 AW), an Illinois Air National Guard (ILANG) facility, Integrated Natural Resources Management Plan (INRMP) has been prepared for the Peoria Air National Guard Base (182D) to manage significant natural resources in support of the military mission. Significant natural resources include the presence of federal and state-listed protected species and Waters of the United States including wetlands. The 182 AW INRMP meets the intent of the Sikes Act (16 US Code [USC] § 670a–670l, 74 Stat. 1052).

To the extent that resources permit, the US Fish and Wildlife Service (USFWS), Illinois Department of Natural Resources (IDNR), and the ILANG by signature of their agency representative, do hereby enter into a cooperative agreement for the conservation, protection, and management of natural resources present on 182 AW. This agreement may be modified and amended by mutual agreement of the authorized representatives of the three agencies. This agreement will become effective upon the date of the last signatory and shall continue in full force for a period of 5 years or until terminated by written notice to the other parties, in whole or in part, by any of the parties signing this agreement.

By their signatures below, or an enclosed letter of concurrence, all parties grant their concurrence with and acceptance of the following document.

Approving Officials:

Col. Daniel R. McDonough Illinois Air National Guard Commander, 182d Airlift Wing	Date
Charles Wooley Acting Regional Director, Midwest Region US Fish and Wildlife Service, Region 3	Date
Wayne Rosenthal Director Illinois Department of Natural Resources	Date

ANNUAL REVIEW DOCUMENTS

This page is used to certify the annual review and coordination of the 182 AW INRMP.

With the signature below, this acknowledges that the annual review and coordination of the INRMP has occurred for the specified year.

Year: 2019

[ ]	Date
Illinois Air National Guard Commander, 182d Airlift Wing	
[ ]	Date
US Fish and Wildlife Service	
[ ]	Date
Illinois Department of Natural Resources	

ANNUAL REVIEW DOCUMENTS

This page is used to certify the annual review and coordination of the 182 AW INRMP.

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Year: 2020

[ ]	Date
Illinois Air National Guard Commander, 182d Airlift Wing	
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US Fish and Wildlife Service	
[ ]	Date
Illinois Department of Natural Resources	

ANNUAL REVIEW DOCUMENTS

This page is used to certify the annual review and coordination of the 182 AW INRMP.

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Year: 2021

[ ]	Date
Illinois Air National Guard Commander, 182d Airlift Wing	
[ ]	Date
US Fish and Wildlife Service	
[ ]	Date
Illinois Department of Natural Resources	

ANNUAL REVIEW DOCUMENTS

This page is used to certify the annual review and coordination of the 182 AW INRMP.

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Year: 2022

[ ]	Date
Illinois Air National Guard Commander, 182d Airlift Wing	
[ ]	Date
US Fish and Wildlife Service	
[ ]	Date
Illinois Department of Natural Resources	

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DOCUMENT CONTROL

Record of Review –In accordance with the Sikes Act, Department of Defense Instruction (DoDI) 4715.03, *Natural Resources Conservation Program*, Department of Defense Manual (DoDM) 4715.03, *INRMP Implementation Manual*, and Air Force Instruction (AFI) 32-7064, *Natural Resources Management*, an INRMP is required to be reviewed annually to ensure plans and projects remain current, and every 5 years for operation and effect. Annual reviews and updates are accomplished through annual meetings led by the base Environmental Manager (EM) and attended by the USFWS, the State Fish and Wildlife Agency, and, if required, the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA NMFS). During the annual meetings, the actions taken over the previous year are discussed and actions to be taken over the coming year are discussed and agreed to. The meeting is followed up in writing for concurrence by the EM and the representatives from the USFWS and the state fish and wildlife agency, Illinois Department of Natural Resources (IDNR). As part of the annual and 5-year reviews, the EM shall hold meetings with internal stakeholders to ensure all personnel and tenants are informed of INRMP requirements.

ACRONYMS

°F	degrees Fahrenheit
ACM	asbestos-containing material
AFI	Air Force Instruction
AFPD	Air Force Policy Directive
ANG	Air National Guard
AW	Airlift Wing
BASH	Bird/Wildlife Aircraft Strike Hazard
BCI	Bat Conservation International
BHWG	BASH Hazard Working Group
BMP	Best Management Practice
CAPS	Cooperative Agriculture Pest Survey
BCE	Base Civil Engineering
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act
CWCS	Comprehensive Wildlife Conservation Plan & Strategy
DEPARC	Defense Environmental Programs Annual Report to Congress
DoD	Department of Defense
DoDI	Department of Defense Instruction
DZ	Drop Zone
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EM	Environmental Manager
EO	Executive Order
ERP	Environmental Restoration Program
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FS	Fighter Squadron
FWM	Fish and Wildlife Management
FY	Fiscal Year
GIS	Geographical Information System
HWAS	Hazardous Waste Accumulation Site
IDA	Illinois Department of Agriculture
IDNR	Illinois Department of Natural Resources
IEPA	Illinois Environmental Protection Agency
ILANG	Illinois Air National Guard
INRMP	Integrated Natural Resources Management Plan
IPM	Integrated Pest Management
MBTA	Migratory Bird Treaty Act
MOU	Memorandum of Understanding
MOA	Memorandum of Agreement

NEPA	National Environmental Policy Act
NGB	National Guard Bureau
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWR	National Wildlife Refuge
OWS	Oil/Water Separators
PIA	Peoria International Airport
PIF	Partners in Flight
PCB	Polychlorinated biphenyls
QD	Quantity Distance
SAP	Satellite Accumulation Point
SDO	Stormwater Discharge Outfalls
SWPPP	Storm Water Pollution Prevention Plan
TASG	Tactical Air Support Group
TCRPC	Tri-County Regional Planning Commission
USC	United States Code
USACE	US Army Corps of Engineers
USAF	US Air Force
USDA	US Department of Agriculture
USDA-WS	US Department of Agriculture Wildlife Services
US EPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
USGS	US Geological Service

1.0 EXECUTIVE SUMMARY

The Sikes Act Improvement Act of 1997, 16 USC § 670a *et seq*., as amended, (herein referred to as the Sikes Act) requires federal military installations with significant natural resources to develop a long-range INRMP and implement cooperative agreements with other agencies. The Sikes Act is implemented through Department of Defense (DoD) and US Air Force (USAF) Instructions and Manuals. The conservation measures discussed in the INRMP help manage water resources, reduce bird/wildlife aircraft strike hazard (BASH) risk, manage federal and state-listed species, and sustain natural resources. The 182 AW INRMP is intended to be in support of and consistent with the intent of the Sikes Act.

The 182 AW INRMP is the primary guidance document and tool for managing natural resources on 182 AW. The ILANG leases approximately 334 acres from the General Wayne A. Downing Peoria International Airport (PIA), in the southwestern portion of the airport property. Approximately 100 acres are developed. Land use categories at the installation include air operations, administrative, community, industrial, medical, open space, and constrained areas such as quantity distance (QD) arcs and floodplains, which are restricted for development. Fish and Wildlife Management is the main driver for the development of the INRMP and this INRMP presents practicable alternatives and recommendations that allow for the protection and enhancement of natural resources and conservation of existing ecosystems, while minimizing impacts on the installation's mission. Natural resources management activities on 182 AW must be conducted in a way that provides for sustainable land use, complies with applicable environmental laws and regulations, real estate leases and licenses, and provides for "no net loss" in the capability to support the military mission. This 182 AW INRMP provides a structure and plan to manage natural resources effectively and ensures that facilities remain available to support the installation's military mission into the future.

Specific goals in the 182 AW INRMP are supported by its objectives and work plans, as well as management strategies and specific actions. Goals and objectives are listed in **Section 8** of this plan, and projects are summarized in **Section 9**. The 182 AW INRMP provides a description of the installation, the military mission, the environment on the installation, and specific plans and strategies for natural resource management designed for sustainable military training. The implementation of the 182 AW INRMP will ensure the successful accomplishment of the military mission while promoting adaptive management that sustains ecosystem and biological integrity and provides for multiple uses of natural resources. It also will ensure that management efforts of the 182 AW at these facilities is consistent and integrated with as little redundancy as possible.

2.0 GENERAL INFORMATION

2.1 Purpose and Scope

The 182 AW INRMP is the primary guidance document and tool for natural resource management at 182 AW that provides for sustainable, healthy ecosystems, complies with

applicable environmental laws and regulations and real estate leases and licenses, and provides for “no net loss” in the capability of military installation lands to support the military mission of the installation. The installation Commander can use the 182 AW INRMP to manage natural resources more effectively to ensure that installation lands remain available and in good condition to support the installation’s military mission over the long term.

The 182 AW INRMP is consistent with the Sikes Act as required by the DoD, the Air Force and the National Guard Bureau (NGB). It was developed as a result of the presence of federal and state-listed endangered and threatened species, and regulated water resources on 182 AW. A multiple-use approach is implemented to allow for the presence of mission-oriented activities, as well as protecting environmental quality through the efficient management of natural resources.

2.2 Management Philosophy

2.2.1 Ecosystem Management

Natural resources at 182 AW are managed with an ecosystem management approach as directed by AFI 32-7064 and DoDI 4715.03. Ecosystem management is defined as the management to conserve major ecological services and restore natural resources while meeting the socioeconomic, political and cultural needs of current and future generations. The goal of ecosystem management on military lands is to ensure that military lands support present and future test and training requirements while conserving, improving, and enhancing ecosystem integrity. The ecosystem management program for 182 AW incorporates the following elements as described in **Table 1**.

Biodiversity is the degree of variation of life within a given ecosystem, region, or even the entire planet. The DoD’s challenge is to manage for biodiversity in a way that supports the military mission. Specific management practices identified in the 182 AW INRMP have been developed to enhance and maintain biological diversity within 182 AW ecosystems. Ecosystem management includes biodiversity conservation and invasive species control as integral parts of ecosystem management. Air National Guard (ANG) installations maintain or reestablish viable populations of all native species when practical and consistent with the military mission. ANG installations also identify the presence of exotic and invasive species, and implement programs to control and/or eradicate those species. Finally, when feasible, ANG installations develop joint control strategies with other federal, state, and when feasible local cooperating agencies and adjacent landowners to increase the effectiveness of control measures and for the benefits illustrated in **Figure 1**.

Table 1. Elements and Principles of Ecosystem Management	
DoDI 4715.03 Elements	
1	Avoid single-species management and implement an ecosystem-based multiple species management approach, insofar as that is consistent with the requirements of the Endangered Species Act (ESA)
2	Use an adaptive management approach to manage natural resources-related issues such as climate change
3	Evaluate and engage in the formation of local or regional partnerships that benefit the goals and objectives of the INRMP
4	Use the best available scientific information in decision-making and adaptive management techniques in natural resource management
5	Foster long-term sustainability of ecosystem services
AFI 32-7064 Principles	
1	Maintain or restore native ecosystem types across their natural range, where practical and consistent with the military mission
2	Maintain or restore ecological processes such as wildland fire and other disturbance regimes, where practical and consistent with the military mission
3	Maintain or restore the hydrological processes in streams, floodplains, and wetlands, when feasible
4	Use regional approaches to implement ecosystem management on an installation by collaboration, when feasible, with adjoining property owners, other DoD components, as well as other federal, state, and local agencies
5	Provide for outdoor recreation, agricultural production, harvesting of forest products, and other practical utilization of the land and its resources, provided that such use does not inflict long-term ecosystem damage or negatively impact the ANG mission

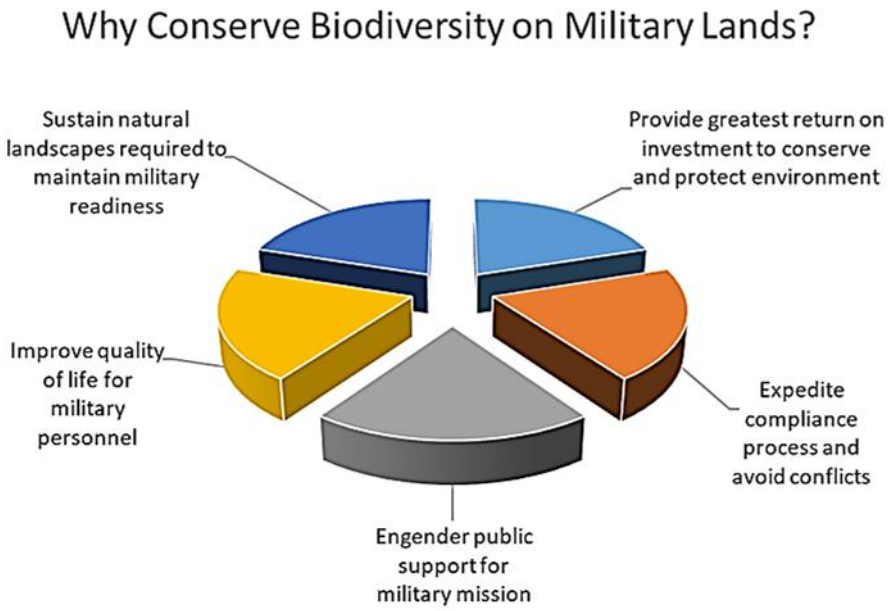

Figure 1. Why conserve biodiversity on Military Lands
*Adapted from Keystone Center, 1996.

2.3 Authority

2.3.1 Natural Resources Law, Regulations & Policy

The ANG, USFWS, and IDNR determined an INRMP was required for the 182 AW due to the presence of significant natural resources thereby necessitating conservation and management.

DoDI 4715.03, *Natural Resources Conservation Program*, identifies the DoD policies and procedures concerning natural resources management and INRMP reviews, public comment, and endangered species consultation. INRMPs are required to be jointly reviewed by the USFWS, state fish and wildlife agency, and ANG installation for operation and effect on a regular basis, but not less often than every five years. Minor updates and continued implementation of an existing INRMP do not require need for public comment. Major revisions to an INRMP do require an opportunity for public review. The degree of endangered species consultation when updating or revising an INRMP depends upon specific projects identified in the 182 AW INRMP and the amount of past consultation. Most updates and revisions will not require formal consultation. ESA Section 7 consultation is required for INRMPs that contain projects that may affect federally-listed species or designated critical habitat. The need for such consultation should become apparent during the review for operation and effect and implemented if necessary as part of an INRMP revision.

2.3.2 National Environmental Policy Act Compliance

The Environmental Impact Analysis Process (EIAP) is the process by which federal agencies facilitate compliance with environmental regulations. The primary legislation affecting these agencies' decision-making process is the National Environmental Policy Act of 1969 (NEPA; 42 USC § 4321 *et seq*.). NEPA requires that any organization using federal monies, proposing work on federal lands, or requiring a federal permit consider potential environmental consequences of proposed actions. The law's intent is to protect, restore, or enhance the environment through well-informed decisions.

The Council on Environmental Quality (CEQ) was established under NEPA for the purpose of implementing and overseeing federal policies as they relate to this process. The adoption of an INRMP can be considered a major federal action as defined by Section 1508.18 of the CEQ regulations. This requires an analysis of potential environmental impacts for the implementation of an INRMP. Although a complete Environmental Assessment (EA) is not necessarily required as individual actions and projects undergo their own NEPA analysis.

CEQ regulations require intergovernmental notifications prior to making any detailed statement of environmental impacts. Through the Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) process, ILANG notifies relevant federal, state, and local agencies and allows them sufficient time to make known their environmental concerns specific to a Proposed Action. Comments and concerns submitted by these agencies during the IICEP process are subsequently incorporated into the analysis of potential environmental impacts. This coordination fulfills requirements under Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, and IICEP. Furthermore, public participation in decision making on new proposals is required. Consideration of the views and information of all interested persons promotes open communication and enables better decision-making. Agencies, organizations, and

members of the public with a potential interest in the Proposed Action, including minority, low-income, disadvantaged, and Native American groups, are urged to participate.

The EIAP for the previous 182 AW INRMP (March 2012) was conducted in accordance with NEPA, CEQ *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 Code of Federal Regulations [CFR] § 1500-1508), and 32 CFR Part 989. The EIAP and decision-making process for the Proposed Action (implementation of the 182 AW INRMP) involved an examination of all environmental issues pertinent to the action proposed. Impact evaluations of the 2012 182 AW INRMP determined that no significant direct, indirect, or cumulative impacts on the quality of the natural or human environment would occur from the implementation of the Proposed Action (the preferred alternative). This determination was based on thorough review and analysis of existing resource information, and coordination with knowledgeable, responsible personnel from the 182 AW and other relevant local, state, and federal agencies. Individual actions or projects that have the potential to impact the environment will be analyzed separately in accordance with the NEPA process. A new EIAP is not required for this INRMP update.

If a future action or project has the potential to impact the environment, the initial step in compliance with NEPA is to complete USAF Form 813 "*Request for Environmental Impact Analysis*". The form is prepared to aid in the development of the assessment, providing information on the proposed action and its alternatives, purpose, and potential environmental effects. This allows the proponent to identify potential environmental impacts early and facilitates making a determination about whether an EA or an Environmental Impact Statement (EIS) might be required for a specific action. Some sections are prepared by the proponent and other sections are prepared by the Environmental Management Office 182 AW/EM. If the action is not covered by a categorical exclusion, then an EA is prepared to determine if there are potential significant impacts. If potential significant impacts are identified, either while completing USAF Form 813 or during the EA, then an EIS is prepared. The majority of natural resources management actions in this INRMP are covered by categorical exclusions.

2.3.3 Responsibilities

The updated 182 AW INRMP has been organized to ensure the implementation of year-round, cost-effective management activities and projects that meet the requirements of 182 AW. Various personnel and organizations within the 182 AW that are responsible for the implementation of this INRMP are described in the following subsections.

2.3.3.1 Installation Commander

The installation Commander oversees the installation and is responsible for ensuring the goals and objectives of the INRMP are implemented to the fullest extent practicable based on funding and manpower availability. The installation Commander is the official signatory for the 182 AW INRMP.

2.3.3.2 Natural Resources Program Manager

The ANG Natural Resources Program Manager (ANG NR Program Manager) is the technical point of contact on all natural resource related activities for the ANG. The ANG NR Program Manager tracks DoD and USAF policies and approves funding for projects identified as a priority

in the 182 AW INRMP. The development of projects included in the INRMP and any deviations from those projects will be submitted to the ANG NR Program Manager for review. Decisions resulting from those reviews will be a cooperative effort between the ANG NR Program Manager and the EM and/or the installation's Natural Resources Manager, when applicable.

2.3.3.3 Environmental Manager

The Environmental Manager (EM) plans, budgets, approves, and oversees all environmental activities performed on the installation and is responsible for ensuring that activities associated with the implementation of this INRMP adhere to applicable federal, state, local, and USAF environmental regulations and guidelines. The EM should independently review deviation from the projects proposed in this INRMP. Projects proposed in the 182 AW INRMP are reviewed by the EM and the ANG NR Program Manager. Persons responsible for implementation of the INRMP are required to attend the Civil Engineer Corps Officers School (CECOS) DoD Natural Resources Compliance course (http://www.netc.navy.mil/centers/csfe/cecos/CourseDetail2.htm#tab25).

2.3.3.4 Base Civil Engineer

The Base Civil Engineer (BCE) plans, budgets, approves, and oversees all maintenance and construction activities performed on the installation. All maintenance and construction-related projects or management activities proposed in this INRMP should be approved by the BCE to ensure that (1) funding is available and (2) these projects are complementary to the installation's comprehensive planning processes.

2.3.3.5 Legal Office

The Legal Office is responsible for ensuring the implementation of the management objectives contained within the 182 AW INRMP meet all regulatory and statutory requirements that pertain to natural resources management. The Legal Office will review any future natural resources management proposals and alert the 182 AW/CC and 182 AW/EM should there be any regulatory conflicts or shortfalls. In addition, the legal office will keep participating INRMP parties informed of any new statutes or regulations that might affect natural resources management.

2.3.3.6 Flight Safety Office

The 182 AW Flight Safety Office is responsible for development, implementation and management of the ANG BASH Program. The Safety Office also ensures that bird/wildlife strikes resulting from aircraft assigned to transient units at 182 AW are accurately documented and reported to the EM and the USAF BASH Team. In addition, the Safety Office participates in the 182 AW BASH Hazard Working Group (BHWG), which conducts meetings to evaluate and refine strategies for the reduction of BASH risk on 182 AW. The Safety Office is responsible for coordinating with and providing required information on BASH activities with the EM.

2.3.3.7 Wing Safety Office

The Wing Safety Office, in conjunction with the acting Natural Resources Manager, is responsible for implementing all activities presented in this IRNMP that pertain to the BASH Reduction Program. The Wing Safety Office also ensures that bird/wildlife strikes that occur with

aircraft assigned to units at 182 AW are accurately documented and reported to the USAF BASH Team. In addition, the Wing Safety Office ensures that the Bird Hazard Working Group conducts meetings on the reduction of the BASH threat on the installation.

2.3.3.8 Airfield Management

Airfield Management is responsible for ensuring that the airfield is acceptable and appropriated for flight activity.

2.3.3.9 Operations and Management

Operations and Maintenance personnel are responsible for all grounds maintenance activities on the installation. In addition, this office will ensure accomplishment of the habitat management protocols established in this INRMP to accomplish mission requirements while complying with natural resource management goals consistent with the mission and regulatory compliance requirements. The Operations and Maintenance personnel will also periodically review the type of grounds maintenance equipment to determine if new or additional equipment is needed for the proper maintenance of the installation's landscapes.

2.3.3.10 US Department of Agriculture – Wildlife Services

US Department of Agriculture – Wildlife Services (USDA-WS) is responsible for monitoring nuisance wildlife that have the potential to create an aircraft strike hazard. USDA-WS personnel support activities that pertain to the BASH Program and are responsible for wildlife depredation requirements within the airfield.

2.3.3.11 Pest Management

The installation Pest Management Coordinator is responsible for the protection of real estate, control of potential disease vectors or animals of other medical importance, control of undesirable or nuisance plants and animals (including insects), and prevention of damage to natural resources. Pest management personnel utilize Integrated Pest Management (IPM) approaches and are responsible for the implementation of the IPM Plan.

2.3.3.12 Public Affairs Office

The Public Affairs Office is responsible for the coordination of public access for events at 182 AW. The Public Affairs Office serves as the point-of-contact to interface between the Commander and civilian groups interested in the installation for environmental, educational, or other purposes.

2.3.3.13 US Fish and Wildlife Service

The USFWS is a signatory of the INRMP and provides input regarding natural resource projects and operational component plans. The USFWS alerts the EM and/or the ANG NR Program Manager whenever new species added to the federal threatened and endangered species lists have the potential for inhabiting 182 AW. In addition, the USFWS, when feasible, will support wildlife and vegetation surveys conducted at the ANG properties.

2.3.3.14 Illinois Department of Natural Resources

The IDNR is a signatory of the INRMP and provides input regarding natural resource projects and operational component plans. The IDNR alerts the EM and/or the ANG NR Program Manager whenever new species added to the state threatened and endangered species lists have the potential for inhabiting 182 AW. In addition, the IDNR, when feasible, will support 182 AW wildlife and vegetation surveys conducted at the 182 AW properties.

2.4 Integration with Other Plans

By its nature, an INRMP is multidisciplinary and provides the summary for natural resources at a specific installation. As a result, information from an INRMP is incorporated into other plans and other plans are written to support the INRMP. The INRMP plans include the following:

- IPM Plan. IPM is a planned program, incorporating continuous monitoring, education, record-keeping, and communication to prevent pests and disease vectors from causing unacceptable damage to operations, people, property, material, or the environment (ANG 2013).
- Storm Water Pollution Prevention Plan (SWPPP). Focuses on industrial activity areas that are exposed to storm water or could otherwise pose a potential for storm water pollution (ANG 2018b).
- BASH Hazard Reduction Plan. Provides summary of the BASH program on 182 AW, including techniques, processes, responsibilities, and management recommendations (ILANG 2018).

In addition, the 182 AW INRMP also integrates and coordinates its activities with the following plans from other agencies.

- Illinois Wildlife Action Plan. Provides plans for the conservation of wildlife and plans to avoid the addition of more species to the endangered and threatened species list (IDNR 2015). The 182 AW INRMP integrates this plan into invasive species management and fish and wildlife management.

3.0 INSTALLATION OVERVIEW

3.1 Location and Area

The 182 AW of the Illinois ANG is located at the PIA in Peoria, Illinois, 4.8 miles southwest of the City of Peoria and west of Interstate 474 (**Figures 2-3**). The ILANG installation is approximately 334 acres. It was acquired and developed starting in 1987 and completed in 1994. The ILANG installation had previously been located on the eastern side of PIA. The PIA provides the airfield facilities for ANG aircraft flight operations, including two runways (13/31 and 4/22), and a Federal Aviation Administration (FAA) control tower.

The 182d AW also leases a 387 acre site, known as the Ellis Drop Zone (DZ). The DZ is located in Fulton County, approximately two miles southwest of Ipava, and 42 miles southwest of the PIA. This site is leased from the Black Gold Cattle Company, to provide training space for airdrop missions. The Black Gold Cattle Company has been granted the exclusive right to

manage the forage grown on the leased property; this includes the right to make hay and establish habitat and or food plots for wildlife.

Figure 2. 182 AW Regional Map

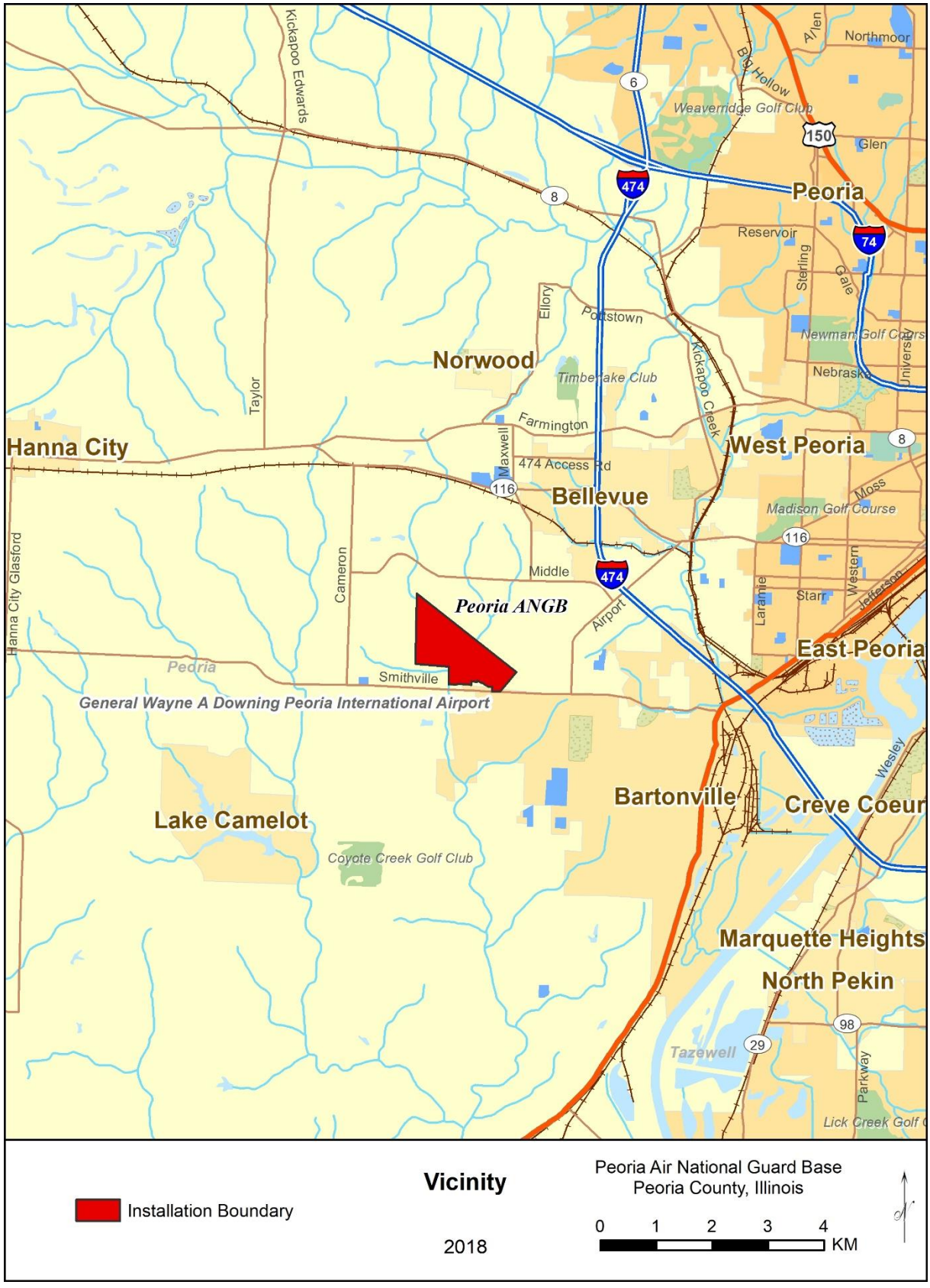

Figure 3. 182 AW Vicinity Map

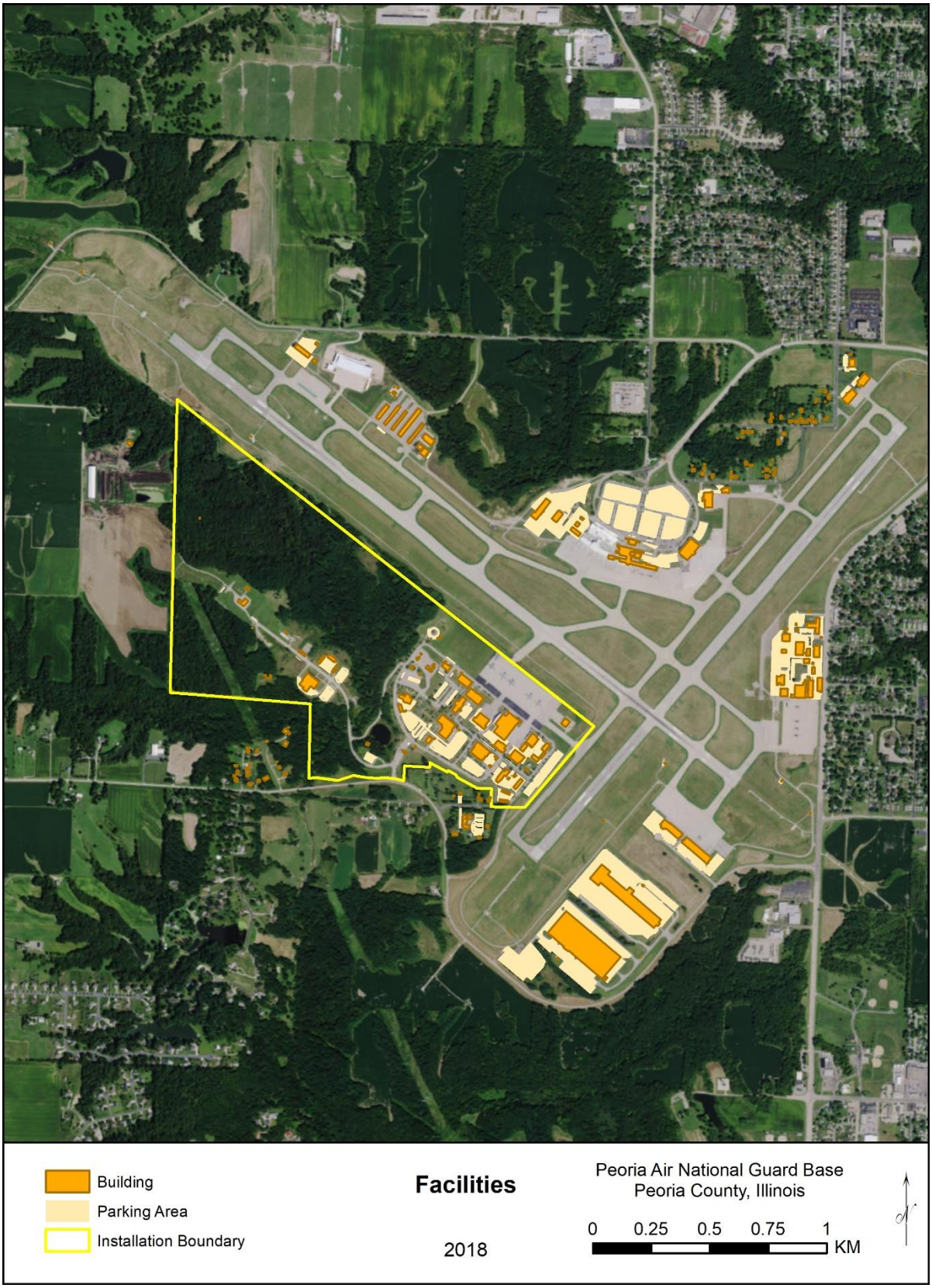

Figure 4. 182 AW Facilities Map

3.2 Installation History

In June 1947 the unit was organized and federally recognized as the 169th Fighter Squadron (FS). The 169 FS was equipped with P-51 fighters, AT-6 trainers, and a B-26 tow target plane. In December 1952, the unit was re-designated as the 169th Fighter Bomber Squadron and then again was re-designated in June 1955 to the 169th Fighter Interceptor Squadron. The unit converted to F-84 aircraft in the second half of 1958 and was re-designated the 169th Tactical FS in November of that year. The 182 Tactical Fighter Group in Peoria, Illinois, was formed in October 1962 and had four squadrons under it, including the 169th Tactical FS. In May 1969, the unit was re-designated the 182 Tactical Air Support Group (TASG) with interim U-3A/B aircraft and completed its conversion to 0-2A aircraft by the end of January 1970. In early 1980, the 182 TASG began its conversion to OA-37B aircraft and completed it by the beginning of June 1980. The unit converted to F-16 aircraft beginning in July 1992 and was re-designated to the 182 Fighter Group at that time. In June 1995, the unit converted to C-130E aircraft and became the 182 AW. In 2005, the 182 AW converted models from C130E to C-130H3. Today, the installation is home to the 182 AW of the ILANG and occupies approximately 334 acres of leased land in the southwestern portion of PIA (**Figure 4**).

3.3 Military Missions

The mission of the 182 AW is two-fold, comprising federal and state responsibilities. On the federal level, the unit's primary mission is to achieve and maintain operational readiness to provide tactical airlift services to support the DoD. The unit's state mission is to protect peace and personal property and to assist the State of Illinois in the event of emergencies (e.g., natural disasters).

The 182 AW maintains and operates eight C-130H3 aircraft, which are designed for airlift support, aircraft operations on short-field unpaved runways, equipment and personnel airdrops, aero-medical missions, and natural disaster relief missions. Training missions involving C-130H3 transport aircraft of the 182 AW include parachute airdrops of personnel, equipment, and training bundles (all containing inert materials). Offsite locations used for airdrop activities are designated as DZs.

The major support operations performed at 182 AW includes aircraft maintenance, aircraft deicing, aircraft refueling, aerospace ground equipment (AGE) maintenance, ground vehicle maintenance, refueling of ground vehicles, and facilities maintenance. Aircraft maintenance operations include activities such as corrosion control, non-destructive inspection (NDI), fuel cell maintenance, engine maintenance, avionics repair, hydraulics, washing, and wheel and tire maintenance.

3.4 Surrounding Communities

Population estimates as of July 1, 2017 by the United States Census Bureau estimate the population of Peoria County at 183,011 (US Census Bureau 2017). The installation is 4.8 miles southwest of the City of Peoria and west of Interstate 474 (**Figure 3**). Land use to the south and west of the base includes a cemetery, a church, single-family housing, and farming, and is zoned agricultural. To the north and east is the local airport, residential subdivisions, and open farmland. North of the airport, the land is zoned residential and agricultural. To the airport's east, the area is primarily residential (ANG 2016).

3.5 Local and Regional Natural Areas

The 182 AW is approximately 3.5 miles from the Illinois River and less than 10 miles from Peoria Lake. The Illinois River is in the Mississippi Flyway which extends from Canada to the Gulf of Mexico. This flyway is one of four migration routes used by migratory birds in North America. There are National Wildlife and Fish Refuges (NWRs) on the Illinois River to the north and south of 182 AW. In addition to the NWRs, there are numerous state parks, forests, conservation areas, and nature preserves in close proximity to the installation.

4.0 PHYSICAL ENVIRONMENT

4.1 Climate

Peoria County is located in the western portion of central Illinois where the climate is generally continental, characterized by hot, humid summers, cool to cold winters, and plentiful precipitation throughout the year (MRCC 2011).

Average daily temperatures fluctuate greatly between seasons, from an average high of 86° Fahrenheit (F) during the summer to an average low of 14°F in the winter. The mean annual temperature is 51.9°F. Total annual precipitation is approximately 36 inches and the average seasonal snowfall is about 24.6 inches (ANG 2018a).

In consideration of the future climate resiliency scenarios at 182 AW, the climate is predicted to include extreme heat, heavy downpours, and flooding. The average annual temperature is expected to continue the trend of increasing by about 1°F with spring temperature increasing by about 2°F. Precipitation in spring and winter is predicted to increase and these future increases in high precipitation events as well as an increase in evaporation rates may lead to greater intensity of floods and droughts (Frankson, Kunkel et al 2017). The installation plans on creating a Greenhouse Gas Management Plan that will include a greenhouse gas inventory, greenhouse gas reduction targets, and a monitoring program.

4.2 Landforms

The majority of central Illinois and Peoria County lies within the Tills Plains Section of the Central Lowland physiographic province. Landforms in the region are the result of glaciation. The flat, developed topography in the region is dissected by the Illinois River (ANG 2007). Undeveloped property is characterized by steep terrain and rolling hills. Elevation ranges from approximately 600 ft. above mean sea level in the south-central portion of the base to about 650 feet above mean sea level near the northwestern edge (ANG 2017; **Figure 5**).

4.3 Geology and Soils

Most of the landscape of Illinois is developed on materials deposited by great continental glaciers of the geologically recent Ice Age, by wind and streams. Peoria County is underlain by a gray compact silty till with sand and gravel that was deposited by Pleistocene glaciation of the Illinoian Stage and Jubileean Substage more than 75,000 years ago. These deposits overlie

Pennsylvanian and older formations consisting of limestone, shale, sandstone, and coal in various thickness and faces (ANG 2007).

The installation is underlain by an approximately 30-inch-thick layer of silty Peoria loess soil. The loess layer is underlain by thousands of feet of Precambrian to Pennsylvanian Age sedimentary rock layers consisting of limestone, sandstone, and shale as well as limestone and coal in the more recent units. The largest soil areas on the installation include about 126 acres of Marseilles silt loam with various percent slopes; 95.6 acres of Rozetta silt loam with different percent slopes, and 40.5 acres of Lawson silt loam with 0 to 2 percent slopes that frequently flood (ANG 2007; **Figure 6**).

4.4 Hydrology

The installation is within the Middle Illinois River Watershed of the Lower Illinois River Basin. Major rivers in the basin include the Illinois River, Sangamon River, Spoon River, La Moine River, Vermilion River, and Mackinaw River (ANG 2007). The Sankoty Sand aquifer is a 100-foot-thick non-contiguous Pleistocene sedimentary rock unit that occurs approximately 3 miles east of the installation. This aquifer is tapped by numerous groundwater wells and supplies groundwater storage for the central Illinois area (ANG 2007).

The major surface water body in the immediate vicinity of the 182 AW is the East Branch of LaMarsh Creek, which traverses through the northwest portion of the installation (**Figure 7**). The portion of LaMarsh Creek within the installation boundary is a mid- to upper-tributary stream channel approximately 3 to 4 miles from the Illinois River. The LaMarsh Creek drainage is characterized by a steep ravine containing a relatively narrow floodplain. All of the storm water runoff is eventually discharged into this creek, which flows into the Illinois River. The Illinois River is classified by the 2004 Illinois Environmental Protection Agency (IEPA) Water Quality Report as an impaired water body due to such pollutants as Polychlorinated biphenyls (PCBs), mercury, and fecal coliform from an unidentified source. Lamarsh Creek has not been evaluated for impairment and is therefore not listed as an impaired water body on the Illinois 303(d) list of impaired water bodies (ANG 2018b).

East branch of LaMarch Creek

A US Geological Service (USGS) report in 1990 stated that the surface water quality in the Peoria area was of naturally low quality. Consequently, surface water within the runoff watershed area is not used as potable water for the installation (ANG 2007).

The installation contains a total of 16 storm water discharge outfalls that discharge into East Branch of Lamarsh Creek or off-installation, which includes 7 industrial outfalls, one emergency overflow outfall, and 8 non-industrial outfalls. The installation has 17 inflow points. See the SWPPP for more details and maps (ANG 2018b).

The 182 AW has been issued an Authorization to Discharge by the IEPA under the National Pollutant Discharge Elimination System (NPDES) Program. The 182 AW has developed a SWPPP to comply with the US EPA NPDES program under the Clean Water Act (CWA) of 1977 (33 USC 1251 et seq.). The IEPA adopted a final storm water general permit for industrial discharges in Illinois. The 182 AW is subject to general permitting for airports in the State of Illinois and has been issued General Permit Number ILR005019 by the IEPA (ANG 2007).

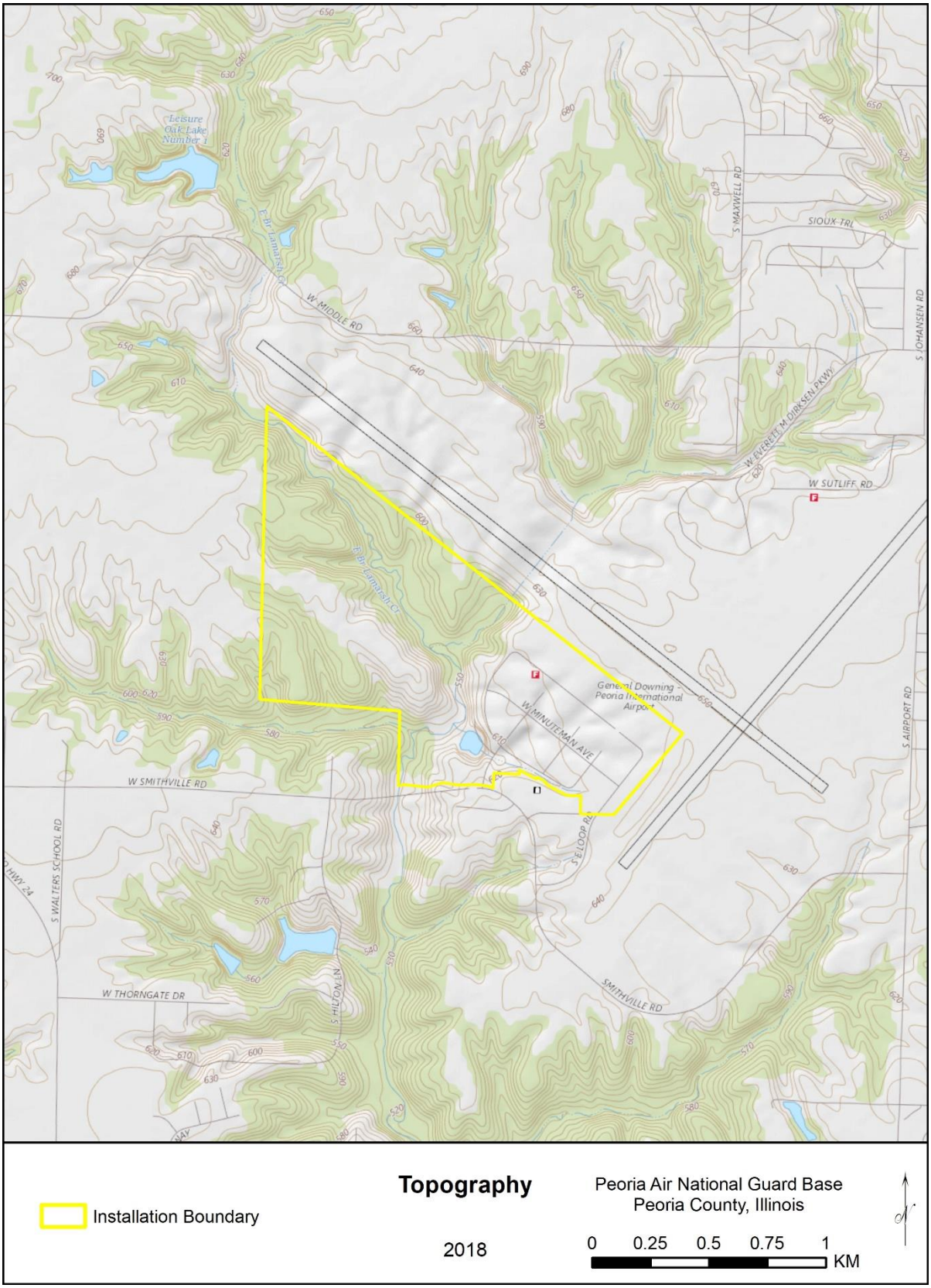

Figure 5. 182 AW Topography Map

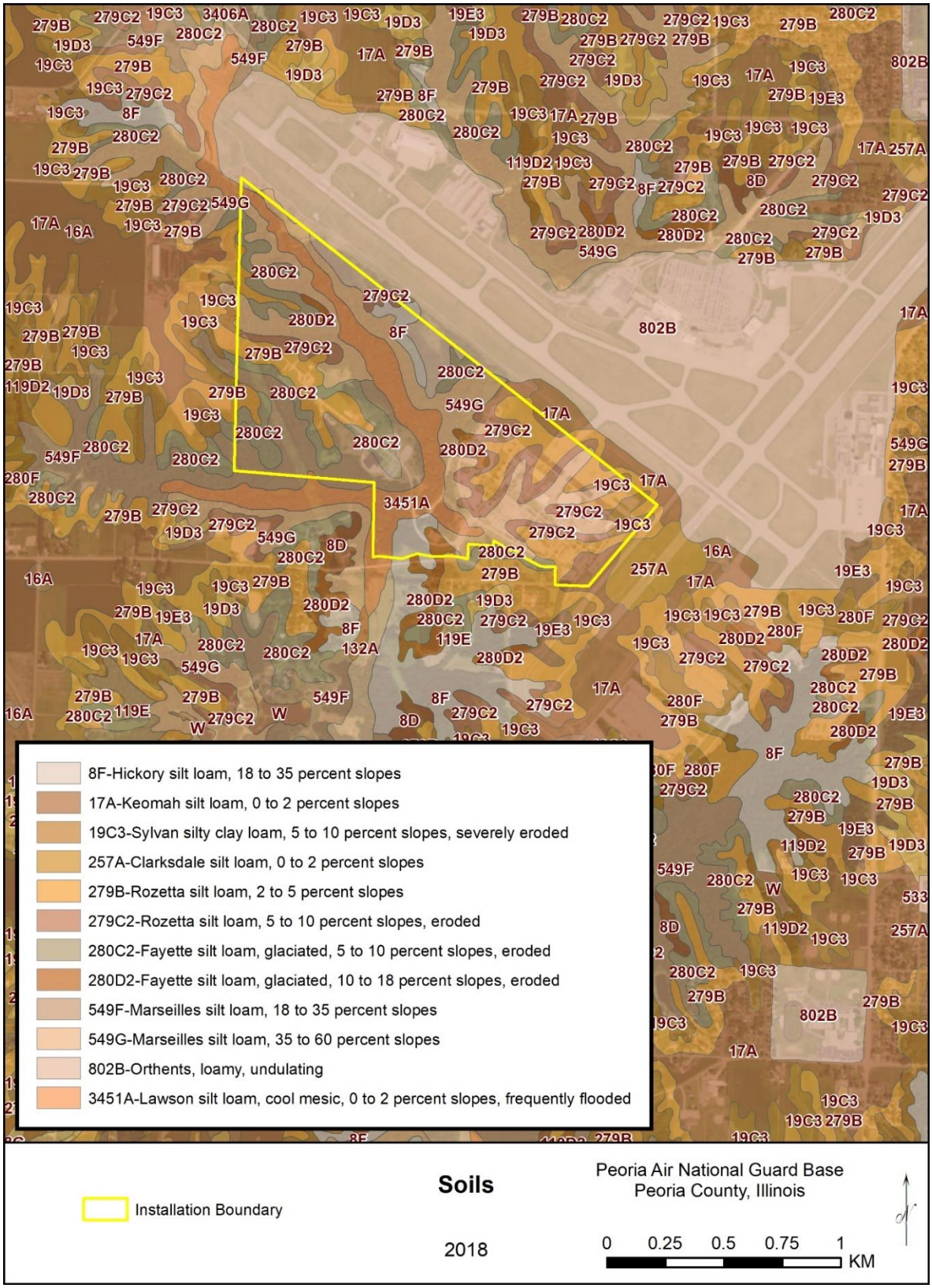

Figure 6. 182 AW Soils Map

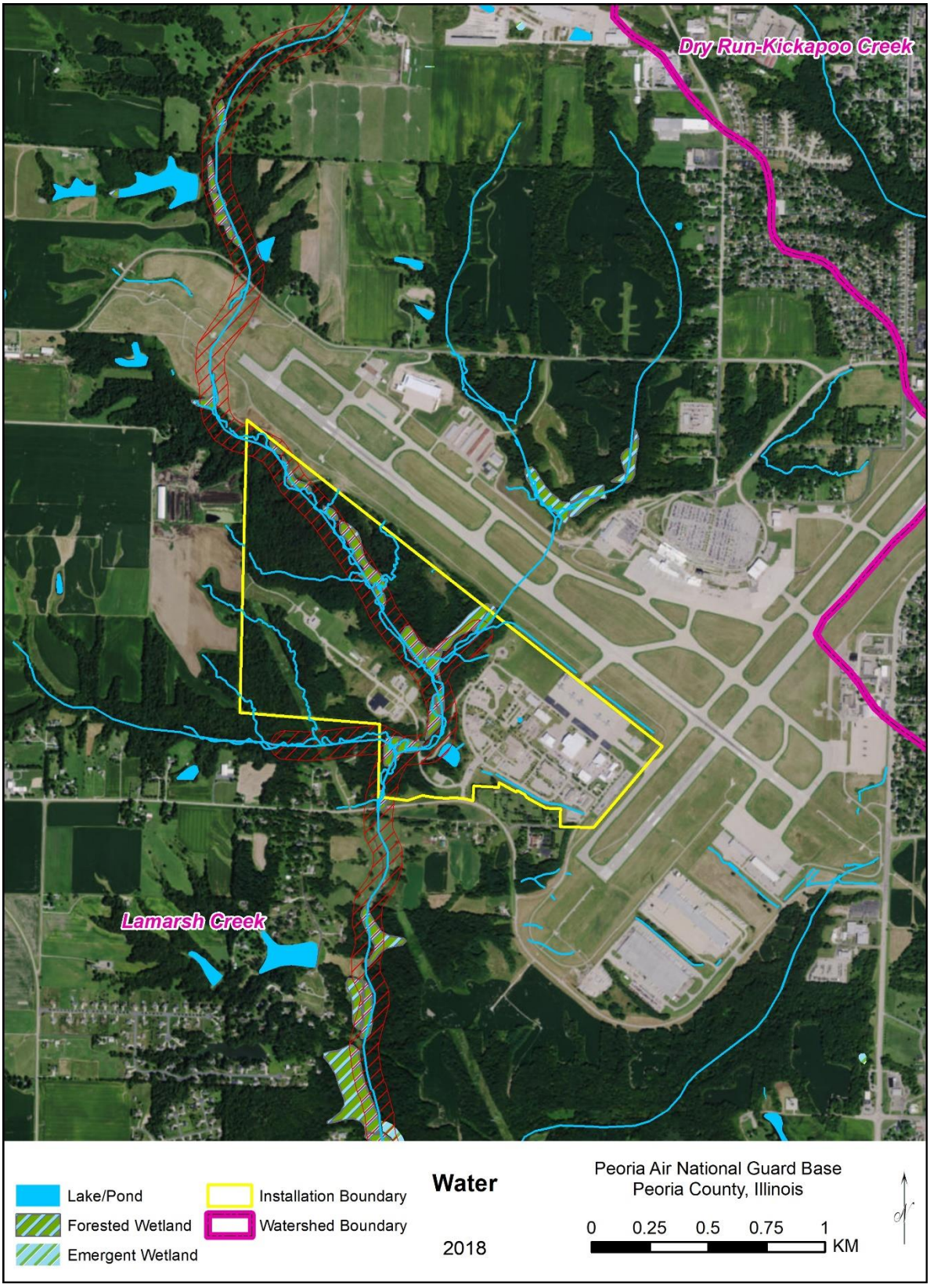

Figure 7. 182 AW Water Resources Map

5.0 ECOSYSTEMS AND THE BIOTIC ENVIRONMENT

5.1 Ecosystem Classification

The installation is located within the Galesburg Section of the Illinois Western Forest-Prairie Division. Vegetation in this area includes dry to mesic oak-hickory forest on the ravine slopes and ridgetops, and floodplain forest in the bottoms adjacent to the perennial stream channel (ANG 1995).

5.2 Vegetation

5.2.1 Historic Vegetative Cover

The area surrounding 182 AW included long-leaved willow (*Salix acutifolia*), black willow (*Slix nigra*), sycamore (*Platanus occidentalis*), silver maple (*Acer saccharinum*), and white elm (*Ulmus americana*; Brendel 1887).

5.2.2 Current Vegetative Cover

Vegetation on the installation consists primarily of turf grass, shrubs, and other landscaping. However, portions of the installation contain natural vegetation, particularly at the south end and along LaMarsh Creek.

The tract of forest varies from young upland to young lowland forest, both typically dominated by black locust (*Robinia pseudoacacia*), and eastern cottonwood (*Populus deltoides*) in the dominant canopy, with some areas also having black oak (*Quercus velutina*), northern red oak (*Quercus rubra*), mockernut hickory (*Carya tomentosa*), bitternut hickory (*Carya cordiformis*), and white oak (*Quercus alba*) as a primary component of the dominant canopy. Mid-canopy species include boxelder (*Acer negundo*), black locust, white mulberry (*Morus alba*), American elm (*Ulmus americana*), black cherry (*Prunus serotina*), and Osage orange (*Maclura pomifera*). The understory includes flowering dogwood (*Cornus florida*), American elm, sassafras (*Sassafras albidum*), slippery elm (*Ulmus rubra*), hop hornbeam (*Ostrya virginiana*), multiflora rose (*Rosa multiflora*), bush honeysuckle (*Lonicera* spp.) and autumn olive (*Elaeagnus umbellate*; ANG 1995, 2011).

Table 2 includes vascular plant species observed at 182 AW. A full list of plant species occurring in Peoria County can be found on the US Department of Agriculture (USDA) Forest Service Website : https://www.nrs.fs.fed.us/data/il/ilpin/county/county.asp?county=143.

Table 2. Vascular Plant Species Observed at 182 AW

Scientific Name	Common Name	Scientific Name	Common Name
Acer negundo	boxelder	*Morus alba*	white mulberry
Achillea millefolium	common yarrow	*Parthenocissus quinquefolia*	Virginia creeper
Alliaria petiolata	garlic mustard	*Pastinaca sativa*	wild parsnip
Ambrosia spp.	ragweed	*Phalaris arundinacea*	reed canary grass
Andropogon gerardii	big bluestem grass	*Phytolacca americana*	pokeweed
Apocynum cannabinum	Indian hemp	*Podophyllum peltatum*	may apple
Aster ericoides	heath aster	*Polygonum* spp.	smartweed
Bromus inermis	smooth brome	*Polytaenia nuttallii*	prairie parsley
Carya tomentosa	mockernut hickory	*Populus deltoides*	eastern cottonwood
Cicuta douglasii	water hemlock	*Prunus serotina*	black cherry
Cirsium arvense	Canada thistle	*Quercus alba*	white oak
Coreopsis lanceolata	lanceleaf coreopsis	*Quercus rubra*	northern red oak
Coreopsis tripteris	tall coreopsis	*Quercus velutina*	red oak
Cornus florida	flowering dogwood	*Rhus radicans*	poison ivy
Cornus spp.	dogwood	*Robinia pseudoacacia*	black locust
Desmodium sp.	ticktrefoil	*Rosa multiflora*	multiflora rose
Dianthus armeria	deptford pink	*Rudbeckia hirta*	black-eyed susan
Dioscorea villosa	wild yam	*Salix* spp.	willow
Erigeron spp.	fleabane	*Sassafras albidum*	sassafras
Helenium autumnale	sneezeweed	*Schedonorus arundinaceus*	tall fescue
Helianthus giganteus	tall sunflower	*Silphium terebinthinaceum*	prairie dock
Helianthus grosseserratus	sawtooth sunflower	*Solidago canadensis*	Canada goldenrod
Humulus japonicas	japanese hop	*Solidago* spp.	goldenrod
Impatiens capensis	jewel flower/spotted touch-me-not	*Sporobolus heterolepis*	prairie dropseed
Juncus tenuis	poverty rush	*Symphyotrichum novae-angliae*	New England aster
Juniperus virginiana	red cedar	*Toxicodendron radicans*	poison ivy
Lobelia inflata	Indian tobacco	*Tradescantia ohioensis*	Ohio spiderwort
Lobelia spicata	palespike lobelia	*Tradescantia virginiana*	spiderwort
Maclura pomifera	Osage orange	*Typha* spp.	cattails
Medicago lupulina	medic	*Ulmus americana*	American elm
Melilotus officinalis	yellow clover/sweet clover	*Ulmus rubra*	slippery elm
Menispermum canadense	Canada moon seed	*Urtica dioica*	stinging nettle

Source: ANG 2016, USDA-WS

5.3 Fish and Wildlife

Formal wildlife surveys conducted on 182 AW include bat surveys in 2010/2011 and 2016, and a USDA wildlife survey as part of a biological assessment in 1994 (ANG 2011; ANG 2017; USDA 1994). In 2015, the US Army Corps of Engineers (USACE) identified 182 AW for bat surveys

due to its proximity to known or potential threatened or endangered bat species populations. Mist net and acoustic surveys for bats, with a focus on federally listed species (e.g., Indiana bat [*Myotis sodalis*] and northern long-eared bat [*Myotis septentrionalis*]), were conducted during the summer of 2016. Twenty bats, including the big brown bat (*Eptesicus fuscus*), the eastern red bat (*Lasiuris borealis*) and the northern long-eared bat were caught in mist nets. In the acoustic surveys, no northern long-eared bats were documented on the installation. There was a reduction of northern long-eared bat numbers recorded from the 2010 surveys to the 2016 surveys, possibly indicating overall population declines. Continued monitoring procedures are recommended. Other significant species found in the earlier 2010 surveys include the little brown bat (*Myotis lucifugus*) and the eastern pipistrelle (*Perimyotis subflavus*). Neither of these species were present in netted 2016 surveys and only eastern pipistrelles were present in 2016 acoustic data (ANG 2017b).

Potential occurrence of birds (**Table 2**) and mammals (**Table 3**) on 182 AW is based on species lists for the USFWS's Illinois River National Wildlife and Fish Refuges Complex Comprehensive Conservation Plan and Environmental Assessment (USFWS 2004), USDA-WS personnel observations, bat survey results, and on habitat requirements of these species. Potential occurrence of amphibians and reptiles (**Table 4**) on 182 AW is based on the Illinois Natural History Survey's list for amphibians and reptiles in Peoria County (Illinois Natural History Survey 2008), IDNR recommendation, and on habitat requirements of these species. A proposed future project is to conduct flora and fauna surveys to include identification of threatened and endangered species, and invasive species (see **Section 9.0**).

Table 3. Bird Species Observed on 182 AW			
Scientific Name	**Common Name**	**Scientific Name**	**Common Name**
Accipiter cooperii	Cooper's hawk	*Columba livia**	rock pigeon
Accipiter striatus	sharp-shinned hawk	*Contopus virens*	eastern wood-peewee
Actitis macularia	spotted sandpiper	*Corvus brachyrhynchos*	American crow
Agelaius phoeniceus	red-winged blackbird	*Cyanocitta crystata*	blue jay
Aix sponsa	wood duck	*Dendroica petechial*	yellow warbler
Ammodramus savannarum	grasshopper sparrow	*Dolichonyx oryzivorus*	bobolink
Anas discors	blue-winged teal	*Dryocopus pileatus*	pileated woodpecker
Anas platyrhynchos	mallard	*Dumetella carolinensis*	gray catbird
Anser albifrons	greater white-fronted goose	*Eremophila alpestris*	horned lark
Ardea alba	great egret	*Falco peregrinus*	peregrine falcon
Ardea herodias	great blue heron	*Falco sparverius*	American kestrel
Baeolophus bicolor	tufted titmouse	*Fulica americana*	American coot
Branta canadensis	Canada goose	*Gallinago gallinago*	common snipe
Bubo virginianus	great-horned owl	*Geothylpis trichas*	common yellowthroat
Bubulcus ibis	cattle egret	*Haliaeetus leucocephalus*	bald eagle
Buteo jamaicensis	red-tailed hawk	*Hirundo rustica*	barn swallow
Buteo lagopus	rough-legged hawk	*Hirundo rustica*	barn swallow
Buteo lineatus	red-shouldered hawk	*Icterus galbula*	Baltimore oriole
Calidris himantopus	stilt sandpiper	*Junco hyemalis*	dark-eyed junco
Calidris minutilla	least sandpiper	*Larus delawarensis*	ring-billed gull
Cardinalis cardinalis	northern cardinal	*Lasiurus borealis*	eastern red bat
Carduelis tristis	American goldfinch	*Melanerpes carolinus*	red-bellied woodpecker
Cathartes aura	turkey vulture	*Meleagris gallopavo*	wild turkey
Catharus guttatus	hermit thrush	*Melospiza melodia*	song sparrow
Catharus ustulatus	Swainson's thrush	*Molothrus ater*	brown-headed cowbird
Certhia americana	brown creeper	*Myiarchus crinitus*	great-crested flycatcher
Ceryle alcyon	belted kingfisher	*Pandion haliaetus*	osprey
Chaetura pelagica	chimney swift	*Passer domesticus**	house sparrow
Charadrius vociferus	killdeer	*Passerculus sandwichensis*	savannah sparrow
Chen caerulescens	lesser snow goose	*Passerina cyanea*	indigo bunting
Chordeiles minor	common nighthawk	*Pelecanus erythrorhynchos*	American white pelican
Circus cyaneus	northern harrier	*Petrochelidon pyrrhonota*	cliff swallow
Colaptes auratus	northern flicker	*Phalacrocorax auritus*	double-crested cormorant
Colinus virginianus	northern bobwhite	*Pheucticus ludovicianus*	rose-breasted grosbeak
Picoides pubescens	downy woodpecker	*Streptopelia decaocto*	Eurasian collared dove
Pipilo erythrophthalmus	eastern towhee	*Strix varia*	barred owl
Pluvialis dominica	American golden-plover	*Sturnella magna*	eastern meadowlark
Poecile atricapillus	black-capped chickadee	*Sturnus vulgaris**	European starling
Progne subis	purple martin	*Tachycineta bicolor*	tree swallow
Quiscalus quiscula	common grackle	*Thryothorus ludovicianus*	Carolina wren
Regulus calendula	ruby-crowned kinglet	*Tringa melanoleuca*	greater yellowlegs

Table 3. Bird Species Observed on 182 AW			
Scientific Name	**Common Name**	**Scientific Name**	**Common Name**
Setophaga ruticilla	American redstart	*Tringa solitaria*	solitary sandpiper
Sitta carolinensis	white-breasted nuthatch	*Troglodytes aedon*	house wren
Spinus tristis	American goldfinch	*Turdus migratorius*	American robin
Spiza Americana	dickcissel	*Tyrannus tyrannus*	eastern kingbird
Spizella arborea	American tree sparrow	*Vireo olivaceus*	red-eyed vireo
Spizella passerine	chipping sparrow	*Zenaida macroura*	mourning dove
Spizella pusilla	field sparrow	*Zonotrichia albicollis*	white-throated sparrow
Stelgidopteryx serripennis	northern rough-winged swallow		
Source: USDA WILDLIFE SERVICES 2012, USDA-WS			

Table 4. Mammals Observed and Potentially Occurring on 182 AW

Scientific Name	Common Name
Canis latrans[a]	coyote
Didelphis marsupialis	opossum
Eptesicus fuscus [a]	big brown bat
Geomys bursarius	plains pocket gopher
Lasionycteris noctivagans [a]	silver-haired bat
Lasiurus borealis [a]	eastern red bat
Lasiurus cinereus	hoary bat
Marmota monax	woodchuck
Mephitus mephitus	striped skunk
Microtus pennsylvanicus	meadow vole
Mus musculus[b]	house mouse
Mustela vison	mink
Myotis lucifugus [a]	little brown bat
Myotis septentrionalis [a]	northern long-eared bat
Myotis sodalis	Indiana bat
Odocoileus virginianus	white-tailed deer
Perimyotis subflavus [a]	eastern pipistrelle
Peromyscus leucopus	white-footed mouse
Peromyscus maniculatus	deer mouse
Pitymys pinetorum	pine vole
Procyon lotor	raccoon
Rattus norvegicus[b]	Norway rat
Scalopus aquaticus	eastern mole
Sciurus niger	eastern fox squirrel
Sylvilagus floridanus	eastern cottontail
Taxidea taxus	American badger
Urocyon cinereoargenteus	gray fox
Vulpes vulpes[a]	red fox
Zapus hudsonius	meadow jumping mouse

Source: USFWS 2004, ANG 2011, ANG 2017b

Notes: [a] Observed on the installation

[b] Nonnative species

Table 5. Amphibians and Reptiles Potentially Occurring on 182 AW	
Scientific Name	**Common Name**
Amphibians	
Acris blanchardi	Blanchard's cricket frog
Anaxyrus americanus	American toad
Anaxyrus fowleri	Fowler's toad
Hyla versicolor-chrysoscelis	grey treefrog complex
Lithobates blairi	plains leopard frog
Lithobates catesbeianus	bullfrog
Lithobates clamitans	green frog
Lithobates pipiens	northern leopard frog
Pseudacris maculata	boreal chorus frog
Reptiles	
Chelydra serpentina	common snapping turtle
Chrysemys picta	painted turtle
Diadophis punctatus	ringneck snake
Lampropeltis calligaster	prairie kingsnake
Pantherophis spiloides	grey ratsnake
Storeria dekayi	Dekay's brown snake
Storeria occipitomaculata	red-bellied snake
Thamnophis sirtalis	common garter snake
Source: Illinois Natural History Survey 2008	

5.4 Threatened and Endangered Species and Species of Concern

The ESA requires any action authorized or funded by a federal agency does not jeopardize the continued existence of any threatened or endangered species and/or it does not result in the modification of critical habitat of such a species. A review of the most recent Illinois Natural Heritage Database completed by the IDNR revealed that there are 23 state-listed species of plants or animals known to occur in Peoria County (IDNR 2018). Additionally, the USFWS IPaC online system identified 5 potential federally threatened, endangered, or candidate species in the vicinity of the Subject Property (USFWS 2017).

Priority federally and state special status species were identified based on their regulatory status, known occurrence on or near 182 AW, or highly likely occurrence on 182 AW. Eight priority species were identified including 3 mammals, 2 birds, 2 plants, and one insect. If any additional special status species are documented on 182 AW, management strategies will be added.

Federal Special Status Priority Species:

- Endangered Indiana bat (*Myotis sodalis*)
- Threatened northern long-eared bat (*Myotis septentrionalis*)
- Endangered rusty patched bumble bee (*Bombus affinis*)
- Bald eagle (*Haliaeetus leucocephalus*)

State Special Status Priority Species:

- Threatened Franklin's ground squirrel (*Poliocitellus franklinii*)
- Endangered osprey (*Pandion haliaetus*)
- Threatened soft-leaf arrowwood (*Viburnum molle*)
- Threatened spotted coral-root orchid (*Corallorhiza maculata*)

5.5 Waters of the US, Wetlands, and Floodplains

The 182 AW is comprised of about 7.0 acres of riverine wetlands along LaMarsh Creek; about 17.8 acres of forested/shrub wetland in the western portion of the base; and approximately 0.10 acres of freshwater pond wetland located in the developed eastern portion of the installation (ANG 2017).

EO 11988, *Floodplains Management*, requires all Federal agencies to provide leadership and take action to reduce the risk of flood loss; minimize the impacts of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values of floodplains when acquiring, managing, or disposing of Federal lands. In addition, if action is taken that permits an encroachment within the floodplain that alters the flood hazards on a National Flood Insurance Rate Map (FIRM; e.g., changes to the floodplain boundary), 182 AW must submit an analysis reflecting those changes to the Federal Emergency Management Agency (FEMA). FEMA headquarters can be contacted at 202-646-3461 to obtain booklet MT-2, Revisions to National Flood Insurance Program Maps, for further guidance.

Freshwater pond

The westernmost portion of the airport property lies within the 100-year floodplain associated with LaMarsh Creek. The undeveloped northwest portion of the installation has been identified by the Tri-County Regional Planning Commission (TCRPC) and the National Flood Insurance Program as being located within the 100-year floodplain of the East Branch of LaMarsh Creek. The developed portion of the installation, however, is not within the identified floodplain boundary and is in compliance with EO 11988 (ANG 2008).

An approved jurisdictional determination, dated September 25, 2013, outlined the jurisdictional and non-jurisdictional wetlands within the 182 AW boundary and are summarized below (ANG 2018b):

- Relatively permanent waters – Jurisdictional – 9.644 acres
- Non-relatively permanent waters – Jurisdictional – 0.617 acres
- Emergent Vegetative wetlands – Jurisdictional – 0.406 acres
- Non-relatively permanent water – Non-jurisdictional – 1.724 acres

- Stormwater ponds, swales, and channels – Non-jurisdictional – 3.118 acres

5.6 Other Natural Resource Information

As directed by EO No. 11989, *Off Road Vehicles on Public Lands*, outlines the use of any off-road vehicles (ORV), including mountain bikes, will be allowed only after thoroughly analyzing the impact of such use on soils, archeological sites, wildlife, water quality, and other ecosystem attributes. Periodically monitor and evaluate any areas designated for ORV use for damage.

6.0 MISSION IMPACTS ON NATURAL RESOURCES

6.1 Natural Resources Needed to Support the Military Mission

The mission of the 182 AW is two-fold, comprising federal and state responsibilities. On the federal level, the unit's primary mission is to achieve and maintain operational readiness to provide tactical airlift services to support the DoD. The unit's state mission is to protect peace and personal property and to assist the State of Illinois in the event of emergencies (e.g., natural disasters).

The 182 AW maintains and operates eight C-130H3 aircraft with training missions including parachute airdrops of personnel, equipment, and training bundles (all containing inert materials). The 182 AW requires operation areas to support flying operations and training with the surrounding areas providing a buffer to reduce BASH risk and provide support to facilities and functions. With a focus on Air Mobility, the installation delivers global air transportation of equipment and supplies during time of war and for peace-time training exercises as well as safe and reliable transportation of military personnel and dignitaries. Degradation of natural resources can result in unintended impacts to the military mission, impaired readiness, and funds spent on natural resources crisis management and interventions rather than the military mission. The 182 AW needs the installation lands and its natural resources to function together as an ecosystem to support the military mission. Management activities in the 182 AW INRMP are designed to support the desired habitats and ecosystem functions to meet this objective.

6.2 Natural Resources Constraints to Mission and Mission Planning

The most significant natural resource constraints to 182 AW's mission and mission planning are in relation to water resources, reduction of BASH risk, managing federal and state-listed species, and sustaining natural resources. Impacts to natural resources on the installation could have an adverse impact on the installation's flying mission or future planning operations. The potential negative impacts could range from a delay in the construction of new buildings to a loss of life as a result of severely damaged aircraft. These issues should be clearly identified and a schedule for their resolution should be prepared. The natural resources constraints to installation planning and mission include:

- Any projects which are anticipated to impact wetlands must acquire approval and the appropriate permits from USACE, US EPA, IDNR, and the ANG NR Program Manager at a minimum. Jurisdictional delineations must be accomplished for each potentially affected wetland.

- Any projects that are anticipated to significantly impact floodplains must undergo the NEPA process per 32 CFR Part 989 and be approved by the ANG NR Program Manager. Any projects that permanently alter the hydrology of a floodplain must be reported to FEMA.182 AW possesses populations of, and habitat features that are attractive to, high BASH threat species.
- Water is a primary cause for erosion in Illinois and future projects may cause accelerated erosion and sedimentation. Negative impacts can include loss of agricultural productivity, loss of wildlife habitat, and degradation of water quality, lost reservoir capacity, and costly impacts to structures such as culverts, ponds, and storm drainage systems.

Land Use

Current land use includes aircraft operation and maintenance, industrial, administrative, airfield, outdoors recreation, and open space. Undeveloped land in the northwest portion of the installation occupies about 188 acres and is characterized by thick forest and streambed vegetation along LaMarsh Creek. A recreational running trail is situated at the perimeter of the undeveloped land and also functions as training grounds.

The buildings on 182 AW have different classifications which include industrial, administrative office space, training, security, and for miscellaneous activities. Facilities serve the following purposes: aircraft operations and maintenance; civil engineering; supply; petroleum, oil, and lubricant storage; and vehicle maintenance (ANG 2017).

Current Major Impacts

There are 12 areas of potential impact from 182 AW's military mission:

- Impacts to:
    - Aircraft safety - There is a concern for bird strike hazards on flying missions.
    - Explosives safety - QD arcs are maintained to ensure the safety of personnel and minimize the potential for damage to other facilities as well as containing fired projectiles in designated safe zones (ANG 2007).
    - Hazardous Materials and Waste - Hazardous waste generated by the existing 182 AW is temporarily stored at a Hazardous Waste Accumulation Site (HWAS). The installation may store hazardous waste for up to 270 days at the facility. Currently, there are approximately 23 Satellite Accumulation Points (SAPs) located at or near the point of generation where hazardous waste is initially accumulated prior to consolidation at an HWAS (ANG 2018b).
    - Oil/ Water Separators (OWSs) – Containment tanks are inspected quarterly with a stick gauge, checked for oil and sediment, and cleaned out as needed. Water from the majority of the OWSs is discharged to the sanitary sewer system; however the OWSs associated with the POL Complex and the Burn Pit (OWS #1) may discharge water to the storm water drainage system (ANG 2018b).
    - Asbestos – Asbestos containing material (ACM) was found in the roofing material of Building 834, and in the floor tile and mastic in Building 830. ACM in all of these facilities were found to be in good condition, not posing a threat, and with no immediate action required. Removal of ACM must be considered if the buildings are involved in construction or repair projects (ANG 2007).

- Environmental Restoration Program (ERP) - Future development of sites identified through the ERP program might be constrained depending on the severity of the contamination or the extent of the remedial action required (ANG 2007).
- Water Quality - Water quality changes in the surface drainages could occur during storm events, and runoff from the airfield may result in erosion. Increase in sedimentation might occur during construction activities
- Noise - Much of the area surrounding the airport is moderately populated with noise levels of correspondingly medium magnitude; however, aircraft noise is the dominant noise producer within the region (ANG 2007).
- Aircraft Activity - General ANG noise mitigation measures include (1) flight patterns to avoid heavily populated areas; (2) governing the speed, rate of climb, and turning radius of aircraft; (3) scheduling of missions to keep noise levels low, especially at night; and, (4) coordinating with the FAA to minimize conflict with civilian aircraft operations (ANG 2007).
- Ground Based Activity - Aircraft activity is the primary contributor to the noise environment and ground-based activities do not generate noise levels such that land use incompatibilities result (ANG 2007).
- Air Quality - The largest stationary source of air pollutant emissions at the installation is horizontal tank fuel transfers (ANG 2007). The installation remains a minor source of emissions on the basis of the previous emissions inventory (ANG 2007).

Potential Future Impacts

Known future mission impacts at 182 AW would include continuation of current impacts as previously described, and additional impacts due to new missions or mission components. Construction-related activities that might be planned would undergo a separate NEPA process. A new structure to house the Fire Department is scheduled for construction beginning in 2019 with the proposed location of the building in the northwest corner of the developed portion of 182 AW (ANG 2017).

7.0 NATURAL RESOURCES PROGRAM MANAGEMENT

7.1 Natural Resources Program Management

The guiding philosophy of the 182 AW INRMP is to take an ecosystems approach to managing natural resources present on 182 AW. Ecosystem management is based on clearly stated goals and objectives, and associated activities and projects. The 182 AW INRMP identifies goals and objectives, and presents the means to accomplish them, as well as the methodologies to monitor results.

7.2 Fish and Wildlife Management

Wildlife management can be performed in a manner that enhances biodiversity through the conservation or reestablishment of native habitats. Conversely, habitat management might be required to decrease the abundance of certain wildlife species to reduce animal damage or bird

strike hazards. Traditionally, wildlife management was confined to large tracts of naturally vegetated land. The installation's limited size necessitates implementation of wildlife management options that do not increase the potential for wildlife-mission conflicts but still conserve regional biodiversity. The 182 AW INRMP will manage the wildlife and its habitat at the installation by implementing the strategies below:

- Attempt to deter animals from foraging or roosting in areas near or adjacent to the flight line and other mission critical areas.
- Attract wildlife to portions of the installation away from these areas.
- Protect and conserve regional biodiversity through conservation of habitat corridors across the installation.
- Reduce impacts on the habitat created by over abundant wildlife populations.

This approach has been chosen due to the relative abundance and variety of wildlife species present on 182 AW, and the low likelihood of excluding all wildlife species from the installation that pose a significant threat to the safety of the flying mission. While the first three objectives are addressed through appropriate habitat management, the fourth is a wildlife management goal.

The DoD and the ANG encourage support of State Wildlife Action Plans as part of a comprehensive installation natural resources program. Consequently, 182 AW should formally review the Illinois Comprehensive Wildlife Conservation Plan & Strategy (CWCS), and consult frequently with the regional IDNR office to determine areas where the installation can participate in future wildlife conservation partnerships with the IDNR and other partners in support of the Illinois CWCS.

7.2.1 Federal Wildlife Policies and Regulations

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits, unless permitted by regulations, the pursuit, hunting, take, capture, killing or attempting to take, capture, kill, or possess any migratory bird included in the MBTA, including any part, nest, or egg of any such bird (16 USC § 703). The DoD has a Memorandum of Understanding (MOU) with the USFWS pursuant to EO 13186 Responsibilities of Federal Agencies to Protect Migratory Birds, which outlines a collaborative approach to promote the conservation of migratory bird populations. This MOU specifically pertains to natural resource management activities, including, but not limited to, habitat management, erosion control, forestry activities, invasive weed management, and prescribed burning. It also pertains to installation support functions, operation of industrial activities, construction and demolition activities, and hazardous waste cleanup. In February 2007, the USFWS finalized regulations for issuing incidental take permits to the DoD. If any of the Armed Forces determine that a proposed or an ongoing military readiness activity may result in a significant adverse effect on a population of migratory bird species, then they must confer and cooperate with the USFWS to develop appropriate and reasonable conservation measures to minimize or mitigate identified significant adverse effects (50 CFR Part 21).

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC 668-668c), enacted in 1940, and amended several times since then, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or

barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof."

In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment.

Partners in Flight

The DoD Partners in Flight (PIF) program consists of natural resources personnel from military installations across the United States working collaboratively with partners throughout the Americas to conserve migratory and resident birds and their habitats on DoD lands. PIF sustains and enhances the military mission through proactive, habitat-based conservation and management strategies that maintain healthy landscapes and training lands. Additionally, PIF works beyond installation boundaries to facilitate cooperative partnerships, determine the current status of bird populations, and prevent the listing of additional birds as threatened or endangered. DoD PIF provides a scientific basis for maximizing the effectiveness of resource management, enhancing the biological integrity of DoD lands, and ensuring continued use of these lands to fulfill military training requirements.

Pollinator Conservation

DoD has emphasized the importance of pollinator conservation to the military services by developing partnerships to support their conservation. DoD has MOUs with Bat Conservation International (BCI) and has developed the USAF Pollinator Conservation Reference Guide (March 2018). The MOU with BCI "establishes a policy of cooperation and coordination between DoD and BCI to identify, document and maintain bat populations and their habitats on DoD installations" (signed Oct 2006, renewed Dec. 2011). The MOU states that this framework is important to "ensure that pollinator management activities are incorporated where practicable, into 182 AW INRMPs and practices." Conservation of pollinators by USAF alone or in collaboration with groups such as BCI and P2 supports these DoD initiatives.

Some areas of ANG installations are more suitable for pollinator habitat conservation due to current use and/or habitat condition. For example conservation on unimproved (natural) areas, buffers, recreation areas, rights-of-way, and landscaped areas may be more compatible with mission requirements than other areas. These areas should be a priority for implementing pollinator habitat improvements and using land management practices in ways beneficial to pollinators.

The USAF Pollinator Conservation Reference Guide provides specific pollinator conservation measures which can be implemented by the USAF. The USAF Pollinator Conservation Reference Guide is available on USFWS and AFCEC eDASH Natural Resources website. The USAF Pollinator Reference Guide, developed by the USFWS, establishes guidance as a National Pollinator Conservation Strategy on lands owned by the USAF. It supplements existing policy and instructions to guide USAF actions to contribute to pollinator conservation under Presidential Memo and Federal Pollinator Health Strategy. Further provides Technical Guides as reference

materials for pollinators of conservation concern (listed species, birds of conservation concern, bees and monarch butterflies), and native plant recommendations specific to ecoregions.

Essential Habitat

The USFWS Information, Planning, and Conservation (IPaC) online system was utilized to conduct a records search of the presence of federally listed rare or endangered species, significant natural communities, or other significant habitats on or in the vicinity of the Subject Property. The IPaC online system did not identify critical habitats at the Subject Property (USFWS 2017).

The Prairie State Conservation Coalition's (PSCC) I-View online system was utilized to identify protected lands within the Subject Property. The I-View online system provides an interactive map of all natural lands protected by the State of Illinois. A review of the I-View online system showed no protected lands on the Subject Property. The closest protected land is Rocky Glen Park located approximately 2.5 miles to the northeast of the Subject Property (PSCC 2018).

Wetlands are typically classified as sensitive habitat.

7.2.2 Nuisance Wildlife and Wildlife Diseases

Other than those that present a BASH risk, there are few nuisance wildlife species at 182 AW. Future nuisance wildlife problems will be evaluated in conjunction with USDA-WS personnel, if appropriate. Any solutions to nuisance wildlife problems will follow the IPM and BASH Plans.

Diseases affecting fish and wildlife may occur on the installation. Any large-scale fish and wildlife deaths and unnatural behavior occurring on the installation will be reported, recorded and investigated, in conjunction with USFWS and IDNR personnel, as appropriate.

Potential habitat for the Indiana bat occurs statewide in Illinois, therefore, Indiana bats are considered to potentially occur in any area with forested habitat. White nose syndrome is an illness that has killed more than a million bats since dead and dying bats with the distinctive 'white nose' were first observed in 2006. 'White nose' refers to a ring of white fungus often seen on the faces and wings of affected bats. It was first observed in a cave in New York in February 2006 and has since spread from New York caves to caves in Vermont, Massachusetts, Connecticut, New Hampshire, New Jersey, Pennsylvania, and West Virginia. The USFWS has called for a moratorium on caving activities in the affected areas, and strongly recommends that any clothing or equipment used in such areas be decontaminated after each use (USFWS 2011b).

7.2.3 Installation Hunting Program

State game species on the installation include white-tailed deer. White-tailed deer were previously labeled a nuisance species on the installation but are now controlled by the 182 AW hunting program. The Sikes Act includes specific provisions for the hunting and fishing program. Under the Sikes Act, installations are given the authority to issue hunting and fishing permits to individuals and to collect permit fees. Installations are to retain the permit fees and use the revenue for the protection, conservation, and management of fish and wildlife in accordance with the INRMP. EO 13443, *Facilitation of Hunting Heritage and Wildlife Conservation*, directs Federal agencies that have programs and activities that have a measurable effect on public land management, outdoor recreation, and wildlife management, including the Department of the

Interior and the USDA, to facilitate the expansion and enhancement of hunting opportunities and the management of game species and their habitat.

All hunters on the 182 AW must have a valid Illinois State hunting license with habitat stamp, valid Illinois State archery tag(s), and abide by the IDNR hunting regulations provided in the most current version of the *Illinois Digest of Hunting and Trapping Regulations* (IDNR 2017). In addition to state requirements, all hunters must have turned in a signed waiver of liability and agreement for indemnification, acquire a signed letter of good standing from their respective commander, and carry a current CAC card on their person.

Further restrictions on hunting can be implemented based on 182 AW mission, safety concerns, or game management requirements (i.e., low population and/or overall management based on an individual species) specific to 182 AW or Air Force mission.

7.2.4 Management of Threatened and Endangered Species and Habitats

This section presents information about the management of priority species that are located within or with the potential to occur at 182 AW, along with requirements and strategies for their management. As additional surveys and natural resources management are conducted, it is possible other species may be added in the future.

The goal for this section is to manage 182 AW on a regional, ecosystem-based approach that manages potential habitat for priority species while protecting the operational functionality of the installation's missions. While single-species management is not promoted as a general philosophical management approach on the installation, specific controls are used to protect threatened and endangered species beyond management of the ecosystem.

7.2.4.1 Federally Special Status Wildlife Species

The 182 AW is required to manage for federally protected species. Four federally listed priority species have been identified for 182 AW.

Indiana bat (*Myotis sodalis*): The Indiana bat is currently federally listed as endangered. Potential habitat for the Indiana bat occurs statewide in Illinois, therefore Indiana bats are considered to potentially occur in any area with forested habitat. During the summer, the Indiana bat frequents the corridors of small streams with riparian woods as well as mature upland forests. It forages for insects along stream corridors, within the canopy of floodplain and upland forest, over clearings with early successional vegetation, along the borders of croplands, along wooded fencerows, over farm ponds, and in pastures (Simone 2011). The following management practices are recommended for the Indiana bat (USFWS 2007a):

- Range-wide population monitoring at hibernacula with improvements in census techniques.
- Conservation and management of habitat.

Indiana Bat
Photo Courtesy of Midwest Image Library

- Further research into requirements of and threats to the species.
- Public education and outreach.

Northern long-eared bat (*Myotis septentrionalis*): The Northern long-eared bat is currently listed as a federally threatened species due primarily to extensive population losses from white-nose syndrome. The bats favor mixed age, height, and species stands of forests for summer habitat, often roosting under peeling bark and cavities in either live or dead trees and frequently alternating between roosts at the same site. Mist-netting surveys at the installation detected post-lactating females, scrotal males, and non-reproductive individuals of both sexes during surveys in summer 2010. An additional lactating female was captured in a 2016 survey. These records suggest that the installation harbors a maternity colony of northern long-eared bats due to the suitable roosting habitat and available foraging habitat. The following management strategies for the northern long-eared bat are recommended:

Northern Long-eared Bat
Photo Courtesy of USFWS, Ann Froschauer

- Do not remove standing dead trees, especially between May and July when maternity colonies form.
- Promote a heterogeneous forest that includes trees of various native species and heights. Live and dead hickories are particularly favorable for summer roosting.
- Reduce the presence of invasive plant species, which affect the quality of foraging habitat and the composition of native insect fauna. A plant community dominated by native species will produce the most appropriate prey species for the bats.

Rusty-patched bumble bee (*Bombus affinis*): The Rusty-patched bumble bee is a federally endangered species. Species decline is likely due in part to habitat loss, intensive farming, disease, pesticide use, and climate change. The rusty-patched bumble bee primarily needs nesting habitat, floral resources to gather pollen and nectar, and overwintering habitat. When planning a federal project in the range of the bee, it must be determined if the project occurs in the USFWS Midwest region. In this case, a section 7 consultation must occur. If the project occurs in a county where the bee is found or if it will take place in a High or Low Potential Zone for the species, section 7 consultation may or may not be necessary depending on the zone the project occurs in. The following management strategies are recommended if the species is identified on the installation:

Rusty Patched Bumble Bee
Photo courtesy of USWFS

- Manage habitat.
- Use native plant species on the installation.
- Remove and control invasive plants in woodlands, forest edges, prairies, and meadows in habitats used for foraging, nesting, or overwintering.

Bald eagle (*Haliaeetus leucocephalus*): The bald eagle remains protected under the Bald and Golden Eagle Protection Act and the MBTA. Bald eagles generally nest near coastlines, rivers,

large lakes or streams that support an adequate food supply. The following management strategies for the bald eagle are recommended (USFWS 2007b):

Bald Eagle
Photo courtesy of USWFS, Katherine Whitmore

- Use of pesticides, fertilizers, and other chemicals will be done in accordance with the installation's IPM Plan.
- To avoid disturbing nesting sites, distance should be kept between military activity and nest; forested/natural areas should be maintained around nest trees and certain activities should be avoided during breeding season (January to May).
- Minimize potentially disruptive activities and development in the eagles' direct flight path between their nest, roost sites, and important foraging areas.
- Locate aircraft corridors no closer than 1,000 feet vertical or horizontal distance from communal roost sites.
- Where bald eagles are likely to nest in human-made structures (e.g., cell phone towers) and such use could impede operation or maintenance of the structures or jeopardize the safety of the eagles, equip the structures with either (1) devices engineered to discourage bald eagles from building nests, or (2) nesting platforms that will safely accommodate bald eagle nests without interfering with structure performance.
- Monitor and minimize dispersal of contaminants associated with hazardous waste sites (legal or illegal), permitted releases, and runoff from agricultural areas, especially within watersheds where eagles have shown poor reproduction or where bio accumulating contaminants have been documented.

7.2.4.2 State Special Status Species

The Illinois Endangered Species Protection Act provides for the protection of threatened and endangered species. The182 AW's Priority state-listed species are discussed below:

Franklin's ground squirrel
Photo courtesy of IDNR

Franklin's ground squirrel (*Poliocitellus franklinii*): This species has a strong affinity for tallgrass and mid-grass prairies as well as riparian areas, forest-field edges, fields, hedgerows, and un-mowed strips along roads. They are threatened not only by the disappearance of the tall grasses that protect them from humans and predators but the subsequent journey required to find places where this grass remains (Duggan et al. 2009). Management strategies include (NatureServe 2018):

- Refrain from excessive cultivation or removal of herbaceous vegetation.

Osprey (*Pandion haliaetus*): Osprey habitat primarily includes rivers, lakes, reservoirs and seacoasts. They will build large stick nests on trees or man-made structures such as utility poles, windmills, microwave towers, chimneys, and channel markers. Illinois lies in its migration path and therefore, care must be taken to provide possible nesting habitats for the species.

Osprey
Photo courtesy of IDNR

Soft-leaf arrowwood (*Viburnum molle*): Soft-leaf arrowwood will naturally occur in low alluvial woods and moist, wooded slopes. It is recommended the installation conduct surveys for the species and if found, inform IDNR for management recommendations.

Spotted coral-root orchid (*Corallorhiza maculata*): Native to Illinois, spotted coral-root orchid can be found in wet to dry soils in the deciduous forest that occupies the installation. Potential threats include habitat loss and over harvesting. It is recommended the installation conduct surveys for the species and if found, inform IDNR for management recommendations.

Spotted coral-root orchid
Photo courtesy of USDA-FS

7.2.4.3 Management Strategies for Special Status Species

The following general guidelines will be followed to facilitate the military mission and natural resources management objectives while minimizing negative impacts on special status species and their habitats, and reducing BASH risk.

- Manage 182 AW with a regional ecosystem-based approach that manages potential sensitive-species habitat while protecting the operational functionality of the installation's missions.
- Ensure that 182 AW remains in compliance with the ESA and appropriate state regulations.
- Promote natural resources and ecosystem management in the region which benefits the functionality of 182 AW ecosystems.
- Protect habitats for priority species on 182 AW.
- Ensure that BASH program remains in compliance with ESA regulations.
- Conduct field surveys for potential threatened and endangered species every 3 to 5 years.

7.3 Water and Wetland Resource Protection

In general, water resources will be managed through conservation and impact avoidance. The following guidelines will be implemented to ensure compliance, and to protect and enhance water resources at 182 AW.

- Remain in compliance with USACE and state wetlands regulations.
- Manage for no net loss of wetland and floodplain acreage, functions and values.
- Continue compliance with existing NPDES permits.

7.3.1 Regulatory and Permitting

The USACE regulates the discharge of dredged or fill material into Waters of the US, including wetlands, under Section 404 of the CWA. Even an inadvertent encroachment into Waters of the US resulting in a displacement or movement of soil or fill material has the potential to be viewed as a violation of the CWA if an appropriate permit has not been issued by the USACE. Waters of the US are defined under 33 CFR Part 328.3(a) and referred to as jurisdictional waters. Jurisdictional waters may include coastal and inland waters, lakes, rivers, ponds, streams, intermittent streams, vernal pools, wetlands, and other waters, that if degraded or destroyed could affect interstate commerce.

A jurisdictional determination is made based on multiple criteria, but the relationship of the wetland to other Waters of the US is important. Management of wetlands on federal lands and military installations is further governed by EO 11990 and DoDI 4715.03, respectively. Under those instructions, wetlands are required to be managed for no net loss on federal lands, including military installations. In support of these policies, long- and short-term adverse impacts associated with the destruction or modification of wetlands and support of new construction in wetlands must be avoided to the maximum extent possible.

According to the US EPA regulations issued under Section 404(b)(1) of the CWA, permitting of fill activities will not be approved unless the following conditions are met: no practicable, less environmentally damaging alternative to the action exists; the activity does not cause or contribute to violations of state water quality standards (or compliance under Section 401 of the CWA); the activity does not jeopardize listed species or sensitive cultural resources (33 CFR Part 320.3 [e] and [g]); the activity does not contribute to significant degradation of Waters of the US; and all practicable and appropriate steps have been taken to minimize potential adverse impacts to the aquatic ecosystem (40 CFR Part 230.10).

Section 401 of the CWA gives the State of Illinois the authority to regulate federally-permitted activities that may result in a discharge to water bodies, including wetlands. The state may issue certification, with or without conditions, or deny certification for activities that may result in a discharge to water bodies. The IEPA is responsible for issuing Section 401 Water Quality Certification and state isolated wetland permits in Illinois.

<u>Permitting</u>
As discussed above, the USACE and IEPA have regulatory authority over Jurisdictional Waters of the United States and isolated waters. The USACE issues Nationwide Permits (NWPs) and Regional General Permits (RGPs) that cover many routine or minor projects. The USACE issues Individual Permits for larger projects, or those that do not meet the requirements of a NWP or RGP. The IEPA issues individual 401 Water Quality Certifications to cover most project activities. Several of the NWPs are pre-certified requiring no notification requirements to the USACE, while others require pre-notifications under at least some circumstances.

The NPDES Pesticide General Permit, pertains to pesticide applications on or near Waters of the State of Illinois. This permit is consistent with the US EPA pesticide general permit requirements, which are published under 40 CFR 122. It is applicable to all persons who discharge pesticides to waters of the state from the application of biological or chemical

pesticides, which leave a residue of the pesticide or its degradants. More information regarding the NPDES Pesticide General Permit for Illinois can be found at: http://www.epa.illinois.gov/topics/forms/water-permits/pesticide/index.

The Joint Permit application process, administered in a partnership of the Chicago District of USACE, IEPA, and the IDNR, regulates the discharge of dredged or fill material into Waters of the United States, including wetlands, per 33 CFR 323 (Federal Water Pollution Control [Clean Water] Act Section 404 - "Dredge and Fill"). This process mandates an evaluation of all potential impacts and requires that projects be designed to avoid, minimize, and mitigate impacts.

Water quality certification for projects under the Joint Permit process is provided by the IEPA. The USACE cannot issue a permit without water quality certification from the IEPA. (http://www.gpo.gov/fdsys/pkg/CFR-2012-title33-vol3/pdf/CFR-2012-title33-vol3-part323.pdf). Section 401 of the CWA requires that any person applying for a federal permit or license which may result in a discharge of pollutants into Waters of the United States must obtain a state water quality certification that the activity complies with all applicable water quality standards, limitations, and restrictions. Projects within wetlands or within the regulatory floodway of rivers, lakes and streams which are not covered under an existing Section 404 permit are required to provide an anti-degradation report which 1) assesses alternatives to the proposed project which will result in reduced pollutant load 2) includes a mitigation plan for unavoidable environmental degradation, 3) identifies and characterizes the current physical, biological and chemical conditions of the waterbody impacted by the proposed project, 4) quantifies the potential increase in pollutant load and potential impacts of the proposed project. IEPA has the option to waive the Section 401 certification, grant the permit, grant the permit with conditions, or deny the permit. The IEPA may require monitoring or mitigation as a condition for certification.

Permitting requirements vary depending on type, location, and extent of disturbance. Prior to initiating projects or activities (e.g., dredging, filling, work in and around a stream) occurring within or with the potential to affect a floodplain, wetland or other water body, the appropriate agencies (USACE, IEPA, IDNR or local community floodplain administrator) should be consulted to determine permitting requirements.

7.3.2 Vegetation Buffers

Vegetated buffers are also referred to as riparian management zones, riparian buffers, wetland buffers, lake buffers, buffer strips, filter strips or streamside management areas. Buffers can take many forms and may in size and function vary depending on the upland land use and the type of water resource being protected and can either be grassland or forest and may or may not be mowed and maintained occasionally. One of the primary purposes of a vegetated buffer is for water quality protection by providing vegetation to interrupt water flow and to trap and filter out suspended sediments, nutrients, chemicals, and other polluting agents before they reach the body of water. Vegetated buffers where feasible should be maintained along all perennial and intermittent streams, wetlands, lakes or ponds where nearby management activities result in surface/soil disturbance, earth changes and where erosion and sediment transport occur during rain events. Maintaining the forest cover around small water resources is important for preventing sedimentation and impacts to water quality.

7.4 Grounds Maintenance

Installation grounds maintenance personnel currently perform most grounds maintenance activities at 182 AW including road maintenance and mowing of the open/airfield areas. The EM will work with grounds maintenance personnel to ensure the use of native plant species, and consult with the USDA base personnel, as needed. Grounds maintenance personnel will ensure compliance with environmental legislation, regulations, and guidelines, and promote IPM practices, including managing invasive species. See **Table 6** for a list of approved plant species for airfields provided by USDA Wildlife Services-IL.

Table 6. USDA Wildlife Services-IL Accepted Plant Species for Airfields	
Scientific Name	**Common Name**
Ulmus carpinifolia	smoothleaf elm
Sedum aizoon 'Euphorbiodes'	aizoon stonecrop
Ribes alpinum	alpine currant
Ulmus americana	American elm
Ostrya virginiana	American hophornbeam
Carpinus caroliniana	American hornbeam
Cotinus obovatus	American smoke tree
Alisma subcordatum	American water plantain
Sedum rupestre	angelina
Lolium multiforum	annual rye grass
Viburnum dentatum	arrowwood viburnum
Salix purpurea	artic willow
Sedum acre	aureum
Laburnum x *wateri* 'Vossii'	bean tree, vossii golden chain
Monarda var.	beebalm
Sedum cauticola	bertram anderson sedum
Carex bicknellii	bicknell's sedge
Andropogon geradii	big bluestem
Betula var.	birch
Rudbeckia sp.	black-eyed susan
Gaillardia aristata	blanket flower, gaillardia
Liatris sp.	blazingstar, gayfeather
Festuca glauca	blue fescue
Sedum rupestre	blue spruce
Verbena hastata	blue vervain
Calamagrostis canadensis	bluejoint grass
Parthenocissus tricuspidata	Boston ivy
Buxus sp.	boxwood – green velvet, green gem, green mound, green mountain
Sedum spurium	bronze carpet
Andropogon virginicus	broomsedge bluestem
Potentilla fruticosa	bush cinquefoil
Asclepias tuberosa	butterfly weed
Cephalanthus occidentalis	buttonbush
Nepeta var.	catmint
Festuca rubra sub. *commutata*	chewings fescue
Robinia pseudoacacia	Chicago blues black locust
Juniperus chinensis	Chinese juniper
Syringa pekinensis	Chinese tree lilac
Sedum spurium 'Coccineum'	red carpet
Bidens frondosa	common beggar-ticks
Syringa vulgaris	common lilac
Juniperus horizontalis	creeping juniper
Festuca rubra sub. trichophylla	creeping red fescue
Magnolia acuminata	cucumber tree
Veronicastrum virginicum	culver's root
Narcissus sp.	daffodils
Metasequoia glyptostrobo	dawn redwood
Hemerocallis sp.	daylily
Diervilla lonicera	dwarf bush honeysuckle

Table 6. USDA Wildlife Services-IL Accepted Plant Species for Airfields	
Scientific Name	**Common Name**
Forthergilla gardenii	dwarf fothergilla
Festuca seed mix	e.g. "no-mow" seed mix (prairie nursery, Westfield, WI)
Cercis canadensis	eastern redbud
Ulmus spp.	elms; patriot, triumph
Baptisia var.	false indigo
Smilacina racemosa	false Solomon's seal
Heliopsis helianthoides	false sunflower; oxeye sunflower
Talinum calycinum	fame flower
Calamagrostis x *acutiflora*	feather reed grass
Festuca sp.	fescues
Euphorbia corollata	flowering spurge
Puccinellia distans	fluts distans alkaligrass
Forsythia x *intermedia*	forsythia, border forsythia
Pennisetum alopecuroides	fountain grass
Pensteman spp	foxglove, beardtongue, penstemon
Gernium var.	geranium
Ginkgo biloba	gingko
Zizia aurea	golden alexanders
Sedum acre	goldmoss stonecrop
Rhus aromatica	grow low sumac variety
Festuca ovina var. *duriuscula*	hard fescue
Iris versicolor	harlequin iris, blue flag iris
Zizia aptera	heart-leaf alexander
Verbena stricta	hoary vervain
Gleditsia triacanthos var. *inermis*	honey locust
Hydrangea sp.	hydrangea – oakleaf, annabelle
Ilex glabra (non-fruiting)	inkberry
Juncus interior	inland rush
Distichlis spicata	inland saltgrass
Iris sp.	iris
Polemonium reptans	Jacob's ladder
Acer palmatum	Japanese maple
Syringa reticulata	Japanese tree lilac
Sedum spurium	john creech
Koeleria macrantha	junegrass
Hypericum kalmianum	Kalm's St. John's wort
Gymnocladus dioicus	Kentucky coffee tree
Alisma triviale	large flowered water plantain
Schizachyrium scoparium	little bluestem
Platanus x *acerifolia*	London plane tree
Miscanthus x *sinesis*	maiden grass, miscanthus
Pediculatis lanceolata	marsh betony
Asclepias spp.	milkweed
Syringia patula 'Miss Kim'	Miss Kim Manchurian lilac
Kalmia latifolia	mountain laurel
Prunus serrulata	Mt. Fuji cherry
Aster novae-angliae	New England aster
Ceanothus americanus	New Jersey tea
Physocarpus opulifolius	ninebark
Catalpa speciosa	northern catalpa
Chasmanthium latifolium	northern sea oats

Table 6. USDA Wildlife Services-IL Accepted Plant Species for Airfields	
Scientific Name	**Common Name**
Sedum sieboldii	October Daphne
Tradescantia ohiensis	Ohio spiderwort
Sedum kamtschaticum	orange stonecrop
Allium var.	ornamental onions
Syringa meyeri 'Palibin'	palibin lilac
Aster Ianceolatus	panicled aster
Rosa carolina	pasture rose
Juncus tenuis	slender rush
Lolium perenne	perennial ryegrass
Rhododendron periclymenoides	pink azalea
Heuchera richardsonii	prairie alum root
Spartina pectinata	prairie cord grass
Sporobolus heterolepis	prairie dropseed
Phlox pilosa	prairie phlox
Carex stipata	prickly sedge
Prunus x *cistena*	purple leaf sand cherry
Eragrostis spectabilis	purple love grass
Populus tremuloides	quaking aspen
Eryngium yuccifolium	rattlesnake master
Festuca rubra	red fescue
Agrostis alba or *Agrostis gigantea*	red top
Cornus sericea	red twig dogwood
Asclepias incarnate	rose milkweed
Hylotelephium spp.	rosy glow
Rosa rugosa	rugosa rose
Perovskia var.	Russian sage
Salvia var.	salvia
Juniperus sabina	savin juniper
Sedum matrona	sedum
Sedum middendorfianum	sedum
Sedum stefco	sedum
Sedum tatarinowii	sedum
Heptacodium miconioides	seven son flower
Festuca ovina	sheep fescue
Aster lateriflorus	side-flower aster
Juniperus squamata	singleseed juniper
Populus deltoides 'Siouxland'	siouxland cottonwood
Aster azureus	sky blue aster
Agropyron trachycaulum	slender wheat grass
Aster laevis	smooth blue aster
Iris virginica shrevei	southern blue flag iris
Veronica var.	speedwell
Spiraea sp.	snowmound
Festuca rubra sub. *rubra*	spreading fescue
Sedum reflexum	spruce stonecrop
Hylotelephium sp.	stonecrops, sedum
Sedum spurium	summer glory
Aster puniceus	swamp aster
Bidens artistosa mutica	swamp marigold
Festuca arundinacea	tall fescue
Sedum sexangulare	tasteless stonecrop

Table 6. USDA Wildlife Services-IL Accepted Plant Species for Airfields	
Scientific Name	**Common Name**
Juncus torreyi	Torrey's rush
Trillium grandiflorum	trillium
Campis radicans	trumpet vine
Sedum spurium cultivars	two-row stonecrop, dragon's blood, fuldaglt, tricolor
Mertensia virginica	Virginia bluebells
Sedum spurium	voodoo
Weigela x *florida*	weigela
Sedum floriferum	Weihenstephaner gold
Clematis ligusticifolia	western white clematis
Sedum album cultivars	white stonecrop
Parthenium integrifolium	wild quinine
Phlox maculata	wild sweet william
Euonymus alata	winged euonymus
Pedicularis canadensis	wood betony
Phlox divaricata	woodland phlox
Sedum sichotense	woody stonecrop
Achillea spp.	yarrow
Ratibida pinnata	yellow coneflower
Gentiana flavida	yellow gentain
Taxus x *media densiformis*	yew, *densiformis* variety
Viola sororia	common blue violet
Stipa capillata	needle grass
Glyceria striata	fowl mana grass
Sedum spurium 'Fuldaglut'	fuldagold sedum
Source: List provided by USDA WS personnel Hunter Ray (2018)	

7.5 Soil Conservation and Sediment Management

In May 2016, a site erosion survey was conducted on 182 AW by contractors in order to identify, locate, and map areas of erosion within the base boundaries and areas directly adjacent to the base. This survey provides important information to create the Erosion Management Plan which documents the findings of the survey, prioritizes erosion repair projects, and identifies a time-frame for the repair work.

Stormwater runoff is produced when rainfall during a storm exceeds the infiltration capacity of the soil or encounters an impervious surface. Stormwater runoff can be a significant source of pollutants as well as sediments to surface waters, especially in areas with impervious surface cover or where groundcover has been disturbed. Additionally, stormwater runoff from impervious surfaces has a high potential to carry pollutants into wetlands, surface waters, and groundwater. Stormwater Discharge Outfalls (SDOs) are locations where stormwater generated within the boundaries of 182 AW exit the boundaries of 182 AW. Inflows are locations where stormwater generated outside the boundaries of 182 AW enters the boundaries of 182 AW. The base provided the contractor with a map that identified 16 SDOs and 17 inflow locations. During the survey most of the areas were found to be in good condition with no notable erosion issues. Only four areas were identified as having erosion issues: SDO 001, SDO 002, Inflow 001, and the perimeter security road. Three areas are recommended for erosion repair projects (ANG 2017a):

- Project #1: SDO 001 and SDO 002

- Project #2: Inflow 001
- Project #3: South Loop Road Drainage Ditch

See the Erosion Management Plan for full descriptions of plans.

Project #1

This project is in the grassy area between SDO 001 and SDO 002 and the perimeter security road. Over time, runoff overtopped the concrete mat and eroded along the edges and eventually worked beneath the concrete mat. The soil loss caused the liner to break apart and fall into the holes. It is recommended that this site be addressed using sheet pile and riprap grade control structures to stabilize the drainage channel.

Project #2

This project is in the wooded area between Lamarsh Creek and the perimeter security road near Inflow 001, which is an area with dispersive-type soils. It appears that over time, runoff has created a knick-point which has worked its way upstream to its current location. The broken concrete and rubble slow the erosion rate, but do not fully prevent further erosion. It is recommended that this site be addressed using sheet pile and riprap grade control structures to stabilize the drainage channel.

Project #3

Project #3 is in the long concrete lined drainage channel that runs east to west on the south side of South Loop Road. It appears that over time, runoff overtopped the concrete mat and eroded along the edges and eventually worked beneath the concrete mat. Also, the soil eroded from beneath the concrete mat has deposited in a layer several inches deep into the lower end of the drainage channel; reducing the flow capacity of the drainage channel. It is recommended that this site be addressed by replacing the existing concrete liner with a permanent, high-performance erosion control mat to stabilize the soil and assist in vegetation establishment within the ditch.

7.6 Outdoor Recreation, Public Access, and Public Outreach

The Sikes Act and DoDI 4715.03 allow for public access onto DoD lands for the enjoyment and use of natural resources, if such use and access are compatible with the military mission and if the ecosystem can support such use. The outdoor recreation program is based on providing quality experiences while sustaining ecosystem integrity. The hiking trail around the perimeter of the installation is for the use of military and civilian personnel only.

The installation Public Affairs Office continues to work with the Environmental Manager to maintain the ongoing natural resources public relations program. 182 AW will work to preserve and cultivate a good public perception of the installation.

7.7 Geographic Information System (GIS)

GIS is used to manage and catalog information acquired in natural resources research. GIS assists in planning by charting areas of environmental concern and providing a baseline for analyzing the potential impacts of any proposed natural resources management action. Managers can implement the capabilities of a GIS to watershed, wetlands, wildlife, and various other natural resource management applications. GIS needs and requirements will be addressed through the ANG GeoBase Program.

7.8 Other Plans

7.8.1 Integrated Pest Management Plan

182 AW has implemented an IPM Program whose objectives include the protection of real estate, control of potential disease vectors or animals of other medical importance, control of undesirable or nuisance plants and animals (including insects), and prevention of damage to natural resources. In addition, the potential presence of several zoonotic diseases (e.g., Lyme disease and encephalitis) on the installation, and the potential threat to human health and safety cannot be underestimated. Typically a combination of the following IPM techniques is required to resolve a pest problem on a sustained basis:

- Mechanical control, which alters environments in which pests live, traps or removes pests (e.g. glue boards and live-traps) from where they are not wanted, or excludes pests from where they are not wanted (e.g. screening, fencing).
- Cultural control, which manipulates environmental conditions to suppress or eliminate pests (e.g. removal of food scraps or altering their environment).
- Biological control, which uses predators, parasites, or disease organisms to control pests.
- Chemical control, which relies on pesticides to kill pest and/or undesirable species of plants.

DoDI 4150.07 (*DoD Pest Management Program*) states that it is DoD policy to establish and maintain safe, effective, and environmentally sound integrated pest management programs to prevent or control pests and disease vectors that could adversely impact readiness or military operations by affecting the health of personnel or damaging structures, material, or property.

IPM should use mechanical, physical, cultural, biological, and educational methods to maintain pests at populations low enough to prevent undesirable damage or annoyance. Application of the least toxic chemical should be used as a last resort (ANG 2013).

7.8.2 Invasive Species

Invasive species are those that, whether native or nonnative, tend to become established in disturbed systems and competitively exclude native species. Invasive plant species should be eradicated to prevent further spread and infestation. After several surveys, non-native/invasive vegetation management or removal is recommended to enhance habitat quality for native plant species and to decrease the population of invasive terrestrial species at 182 AW. The species recommended for management or removal at 182 AW include black locust, bush honeysuckle (*Diervilla lonicera*), autumn olive, multiflora rose (*Rosa multiflora*), and *Rubus* species (*Rubus* ssp.), Japanese hop (*Humulus japonicas*), Canada thistle (*Cirsium arvense*), fescue (*Festuca pratensis*), garlic mustard (*Alliaria petiolate*), wild parsnip (*Pastinaca sativa*), common teasel (*Dipsacus sylvestris*), and yellow sweet clover (*Melilotus officinalis*; ANG 2016). A guide to vegetation management for the above species is available online (INHS 2009).

<u>Management Strategies</u>

Invasive, non-native species and noxious weeds have the capability to significantly impact native vegetation and wildlife. A key element of INRMP implementation is to ensure no net loss of military training capability. Management of undesirable species is necessary to maintain military lands and facilities in usable condition. In addition, uncontrolled animal pests can become health

hazards, which could threaten the military mission. Grounds maintenance plans include goals to control pest and invasive species on the installation.

The Illinois State Wildlife Action Plan sets goals and actions for conservation programs in the state which includes an Invasive Species Campaign that contains multiple links to sources for education and management of invasive species in Illinois: https://www.dnr.illinois.gov/conservation/IWAP/Pages/InvasiveSpecies.aspx.

The IDNR provides an Herbicide Reference Tool which lists current Illinois Nature Preserves Commission approved herbicides for management of invasive plants (https://www.dnr.illinois.gov/INPC/Pages/INPCManagementGuidelines.aspx). Pesticides must be approved by the DoD compliance board.

The various sources of information on invasive species in Illinois include:

- Illinois Invasive Plant List: https://www.invasive.org/species/list.cfm?id=152
- Illinois Cooperative Agricultural Pest Survey Program List of Invasive Pest Species: http://wwx.inhs.illinois.edu/research/caps/pestinformation.
- Illinois State-listed Noxious Weeds: https://plants.usda.gov/java/noxious?rptType=State&statefips=17
- List of invasive species by category for insects, diseases, plants, and animals: https://www.eddmaps.org/tools/statereport.cfm?id=us_il
- Illinois Invasive Species of Concern: https://www.invasive.org/illinois/SpeciesofConcern.html

7.8.3 Stormwater Management

Stormwater management is handled using SWPPP which works to (1) identify sources of pollution potentially affecting the quality of storm water discharges associated with industrial activity; and (2) to ensure implementation of measures to minimize and control pollutants in storm water discharges associated with industrial activity (ANG 2018b). The 182 AW maintains a SWPPP for these reasons. The SWPPP initiates and provides for continued control of potential stormwater pollution by:

- The formation of a Storm Water Pollution Prevention Team.
- Assessment of potential storm water pollution sources.
- Selection and implementation of controls.
- Periodic evaluation of the effectiveness of the SWPPP.

7.8.4 Bird/Wildlife Aircraft Strike Hazard (BASH)

The most permanent methods of discouraging birds from using airfields involve removing attractive habitat features. The following information is provided to assist the staff organization(s) assigned the responsibilities for airfield grounds maintenance, solid waste management, and wildlife management. Implementation of any BASH reduction measure should be accomplished in coordination with considerations identified in the Range natural resources management plan (e.g., endangered species and wetland constraints) and IPM plan.

The potential exists for future bird strikes at 182 AW but there are multiple management strategies and protocols that can be implemented and followed to reduce the risk that include:

- Maintain uniform grass height between 7-14 inches on the airfield.
- Keep broad-leafed weeds at a minimum on the airfield.
- Plant grass as necessary to minimize bare areas on the airfield that could be used as resting sites for birds and promote a uniform cover.
- Remove all trees in the airfield operating area.
- Maintain the airfield to reduce transition zones between habitat types and eliminate the edge effect.
- Avoid all landscaping that would attract wildlife on the airfield.
- Level high and low spots on the airfield.
- Remove dead vegetation.
- Dead birds and other animals should be removed from the field to deter scavenging birds.
- Inspect ditches to keep them obstacle free, maintain a slope of 5:1, and remove vegetation.
- Eliminate standing water by maintaining drainage in low spots and maintaining ditches.
- Plant vegetation that is appropriate for the region and supports BASH reduction philosophy.

8.0 MANAGEMENT GOALS AND OBJECTIVES

Goals and objectives provide the framework for natural resources management programs. Goals provide a general guiding direction for each technical area and objectives are more specific actions that facilitate achieving those goals. The objectives then drive the development of activities and projects to achieve those objectives. Management goals and objectives for the 182 AW INRMP were developed through a thorough evaluation of the natural resources present on 182 AW in accordance with AFI 32-7064 and the principles of adaptive ecosystem management by an interdisciplinary team of biologists, planners, and environmental scientists. Goals and objectives should be revised over time to reflect evolving environmental conditions, adaptive management, and the completion of tasks as the INRMP is implemented.

GOAL – Ecosystem Management (EM):

OBJECTIVE EM 1: Apply ecosystem-based management through implementation of this INRMP and other installation plans and programs.

OBJECTIVE EM 2: Implement management strategies with consideration of ecological units and time frames.

OBJECTIVE EM 3: Assess the potential impacts of climate resiliency on the mission.

GOAL – Fish and Wildlife Management (FWM):

OBJECTIVE FWM 1: Update the installation's biological inventory.

OBJECTIVE FWM 2: Minimize wildlife-related health risks, safety risks, and environmental damage.

OBJECTIVE FWM 3: Continue to remain in compliance with federal, state, and local laws and regulations governing fish and wildlife.
OBJECTIVE FWM 4: Maintain and involve partnerships with agencies and groups involved in wildlife management.
OBJECTIVE FWM 5: Review the Illinois CWCS and consult with the IDNR on potential projects and partnerships.
OBJECTIVE FWM 6: Attend quarterly BASH meetings.

GOAL – Threatened and Endangered Species (TE):
OBJECTIVE TE 1: Manage 182 AW with a regional ecosystem-based approach that manages potential sensitive-species habitat while protecting the operational functionality of the installation's missions.
OBJECTIVE TE 2: Ensure that 182 AW remains in compliance with the ESA and appropriate state regulations.
OBJECTIVE TE 3: Protect habitats for threatened, endangered, and species of concern on 182 AW.
OBJECTIVE TE 4: Conduct a survey to determine the presence of the rusty patched bumble bee and associated habitat on the installation and develop a management plan to support its presence on the installation if needed.

GOAL – Habitat Management (HM):
OBJECTIVE HM1: Management of habitats and associated wildlife to minimize BASH potential to the extent practicable.
OBJECTIVE HM 2: Protect native habitat diversity.
OBJECTIVE HM 3: Enhance habitat for native species by removing invasive vegetation, when feasible.
OBJECTIVE HM 4: Maintain healthy and stable soils and rehabilitate damaged areas to reduce soil erosion.
OBJECTIVE HM 5: Replace non-native vegetation with native vegetation where feasible, include native vegetation during construction projects.

GOAL – Wetlands and Floodplains Management (WF):
OBJECTIVE WF 1: Remain in compliance with Section 404 and 401 of the CWA and State of Illinois regulations for management of Waters of the US, wetlands and floodplains.
OBJECTIVE WF 2: Where feasible, maintain vegetation buffers on waterways/riparian corridors.
OBJECTIVE WF 3: Where feasible, maximize floral and faunal diversity of wetland communities in areas that will not affect the military mission.
OBJECTIVE WF 4: Minimize the operational impact of 182 AW mission on Waters of the US, wetlands, and floodplains.
OBJECTIVE WF 5: Manage for no net loss of regional wetland and floodplain acreage, functions, and values.

GOAL – Watershed Protection (WP):
OBJECTIVE WP 1: Continue compliance with State of Illinois stormwater management regulations.

OBJECTIVE WP 2: Reduce/control nutrient and sediment inputs into a watershed that degrade water quality.
OBJECTIVE WP 3: Minimize nonpoint source pollution of both surface and groundwater in the watershed through the implementation of best management practices (BMPs).
OBJECTIVE WP 4: Minimize impervious surfaces.

GOAL – Grounds Maintenance (GM):
OBJECTIVE GM 1: When feasible, replace non-native with native vegetation and avoid introduction of invasive, exotic species in revegetation activities.
OBJECTIVE GM 2: Support the IPM Coordinator in the implementation of the IPM Plan.

GOAL – Outdoor Recreation (OR):
OBJECTIVE OR 1: Provide quality outdoor recreation experiences while sustaining ecosystem integrity.
OBJECTIVE OR 2: Ensure that outdoor recreation activities are not in conflict with mission priorities.
OBJECTIVE OR 3: Enhance public perception of the installation.
OBJECTIVE OR 4: Maintain/enhance the multipurpose trail on the installation.

GOAL – Geographic Information System Management (GIS):
OBJECTIVE GIS 1: Collect, store, and maintain data about historical conditions, trends, and current status for critical indicators of ecological integrity and sustainability.
OBJECTIVE GIS 2: Ensure natural resource survey data is updated in ANG Geobase program.

9.0 ANNUAL WORK PLANS

The INRMP Annual Work Plans contain projects listed by fiscal year (FY). For each project, a specific timeframe for implementation is provided (as applicable), as well as the office of primary responsibility (OPR), funding source, and priority for implementation (**Tables 7-10**). Priorities are defined as follows:

- High: The INRMP signatories assert that if the project is not funded the INRMP is not being implemented and the Air Force is non-compliant with the Sikes Act; or that it is specifically tied to an INRMP goal and objective and is part of a "Benefit of the Species" determination necessary for ESA Sec 4(a)(3)(B)(i) critical habitat exemption.
- Medium: Project supports a specific INRMP goal and objective, and is deemed by INRMP signatories to be important for preventing non-compliance with a specific requirement within a natural resources law or by EO 13112 on Invasive Species. However, the INRMP signatories would not contend that the INRMP is not be implemented if not accomplished within programmed year due to other priorities.
- Low: Project supports a specific INRMP goal and objective, enhances conservation resources or the integrity of the installation mission, and/or support long-term compliance

with specific requirements within natural resources law; but is not directly tied to specific compliance within the proposed year of execution.

Table 7. Work Plans FY 2019			
Projects	**OPR**	**Funding Source**	**Priority Level**
Prepare budget to implement the natural resources management program.			High
Complete annual review 182 AW INRMP.			High
Conduct fauna surveys to identify threatened and endangered species, including federal and state listed species, every 5 years or as appropriate. FY2019 Survey Focus Area:			High
Conduct rare plant surveys, including federal and state listed species, every 5 years or as appropriate. FY2019 Survey Focus Area:			High
182 AW/EM will review, with the ANG Natural Resource program manager, activities for potential to impact water resources, including Jurisdictional Waters.			High
If an activity will impact a waters of the U.S./ wetland or other water resources, coordination and permitting will be completed and mitigation options will be identified.			High
Monitor at-risk construction and maintenance sites to ensure erosion and sediment control measures are implemented and maintained.			High
Monitor changes to federal and state listed species.			High
Review activities for potential to impact listed species and identify options to minimize those impacts.			High
Support implementation of the 182 AW BASH Management Plan and BASH risk reduction measures while complying with all associated laws and regulations.			High
Maintain roads and associated drainage to minimize erosion and maintain compliance with CWA (Erosion Projects #1 & #2).			High
Conduct GIS suitability analysis of potential sites for pollinator gardens.			High
Conduct regular surveys for birds at Peoria ANGB to monitor changes to BASH risk, in conjunction with MLRA and USDA-WS.	USDA-WS		High
Support the Integrated Pest Management Coordinator in the implementation of the Integrated Pest Management Plan, including annual updates, methods for control and reporting requirements.			High
Use native plant species and materials for landscaping activities Focus Areas: Fire Department Construction and Erosion Projects #1 & #2.			Medium
Develop and Implement Management Plan for Invasive Species. Focus Areas: Absinthe wormwood, Japanese barberry, common teasel, Japanese hops			Medium
Evaluate feasibility of establishing and maintaining vegetation buffers around water resources . Focus Areas: See *Delineation of Waters/ Wetlands at Peoria Air National Guard Base*, Figures 6-I & 6-J			Medium
Update GIS data as natural resources surveys are completed.			Medium
Develop environmental awareness materials for natural resources.			Low
Continue 182 AW outreach program.			Low

Table 8. Work Plans FY 2020			
Projects	**OPR**	**Funding Source**	**Priority Level**
Prepare budget to implement the natural resources management program.			High
Complete annual review 182 AW INRMP.			High
Conduct fauna surveys to identify threatened and endangered species, including federal and state listed species, every 5 years or as appropriate. FY2020 Survey Focus Area:			High
Conduct rare plant surveys, including federal and state listed species, every 5 years or as appropriate. FY2020 Survey Focus Area:			High
182 AW/EM will review, with the ANG Natural Resource program manager, activities for potential to impact water resources, including Jurisdictional Waters.			High
If an activity will impact a waters of the US/wetland or other water resources, coordination and permitting will be completed and mitigation options will be identified.			High
Monitor at-risk construction and maintenance sites to ensure erosion and sediment control measures are implemented and maintained.			High
Monitor changes to federal and state listed species.			High
Review activities for potential to impact listed species and identify options to minimize those impacts.			High
Support implementation of the 182 AW BASH Management Plan and BASH risk reduction measures while complying with all associated laws and regulations.			High
Maintain roads and associated drainage to minimize erosion and maintain compliance with CWA (Erosion Project #3).			High
Develop Action items for FY2020, based on suitability study of potential sites for pollinator gardens. OPEN -			High
Conduct regular surveys for birds at Peoria ANGB to monitor changes to BASH risk, in conjunction with MLRA and USDA-WS.	USDA-WS		High
Support the Integrated Pest Management Coordinator in the implementation of the Integrated Pest Management Plan, including annual updates, methods for control and reporting requirements.			High
Use native plant species and materials for landscaping activities. Focus Area: Erosion Project #3			Medium
Develop and Implement Management Plan for Invasive Species. Focus Areas: Absinthe wormwood, Japanese barberry, common teasel, Japanese hops			Medium
Evaluate feasibility of establishing and maintaining vegetation buffers around water resources. Focus Areas: See *Delineation of Waters/ Wetlands at Peoria Air National Guard Base*, Figures 6-E & 6-F			Medium
Update GIS data as natural resources surveys are completed.			Medium
Develop environmental awareness materials for natural resources.			Low
Continue 182 AW outreach program.			Low

Table 9. Work Plans FY 2021			
Projects	**OPR**	**Funding Source**	**Priority Level**
Prepare budget to implement the natural resources management program.			High
Complete annual review 182 AW INRMP.			High
Conduct fauna surveys to identify threatened and endangered species, including federal and state listed species, every 5 years or as appropriate. FY2021 Survey Focus Area:			High
Conduct rare plant surveys, including federal and state listed species, every 5 years or as appropriate. FY2022 Survey Focus Area:			High
182 AW/EM will review, with the ANG Natural Resource program manager, activities for potential to impact water resources, including Jurisdictional Waters.			High
If an activity will impact a waters of the U.S./ wetland or other water resources, coordination and permitting will be completed and mitigation options will be identified.			High
Monitor at-risk construction and maintenance sites to ensure erosion and sediment control measures are implemented and maintained.			High
Monitor changes to federal and state listed species.			High
Review activities for potential to impact listed species and identify options to minimize those impacts.			High
Support implementation of the 182 AW BASH Management Plan and BASH risk reduction measures while complying with all associated laws and regulations.			High
Maintain roads and associated drainage to minimize erosion and maintain compliance with CWA.			High
Develop Action items for FY2021, based on suitability study of potential sites for pollinator gardens. OPEN -			High
Conduct regular surveys for birds at Peoria ANGB to monitor changes to BASH risk, in conjunction with MLRA and USDA-WS.	USDA-WS		High
Support the Integrated Pest Management Coordinator in the implementation of the Integrated Pest Management Plan, including annual updates, methods for control and reporting requirements.			High
Use native plant species and materials for landscaping activities. Focus Areas:			Medium
Develop and Implement Management Plan for Invasive Species. Focus Areas: Absinthe wormwood, Japanese barberry, common teasel, Japanese hops			Medium
Evaluate feasibility of establishing and maintaining vegetation buffers around water resources. Focus Areas: See *Delineation of Waters/ Wetlands at Peoria Air National Guard Base*, Figures 6-A & 6-B			Medium
Update GIS data as natural resources surveys are completed.			Medium
Develop environmental awareness materials for natural resources.			Low
Continue 182 AW outreach program.			Low

Table 10. Work Plans FY 2022			
Projects	**OPR**	**Funding Source**	**Priority Level**
Prepare budget to implement the natural resources management program.			High
Complete annual review 182 AW INRMP.			High
Conduct fauna surveys to identify threatened and endangered species, including federal and state listed species, every 5 years or as appropriate. FY2022 Survey Focus Area:			High
Conduct rare plant surveys, including federal and state listed species, every 5 years or as appropriate. FY2022 Survey Focus Area:			High
182 AW/EM will review, with the ANG Natural Resource program manager, activities for potential to impact water resources, including Jurisdictional Waters.			High
If an activity will impact a waters of the U.S./ wetland or other water resources, coordination and permitting will be completed and mitigation options will be identified.			High
Monitor at-risk construction and maintenance sites to ensure erosion and sediment control measures are implemented and maintained.			High
Monitor changes to federal and state listed species.			High
Review activities for potential to impact listed species and identify options to minimize those impacts.			High
Support implementation of the 182 AW BASH Management Plan and BASH risk reduction measures while complying with all associated laws and regulations.			High
Maintain roads and associated drainage to minimize erosion and maintain compliance with CWA			High
Develop Action items for FY2022, based on suitability study of potential sites for pollinator gardens. OPEN -			High
Conduct regular surveys for birds at Peoria ANGB to monitor changes to BASH risk, in conjunction with MLRA and USDA-WS.	USDA-WS		High
Support the Integrated Pest Management Coordinator in the implementation of the Integrated Pest Management Plan, including annual updates, methods for control and reporting requirements.			High
Develop and Implement Management Plan for Invasive Species. Focus Areas: Absinthe wormwood, Japanese barberry, common teasel, Japanese hops			Medium
Use native plant species and materials for landscaping activities. Focus Areas:			Medium
Evaluate feasibility of establishing and maintaining vegetation buffers around water resources. Focus Areas: See *Delineation of Waters/ Wetlands at Peoria Air National Guard Base*, Figures 6-C & 6-D			Medium
Update GIS data as natural resources surveys are completed.			Medium
Develop environmental awareness materials for natural resources.			Low
Continue 182 AW outreach program.			Low

10.0 INRMP IMPLEMENTATION, UPDATE, AND REVISION PROCESS

10.1 INRMP Implementation

In accordance with AFI 32-7064, an INRMP is considered implemented if an installation:

- Actively requests, receives, and uses funds for "must fund" projects and activities as defined by Chapter 4 of AFI 32-7001 (Environmental Quality Programming and Budgeting).
- Executes all "must fund" projects and activities in accordance with specific time frames identified in the INRMP.
- Prepares the INRMP in cooperation with appropriate stakeholders. Notifies stakeholders when a new or revised INRMP will be prepared, and solicits participation and input to the INRMP development and review process.
- Ensures that sufficient numbers of professionally trained natural resources management personnel are available to perform the tasks required by the INRMP.
- Ensures INRMP has been approved in writing by the appropriate representative from each cooperating agency within the past five years.
- Reviews the INRMP annually and coordinates annually with cooperating agencies.
- Establish and maintain regular communications with the appropriate federal and state agencies for the region where the installation is located.
- Documents specific INRMP action accomplishments undertaken each year.
- Ensures INRMP updates and reviews are conducted in cooperation with the USFWS, IDNR, and National Oceanic and Atmospheric Administration (NOAA), where applicable.
- Ensures the INRMP implements ecosystem management on Air Force installations by setting goals for attaining a desired land condition.

Natural resource and land use management issues are not the only factors contributing to the development and implementation of the INRMP. Facility management and other seemingly unrelated issues affect implementation. It is important to the implementation of this INRMP that 182 AW personnel take ownership of the INRMP to provide the necessary resources (i.e., personnel and equipment), and to utilize the appropriate funding allocated by the ANG NR Program Manager to enact the INRMP. It is extremely important that the INRMP Working Group continue to participate in the implementation of this INRMP. The INRMP Working Group is made up of the key 182 AW personnel, and has an oversight role to ensure the effective implementation of this INRMP. Top- and middle-level management representation, as well as representation from several individuals with day-to-day on-site experience will provide the INRMP Working Group with the leadership and structure necessary for the successful implementation of this INRMP.

10.1.1 Monitoring INRMP Implementation

10.1.1.1 182 AW INRMP Implementation Analysis

The 182 AW INRMP implementation will be monitored for meeting the legal requirements of the Sikes Act as well as for other mission and biological measures of effectiveness. The ultimate successful implementation of this INRMP is realized in no net loss in the capability of the 182

AW training lands to support the military mission while at the same time providing effective natural resources management.

In order to monitor and evaluate the effectiveness of the INRMP implementation the following will be reviewed as applicable and discussed within the context of the annual review and/or a formal review of operation and effect:

- Impacts to/from the military mission;
- Conservation program budget;
- Staff requirements;
- Program and project implementation;
- Trends in species and habitat diversity as evidenced by recurring biological surveys, land use changes, and opinions of natural resource experts;
- Compliance with regulatory requirements; and,
- Feedback from military trainers, the USFWS, the IDNR, and others.

Some of these areas may not be looked at every year due to lack of data or pertinent information. The effectiveness of the 182 AW INRMP as a mission enabling conservation tool will be decided by mutual agreement of the USFWS, the IDNR, and the 182 AW during annual reviews and/or reviews for operation and effect.

10.1.1.2 USAF and DoD INRMP Implementation Monitoring

The USAF uses the Defense Environmental Programs Annual Report to Congress (DEPARC) to monitor Sikes Act compliance. DEPARC is the automated system used to collect installation environmental information for reporting to DoD and Congress. Established to fulfill an annual requirement to report the status of DoD's Environmental Quality program to Congress, DEPARC collects information on enforcement actions, inspections and other performance measures for high-level reports and quarterly reviews. DEPARC also helps the USAF track fulfillment of DoD Measures of Merit requirements.

The Deputy under Secretary of Defense's (DUSD) Updated Guidance for Implementation of the Sikes Act also includes an updated Conservation Metrics for Preparing and Implementing INRMPs section. Progress toward meeting these measures of merit is reported in the annual report to Congress.

10.1.2 Priorities and Scheduling

The Office of Management and Budget considers funding for the preparation and implementation of this INRMP, as required by the Sikes Act, to be a high priority. However, the reality is that not all of the projects and programs identified in this INRMP will receive immediate funding. Therefore, projects need to be funded consistent with timely execution to meet future deadlines. Projects are generally prioritized with respect to compliance. Highest priority projects are projects related to recurring or current compliance, and these are generally scheduled earliest. The prioritization of the projects is based on need, legal drivers, and ability to further implementation of the INRMP.

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

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

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

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

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

- Community outreach activities, such as Earth Day and Historic Preservation Week activities;
- Educational and public awareness projects, such as interpretive displays, oral histories, nature trails, wildlife checklists, and conservation teaching materials;
- BAs, biological surveys, or habitat protection for a non-listed species;
- Restoration or enhancement of cultural or natural resources when no specific compliance requirement dictates a course or timing of action; and
- Management and execution of volunteer and partnership programs.

10.1.3 Funding

Implementation of this INRMP is subject to the availability of annual funding. Funding sources for specific projects can be grouped into three main categories by source: federal ANG NGB funds, other federal funds, and non-federal funds. When projects identified in the plan are not implemented due to lack of funding, or other compelling circumstances, the installation will

review the goals and objectives of this INRMP to determine whether adjustments are necessary. Funding options include:

- The Legacy Resource Management Program provides financial assistance to DoD efforts to conserve natural and cultural resources on federal lands. Legacy projects could include regional ecosystem management initiatives, habitat preservation efforts, archeological investigations, invasive species control, and/or flora or fauna surveys. Project proposals are submitted to the Legacy program during their annual funding cycle (https://www.dodlegacy.org/Legacy/index.aspx).
- There are also grant and assistance programs administered by other federal agencies that could be accessed for natural resources management at 182 AW. Examples include funds associated with the CWA and endangered species.
- Other non-federal funding sources that could be considered include The Public Lands Day Program, which coordinates volunteers to improve the public lands they use for recreation, education, and enjoyment, and the National Environmental Education and Training Foundation, which manages, coordinates, and generates financial support for the program (https://www.neefusa.org/npld).
- 182 AW may consider entering into cooperative or mutual aid agreements with states, local governments, non-governmental organizations, and other individuals.

10.1.4 Cooperative Agreements

The DoD and subcommand entities have MOU, Memorandums of Agreement (MOA), and other cooperative agreements with other federal agencies, conservation and special interest groups, and various state agencies in order to provide assistance with natural resources management at installations across the US. Generally, these agreements allow installations and agencies or conservation and special interest groups to obtain mutual conservation objectives. The DoD agreements applicable to 182 AW include:

- MOU between DoD and USFWS/IFWA for a Cooperative Integrated Natural Resource Program associated with the ecosystem-based management of fish, wildlife, and plant resources on military lands (2006).
- MOU between DoD and USFWS/International Fund for Animal Welfare (IFAW) to promote the conservation of migratory birds (2011).
- MOU between the DoD and US EPA to form a working partnership to promote environmental stewardship by adopting IPM strategies to reduce the potential risks to human health and the environment associated with pesticides (2012).
- MOA for federal Neotropical Migratory Bird Conservation Program and addendum (Partners in Flight-Aves De Las Americas) among DoD, through each of the Military Services, and over 110 other federal and state agencies and non-governmental organizations (1991).
- MOU between the DoD and Ducks Unlimited, Inc. to provide a foundation for cooperative development of selected wetlands and associated uplands in order to maintain and increase waterfowl populations and to fulfill the objectives of the North American Waterfowl Management Plan, within the context of DoD's environmental security and military missions (2006).
- MOU between DoD and NRCS to promote cooperative conservation where appropriate (2006).
- MOU with Watchable Wildlife Incorporated (2002).

- MOU between the DoD and BCI to identify, document and maintain bat populations and habitats on DoD installations (2011).
- Cooperative Agreement between DoD and The Nature Conservancy to work cooperatively in areas of mutual interest (2010).
- Interagency Agreement (2010) and MOU (2009) between USAF and US Forest Service (USFS) to enhance cooperation and improve public service, and management of natural and cultural resources on lands managed by the USAF and the USFS.
- MOA (2003) between FAA, USAF, US Army, US EPA, USFWS, and USDA to address aircraft-wildlife strikes, available at https://www.faa.gov/airports/environmental/media/wildlife-hazard-mou-2003.pdf.

For a further list of cooperative agreements and MOUs please visit
http://www.denix.osd.mil/nr/legislationandpolicy/mousandmoas/
https://www.denix.osd.mil/announcements/unassigned/sikes-tripartite-mou/
https://www.denix.osd.mil/arc/derpfy2002/unassigned/appendix-d-interagency-agreements-dsmoas-atsdr-and-cooperative-agreements-derp-fy02/

10.1.5 Consultations Requirements

The 182 AW has multiple natural resources consultation requirements in addition to the INRMP development and review requirements as identified in the Sikes Act. Federally listed species management requires ESA Section 7 consultation with the USFWS. State-listed species management, as well as game species management, requires consultation with IDNR. Actions that fall under the jurisdiction of Section 404 or 401 of the CWA necessitate permitting from MDEP, while Section 404 actions necessitate permitting from the USACE, Mississippi Valley Division.

10.2 Annual INRMP Review and Coordination Requirements

Per DoD policy, the 182 AW will review the INRMP annually in cooperation with the USFWS and IDNR. On an annual basis, the EM will invite the USFWS Regional Office, the USFWS local field office, the IDNR, and ANG NGB/A4AM to attend a meeting or participate in a conference call to review previous year INRMP implementation and discuss implementation of upcoming programs and projects. Invitations will be either by letter or email. Attendance is at the option of those invited, but at minimum the USFWS local field office and one representative of IDNR are expected to attend. The meeting will be documented with an agenda, meeting minutes and sign-in roster of attendees.

At this annual meeting the need for updates or revisions will be discussed. If updates are needed, the 182 AW will initiate the updates and after agreement of all three parties they will be added to the INRMP. If it is determined that major changes are needed, all three parties will provide input and an INRMP revision will be initiated with 182 AW acting as the lead coordinating agency. The annual meeting will be used to expedite the more formal review for operation and effect and if all parties agree and document their mutual agreement, it can fulfill the requirement to review the INRMP for operation and effect.

If not already determined in previous annual meetings, by the fourth year annual review a determination will be made jointly to continue implementation of the existing INRMP with

updates or to proceed with a revision. If the parties feel that the annual reviews have not been sufficient to evaluate operation and effect and they cannot determine if the INRMP implementation should continue or be revised, a formal review for operation and effect will be initiated. The determination on how to proceed with INRMP implementation or revision will be made after the parties have had time to complete this review.

As part of the annual review, the 182 AW will specifically:

- Invite feedback from USFWS and IDNR on the effectiveness of the INRMP;
- Inform USFWS and IDNR which INRMP projects and activities are required to meet current natural resources compliance needs; and,
- Document specific INRMP action accomplishments from the previous year.

10.3 INRMP Update, and Revision Process

10.3.1 Review for Operation and Effect

Not less than every five years, the INRMP will be reviewed for operation and effect to determine if the INRMP is being implemented as required by the Sikes Act and contributing to the management of natural resources at 182 AW. The review will be conducted by the three cooperating parties to include the Commander responsible for the INRMP, the Supervisor of the USFWS Illinois Field Office, and Secretary of the IDNR. While these are the responsible parties, technical representatives generally are the personnel who actually conduct the review.

The review for operation and effect will either conclude that the INRMP is meeting the intent of the Sikes Act and only needs an update and implementation can continue; or that it is not effective in meeting the intent of the Sikes Act and it must be revised. The conclusion of the review will be documented in a jointly executed memorandum, meeting minutes, or in some way that reflects mutual agreement.

If only updates are needed, they will be completed in a manner agreed to by all parties. The updated INRMP will be reviewed by the local USFWS field office in Illinois and IDNR Secretary. Once concurrence letters or signatures are received from the Supervisor of the USFWS Illinois Field Office and the IDNR Commissioner, the update of the INRMP will be complete and implementation will continue. Generally, the environmental impact analysis will continue to be applicable to updated INRMPs, and a new analysis will not be required.

If a review of operation and effect concludes that an INRMP must be revised, there is no set time to complete the revision. The existing INRMP remains in effect until the revision is complete and USFWS and IDNR concurrence on the revised INRMP is received. 182 AW will endeavor to complete such revisions within 18 months depending upon funding availability. Revisions to the INRMP will go through a detailed review process similar to development of the initial INRMP to ensure 182 AW military mission, USFWS, and IDNR concerns are adequately addressed, and the INRMP meets the intent of the Sikes Act.

11.0 APPENDICES

APPENDIX A. REFERENCES

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APPENDIX B. LAW, REGULATIONS, POLICIES, AND EXECUTIVE ORDERS

Federal Executive Orders (EOs)

Environmental Justice (EO 12898) – requires certain Federal agencies, including the DoD, to the greatest extent practicable permitted by law, to make environmental justice part of their missions by identifying and addressing disproportionately high and adverse health or environmental effects on minority and low-income populations.

Exotic Organisms (EO 11987) - requires Federal agencies to restrict the introduction of exotic species into the natural ecosystems on lands and waters which they administer.

Exotic and Invasive Species (EO 13112) - requires Federal agencies to prevent the introduction of invasive species and provide for their control; and to minimize the economic, ecological, and human health impacts that invasive species cause.

Federal Compliance with Pollution Control Standards (EO 12088) - delegates responsibility to the head of each executive agency for ensuring that all necessary actions are taken for the prevention, control, and abatement of environmental pollution. This EO gives the US Environmental Protection Agency (US EPA) authority to conduct reviews and inspections to monitor Federal facility compliance with pollution control standards.

Floodplain Management (EO 11988) – provides direction regarding actions of Federal agencies in floodplains

Protection of Children from Environmental Health and Safety Risks (EO 13045) - places high priority on identification and assessment of environmental health and safety risks that could disproportionately affect children. Directs agencies to ensure that policies, programs, activities, and standards address such risks if identified.

Protection and Enhancement of the Cultural Environment (EO 11593) - requires all Federal agencies to locate, identify, and record all cultural resources which include sites of archaeological, historical, or architectural significance.

Protection and Enhancement of Environmental Quality (EO 11514) – requires Federal agencies to initiate measures needed to direct their policies, plans, and programs to meet national environmental goals. Requires Federal agencies to monitor, evaluate and control agency activities to protect and enhance the quality of the environment.

Protection of Wetlands (EO 11990) – requires Federal agencies to avoid undertaking or providing assistance for new construction in wetlands unless there is no practicable alternative, and all practicable measures to minimize harm to wetlands has been implemented.

Responsibilities of Federal Agencies to Protect Migratory Birds (EO 13186) – charges the USFWS with the responsibility to administer, oversee, and enforce the conservation provisions of the MBTA, which includes responsibility for population management (e.g., monitoring), habitat protection (e.g., acquisition, enhancement, and modification), international coordination, and regulations development and enforcement.

Federal Laws

Defense Appropriations Act of 1991, Public Law 101-511; Legacy Resource Management Program – establishes a program for the stewardship of biological, geophysical, cultural, and historic resources on DoD lands.

National Defense Authorization Act of 1989, Public Law 101-189; Volunteer Partnership Cost-Share Program – amends two acts and establishes volunteer and partnership programs for natural and cultural resources management on DoD lands.

United States Codes

Clean Air Act, 42 USC 7401– 7671q, July 14, 1955, as amended (Clean Air Act of 1970) - establishes the core of the clean air program, the primary objective of which is to establish Federal standards for air pollutants in order to improve air quality in areas of the country which do not meet Federal standards, and to prevent significant deterioration in areas where air quality exceeds those standards.

Conservation Programs on Military installations (Sikes Act), as amended; P.L. 86-797, 16 USC 670(a) et seq. - requires Federal military installations with adequate wildlife habitat to implement cooperative agreements with other agencies and develop long-range INRMPs. Thereby, it is appropriate to manage natural resources for multipurpose uses and provide the public access to those uses to the extent consistent with the military mission. The act also sets guidelines for the collection of fees for the use of natural resources such as hunting and fishing.

Council of Environmental Quality (CEQ) Regulations for Implementing NEPA; 40 CFR Parts 1500–1508 - provides regulations applicable to and binding on all Federal agencies for implementing the procedural provisions of NEPA, as amended.

Endangered Species Act (ESA) of 1973, as amended; P.L. 93-205, 16 USC 1531 et seq. - protects threatened, endangered, and candidate species of fish, wildlife, and plants; and their designated critical habitats. Under this act, no Federal action is allowed to jeopardize the continued existence of an endangered or threatened species. The ESA also requires consultation with the USFWS and the NMFS and the preparation of a biological assessment when such species are present in an area that is affected by government activities.

Federal Land Use Policy and Management Act, 43 USC 1701–1782 - requires management of public lands to protect the quality of scientific, scenic, historical, ecological, environmental, and archaeological resources and values; and to preserve and protect certain lands in their natural condition for fish and wildlife habitat. This act also requires consideration of commodity production such as timbering.

Federal Noxious Weed Act of 1974, 7 USC 2801-2814 - provides for the control and management of nonindigenous weeds that injure or have the potential to injure the interests of agriculture and commerce, wildlife resources, or the public health.

Federal Water Pollution Control Act (CWA), 33 USC 1251–1387 - provides US EPA with the authority for the implementation and enforcement of this comprehensive statute aimed at restoring and maintaining the chemical, physical, and biological integrity of the nation’s waters.

Leases: Non-excess Property of Military Departments, 10 USC 2667, as amended - authorizes DoD to lease to commercial enterprises Federal land that is not currently needed for public use. Covers agricultural out leasing program.

Migratory Bird Treaty Act 16 USC 703–712 - implements various treaties for the protection of migratory birds. Under this act, taking, killing, or possessing migratory birds is unlawful without a valid permit.

National Environmental Policy Act of 1969 (NEPA), as amended; P.L. 91-190, 42 USC 4321 et seq. - requires Federal agencies to use a systematic approach when assessing environmental impacts of government activities. Establishes the use of environmental impact statements. NEPA proposes an interdisciplinary approach in a decision-making process designed to identify unacceptable or unnecessary impacts on the environment.

National Historic Preservation Act, 16 USC 470 et seq. - requires Federal agencies to take account of the effect of any federally assisted undertaking or licensing on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP). Provides for the nomination, identification (through listing on the NRHP), and protection of historical and cultural properties of significance.

Sale of certain interests in land; logs 10 USC 2665 - authorizes sale of forest products and reimbursement of the costs of management of forest resources.

DoD Policies, Directives, and Instructions
DoD Directive 4715.1 - Environmental Security
DoDI 4715.03 - Natural Resources Conservation Program

USAF Instructions and Directives
AFI 32-7062 - Air Force Comprehensive Planning
AFI 32-7065 - Cultural Resources Management
AFI 32-7061 - EIAP
AFPD 32-70 - Environmental Quality
AFI 32-7064 - Integrated Natural Resources Management
Policy Memo for Implementation of Sikes Act Improvement Amendments, USAF Environmental Office (HQ USAF/ILEV) on January 29, 1999 - outlines the USAF's interpretation and explanation of the Sikes Act Improvement Act of 1997.