DRAFT FINAL

Integrated Natural Resources Management Plan
Nebraska Army National Guard

Camp Ashland Training Site, Ashland, NE
Camp Ashland Training Site – Mead, Mead, NE
Greenlief Training Site, Hastings, NE
Greenlief Training Site – Silver Creek, Silver Creek, NE

Prepared for:

Nebraska Army National Guard
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September 2022

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SIGNATURE PAGE
NEBRASKA ARMY NATIONAL GUARD
LINCOLN, NEBRASKA

This Integrated Natural Resources Management Plan (INRMP), dated September 2022, was developed by the Nebraska Army National Guard (NEARNG) and the National Guard Bureau (NGB) in accordance with Army Regulation 200-1 (AR 200-1) – *Environmental Protection and Enhancement,* Department of Defense Manual 4715.03 (DODM 4715.03) – *Integrated Natural Resources Management Plan Implementation Manual*, and Department of Defense Instruction 4715.03 (DODI 4715.03) – *Natural Resources Conservation Program*, and the provisions of the Sikes Act, as amended (16 United States Code §670a et seq.) in cooperation with the United States Fish and Wildlife Service (USFWS), and Nebraska Game and Parks Commission (NGPC). The management of natural resources in this INRMP reflects the mutual agreement of all parties.

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

Approving Officials:

_____ _____

COL WILLIAM M. MYER Date
Chief, Installations & Environment (I&E)
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Maj Gen DARYL L. BOHAC Date
The Adjutant General
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Environmental Programs Manager Date
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Director, Nebraska Field Office Date
U.S. Fish and Wildlife Service

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Director Date
Nebraska Game and Parks Commission

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ANNUAL REVIEW AND COORDINATION DOCUMENTATION 2022

This page is used to certify the annual review and coordination of the Integrated Natural Resources Management Plan (INRMP) for the Nebraska Army National Guard training lands.

By their signatures below, the certifying official acknowledges that the annual review and coordination of the INRMP has occurred for the specified year.

Approving Officials:

Environmental Program Manager **Nebraska Army National Guard**	**Date**
Director, Nebraska Field Office **U.S. Fish and Wildlife Service Signatory**	**Date**
Director **Nebraska Game and Parks Commission**	**Date**

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Director, Nebraska Field Office **U.S. Fish and Wildlife Service Signatory**	**Date**
Director **Nebraska Game and Parks Commission**	**Date**

ANNUAL REVIEW AND COORDINATION DOCUMENTATION 2024

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Environmental Program Manager **Nebraska Army National Guard**	**Date**
Director, Nebraska Field Office **U.S. Fish and Wildlife Service Signatory**	**Date**
Director **Nebraska Game and Parks Commission**	**Date**

ANNUAL REVIEW AND COORDINATION DOCUMENTATION 2025

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1. EXECUTIVE SUMMARY

This Integrated Natural Resources Management Plan (INRMP), dated September 2022, was developed by the Nebraska Army National Guard (NEARNG) and the National Guard Bureau (NGB) in accordance with Army Regulation 200-1 (AR 200-1) – *Environmental Protection and Enhancement,* Department of Defense Manual 4715.03 (DODM 4715.03) – *Integrated Natural Resources Management Plan Implementation Manual*, Department of Defense Instruction 4715.03 (DODI 4715.03) – *Natural Resources Conservation Program*, and the provisions of the Sikes Act, as amended (16 United States Code §670a et seq.).

This INRMP provides NEARNG and the NEARNG's training sites at the Camp Ashland Training Site (CATS), Camp Ashland Training Site – Mead (CATS-M), Greenlief Training Site (GTS), and Greenlief Training Site – Silver Creek (GTS-SC) with a description of the installation and its surrounding environment and presents management practices designed to mitigate negative impacts and enhance the positive effects of the installation's mission on regional ecosystems. These recommendations have been balanced against the requirements of NEARNG to accomplish its military mission at the highest possible level of efficiency.

The maintenance and enhancement of biological diversity is particularly important in the management of natural resources and will be accomplished through the implementation of specific management practices identified in this INRMP. Biodiversity is simply defined as "the variety of life and its processes."

Biodiversity does not just describe how many species there are or how evenly they are represented in each community. Rather, biodiversity can be applied on four basic levels:

1. ***Genetic Diversity***— Refers to the variation of genotypes within a species that influences different characteristics among individuals or populations.

2. ***Species Diversity***—Refers to the number of different kinds of species within a given area.

3. ***Ecosystem Diversity***—Refers to the number, relative proportions, and interactions among communities within an ecosystem.

4. ***Landscape Diversity***—Can be defined as the composition of and interactions among ecosystems across a defined landscape.

By protecting a mosaic of habitats that support the greatest variety of life and its processes, this INRMP will help perpetuate the form and function of native communities, thus enhancing the long-term viability of each installation and ensuring its sustainability for military operations.

The intent of this INRMP is to:

- Manage for no net loss of the NEARNG capability to support the military mission of each installation;
- Minimize habitat fragmentation and promote the natural connectivity of habitats;
- Protect native species and discourage non-native, invasive species;
- Protect rare and ecologically important species and unique or sensitive environments;

- Maintain or mimic natural processes;
- Protect genetic diversity;
- Restore species, communities, and ecosystems; and,
- Monitor impacts on biodiversity.

From these items, objectives and management actions were identified that structure this plan's guidance. However, each of the management strategies described in this INRMP should be monitored so that modifications can be made as conditions change during implementation. The topics of concern involving natural resource constraints to planning and mission operations are presented in Chapter 6.

2. GENERAL INFORMATION

2.1 PURPOSE AND SCOPE

This INRMP provides NEARNG at Camp Ashland Training Site (CATS), Camp Ashland Training Site – Mead (CATS-M), Greenlief Training Site (GTS), and Greenlief Training Site – Silver Creek (GTS-SC) (Figure 2-1) with a description of the installation and its surrounding environment and presents various management practices designed to mitigate negative impacts and enhance the positive effects of the installation's mission on regional ecosystems.

This INRMP integrates all aspects of natural resource management with the rest of the installation's missions and, therefore, becomes the primary tool for managing the installation's ecosystems while ensuring the successful accomplishments of the military mission at the highest possible levels of efficiency. The INRMP is a guide for the management and stewardship of natural resources present on the installation. A multiple-use approach will be implemented to allow for the presence of mission-oriented activities, as well as environmental quality through efficient management of natural resources.

Specific management practices identified in this INRMP have been developed to enhance and maintain biological diversity within the installations. Specifically, management practices will:

- Minimize habitat fragmentation and promote the natural pattern and connectivity of habitats;
- Protect native species and discourage non-native, invasive species;
- Protect rare and ecologically important areas;
- Protect unique sensitive environments;
- Maintain or mimic natural processes;
- Protect genetic diversity;
- Restore species, communities, and ecosystems; and,
- Monitor impacts on biodiversity.

Each of the management strategies described in this plan will be monitored so that modifications can be made during implementation if conditions change.

Appendix A contains the references and Appendix B contains the list of acronyms and abbreviations utilized in preparing this plan.

Figure 2-1. NEARNG Installation Locations

2.2 AUTHORITY

This INRMP is developed under, and proposes actions in accordance with, the applicable DoD and Army policies, directives, and instructions. AR200-1, *Environmental Protection and Enhancement*, provides the necessary direction and instruction for preparing an INRMP. Issues are addressed in this plan using guidance provided under legislation, Executive Orders (EOs), Directives, Manuals, and Instructions that include Department of Defense Manual 4715.03 (DODM 4715.03) – *Integrated Natural Resources Management Plan Implementation Manual*, and Department of Defense Instruction 4715.03 (DODI 4715.03) – *Natural Resources Conservation Program*, and the provisions of the Sikes Act, as amended (16 United States Code §670a et seq.). Appendix C contains agency consultation and Appendix D summarizes key legislation and guidance used to create and implement this INRMP.

2.3 INTEGRATION WITH OTHER PLANS

This INRMP is intended to be compatible with other NEARNG planning documents. In preparing this document, other plans consulted are summarized in Appendix E.

3. INSTALLATION OVERVIEW

3.1 LOCATION AND AREA

3.1.1 Camp Ashland Training Site (CATS)

CATS is centrally located in eastern Nebraska and is approximately 2 miles northeast of Ashland, Nebraska (Figures 3-1 and 3-2). CATS controls/manages 760.6 acres of land that is subdivided by the Platte River - which encompasses approximately 350 acres within the property boundary - with a west parcel in southeast Saunders County (447.46 acres), and an east parcel in the southwest corner of Sarpy County (313.14 acres). The cantonment area, which spans 110.18 acres, is located on the west side of the Platte River.

CATS is in Township 13 North, Range 10 East, Sections 18, 19, and 30. CATS is bordered on the north and west by housing developments. Farmsteads and agricultural fields border the east side of the installation. Range Road 10 East parallels the west side of CATS and primary access to the Installation is via Highway 6 located south of the installation.

3.1.2 Camp Ashland Training Site - Mead (CATS-M)

CATS-M is in the southeast portion of Saunders County, approximately 3 miles southeast of Mead, Nebraska (Figures 3-3 and 3-4). There are two sites that are considered part of CATS-M, one is the training site that is approximately 1,185 acres and the other is the Unit Training Equipment Site (UTES) that is approximately 11.61 acres and is primarily used for storage and maintenance. The cantonment area, which spans 35.56 acres, is located in the southwest corner of the installation.

CATS-M is located in Township 14 North, Range 9 East Section 7, 8, 17, and 18 and UTES is located in Township 14 North, Range 8 East Section 14. Both parcels of land are bordered by land owned and managed by University of Nebraska for agricultural research and privately owned and managed for agriculture.

3.1.3 Greenlief Training Site (GTS)

GTS is located in east central Adams County and west central Clay County, approximately 3 miles east of Hastings, Nebraska (Figures 3-5 and 3-6). GTS has a total acreage of approximately 3,204.17 acres. The cantonment area, which spans 129.46 acres, is located in the north-central portion of the installation.

GTS is located in Township 7 North, Range 8 West Sections 19, 30, and 31; Township 7 North, Range 9 West Sections 24, 25, and 36, and Township 6 North Range 8 West Section 5. The southern portion of the property is bordered by the Union Pacific Rail Line, agricultural land, and the Village of Glenvil, Nebraska. The west side of the property is bordered by agricultural land. On the north and east side of the property are excess storage bunkers. These bunkers are used for farm storage and hog confinement and the land surrounding these bunkers is used for grazing and farming.

Figure 3-1. CATS Vicinity Map

Figure 3-2. CATS Site Location Map

Figure 3-3. CATS-M Vicinity Map

Figure 3-4. CATS-M Site Location Map

659 Figure 3-5. GTS Vicinity Map

Figure 3-6. GTS Site Location Map

3.1.4 Greenlief Training Site - Silver Creek (GTS-SC)

GTS-SC is located in the southeast corner of Nance County, approximately four miles (6.44 km) northwest of Silver Creek, Nebraska (Figures 3-7 and 3-8). The installation has a total of 375 acres. Currently, no established cantonment area exists at the installation.

GTS-SC is in Township 16 North Range 4 West, Section 24 and is surrounded by a barbed-wire fence with a livestock foot gate across the asphalt drive entrance. The abandoned operation's building is in the center of the parcel. This building was built above ground and covered with soil. The antenna for the communications facility was built on top of the operations building, and diesel generators and a small electrical substation were built on the north side of the mound near the entrance to the operations building. GTS-SC on all sides by pastureland with S 550th St to the north and Prairie Creek to the south.

3.2 INSTALLATION HISTORY

3.2.1 CATS

NEARNG began holding annual encampments on the banks of the Platte River in 1908. The oldest permanent NEARNG Facility in Nebraska, this installation was the focus of Nebraska National Guard activities from 1908 up until the end of World War II (Larson-Tibesar 1992a). In 1916 the federal government purchased 122 acres near Ashland, Nebraska to train Nebraska Militiamen for active wartime duty. By the end of 1917, additional land had been purchased and the installation consisted of 797 acres and was primarily used as a rifle range training facility.

Major General Herbert J. Paul, serving as Adjutant General from 1919 to 1939, actively sought to make the installation a permanent facility. During these inter-war times, an increase in federal funding for the development of National Guard facilities allowed for the purchase of an additional 62 acres. The construction of many structures helped make this installation a permanent training facility. Proximity to the Platte River resulted in flooding and other associated problems. Federal funding in 1924 permitted the construction of a levee along the river, target houses, and semi-permanent kitchen and hospital facilities. In 1925 and 1926 construction of more buildings and facilities along the levee (now buildings 51 to 58) occurred. Most of these structures still exist today as originally constructed and still serve their original functions. Construction continued into the next decade as the installation fulfilled its role as an army training facility and rifle range (Larson- Tibesar 1992a).

The years 1940 to 1942 saw very little activity at the installation. From 1943 to 1945 the Army Air Corps Technical Training Command and state militia used the facility. The end of the 1940s through the late 1950s was a period of reorganization of the National Guard. The 1950s was a "decade of building" and facility improvement. The rifle range was renovated and expanded. The old mess halls were converted into academic halls and sleeping quarters. On 12 November 1954, the City of Lincoln obtained an easement on the installation to allow for the construction of water wells, collector pipes, and power lines. In 1957 the Officer Candidate School was created at the installation. Construction in 1958 included the H. J. Paul Army Airfield with two grass runways, a hangar, and a control tower. Additional remodeling to several buildings and a vehicle compound were added by 1960. From the 1970s to the early 1990s little alterations

Figure 3-7. GTS-SC Vicinity Map

Figure 3-8. GTS-SC Site Location Map

were made to the installation. During the 1990s, several buildings were constructed, expanded, or renovated to accommodate the new NGB courses and to improve the overall infrastructure. Following a flood in 2019, several buildings in the cantonment area were renovated as was the levee bordering the Platte River. Apart from these building renovation/expansion projects and the water crossing and levee project, there has been few alterations to the installation from 2000 to present.

3.2.2 CATS-M

Settlement of the area took place primarily in the late 1860s with the acquisition of homesteads through the Homestead Act of 1862 or the purchase of railroad lands (Larson-Tibesar Associates Inc. 1992a and 1992b). In 1942, the DoD acquired the installation for the Naval Ordnance Plant (NOP) and the Nebraska Defenses Corporation operated it until 1945 (Woodward-Clyde Consultants 1996; Commodore Advanced Sciences Inc 1998). The central location and the direct access to railroad lines made the NOP a principal location for the production of ammunition during World War II. The plant produced approximately three million bombs and boosters at four load lines and the Bomb Assembly Area (Hartman 1994; Woodward-Clyde Consultants 1996). NOP production operations ended in 1945 and the installation was placed on an inactive status. From 1945 to 1949, the Army utilized the NOP to store, rework and dispose of bulk explosives and ammunitions (Woodward- Clyde Consultants 1996).

The NOP reactivated in 1950 for the temporary production of bombs, shells, rockets, warheads, block cast Trinitrotoluene (TNT), and supplementary charges and boosters for use in the Korean Conflict. In 1956, the Army placed the NOP on standby status and declared it excess property. After this status was established, private institutions and individuals purchased approximately 10,200 acres of the land. The DoD retained the remaining portions of the land (Woodward-Clyde Consultants 1996).

In the early 1960s, the area transferred to the United States Air Force (USAF) and developed into an Atlas Missile Site. The installation included missile launchers, ammunition bunkers and the guided missile field maintenance shop (Commodore Advanced Sciences Inc 1998).

In March of 1965, the property transferred from the USAF to the NEARNG. From that time on, the NEARNG has used the installation for training. The ICRMP contains a detailed history of the facilities at CATS-M.

3.2.3 GTS

In the late 1930s President Roosevelt and several of the country's top civilian and military leaders foresaw impending U.S. involvement in war. This foresight was affirmed with the beginning of hostilities in Europe in September 1939 and led to a declaration of a "state of limited emergency" by President Roosevelt on 8 September 1939. An EO was given for the immediate bolstering of the armed forces and an increase in the production of war materials. As part of its response to this order, the U.S. Navy began expanding its existing naval ammunition depots in 1940. The U.S. became involved in the war and by early 1942 it was clear that the existing storage facilities were being taxed. Road and rail links to and from existing Naval depots on the coasts were impeding the gains made by the expansion of the existing facilities.

To alleviate the strain on coastal ordnance storage facilities, two identical "continental depots" were constructed, one in McAlester, Oklahoma and the other in Hastings, Nebraska. The two sites had the benefit of similar geography, which allowed for the development and use of a single engineering and design plan, saving time and money during design and construction.

The design of the McAlester and Hastings depots called for the construction of 707 magazines, 70 storage buildings, 2 large-caliber and 2 medium-caliber loading plants, and a two-line bomb and mine-filling plant (Penny 1992). Approximately 76 square miles (196.8 square km) near the town of Hastings were appropriated from local farmers by the right of eminent domain and construction started immediately on what was to become known as one of the two "mid-continental depots". The first phase was completed in nine months and, after a period of tooling and training of personnel; the first bomb was loaded on 4 July 1943. The depot ran at full capacity until the end of the war, and the filling plant and storage depot were supplemented by the construction of two 20-milimeter (mm) fillings houses constructed in late 1942 to meet the demands of a changing war.

In late 1943, the Navy's depots nationwide shifted emphasis from storage to production. As a result, two 40-mm shell plants, two 20-mm shell plants, and two medium caliber case filling plants were constructed at the Hastings Naval Ammunition Depot in late 1943. The Depot underwent additional improvements in 1943 that included the construction of 333 additional storehouses, 30 inert materials storehouses, ignition filling and quilting houses, one rocket motor filling plant, bag sewing buildings, barracks, and auxiliary service buildings. In 1944 the facilities for the loading of TNT were retooled for loading with amatol (Penny 1992).

Over 13 million cubic yards of concrete were poured as part of the initial construction and, by the end of the war, more than 15,000 structures, 227 miles of highway, and 115 miles of railroads had been built at the Hastings Depot. After the war, activity at the depot dropped significantly. However, the Depot became active again during the Korean Conflict, when employment rose to 3,000 (in 1951) from an all-time low of 190 in 1949. At the end of the Korean Conflict, activity at the plant dropped off drastically again and the Navy began selling off portions of the Depot in 1959; by 1967 the Depot was officially closed.

The NEARNG Hastings Training Site was officially renamed the Francis S. Greenlief National Guard Training Site in March 2000. The new name represents a memorial to Lieutenant General (LTG) (NE) Francis S. Greenlief, a Hastings native, who served nearly half of his extensive military career with National Guard units assigned to Nebraska. In July of 1940, Francis Greenlief enlisted in Company G 134th Infantry Regiment in Hastings, Nebraska. He subsequently mobilized with the 35th Division for World War II. He was wounded four times while fighting in the Normandy, Northern France, Rhineland, and Ardennes Campaigns. Greenlief was released from active duty in January 1946 and returned to Hastings, where he served with the NEARNG until being ordered to active duty in Washington, D.C. He served in a number of high-level positions with the NGB and on 1 September 1971 Major General Greenlief was sworn into office as Chief of the NGB. He retired on 1 July 1974. After his retirement, he continued to be a strong supporter of the National Guard. LTG (NE) Greenlief died on 19 December 1999.

3.2.4 GTS-SC

The Strategic Air Command (SAC) of the USAF acquired the 375-acre GTS-SC on 26 May 1965, to be used as an antenna site. After acquiring the installation, SAC constructed a 1,240-foot antenna and associated ancillary facilities on the installation. The ancillary facilities included an underground bunker, diesel generators, parking areas, storage areas, electrical, water, sewer, and telephone systems, and personnel housing. Offutt Air Force Base (AFB) operated this installation as a communication facility from late 1967 through June 1995. With the closing of SAC at Offutt AFB in 1992, the communication facility was no longer needed by the USAF, and the installation was deactivated. The antenna was removed, and the operation's building (an aboveground bunker) was sealed onsite. All other buildings were abandoned onsite.

During the deactivation process, six underground storage tanks were excavated and removed in 1995. Four of the tanks were 25,000-gallon, single-wall steel tanks and previously contained diesel fuel. The other two tanks were 750-gallon, single-wall steel tanks, containing new and used oil. Twenty-three soil samples were collected from below the fuel lines after all piping was removed on 27 and 28 July 1995 and analyzed for total recoverable petroleum hydrocarbons (TRPH). Results showed concentrations of TRPH from below the reporting limit of 20.0 parts per million (ppm) to 627 ppm. These results suggest a petroleum release may have occurred at that time. However, further investigation did not indicate the presence of soil or groundwater contamination. The Nebraska Department of Environment and Energy (NDEE) in 2000 determined that remediation would not be required at GTS-SC (UG# 030896-NM-0830).

In addition, as part of the deactivation process, the USAF removed the antenna, removed and abated all asbestos from the buildings, and cleaned up lead from an ad-hoc small arms range. GTS-SC was declared "excess property" by the Air Force in May of 1998. In support of this action, Offutt AFB prepared an environmental assessment entitled Environmental Assessment for the Declaration of Excess for Silver Creek Facilities and an Environmental Baseline Survey Report for the Declaration of Excess for Silver Creek Facilities. In 2012, the USAF transferred the property to the NEARNG.

3.3 MILITARY MISSIONS

The NEARNG has three primary, interrelated missions (federal, state, and community):

- **Federal -** to command and control ARNG units within the state and to provide a trained and equipped force capable of immediate expansion to war strength that is available for service in times of war, peacetime operations, or national emergency.
- **State -** to provide command and control to civil authorities when required; to aid civil authorities in the protection of life and property; and to preserve peace, order, and public safety under the direction of the governor.
- **Community -** to be an active participant in domestic concerns through local, regional, and statewide initiatives and programs.

When called upon by the Governor, through the State mission, the NEARNG supports civil authorities in the protection of property and the preservation of life, peace, order, and public safety. When called upon by the President, through the federal mission, the NEARNG provides

highly trained, well-equipped personnel and units available to assist in times of war or national emergency.

3.3.1 CATS

Much of the training conducted at CATS is orientated around basic soldiering skills for dismounted troops. This includes, but is not limited to, basic combat team maneuvers, land navigation (map and compass training), and field training exercises. Complementary to the maneuver and field training, bivouac sites are erected throughout CATS for various bodies of troops. These sites are established throughout the camp as needed and their size can vary substantially. Live fire small arms training and qualification historically existed at CATS. However, these ranges are currently inactive.

3.3.2 CATS-M

CATS-M has two training areas, CATS-M and the UTES #2. The CATS-M provides an area for squad/platoon/company-sized units' field training exercises (FTX), driver's training, land navigation courses, and a tactical training area for NEARNG aviation assets. The UTES provides wheel and track vehicle maintenance; logistical support; maintenance training; wheel/track vehicle parking; petroleum, oil, and lubricant (POL) storage; and storage facilities. Most of the training conducted at the MTA is orientated around combat service support unit maneuver training.

Training activities at CATS-M include wheeled/tracked vehicle tactical maneuvers, Military Operations Urbanized Terrain (MOUT) operations, UTES for maintenance training, dismounted day/night land navigation, helicopter training area, individual and collective task training/testing, and communications operations.

3.3.3 GTS

Much of the training conducted at GTS is orientated around weapons qualification and basic soldiering skills for dismounted troops, with some tactical training for NEARNG aviation assets. This includes, but is not limited to, weapons firing, individual soldier’s training, basic combat team maneuvers, land navigation (map and compass training), and field craft. GTS is regularly used for live firearms training and qualification. These ranges are currently active. Access-controlled fans and buffer zones are also required for safety. Helicopter training also occurs on the Installation. Complementary to the maneuvering and field craft training, bivouac sites are erected throughout GTS for various bodies of troops. These sites are established throughout the camp as needed and their size can vary substantially. Bivouac site requirements depend on the unit size, type of training being conducted, and the degree of realism desired by the training staff.

3.3.4 GTS-SC

GTS-SC is currently used as a remote facility to train troops for mobilization by helicopter and/or vehicle. This training includes helicopter landing, unloading/loading, and take-off zones; and off-road vehicle navigation, maintenance, and fueling training.

4. PHYSICAL ENVIRONMENT

4.1 CLIMATE

4.1.1 CATS

Ashland, Nebraska climate is warm during summer when average temperatures tend to be in the 70's and very cold during winter when temperatures tend to be in the 20's. The warmest month of the year is July with an average maximum temperature of 89 degrees Fahrenheit, while the coldest month of the year is January with an average minimum temperature of 13 degrees Fahrenheit. Temperature variations between night and day tend to be moderate during summer with a difference that can reach 27 degrees Fahrenheit, and moderate during winter with an average difference of 23 degrees Fahrenheit (US Climate Data 2021).

The annual average precipitation at Ashland is 30.88 inches. Rainfall is fairly evenly distributed throughout the year. The wettest month of the year is May with an average rainfall of approximately 4.80 inches and the driest month is January 0.78 inches of precipitation (US Climate Data 2021).

4.1.2 CATS-M

Mead, Nebraska climate is warm during summer when temperatures tend to be in the 70's and very cold during winter when temperatures tend to be in the 20's. The warmest month of the year is July with an average maximum temperature of 87 degrees Fahrenheit, while the coldest month of the year is January with an average minimum temperature of 12 degrees Fahrenheit. Temperature variations between night and day tend to be moderate during summer with a difference that can reach 23 degrees Fahrenheit, and moderate during winter with an average difference of 21 degrees Fahrenheit (US Climate Data 2021b).

The annual average precipitation at Mead is 29.39 Inches. Rainfall is fairly evenly distributed throughout the year. The wettest month of the year is June with an average rainfall of 4.55 inches and the driest month is January averaging 0.57 inches of precipitation (US Climate Data 2021b).

4.1.3 GTS

Hastings, Nebraska climate is warm during summer when temperatures tend to be in the 70's and very cold during winter when temperatures tend to be in the 20's. The warmest month of the year is July with an average maximum temperature of 87 degrees Fahrenheit, while the coldest month of the year is January with an average minimum temperature of 14 degrees Fahrenheit. Temperature variations between night and day tend to be moderate during summer with a difference that can reach 26 degrees Fahrenheit, and moderate during winter with an average difference of 22 degrees Fahrenheit (US Climate Data 2021c).

The annual average precipitation at Hastings is 27.99 inches. Rainfall is fairly evenly distributed throughout the year. The wettest month of the year is May with an average rainfall of 4.61 inches and the driest month is January averaging 0.58 inches of precipitation (US Climate Data 2021c).

4.1.4 GTS-SC

Genoa, Nebraska climate is warm during summer when temperatures tend to be in the 70's and very cold during winter when temperatures tend to be in the 20's. The warmest month of the year is July with an average maximum temperature of 86 degrees Fahrenheit, while the coldest month of the year is January with an average minimum temperature of 13 degrees Fahrenheit. Temperature variations between night and day tend to be moderate during summer with a difference that can reach 26 degrees Fahrenheit, and moderate during winter with an average difference of 23 degrees Fahrenheit (US Climate Data 2021d).

The annual average precipitation at Genoa is 28.82 Inches. Rainfall is fairly evenly distributed throughout the year. The wettest month of the year is June with an average rainfall of 4.68 Inches and the driest month is January averaging 0.60 inches in January (US Climate Data 2021d).

4.2 LANDFORMS

4.2.1 CATS

CATS lies within two different physiographic regions. One of the regions that CATS is in is called the “Valleys” which is characterized by flat land consisting of stream-deposited silt, clay, sand, and gravel materials found along major streams (CSD 1973). The other regions that CATS is located within are the Glaciated and Loess Plains Regions. The majority of CATS is located on land composed of alluvial deposits and unconsolidated glacial till (NEARNG 1993; United States Army Corps of Engineers [USACE] 1985).

The watershed used for the installation and the surrounding area is the Lower Platte River Basin. The Lower Platte River Basin reaches a maximum of 1,075 ft above sea level. CATS maintains flood prevention by use of levees and sand ridges constructed on the east side of the Platte River. Topographic map for CATS shown in Figure 4-1.

4.2.2 CATS-M

CATS-M lies within the Glaciated and Loess Plains Regions of the Great Plains (Doering and McFaul 1991; NEARNG 1993). It is located on a terrace that used to be a former channel of the Platte River known as Todd Valley. The terrace is approximately 6-8 miles wide, 30 miles long, and about 50 ft above river level. Topographic map for CATS-M shown in Figure 4-2.

4.2.3 GTS

GTS is located on flat upland areas in the “Plains” classification of Nebraska topographic region. The land is composed of sandstone or stream-deposited silt, clay, sand, and gravel that is covered by wind-deposited silt (CSD 1973). GTS is located on a gently sloping upland plain with low to moderate local relief. Topographic map for GTS shown in Figure 4-3.

935 Figure 4-1. CATS Topographic Map

936 Figure 4-2. CATS-M Topographic Map

937 Figure 4-3. GTS Topographic Map

4.2.4 GTS-SC

GTS-SC is located in the "Valleys" region, characterized by flat land consisting of stream-deposited silt, clay, sand, and gravel materials found along major streams. Directly east of the installation is an isolated "Sand Hill" topographic region characterized as low to high dunes of sand stabilized by grass cover. The dunes are mantle stream-deposited silt, sand, and gravel, and sandstone. While GTS-SC does not fall within the Sand Hill region, it contains many similar properties (CSD 1973). Topographic map for GTS-SC shown in Figure 4-4.

4.3 GEOLOGY AND SOILS

4.3.1 CATS

Saunders and Sarpy County, the location of CATS, were described by the USDA Soil Conservation Service (SCS) in 1965 and 1975 respectively (USDA SCS 1965; USDA SCS 1975). These counties are dominated by Inglewood loamy fine sand, Lex loam, Platte fine sandy loam, silty clay, and loamy fine sand. The land CATS is located on is primarily made up of Lex loam which, after being drained, is rated Prime Farmland. A soils map for CATS is shown in Figure 4-5.

Inglewood loamy fine sands are very deep, moderately well drained soils formed in sandy alluvium on flood plains. They are rarely flooded, moderately well drained and have rapid permeability and very low surface runoff. Depth to the seasonal high-water table ranges from 3 ft (0.91 m) in wet years to about 6 ft (1.83 m) in dry years.

Lex loams consist of very deep, somewhat poorly drained soils on flood plains, formed in 20 to 40 inches (50.8 to 101.6 cm) of loamy alluvium deposited over coarse sand or gravelly sand. Permeability is moderate to moderately slow in the surface layers and very rapid in the substratum. Slopes range from 0 to 2 % and runoff is slow. The seasonal high water table ranges from 1 to 3 ft (0.3 to 0.91 m) and is highest during winter and early spring. During midsummer it commonly recedes to 3 to 6 ft (0.91 to 1.83 m). Flooding is rare or occasional.

Platte fine sandy loams are shallow soils formed in sandy and loamy alluvium deposited over coarse sand or gravelly sand on river valley flood plains. Slopes range from 0 to 3 % and depth to the seasonal high water table is 1 to 3 ft (0.3 to 0.91 m). The water table is highest in the winter and early spring and usually recedes to depths of 4 ft (1.22 m) or more by late summer.

These soils are somewhat poorly drained, with slow runoff and moderate permeability; they may occasionally flood.

Platte soils are formed in old, abandoned river channels and low bottomlands adjacent to the Platte River. Surface layer texture ranges from silty clay to loamy fine sand over a mixed coarse sand and gravel layer. Runoff is slow and flooding is the main hazard. The water table is at its highest level in winter and early in spring. During the summer, however, the water table can drop to a depth of 60 inches (152.4 cm).

975 Figure 4-4. GTS-SC Topographic Map

976 Figure 4-5. CATS Soils Map

4.3.2 CATS-M

Soils in Saunders County were described by the Soil Conservation Service in 1965 (USDA SCS 1965). While the most dominant soils in Saunders County are Silt loams and silty clay loams, the soils the predominately make up CATS-M are Tomek silt loam, Yutan silty clay loam, and Filbert silt loam. Tomek silt loam and Yutan silty clay loam are rated Prime Farmland soils as is and Filbert silt loam is also rated Prime Farmland once it has been drained. A soils map for CATS-M is shown in Figure 4-6.

The Tomek series consists of very deep, well-drained, moderately slowly permeable silt loam soils found on loess-capped stream terraces. Sandy materials at depths of 6 to 20 ft (1.8 to 6.1 m) underlie this soil in most areas.

The Yutan series consists of very deep, well-drained, moderately slowly permeable silty clay loam soils on uplands and in valleys. These soils formed in loess and are located on convex shoulders, back slopes, and narrow summits of uplands and high stream terraces.

The Filbert series consists of very deep, somewhat poorly drained, very slowly permeable silt loam soils formed in loess. They are located in open depressions on stream terraces on 0 to 1 percent slopes and have slow runoff.

4.3.3 GTS

Soils in Adams and Clay County were described by USDA SCS in 1974 and 1981, respectively (USDA SCS 1974; USDA SCS 1981). According to the surveys conducted by the SCS, GTS consists of 12 different soil types, with the majority being tilt loams (~88%) and the rest being silty clay loams (~12%). Almost all of the soils on GTS have been identified as Prime Farmland by the Natural Resources Conservation Service (NRCS 1996). A soils map for GTS is shown in Figure 4-7.

All the soil units, with the exception of the silty clay loams, occur on nearly level land and are deep and moderately well to well drained. They have slow to moderately slow permeability and high water-holding capacity. Erosion potential is low. Soils of these types are most suited to agricultural purposes – they are easily to work and well suited to irrigation.

4.3.4 GTS-SC

The general geologic setting of the area includes the fine eolian sand and coarser alluvial sands and gravels of the Platte River overlying the chalk bedrock of the Cretaceous Age Niobrara Formation. The surface sands are very loose and light brown. A soils map for GTS-SC is shown in Figure 4-8.

Soils in Nance County were described by USDA SCS in 1960 (USDA SCS 1960). GTS-SC is categorized as Sandy Uplands with deep sandy soils that have developed on eolian sand blown from streams bottoms. The fine sands are vulnerable to wind erosion and blowout development if not vegetated.

Figure 4-6. CATS-M Soils Map

Figure 4-7. GTS Soils Map

Figure 4-8. GTS-SC Soils Map

At GTS-SC soils are primarily loamy fine sands of various slopes with the following soil series present:

- Els loamy fine sand, 0 to 3 percent slopes at 26.3 percent of project area
- Ipage loamy fine sand, 0 to 3 percent slopes at 35.7 percent of project area
- Thurman loamy fine sand, 1 to 3 percent slopes at 23.7 percent of project area.

These three-soil series make up 85 percent of the project area. Other soils accounting for 15 percent of the installation include: Valentine fine sand, 3 to 17 percent slopes, eroded; Meadin loamy fine sand, 0 to 2 percent slopes; Elsmere loamy fine sand, 0 to 3 percent slopes; and Boel loamy fine sand, occasionally flooded. Of the three main soils present, all are classified as partially hydric soils. The other soils are either partially hydric or not hydric (Natural Resources Conservation Service [NRCS] 2012).

4.4 HYDROLOGY

4.4.1 Surface Water

Nebraska's surface water generally drains eastward from higher elevation in the western part of the state. There are thirteen major river basins in Nebraska and all surface water in Nebraska eventually drains into the Missouri River.

4.4.1.1 CATS

CATS is located along the west side of the Platte River. The Platte River is the closest large body of surface water in close proximity to CATS. Salt Creek is the other body of water that runs closest to the installation. Salt Creek is located approximately one mile north of the installation (Figure 4-9).

CATS has the Platte River floodplain running through the middle of the installation and in 1967 the USACE built a low levee along the river. This levee was built to try to protect the buildings on the installation during floods since the installation is located directly along the river and was reconstructed following a large flood in 2019. The levee was reinforced in 2021. Platte River flooding is common in late winter and early spring due to ice jams that obstruct the flow of river water past the installation.

Following the 2019 flood, buildings that were affected by the flood were demolished and consolidated into the CATS Rebuild Military Construction (MILCON). As a part of this MILCON, all new and reconstructed structures were built on stilts with the lowest finished floor elevated 1 ft. above the base flood elevation (BFE). Keeping these buildings above the BFE will ensure that these structures will remain intact and available to support the military mission in the event of another 100-year flood. All structures that were unaffected by the flood were deemed unnecessary to put on stilts and left unchanged due to their higher elevation.

There are five different wetland types located on the installation totaling approximately 15.83 acres. The majority of the wetlands are located within the Platte River floodplain. This is due to

the topographic depressions that collect and hold water for long periods of time during the growing and rainy seasons.

4.4.1.2 CATS-M

CATS-M has three main surface waterbodies near or on the installation property and is also located in the Salt Watershed (Figure 4-10). The Platte River is located five miles east of CATS-M. There is also a creek, Johnson Creek, that runs directly through the installation and eventually drains into Johnson Creek Reservoir. Johnson Creek Reservoir is located one mile southeast of the installation.

Figure 4-9. CATS Surface Water Features

Figure 4-10. CATS-M Surface Water Features

Approximately 21.03 acres of wetland are present at CATS-M, they are primarily located in areas of depressed topography as well as places where ponding or sub-surface saturation is occurring. The most prevalent classification of wetland found on-site was palustrine emergent (PEM). This category includes areas such as marshes and wet meadows.

4.4.1.3 GTS

GTS lacks many surface water resources (Figure 4-11). The installation is located in the northern part of the Little Blue River drainage basin that provides the headwaters of the Big Sandy Creek. There are multiple drainages that cross the installation at intermittent locations originating within a quarter mile from the installation. These drainages are almost completely reliant on precipitation to have any stream flow.

Approximately 21.43 acres of wetland is present at GTS. The most prevalent classification of wetland was PEM. The majority of wetlands identified were located in areas of depressed topography and swales in the landscape.

4.4.1.4 GTS-SC

GTS-SC is located in the Middle Platte River basin and does not contain significant amounts of surface water resources (Figure 4-12). GTS-SC has two main sources of surface water resource. The first is Prairie Creek which runs approximately 200 yards south of the installation. Prairie Creek is also the main stormwater catchment for GTS-SC. The other source of surface water is the wetlands that are located on the installation.

There are 18 pockets of wetlands that have been identified at GTS-SC during a preliminary wetland assessment that was conducted on-site, totaling approximately 61.03 acres.

4.4.2 Groundwater

4.4.2.1 CATS

CATS is located within the Southeastern Nebraska Glacial Drift groundwater region. Groundwater in this region can range from 50 to 200 feet depending on topographic elevation, irrigation, and precipitation levels (CSD 1998). The average depth for the Southeastern Nebraska Glacial Drift is approximately 79 feet with the quality being good to excellent (NEARNG 1993).

There are two aquifers located under CATS (the paleovalley alluvial aquifer and the Dakota aquifer). The shallowest aquifer is the paleovalley aquifer which ranges in thickness from approximately 50-100 feet. The Dakota aquifer is interconnected to the paleovalley aquifer and ranges in thickness from 50-500 feet. Water from these interconnected aquifers is used for irrigation, industrial, commercial, domestic, and public water supplies (Environmental Resources Management, Inc. 1998).

CATS has two shallow groundwater wells that have a capacity of 144,000 gallons per day. These wells are untreated, as the water coming from them meets all state and federal water quality standards. These wells serve at least 25 individuals for at least six months of the year.

Figure 4-11. GTS Surface Water Features

Figure 4-12. GTS-SC Surface Water Features

CATS also has thirty other wells that serve other purposes and are divided into different classes (monitoring wells, City of Lincoln Wells, water supply wells, and well pump wells) (NEARNG 1993).

4.4.2.2 CATS-M

CATS-M is located within the Southeastern Nebraska Glacial Drift groundwater region. Groundwater in this region can range from 50 to 200 feet depending on topographic elevation, irrigation, and precipitation levels (CSD 1998). The average depth for the Southeastern Nebraska Glacial Drift is approximately 79 feet with the quality being good to excellent (Commodore Advanced Sciences 1998).

The primary groundwater resources at CATS-M come from groundwater wells, storage, and a cast iron pipe distribution system supplied by the ARDC and constructed in 1942 which is still used today. CATS-M also has 18 monitoring wells located on the installation which are managed and monitored by USACE Kansas City District, a wastewater treatment system, and a septic system (Master Plan 1995). An environmental concern associated with CATS-M is contaminated soil and groundwater. The plume extends southeast from the installation and originates from the former Nebraska Ordnance Plant and Atlas Missile operations.

4.4.2.3 GTS

The primary aquifer that GTS is located on is the Pleistocene sands and gravels. The aquifer is under constant stress from constant industrial and municipal well pumping and also major irrigation well use during the summer months. Ground water level is usually found around 100-150 feet depending on topography, irrigation, and precipitation. Ground water level is also usually found to be significantly higher the closer you are to major drainages (HWS 1996).

Contaminants have been discovered that were left over from a previous NAD. This has caused GTS to become involved in several EPA hazardous waste investigations. Toxins found at a Superfund site located west of GTS have migrated in the groundwater onto GTS property. There are also other neighboring properties that have been found to have contaminants from the former NAD site (HWS 1996).

The current groundwater that is pumped from GTS groundwater is of the calcium bicarbonate type which attributes to the “hardness” of the water. Because of the quality and quantity of the water being pumped from the installation, it is used for most types of well pumping including domestic, municipal, industrial, and irrigation (HWS 1996). In 2021 the drinking water on the installation was tested and high levels of nitrates were detected. A reverse osmosis filtration system was installed to mitigate these concentrations.

4.4.2.4 GTS-SC

The primary aquifer GTS-SC is located on bedrock of the Niobrara Formation (Groundwater Atlas of Nebraska 1986). The depth of the groundwater is approximately 10 feet below the surface. The thickness of the aquifer is approximately 100 feet. Generally, the flow of groundwater is southeast towards the Platte River (WCFS 1998).

5. ECOSYSTEMS AND THE BIOTIC ENVIRONMENT

5.1 VEGETATION

5.1.1 Historic Vegetative Cover

5.1.1.1 CATS

Before the area that the current installation is on was tampered with, grasslands dominated the landscape. Sod-forming grasses and bunchgrasses were found throughout most of the uplands and in large river valleys. The valleys supported tallgrass prairies of big bluestem (*Andropogon gerardii*), Indiangrass (*Sorghastrum nutans*), porcupinegrass (*Hesperostipa spartea*), switchgrass (*Panicum virgatum*), and prairie dropseed (*Sporobolus heterolepis*), as well as sedges (*Carex* spp.) and lowland grasses such as Canada wildrye (*Elymus canadensis*) and prairie cordgrass (*Spartina pectinata*). Little bluestem (*Schizachyrium scoparium*) was also common in the area but mostly found in dryer locations. This area was also known for periodically burning which would help maintain species diversity.

Forested areas were more limited due to the frequent prairie fires which would restrict growth. Forested areas in flood plain areas where also limited due to the floods that would continually replace the riparian areas. Due to the amount of prairie wildfires and floods Riparian Deciduous Forest was the dominant forest community in the area.

5.1.1.2 CATS-M

Before the area that the current installation is on was tampered with, grasslands dominated the landscape. Sod-forming grasses and bunchgrasses were found throughout most of the uplands and in large river valleys. The valleys supported tallgrass prairies of big bluestem, Indiangrass, porcupinegrass, switchgrass, and prairie dropseed, as well as sedges and lowland grasses such as Canada wildrye and prairie cordgrass. Little bluestem was also common in the area but mostly found in dryer locations. This area was also known for periodically burning which would help maintain species diversity.

Forested areas were more limited due to the frequent prairie fires which would restrict growth. Forested areas in flood plain areas where also limited due to the floods that would continually replace the riparian areas. Due to the amount of prairie wildfires and floods Riparian Deciduous Forest was the dominant forest community in the area.

5.1.1.3 GTS

Before the area that the current installation is on was tampered with, grasslands dominated the landscape. Mixed grass prairies, with tall grass prairies to the east and short grass prairies to the west, were the dominant plant communities found in the area GTS is currently on. Tall grass prairies tend to dominate moister sites while shortgrass prairies dominate drier areas. Prominent species included big bluestem, little bluestem, blue grama (*Bouteloua gracilis*), sideoats grama *(Bouteloua curtipendula*), buffalograss (*Bouteloua dactyloides*), green needlegrass (*Nassella viridula*), porcupinegrass, Junegrass (*Koeleria macrantha*), needle-and-thread grass (*Hesperostipa comata*), plains muhly (*Muhlenbergia cuspidata*), purple three-awn (*Aristida*

purpurea), rough dropseed (*Sporobolus clandestinus*), and western wheatgrass (*Pascopyrum smithii*). Major forbs included several locoweeds (*Astragalus* spp. and *Oxytropis* spp.), milkvetches (*Astragalus* spp.), prairie coneflower (*Ratibida columnifera*), prickly-pear cactus (*Opuntia macrorhiza*), and yucca (*Yucca glauca*) on well- drained soils.

5.1.1.4 GTS-SC

Before the area that the current installation is on was tampered with, grasslands dominated the landscape. Mixed grass prairies, with tall grass prairies to the east and short grass prairies to the west, were the dominant plant communities found in the area GTS-SC is currently on. Tall grass prairies tend to dominate moister sites while shortgrass prairies dominate drier areas. Prominent species included big bluestem, little bluestem, switchgrass, and Indiangrass. Lower floodplain valleys were dominated by needle-and-thread grass, prairie sandreed (*Calamovilfa longifolia*), little bluestem, and blue grama.

5.1.2 Current Vegetative Cover

Most training land in Nebraska that used to be dominated by grassland has been plowed up and converted for other uses. The majority of Nebraska that used to be known for its rolling hills and tall and short-grassland areas has been converted into cropland or has been heavily grazed as rangeland and no longer represents the vegetative communities that used to dominate the area. The few areas where you will still be able to find historic native vegetative communities are areas of steep topography, along streams and wetlands, land unsuitable for agriculture, and on nature reserves.

5.1.2.1 CATS

At CATS the previous area known for tallgrass prairie has been converted due to haying and mowing and the introduction of smooth brome (*Bromus inermis*) and Kentucky bluegrass (*Poa pratensis*). Kentucky bluegrass and smooth brome are the prominent species found on the installation as well as buffalograss and several bristlegrass species (*Setaria* spp.). Areas with little grass are dominated by weedy forbs such as dandelion (*Taraxacum officinale*), common yellow woodsorrel (*Oxalis stricta*), and curly dock (*Rumex crispus*). Some of the noxious weeds that can be found in the area include Canada thistle (*Cirsium arvense*), diffuse and spotted knapweed (*Centaurea diffusa* and *C. stoebe*), leafy spurge (*Euphorbia esula*), musk thistle (*Carduus nutans*), common reed (*Phragmites australis*), plumeless thistle (*Carduus acanthoides*), and purple loosestrife (*Lythrum virgatum* and *L. salicaria*).

Forested areas are dominated primarily by eastern cottonwood (*Populus deltoides*), green ash (*Fraxinus pennsylvanica*), red mulberry (*Morus rubra*), honeylocust (*Gleditsia triacanthos*), eastern red cedar (*Juniperus virginiana*), and elms (*Ulmus* spp.). Other forest species found on the installation include northern catalpa (*Catalpa speciosa*), hackberry (*Celtis occidentalis*), silver maple (*Acer saccharinum*), willow (*Salix* spp.) and boxelder (*Acer negundo*).

Eastern cottonwood, silver maple, white mulberry (*Moris alba*), red mulberry, green ash, false indigo (*Amorpha fruticosa*), buttonbush (*Cephalanthus occidentalis*), redosier dogwood (*Cornus sericea*), water smartweed (*Polygonum amphibium*), reed canary grass (*Phalaris arundinacea*),

common reed, and prairie cordgrass dominate wetland areas within installation. Vegetative communities at CATS are shown in Figure 5-1.

CATS currently leases 114 acres of land on the west side of the installation for hay production. Agricultural outleasing management and goals for CATS are included in Section 7.11.1.

5.1.2.2 CATS-M

At CATS-M the previous area known for tallgrass prairie has been converted due to haying and mowing as well as the introduction of alfalfa (*Medicago sativa*). While smooth brome and alfalfa dominate most of the area at the installation, other weedy forbs can be found growing along field edges and also near roadsides. Some of the noxious weeds that can be found in the area include Canada thistle, diffuse and spotted knapweed, leafy spurge, musk thistle, common reed, plumeless thistle, and purple loosestrife. Most other areas at CATS-M are dominated by American elm (*Ulmus americana*) and/or Siberian elm (*Ulmus pumila*), with some green ash, red mulberry, honeylocust, and eastern cottonwood. Eastern cottonwoods dominate wooded wetland areas near the center of the installation. Wetland areas and areas with lower topography where ponding occurs are dominated by curly dock, perennial ryegrass (*Lolium perenne*), swamp smartweed (*Polygonum hydropiperoides*), eastern cottonwood, and American elm.

CATS-M currently leases 965 acres for hay production. Prairie restoration activities converting vegetation to native cover occurring at CATS-M are implemented as a part of the agricultural outleasing program in the form of conversion from alfalfa stands to native prairie grasses and forbs. Conversion of old alfalfa stands to native prairie grasses serves to provide habitat and forage for native species and a better adapted, higher functioning ecosystem that requires minimal maintenance. Information on the agricultural outleasing program at CATS-M, including management and goals can be found in Section 7.11.2.

Vegetative communities at CATS-M are shown in Figure 5-2.

5.1.2.3 GTS

The area that GTS is located on used to be known for its mixed-grass prairies. Today, most of that native mixed-grass area has been replaced by cropland and rangeland except for small areas that are located on steep topography. The introduction of smooth brome as well as years of haying and grazing have resulted in an area no longer considered mixed-grassland prairie. Most hayland is dominated with smooth brome as well as large areas of switchgrass and big bluestem. Most areas along roadsides and field edges are dominated by weedy species of forbs.

Windrows were planted at GTS from the 1940s to the 1960s. The dominant species making up these windrows include eastern red cedar, lilac (*Syringa* spp.), honey locust, black locust (*Robinia pseudoacacia*), green ash, and ponderosa pine (*Pinus ponderosa*). Some of the noxious weeds that can be found in the area include Canada thistle, diffuse and spotted knapweed, leafy spurge, musk thistle, plumeless thistle, and purple loosestrife.

Wetland areas or areas with depressed topography where pooling occurs are known to have cattails (*Typha* spp.), rushes (*Eleocharis* spp. and *Juncus* spp.), bulrushes (*Schoenoplectus* spp.), and sedges. Vegetative communities at GTS are shown in Figure 5-3.

GTS currently leases 2,640 acres for the production of hay. Agricultural outleasing management and goals can be found in Section 7.11.3.

5.1.2.4 GTS-SC

The land that GTS-SC is on used to be categorized as mixed-grass prairie but due to haying, mowing, and using for rangeland this area can no longer be defined as mixed-grass prairie. The species that dominate the area are switchgrass, big bluestem, little bluestem, and Scribner's panicum (*Dicanthelium oligosanthes*). Other areas such as wetland and areas that have depressed topography where pooling occurs are dominated by smartweed (*Polygonum* spp. and *Persicaria* spp.), cattails, rushes, bulrushes, sedges, and prairie cordgrass.

The noxious weed leafy spurge is also abundant throughout the installation. Vegetative communities at GTS-SC are shown in Figure 5-4.

GTS-SC traditionally leases 347 acres of land for haying, comprising the majority of the installation. However, due to high amounts of leafy spurge at the installation in 2019, the hay lease was ended with no plans for renewal.

1272 Figure 5-1. CATS Vegetative Communities

1273 Figure 5-2. CATS-M Vegetative Communities

Figure 5-3. GTS Vegetative Communities

Figure 5-4. GTS-SC Vegetative Communities

5.2 FISH AND WILDLIFE

5.2.1 Birds

Migratory birds are protected through International Treaties and the Migratory Bird Treaty Act. Federal regulations and EO 13186 provide the framework for regulation of migratory bird take and possession. Federal permits are required to take, possess, transport, and dispose of migratory birds, bird parts, feathers, nests, or eggs.

5.2.1.1 CATS

Migratory birds with the potential to inhabit CATS are listed in Appendix E. Several bird surveys were conducted at CATS over the last 20 years. Most recently, a migratory bird survey was conducted at CATS in the summer of 2021 (21 through 22 June) and recorded 44 bird species encompassing 405 individuals at 28 of the 42 previously designated survey points. The American robin (*Turdus migratorius),* detected at 22 of the 28 survey points, was the most widespread species. Avian use surveys were also conducted fall 2020 as well as spring and summer 2021. In these surveys a total of 110 species were detected (Olsson 2021a).

The NGPC has also conducted the "International Shorebird Survey-Lower Platte River" from April to October in 2000. In 2005, a bird inventory was performed at 30 survey locations within CATS, as part of a natural resources planning level survey. A total of 114 bird species were identified during the survey. Additionally, bald eagle (*Haliaeetus leucocephalus*), interior least tern (*Sternula antillarum athalassos*), and piping plover (*Charadrius melodus*) surveys are conducted annually to document nesting and any other presence activity. A comprehensive list of avian species is provided in Appendix E. See Section 5.3.1 CATS Threatened and Endangered Species and Species of Concern for more information on and a listing of protected species and species of concern.

5.2.1.2 CATS-M

Migratory birds with the potential to inhabit CATS-M are listed in Appendix A bird survey was conducted at CATS-M in the summer of 2021 (June 16 and 21)). This survey was conducted at 31 of 65 previously designated survey points, each consisting of 5-minute intervals. During the surveys, 37 unique bird species were identified, encompassing 328 individuals. Dickcissel (*Spiza Americana)* was the most commonly detected species. Avian use surveys were also conducted in the fall of 2020 as well as the spring and summer of 2021. In these surveys a total of 54 species were detected (Olsson 2021b). An avian point count survey was conducted at CATS-M in July and August 2000. A total of 27 bird species were detected from 5 surveys within the Study Area, each consisting of 15-minute intervals. A comprehensive list of avian species is provided in Appendix E. See Section 5.3.2 CATS-M Threatened and Endangered Species and Species of Concern for more information on and a listing of protected species and species of concern.

5.2.1.3 GTS

Migratory birds with the potential to inhabit GTS are listed in Appendix E. A bird survey was conducted at GTS in the summer of 2021 (29 through 30 June). The survey was conducted at 45 of 90 previously designated survey points. During the survey, 43 bird species were identified,

encompassing 522 individuals. The dickcissel (*Spiza americana)* was the most commonly detected species. An avian point count survey was conducted at GTS in the summer of 2000 (29 June and 29 August). A total of 27 bird species were detected from the 15-minute interval survey points within the Study Area. A comprehensive list of avian species is provided in Appendix F. See Section 5.3.3 GTS Threatened and Endangered Species and Species of Concern for more information on and a listing of protected species and species of concern. GTS-SC

Migratory birds with the potential to inhabit GTS-SC are listed in Appendix A bird survey was conducted at GTS-SC on 15 June 2021. A total of 18 bird species were detected from 11 of previously designated 25 survey points within the Study Area, encompassing 125 individuals. Western meadowlark (*Sturnella neglacta*) was the most commonly detected species. Avian use surveys were also conducted during fall 2020 as well as spring and summer of 2021. A total of 44 species were detected during these surveys (Olsson 2021c). Additionally, bald eagle and burrowing owl surveys are conducted annually to document nesting and any other presence activity. A comprehensive list of avian species is provided in Appendix E. See Section 5.3.4 GTS-SC Threatened and Endangered Species and Species of Concern for more information on and a listing of protected species and species of concern.

Burrowing Owl at GTS-SC
Photo credit: Julie Godberson, NEARNG

5.2.2 Mammals

5.2.2.1 CATS

In fall of 2020, and spring and summer of 2021, a total of 18 species were identified through visual encounters, otter surveys, acoustic bat monitoring, and bat emergence surveys as part of a fauna survey (Olsson 2021a). Nine different bat species were detected through acoustic monitoring during this survey. In 2005, a mammal inventory was performed at 30 survey locations within CATS, as part of a Natural Resources Planning Level Survey. Of 16 species of mammals identified at CATS, four were captured in live traps, one was found beneath an artificial cover board, and the remaining were seen during visual encounter surveys. The inventory was performed at 23 locations.

Monitoring efforts (in-house) through the use of trail cameras have captured mammal presence among other wildlife groups at CATS.

The targeted surveys along with observations made during site visits over many years of natural resource monitoring have yielded several records of mammal occurrences at CATS. A comprehensive list of mammals is provided in Appendix F. See Section 5.3.1 CATS Threatened and Endangered Species and Species of Concern for more information on and a listing of protected species and species of concern.

5.2.2.2 CATS-M

In the fall of 2020, and spring and summer of 2021, a mammal inventory was performed as part of a fauna survey (Olsson 2021b). During this inventory, 17 mammals were observed on the CATS-M installation. Acoustic bat monitoring surveys were conducted during 2020 and 2021 at CATS-M, seven bat species were detected during those surveys. A small mammal survey was conducted in the fall of 2000 (25 and 16 October). This survey was accomplished with the use of three rows of 25 Sherman live traps spaced approximately 8 ft apart. The traps were baited with rolled oats and peanut butter in the evening and checked the following morning. In 2005, a mammal inventory was performed within CATS-M, as part of a Natural Resources Planning Level Survey. The inventory was performed at 51 locations and resulted in 100 trap nights.

Monitoring efforts (in-house) through the use of trail cameras have captured mammal presence among other wildlife groups at CATS-M.

The targeted surveys along with observations made during site visits over many years of natural resource monitoring have yielded several records of mammal occurrences at CATS-M. A comprehensive list of mammals is provided in Appendix F. See Section 5.3.2 CATS-M Threatened and Endangered Species and Species of Concern for more information on and a listing of protected species and species of concern.

5.2.2.3 GTS

Acoustic bat monitoring surveys were conducted during 2016 and 2017 at GTS, six bat species were detected during the 2016 efforts. In 2005, a mammal inventory was performed within GTS, as part of a Natural Resources Planning Level Survey. Fifty small mammal traps were set on two evenings for a total of 100 trap nights. Locations of traps can be broken down as follows: 50 traps were set along two different wind breaks; 25 traps were set along the banks of Big Sandy Creek at the northwest corner of the facility; 25 traps were set around the pond and impoundment area on the east end of the property.

Due to limited funding, mammal inventory surveys were not completed in Fall 2020 or Spring 2021. The lack of funding allocated to this this installation is due to it having fewer natural resources on site than the CATS and CATS-M installations.Monitoring efforts (in-house) through the use of trail cameras have captured mammal presence among other wildlife groups at GTS.

The targeted surveys along with on-site observations by natural resource personnel have yielded several records of mammal occurrences at GTS. A comprehensive list of mammals is provided in Appendix F. See Section 5.3.3 GTS Threatened and Endangered Species and Species of Concern for more information on and a listing of protected species and species of concern.

5.2.2.4 GTS-SC

In the fall of 2020, and spring and summer of 2021, a mammal inventory was performed as part of a fauna survey (Olsson 2021c). During this inventory, 7 mammal species were identified on the GTS-SC installation.

Acoustic bat monitoring surveys were conducted during 2016 and 2017 at GTS-SC, six bat species were detected during the 2016 efforts.

GTS-SC is a relatively young in ownership by the NEARNG. All other mammal surveys have been conducted through use of natural resource personnel and on-site observation at GTS-SC. A comprehensive list of mammals is provided in Appendix F.

See Section 5.3.4 GTS-SC Threatened and Endangered Species and Species of Concern for more information on and a listing of protected species and species of concern.

5.2.3 Reptiles and Amphibians

5.2.3.1 CATS

In the fall 2020, and spring and summer of 2021, an amphibian inventory was performed at CATS. During this inventory, eight species of amphibians were identified on the CATS installation. Of these eight species, five were frog species, and three were toad species. A reptile inventory was also performed as part of the same 2020-2021 survey. During the reptile inventory, seven different species of reptiles were observed at CATS, which consisted of two snake species, four turtle species, and the Northern prairie skink (*Plestiodon septentrionalis septentrionalis*).

In 2005, an amphibian inventory was performed at seven survey locations within CATS, as part of a Natural Resources Planning Level Survey. Seven amphibian species were documented. Four of the five expected species of aquatic turtles were encountered. A reptile inventory was also performed in 2005 as part of the Natural Resources Planning Level Survey. Eleven species of reptiles were encountered at 18 different survey locations on the CATS installation. Survey results are included in Appendix F.

5.2.3.2 CATS-M

In the fall of 2020, and spring and summer of 2021, an amphibian inventory was performed at CATS-M. During this inventory, nine species of amphibians were identified on the installation. Of thesenine species, six were frog species and three were toad species. A reptile inventory was also performed as part of the same 2020-2021 Natural Resources Planning Level Survey, during which five different species of reptiles were observed at CATS-M, which consisted of two snake species and two known turtle species.

In 2005, as part of a Natural Resources Planning Level Survey, an amphibian inventory and reptile inventory were performed at CATS-M. During the amphibian inventory, three species were identified from 11 survey locations. The reptile survey, taken at 21 survey locations, yielded seven species of reptiles identified on the installation. The results from these surveys are included in Appendix F.

5.2.3.3 GTS

In 2005, both amphibian and reptile inventories were performed at GTS as part of a Natural Resources Planning Level Survey. The amphibian inventory, taken at five survey locations

within the installation, identified four amphibian species. The reptile inventory saw six species identified from a total of 45 survey locations at GTS. The results from these inventories are included in Appendix F.

5.2.3.4 Due to limited funding, reptile and amphibian inventory surveys were not completed in Fall 2020 or Spring 2021. The lack of funding allocated to this this installation is due to it having fewer natural resources on site than the CATS and CATS-M installations.GTS-SC

In the fall of 2020, and spring and summer of 2021, an amphibian inventory was performed at GTS-SC. During this inventory, five species of amphibians were identified on the GTS-SC installation. Of these five species, four were frog species along with the woodhouse toad (*Anaxyrus woodhousii*). A reptile inventory was also performed as part of the same 2020-2021 survey. During the reptile inventory, one species was identified on GTS-SC, the painted turtle (*Chrysemys picta*).

5.2.4 Fisheries

5.2.4.1 CATS

CATS is located directly along the Platte River, which is home to many important fish species. The health and abundance of certain fish species can be a good bio-indicator of the aquatic environment and water quality itself. In 2005, a fisheries inventory was performed at three survey locations within CATS, as part of a Natural Resources Planning Level Survey. Three different collection techniques were used at the survey locations: trammel nets, minnow siene, and electro-fishing. Survey results are listed in Appendix F.

To restore aquatic and riparian habitat as part of the on-going environmental stewardship mission of the NEARNG, a chute was constructed through emergent riparian woodland on the east bank of the Platte River at CATS in 2010. The constructed chute, known as the east bank west chute (EBWC) connects remnant chutes and water bodies, offering opportunity for diverse habitat improvement while also supporting the NEARNG training mission. Biological monitoring has been conducted at the east chute from 2012 to 2018. In addition to monitoring the EBWC, similar monitoring was conducted at a parallel backwater, known as the East Chute, and the Platte River from 2014 to 2018. Summaries of monitoring results for fish and macroinvertebrate surveys are provided in Appendix F.

5.2.4.2 CATS-M

Given the limited availability of surface water at CATS-M, no fisheries monitoring has been conducted at CATS-M.

5.2.4.3 GTS

Given the limited availability of surface water at GTS, no fisheries monitoring has been conducted at GTS.

5.2.4.4 GTS-SC

Given the limited availability of surface water at GTS-SC, no fisheries monitoring has been conducted at GTS-SC.

5.3 THREATENED AND ENDANGERED SPECIES AND SPECIES OF CONCERN

Information from the USFWS and NGPC was collected regarding the presence of threatened and endangered species at each installation pursuant to the requirements of Section 7 of the Endangered Species Act (ESA) (16 USC 1536) and the Nebraska Nongame and Endangered Species Conservation Act (Nebraska Revised Statutes 37-806). Under the ESA, an "endangered species" is defined as any species that is in danger of extinction throughout all or a significant portion of its range. A "threatened species" is defined as any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Included below is a listing of the federal and state protected species for each installation.

5.3.1 CATS

The species listed in the table below have the potential to occur in near CATS. Candidate species that potentially occur in Nebraska that are currently under review for listing and species of conservation concern are also included. Birds of Conservation Concern (BCC) are bird species that are not listed as endangered or threatened, of the highest conservation priority as designated by the USFWS. The BCC 2021 list is comprised of avian species that are migratory, non-game, or game species that have minimal harvest (USFWS 2021). Background information for listed threatened and endangered species is provided in Section 5.3.5.

Table 5-1. Federal and State Protected species at CATS

Scientific Name	Common Name	Federal Status	State Status	Observed on or Near Installation
Birds				
Sternula antillarum athalassos	Interior Least Tern		E	X
Charadrius melodus	Piping Plover	T	T	X
Grus americana	Whooping Crane	E	E	
Pluvialis dominica	American Golden plover	BCC		
Haliaeetus leucocephalus	Bald Eagle	BCC		X
Coccyzus erythropthalmus	Black-billed Cuckoo	BCC		
Dolichonyx oryzivorus	Bobolink	BCC		
Calidris subruficollis	Buff-breasted Sandpiper	BCC		
Spiza americana	Dickcissel	BCC		X
Chaetura pelagica	Chimney Swift	BCC		
Calidris alpina arcticola	Dunlin	BCC		
Antrostomus vociferus	Eastern Whip-poor-will	BCC		

Scientific Name	Common Name	Federal Status	State Status	Observed on or Near Installation
Spizella pusilla	Field Sparrow	BCC		X
Ammondramus savannarum	Grasshopper Sparrow	BCC		X
Zonotrichia querula	Harris's Sparrow	BCC		X
Ammondramus henslowii	Henslow's Sparrow	BCC		
Limosa haemastica	Hudsonian Godwit	BCC		
Oporornis formosus	Kentucky Warbler	BCC		
Tringa flavipes	Lesser Yellowlegs	BCC		X
Lanius ludovicianus	Loggerhead Shrike	BCC		X
Protonotaria citrea	Prothonotary Warbler	BCC		
Melanerpes erythrocephalus	Red-headed Woodpecker	BCC		X
Euphagus carolinus	Rusty Blackbird	BCC		
Calidris pusilla	Semipalmated Sandpiper	BCC		X
Asio flammeus	Short-eared Owl	BCC		
Bartramia longicauda	Upland Sandpiper	BCC		
Empidonax traillii	Willow Flycatcher	BCC		X
Hylocichla mustelina	Wood Thrush	BCC		X
Fish				
Scaphirhynchus albus	Pallid Sturgeon	E	E	X
Acipenser fulvescens	Lake Sturgeon		T	
Macrhybopsis gelida	Sturgeon Chub	UR	E	
Mammals				
Myotis septentrionalis	Northern Long-eared Bat	T	T	X
Plants				
Platanthera praeclara	Western Prairie Fringed Orchid	T	T	
Insects				
Danaus plexippus	Monarch Butterfly	C		X
Speyeria idalia	Regal fritillary	UR		
Reptiles				
Emydoidea blandingii	Blanding's turtle	UR		
NOTE: E = Endangered. T = Threatened. C = Candidate for listing. UR = Under Review. BCC = Birds of Conservation Concern. USFWS IPaC 2021, USFWS 2021, NGCP CERT 2021, and Audubon 2021				

5.3.2 CATS-M

The species listed in the table below have the potential to occur near CATS-M. Candidate species that potentially occur in Nebraska that are currently under review for listing and species of conservation concern are also included. Birds of Conservation Concern (BCC) are bird species

that are not listed as endangered or threatened, of the highest conservation priority as designated by the USFWS. The BCC 2021 list is comprised of avian species that are migratory, non-game, or game species that have minimal harvest (USFWS 2021). Background information for species protected under the ESA is provided in Section 5.3.5. Federal and State Protected Species at CATS-M.

Table 5-2. Federal and State Protected Species at CATS-M

Scientific Name	Common Name	Federal Status	State Status	Observed on or Near Installation
Birds				
Pluvialis dominica	American Golden plover	BCC		
Haliaeetus leucocephalus	Bald Eagle	BCC		X
Coccyzus erythropthalmus	Black-billed Cuckoo	BCC		
Dolichonyx oryzivorus	Bobolink	BCC		
Calidris subruficollis	Buff-breasted Sandpiper	BCC		
Chaetura pelagica	Chimney Swift	BCC		
Spiza americana	Dickcissel	BCC		X
Antrostomus vociferus	Eastern Whip-poor-will	BCC		
Calidris alpina arcticola	Dunlin	BCC		
Spizella pusilla	Field Sparrow	BCC		X
Aquila chrysaetos	Golden Eagle	BCC		X
Ammondramus savannarum	Grasshopper Sparrow	BCC		X
Zonotrichia querula	Harris's Sparrow	BCC		X
Ammondramus henslowii	Henslow's Sparrow	BCC		X
Limosa haemastica	Hudsonian Godwit	BCC		
Oporornis formosus	Kentucky Warbler	BCC		
Lanius ludovicianus	Loggerhead Shrike	BCC		
Protonotaria citrea	Prothonotary Warbler	BCC		
Melanerpes erythrocephalus	Red-headed Woodpecker	BCC		X
Euphagus carolinus	Rusty Blackbird	BCC		
Asio flammeus	Short-eared Owl	BCC		
Bartramia longicauda	Upland Sandpiper	BCC		X
Empidonax traillii	Willow Flycatcher	BCC		X
Hylocichla mustelina	Wood Thrush	BCC		
Fish				
None				
Mammals				
Myotis septentrionalis	Northern Long-eared Bat	T	T	X
Plants				
Platanthera praeclara	Western Prairie Fringed Orchid	T	T	
Insects				
Danaus plexippus	Monarch Butterfly	C		X
Speyeria idalia	Regal fritillary	UR		
Reptiles				
Emydoidea blandingii	Blanding's turtle	UR		
NOTE: E = Endangered. T = Threatened. C = Candidate for listing.				

Scientific Name	Common Name	Federal Status	State Status	Observed on or Near Installation
UR = Under Review. BCC = Birds of Conservation Concern. USFWS IPaC 2021, USFWS 2021, NGPC CERT 2021, and Audubon 2021				

5.3.3 GTS

The species listed in the table below have the potential to occur near GTS. Candidate species that potentially occur in Nebraska that are currently under review for listing and species of conservation concern are also included. Birds of Conservation Concern (BCC) are bird species that are not listed as endangered or threatened, of the highest conservation priority as designated by the USFWS. The BCC 2021 list is comprised of avian species that are migratory, non-game, or game species that have minimal harvest (USFWS 2021). Background information for species protected under the ESA is provided in Section 5.3.5. Federal and State Protected Species at GTS.

Table 5-3. Federal and State Protected Species at GTS

Scientific Name	Common Name	Federal Status	State Status	Observed on or Near Installation
Birds				
Grus americana	Whooping Crane	E	E	
Pluvialis dominica	American Golden plover	BCC		
Haliaeetus leucocephalus	Bald Eagle	BCC		
Vireo bellii	Bell's Vireo	BCC		X
Coccyzus erythropthalmus	Black-billed Cuckoo	BCC		
Dolichonyx oryzivorus	Bobolink	BCC		
Calidris subruficollis	Buff-breasted Sandpiper	BCC		
Chaetura pelagica	Chimney Swift	BCC		
Spiza americana	Dickcissel	BCC		X
Calidris alpina arcticola	Dunlin	BCC		
Antrostomus vociferus	Eastern Whip-poor-will	BCC		
Spizella pusilla	Field Sparrow	BCC		
Ammondramus savannarum	Grasshopper Sparrow	BCC		X
Zonotrichia querula	Harris's Sparrow	BCC		
Ammondramus henslowii	Henslow's Sparrow	BCC		X
Limosa haemastica	Hudsonian Godwit	BCC		
Oporornis formosus	Kentucky Warbler	BCC		
Calamospiza melanocorys	Lark Bunting	BCC		
Tringa flavipes	Lesser Yellowlegs	BCC		
Lanius ludovicianus	Loggerhead Shrike	BCC		
Protonotaria citrea	Prothonotary Warbler	BCC		
Melanerpes erythrocephalus	Red-headed Woodpecker	BCC		X
Euphagus carolinus	Rusty Blackbird	BCC		
Calidris pusilla	Semipalmated Sandpiper	BCC		
Asio flammeus	Short-eared Owl	BCC		
Bartramia longicauda	Upland Sandpiper	BCC		
Tringa semipalmata	Willet	BCC		

Scientific Name	Common Name	Federal Status	State Status	Observed on or Near Installation
Empidonax traillii	Willow Flycatcher	BCC		
Hylocichla mustelina	Wood Thrush	BCC		
Fish				
None				
Mammals				
Myotis septentrionalis	Northern Long-eared Bat	T	T	
Plants				
Platanthera praeclara	Western Prairie Fringed Orchid	T	T	
Insects				
Danaus plexippus	Monarch Butterfly	C		X
Speyeria idalia	Regal fritillary	UR		
Reptiles				
Emydoidea blandingii	Blanding's turtle	UR		
NOTE: E = Endangered. T = Threatened. C = Candidate for listing. UR = Under Review. BCC = Birds of Conservation Concern. USFWS IPaC 2021, USFWS 2021, NGPC CERT 2021, & Audubon 2021				

5.3.4 GTS-SC

The species listed in the table below have the potential to occur near GTS-SC. Candidate species that potentially occur in Nebraska that are currently under review for listing and species of conservation concern are also included. Birds of Conservation Concern (BCC) are bird species that are not listed as endangered or threatened, of the highest conservation priority as designated by the USFWS. The BCC 2021 list is comprised of avian species that are migratory, non-game, or game species that have minimal harvest (USFWS 2021). Background information for species protected under the ESA is provided in Section 5.3.5. Federal and State Protected Species at GTS-SC.

Table 5-4. Federal and State Protected Species at GTS-SC

Scientific Name	Common Name	Federal Status	State Status	Observed on or Near Installation
Birds				
Sternula antillarum athalassos	Interior Least Tern		E	
Charadrius melodus	Piping Plover	T	T	
Grus americana	Whooping Crane	E	E	
Pluvialis dominica	American Golden plover	BCC		
Haliaeetus leucocephalus	Bald Eagle	BCC		X
Coccyzus erythropthalmus	Black-billed Cuckoo	BCC		
Dolichonyx oryzivorus	Bobolink	BCC		
Calidris subruficollis	Buff-breasted Sandpiper	BCC		
Chaetura pelagica	Chimney Swift	BCC		X

Scientific Name	Common Name	Federal Status	State Status	Observed on or Near Installation
Spiza americana	Dickcissel	BCC		X
Calidris alpina arcticola	Dunlin	BCC		
Antrostomus vociferus	Eastern Whip-poor-will	BCC		
Spizella pusilla	Field Sparrow	BCC		
Ammondramus savannarum	Grasshopper Sparrow	BCC		X
Zonotrichia querula	Harris's Sparrow	BCC		
Ammondramus henslowii	Henslow's Sparrow	BCC		X
Limosa haemastica	Hudsonian Godwit	BCC		
Oporornis formosus	Kentucky Warbler	BCC		
Tringa flavipes	Lesser Yellowlegs	BCC		
Lanius ludovicianus	Loggerhead Shrike	BCC		
Protonotaria citrea	Prothonotary Warbler	BCC		
Melanerpes erythrocephalus	Red-headed Woodpecker	BCC		
Euphagus carolinus	Rusty Blackbird	BCC		
Asio flammeus	Short-eared Owl	BCC		
Bartramia longicauda	Upland Sandpiper	BCC		X
Hylocichla mustelina	Wood Thrush	BCC		
Fish				
Scaphirhynchus albus	Pallid Sturgeon	E	T	
Macrhybopsis gelida	Sturgeon Chub	UR	E	
Mammals				
Myotis septentrionalis	Northern Long-eared Bat	T	T	
Plants				
Platanthera praeclara	Western Prairie Fringed Orchid	T	T	
Cypripedium candidum	Small White Lady's Slipper		T	
Insects				
Danaus plexippus	Monarch Butterfly	C		X
Speyeria idalia	Regal fritillary	UR		
Reptiles				
Emydoidea blandingii	Blanding's turtle	UR		
NOTE: E = Endangered. T = Threatened. C = Candidate for listing. UR = Under Review. BCC = Conservation Concern. USFWS IPaC 2021, USFWS 2021, NGPC CERT 2021, and Audubon 2021				

5.3.5 Threatened, Endangered, and Candidate Species Information

This section includes background information for individual species that are designated as threatened or endangered. Refer to the tables provided in the previous sections for the installation (may be one or multiple) of interest for each species.

5.3.5.1 Interior Least Tern

Interior Least Tern at CATS
Photo credit: Amy Dirks, NEARNG

The interior least tern is designated as endangered by state regulation and was de-listed from federal endangered status in January 2021. The least tern breeds locally along major tributaries of the Mississippi River drainage basin from eastern Montana south to Texas and east to western Illinois, Missouri, Arkansas, and Louisiana. In Nebraska, the interior least tern currently breeds along the Platte River from its mouth, west to North Platte, at one or two isolated sites along the South Platte, along the lower reaches of the Niobrara River, along reaches of the Loup and Elkhorn Rivers, and on the unchannelized section of the Missouri River below the Fort Randall and Gavins Point dams (Lackey 1997a).

Along the Platte River system, reservoirs and irrigation diversions have severely reduced river flows and curtailed the scouring effects of spring floods. Those reductions accelerated the encroachment of vegetation onto the river sandbars further altering the habitat. Furthermore, the extraction of sand and gravel for commercial use was another change that occurred as rivers were developed (Lackey 1997a). Sand and gravel mines created open sandpit lakes and bare sand piles on the river floodplain. As riverine nesting habitat became increasingly limited, least terns began to nest on the bare spoil piles at sandpits. Least tern reproductive success can also be limited by human-related disturbances, such as foot traffic, unleashed pets, recreational activities, and off-road vehicles. Agricultural chemical runoff into rivers and tributaries can also affect the quality of least tern nesting and foraging habitat (Lackey 1997a). More importantly, the effects of contaminants, combined with the physical degradation of habitat and the increase in human disturbance, could further accelerate population declines.

The least terns are highly dependent on the presence of dry, exposed mid-river sandbars that are free of vegetation and have no connection to land, as well as on favorable river flows that support a forage fish population (Lackey 1997a; Stansberry pers. comm. 2000). Characteristic riverine nesting sites are dry, flat, sparsely vegetated sand- and gravel bars within a wide, unobstructed, water- filled river channel. Nests are initiated only after spring and early summer flows recede and dry areas on sandbars are exposed, usually on higher elevations away from the water's edge. Artificially created nesting sites, such as sand and gravel mining operations, are also used as possible nesting habitat by the species (Lackey 1997a; Anschutz pers. comm. 2000).

Interior least terns usually arrive on their breeding grounds in early to mid-May and begin to establish feeding and nesting territories. The nesting season for the least tern is from 15 April to 15 August (Anschutz pers. comm. 2000). In the fall, the migration usually takes place from mid- or late July to early September (Lackey 1997a).

5.3.5.2 Piping Plover

Piping Plover
Photo credit: NEBRASKAland Magazine/NGPC

The piping plover is a migratory shorebird that breeds along prairie rivers, alkali lakes, ponds of the northern Great Plains, on sandy beaches along the Great Lakes, and on the vast beaches of the Atlantic Coast. Although one of the largest piping plover breeding populations in North America is supported by Nebraska Rivers, the piping plover is designated as threatened by both the state and federal regulation. The piping plover's historic breeding range in Nebraska included the Missouri River, Platte River, parts of the Loup River, and the Niobrara River. The piping plover can still be found nesting on naturally occurring sandbars along the lower Niobrara, the Lower Platte (Columbus to Plattsmouth), the Loup, and at a few sites along the Middle Loup (Lackey 1997b).

Many factors have led to the decline in piping plover population. Dams and diversions regulate flows that historically would scour vegetation from sandbars, while sediment trapped behind dams can no longer contribute to downstream sandbar formation. Thus, sediment-deficient water passing through dams lowers the riverbed while elevating the sandbars (Lackey 1997b). Furthermore, vegetation on heightened sandbars is no longer scoured, and the only suitable nesting sandbars are those exposed at low flows. These low-elevation sandbars, however, are routinely subjected to flooding that destroys the plover nests. Recreational and commercial developments have also encroached on their habitat, forcing the piping plovers to find alternative habitat at sand and gravel mines in order to find viable nesting sites. These areas, however, often lack the protection of a flowing water barrier and are easily accessed by human and terrestrial predators (Lackey 1997b).

In Nebraska, piping plovers nest on submerged and/or exposed sandbars in the middle of wide channels of large rivers (Lackey 1997b; Stansberry pers. Comm. 2000). Characteristic habitats include unvegetated or sparsely vegetated sandbars on the Platte and spoil piles at sand and gravel mining operations (Lackey 1997b; Anschutz pers. comm. 2000). This makes CATS a prime resource for piping plover protection and conservation. Nests are located on elevated areas with non-vegetated sand, gravel, and cobble substrates; and are sometimes placed near objects such as small pieces of driftwood, stones, or bones to aid in camouflaging the nest. Unobstructed views are also essential so adult piping plovers can readily detect potential threats (Lackey 1997b).

In spring, piping plovers begin their migration north to breeding areas and arrive in the Great Plains in late April or early May. The nesting season for piping plovers is from 15 April through 15 August (Anschutz pers. comm. 2000). Most piping plovers in Nebraska nest in or near colonies of the endangered least tern. This association is thought to be beneficial to plovers, because the tern aggressively defends the entire colony areas by mobbing and chasing intruders away. Fall migration to wintering areas may begin as early as late June, and by mid-August most piping plovers have left Nebraska (Lackey 1997b).

5.3.5.3 Whooping Crane

Whooping Crane
Photo credit: NEBRASKAland Magazine/NGPC

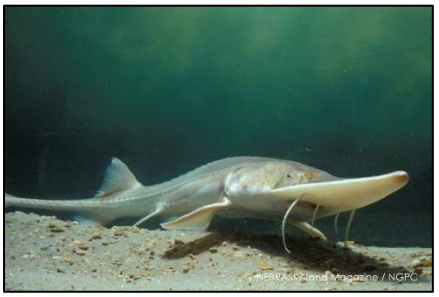
The whooping crane, which is listed as endangered by both state and federal regulations, is the tallest bird in North America and is probably one of the best-known endangered species on the continent. The body feathers are mostly white with black wing tips, which you can only see in flight. The top of the head is covered with an identifying red crown. A distinguishing feature for the whooping crane is their long black legs and yellow bill. Immature whooping cranes are rusty or cinnamon colored during the first fall migration. At around four months of age, white feathers appear on the lower neck and back. Immature birds achieve full adult white plumage late in their second summer.

Male whooping cranes approach 5 feet tall when standing upright and can weigh 16 pounds, females also reach 5 feet in height and average 14 pounds. The wingspan of the whooping crane is 87 inches. The whooping crane is the only large white bird, with a wingspan of over 7 feet that flies with neck and legs outstretched.

The whooping crane is the rarest of the world's 15 species of cranes. It is estimated that less than 600 individuals exist worldwide. More than half of these birds migrate through Nebraska during the spring and the fall (NGPC 2021d). Spring migration typically occurs March 6 through April 29 and the fall migration typically from October 9 through November 15.

GTS is located approximately 30 miles south south-east from the Nebraska Crane Trust located at 9325 South Alda Road, Wood River, NE 68883.

5.3.5.4 Pallid Sturgeon



Pallid Sturgeon
Photo credit: NEBRASKAland Magazine/NGPC

The pallid sturgeon was designated as an endangered species on 6 September 1980 and is protected by both state and federal regulations. The species was originally found in the Missouri and lower Mississippi Rivers and their larger tributaries. However, presently it is found only in portions of its former range. In Nebraska, the pallid inhabits the main stem of the Missouri River, which includes the unchannelized, reaches above and below Gavins Point Dam and the channelized reach downstream from Sioux City. It also lives in the lower reaches of major tributaries such as the Niobrara, Platte, Elkhorn, and Little Nemaha Rivers (Zuerlein 1997).

The pallid sturgeon has declined significantly since the 1900s. The species was fairly abundant before commercial over-harvesting and habitat modifications (Zuerlein 1997). The building of dams affected their survival by altering water temperatures: the water released from a dam is much colder than normal river water. Flow patterns that naturally occurred during spawning periods were replaced by water releases from dams operating for power generation and navigation flows. Furthermore, fish bypass facilities were not constructed on any of the dams, resulting in the interruption of upstream and downstream spawning movements. Finally, tree snags and drift piles that had provided instream habitat for aquatic insects and fish were removed (Zuerlein 1997).

The species is associated with habitat that includes areas near the bottom of large, turbid rivers. On the Platte River, pallid sturgeon are directly associated with mid-river submerged and/or exposed sandbars. They are known to inhabit the downstream ends of exposed and submerged sandbars, presumably to feed on invertebrates that have dropped out of suspension and accumulated in low velocity pools (Stansberry pers. comm. 2000). Many sturgeon species depend on free-flowing rivers and seasonal floods to provide suitable spawning conditions (Beamesderfer and Farr 1997). At the mouth of large Missouri River tributaries, habitat can be found that is favorable to the species, such as water carrying relatively large amounts of silt, organic matter, and drifting aquatic insects. In addition, water with temperatures, which are similar to conditions before the dams and reservoirs were built, can be favorable habitat (Zuerlein 1997).

5.3.5.5 Sturgeon Chub

The sturgeon chub is a member of the minnow family (*cyprinidae*) and is identified as endangered by Nebraska regulation. The sturgeon chub's range in Nebraska consists of the Missouri River and its tributaries including the lower Platte River and they are considered extremely rare in both rivers (Steffensen et. al. 2014a). Preferred sturgeon chub habitat is turbid, fast flowing water with rock or sand substrate. Some evidence indicates this species may move to shallower water to spawn during June to mid-July (USFWS 2001). The greatest factors affecting sturgeon chub are the altered flow regimes, turbidity levels, and water temperature (NRCS 2009a).

Sturgeon Chub
Photo credit: David Ostendorf

Peters and Parham (2007) collected five sturgeon chub from the lower Platte River during a four-year sampling effort that totaled 1,157 unique sampling efforts of mixed gear types that included: trammel nets, gill nets, trawls, seines and trotlines. Overall, 48,761 specimens were collected from the lower Platte River by Peters and Parham (2007). The sturgeon chub was typically collected over sand with up to 25% gravel substrates, collection depths ranged from 3.4-4.6 feet with an average bottom velocity of 1.0 feet/second. The sturgeon chub and pallid sturgeon are both bottom dwelling species sharing similar habitats (Peters and Parham 2007).

5.3.5.6 Lake Sturgeon

Lake sturgeon are large, long-lived freshwater fish that are identified as threatened by Nebraska regulation. Lake sturgeon inhabit large lakes and deep, fast flowing waters with sand and gravel substrate. Adults will migrate great distances to find suitable habitat for spawning. Spawning usually takes place in late spring over gravel or rocky substrate. It takes many years for sturgeon to reach full maturity and they reproduce infrequently (Steffensen et al 2014b).

Presently, most of captured lake sturgeon in the Missouri River are hatchery-reared fish. As stocking continues, the population of lake sturgeon in the Missouri River and its tributaries is projected to increase (Steffensen et al 2014b). With the installation of dams and the channelization of rivers, habitat fragmentation has occurred. Dams have stopped spawning migrations resulting in lower recruitment and reduced abundance of the species.

5.3.5.7 Northern Long-Eared Bat

The Northern Long-Eared Bat (NLEB) is federally protected as threatened with a 4(d) Rule and state protected as threatened. In Nebraska, the nearest confirmed hibernacula for the NLEB occur in limestone and sandstone mines along the Platte River near Louisville, in Cass County. They use these mines in Louisville on a year-round basis (Czaplewski et al. 1979). There are dense riparian corridors along the Platte River connecting these hibernacula to CATS. NLEBs also occur in mines located southwest of Fontenelle Forest, in Sarpy County (USFWS 2014), and breeding records have been confirmed in that county (Benedict 2004). Fontenelle Forest is located north of the city of Bellevue, Nebraska adjacent to the Missouri River, within a dense forested habitat.

Northern Long-Eared Bat
Photo credit: New York Department of Environmental Conservation; Al Hicks

The NLEB is exclusively insectivorous and uses passive listening and echolocation (or gleaning) to locate and capture insects resting on leaves, tree trunks, or against structures (Taylor 1963). This species' ability to glean insects from vegetation, in addition to aerial hawking of prey, makes them well adapted for forest interior foraging (Ratcliffe and Dawson 2003), and has likely resulted in their apparent dependency on intact forests. Henderson and Broders (2008) determined that NLEBs do not fly more than approximately 256 feet from an edge of intact forest, thereby avoiding open, un-forested areas.

5.3.5.8 Western Prairie Fringed Orchid

Western Prairie Fringed Orchid Photo credit: Daniel Mosquin, Nebraska Rare Species/NGPC

The western prairie fringed orchid is identified as threatened by both state and federal regulations. The orchid's historic distribution once extended throughout the wetlands west of the Mississippi River and in the tallgrass prairie of the central United States and southern Canada (Hof et al. 1999). Because of the conversion of prairie to cropland and other human disturbances, however, much of its original habitat has been lost. Plowing, mowing before seed set, grazing, burning, water table manipulation and other management activities have all negatively impacted the orchid. A limited number of observed populations and their relative isolation prompted the addition, in 1989, of the western prairie fringed orchid to the Federal and Nebraska lists of threatened species (USFWS, 1989; Fritz 1993). Known populations currently occur in the Plains States and Manitoba in Canada (USFWS 1996b).

In Nebraska, potential orchid habitat exists primarily in the eastern two-thirds of the state, where the orchid occurs in mesic upland prairies in glacial drift and calcium- rich loess soils state (Fritz 1993). These upland prairies are typified by the tallgrass prairie habitat and a high soil moisture profile. Associated tallgrass species include big bluestem, little bluestem and Indiangrass, with tufted hairgrass (*Deschampsia caespitosa*) and switchgrass common in wetter sites (USFWS 1996a). The orchid generally occurs in the wetter portions of these prairies or in associated sedge meadows. Current verified orchid populations are found in Lancaster, eastern Seward, Hall and east-central Cherry Counties; Saunders County was identified by the USFWS as having potential sites suitable for the orchid (USFWS 1996b).

Orchids emerge in early May and, with favorable conditions; the peak flowering period in eastern Nebraska is from mid-June to late July (Fritz 1993). Above-ground growth, however, has been observed to be quite erratic (Bowles et al. 1992). Periods of high numbers may be followed by years in which the orchids do not emerge. Excessive drought or flooding can cause local populations to decline and even become extinct (Sieg and King 1995).

5.3.5.9 Saltwort

Saltwort is identified as endangered by the State of Nebraska. Saltwort is a small annual succulent that has the ability to grow in very alkaline soils in Nebraska's saline wetlands. The stems of the plant are green and fleshy during the summer months, then fade to red in the fall. While saltwort's range includes much of western United States and Canada, it is also found as far south and east as Nebraska. Saltwort's population in Nebraska is limited to the watersheds of Rock Creek and Salt Creek in Saunders and Lancaster Counties (NGPC 2021b).

Saltwort requires clay soils with a salinity level of 2.5 to 4.7 percent and a water table within three feet of the ground surface. These specific requirements have limited the amount of

available natural habitat for saltwort. In addition, it is estimated that more than 90 percent of saline wetlands in Nebraska have been severely degraded or destroyed (NGPC 2021b).

5.3.5.10 Small White Lady's Slipper

Small White Lady's Slipper
Photo credit: Nebraska Rare Species/NGPC

The small white lady's-slipper, which is identified as threatened by state regulation, is a perennial orchid with fibrous roots. The upright stems are solitary or colonial and 6-16 inches tall. There are usually 3 or 4 lance-shaped leaves clasping the stem. The larger leaves may be up to 6 inches long and 2 inches wide and are strongly ribbed. The flowers, usually one, rarely two per plant, are located terminally on the stems and are subtended by a leafy bract. The flowers resemble a small porcelain slipper. The inflated lip is white, delicately streaked with rose-purple and only 3/4 to 7/8 inches long. The sepals and petals are greenish-yellow with purplish stripes and are downy near the base (NRCS 2009b).

The small white lady's-slipper is a plant of the northeastern United States. Historically the orchid was likely found throughout eastern Nebraska and much of central Nebraska. There are historic collection records for the orchid from 17 Nebraska counties. In the past 15 years, the orchid has been collected from only four Nebraska counties: Howard, Pierce, Platte, and Sherman. There are only 7 known extant populations. Two populations are thought to have been destroyed in recent years by road construction projects. All known Nebraska populations have less than 200 plants each (NRCS 2009b).

All of Nebraska's known populations occur in native, sub-irrigated wet meadows. These sites have sandy loam soils and are dominated by typical wet meadow species including big bluestem and sedges (*Carex* spp.). Most sites where the orchid occurs are relatively undisturbed hay meadows. The orchid appears to be intolerant of cattle grazing and has not been found in grazed pastures. Two populations of orchids near Columbus occurred in road ditches adjacent to native meadows. The small white lady's-slipper rarely occurs in such early successional habitats, but when they do, they are usually adjacent to naturally occurring seed sources (NRCS 2009b).

The conversion of wet meadows to cropland is a primary threat to remaining populations of the small white lady's-slipper. Another primary threat is the alteration of natural groundwater levels in meadows where the orchid occurs. Direct pumping of groundwater from irrigation wells can reduce groundwater levels in meadows. Reduced flows in streams adjacent to meadows can also reduce groundwater levels in the meadows.

The small white lady's-slipper has not been found in grazed pastures and it appears that cattle grazing has likely impacted the orchid's abundance. The orchid is also susceptible to herbicides and both their direct herbicide application as well as herbicide drift from adjacent croplands has likely impacted the species. The original habitat of small white lady's-slipper has been highly fragmented, resulting in small, isolated populations of the species. These small populations are

vulnerable to being eliminated by chance human-induced or natural catastrophic events (NRCS 2009).

5.3.5.11 Salt Creek Tiger Beetle

The Salt Creek tiger beetle is identified as endangered both federally and by the State of Nebraska. The Salt Creek tiger beetle spends most of its life as larva. Adults are metallic brown/olive green on the top side and metallic green on the underside with soft-bodies, large dark heads, and large mandibles. The Salt Creek tiger beetle's range within Nebraska is limited to small areas within saline wetlands in Lancaster and Saunders Counties (NGPC 2021c).

The Salt Creek tiger beetle requires saline mud flats and exposed mud stream banks with salt deposits. The beetle is not tolerant of dry conditions and is typically found within a few feet of a stream or wetland edge. These specific requirements and the channelization and straightening of Salt Creek have limited the amount of available natural habitat for the Salt Creek tiger beetle. In addition, it is estimated that more than 90 percent of saline wetlands in Nebraska have been severely degraded or destroyed (NGPC 2021c).

5.4 WETLANDS AND FLOODPLAINS

5.4.1 Wetlands

Wetlands are defined as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE 1987). Wetland functions include groundwater recharge/discharge, flood/flow alteration, sediment stabilization, sediment and toxicant retention, nutrient removal and transformation, aquatic and terrestrial diversity and abundance, and uniqueness.

Wetland areas are determined using the routine onsite determination method described in the USACE *Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region* (Version 2.0) (USACE 2010) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (Version 2.0) (USACE 2010). The wetland delineation method requires the investigation of three wetland parameters:

- ***Hydrophytic Vegetation***—Classified by the estimated probability of occurrence in wetland versus non-wetland areas throughout its distribution.

- ***Hydric Soils***—Soils that are saturated, flooded, or ponded for sufficient periods during the growing season and that develop anaerobic conditions in their upper layers.

- ***Hydrological Characteristics***—Determined by the frequency of flooding, duration of inundation, and soil saturation.

For an area to be classified as a wetland, positive indicators of each of the three parameters must be present, with the exception of problem areas.

The USACE has jurisdiction over all waters of the U.S. and is the regulatory authority for decisions regarding the occurrence of wetlands and other waters of the U.S. within the project area. Discharges of dredged or fill materials in waters of the U.S., including wetlands, require prior authorization from the USACE under Section 404 of the Clean Water Act (CWA) (33 USC 1344) and EO 11990, *Protection of Wetlands*.

If wetlands are or expected to be impacted due to installation activities, a Section 404 permit may be required. Section 404 Permit requirements are based on project impacts to jurisdictional resources. There are three types of permits; Nationwide Permit, Nationwide Permit with waiver, and Individual Permit. Nationwide Permits are streamlined permits based on small impact thresholds to jurisdictional resources. Typically, these permits take 45 to 60 days to acquire.

Waivers can be requested to impact greater amounts beyond what the Nationwide Permit thresholds allow if the resources are of low quality. A Section 404 Individual Permit includes a public and agency review period and can require from four to twelve months, averaging about six months.

Furthermore, as a part of a Section 404 permit, the USACE may require mitigation for the impacts to jurisdictional features. Typically, the USACE requires that an applicant purchase mitigation credits through an approved mitigation bank. If a mitigation bank is not present in the area, an in-lieu fee mitigation program may be used. The last option would be to do on-site permittee-responsible mitigation. Mitigation, and how it is accomplished, will need to be negotiated with USACE.

In addition to USACE regulatory requirements for wetlands, the NDEE is responsible for administering the Section 401 Water Quality Certification Program under Section 401 of the CWA. Under Title 117 – Nebraska Surface Water Quality Standards, the NDEE has authority over all surface waters of the state. This includes waters that may be considered non-jurisdictional by the USACE under Section 404 of the CWA, such as isolated wetlands. Coordination with the NDEE is necessary for impacts to surface waters that could affect water quality and is generally completed in conjunction with the 404-permit application.

5.4.1.1 CATS

Wetlands at CATS were delineated by Olsson Associates (Olsson) in October of 2017 (Olsson 2017a). Based on a review of existing resources and the field investigation, Olsson identified 35 wetlands, seven open waters, and four channels, including the Platte River within the study area (Figure 4-9). Olsson identified 25 areas of Palustrine Emergent Temporarily Flooded (PEMA) wetlands, two areas of Palustrine Scrub Shrub Temporarily Flooded (PSSA) wetlands, three Palustrine Emergent Seasonally Flooded (PEMC) wetlands, and five Palustrine Forested Temporary Flooded (PFOA) wetlands. A total of 27.33 acres of wetlands were observed along with 9.41 acres of open waters and 26,091 linear feet of channels. Seven open waters and five perennial waters were found within the study area.

The wetlands, open waters, and channels identified by Olsson are likely to be considered "Waters of the United States" (WOTUS). This would make these waters subject to the Clean Water Act (CWA) due to their proximity and nexus to a traditionally navigable waterway, the

Platte River. These waters can only be deemed jurisdictional by the U.S. Army Corps of Engineers (USACE).

5.4.1.2 CATS-M

On-going stream and wetland restoration work along Johnson Creek requires five years of monitoring to determine if the banks develop stabilization issues, if vegetation becomes established, and if the percentage of desirable vegetative species meets permit requirements. Three cross sections are required within each channel mitigation site to serve as a comparison for monitoring efforts each year.

The most recent monitoring event occurred in July 2016. A total of 32 vegetative species were identified within the restored wetland areas, across all cross sections, within each project. Out of 32 species within the restored wetland areas, 23 species (72 percent) have indicator status of FAC or wetter (FAC, FACW, or OBL). However, two invasive species in wetlands were observed within the project areas. Reed canary grass was a dominant species throughout the project areas. Common reed (*Phragmites australis*) was observed at two primary locations in large stands typical of common reed growth patterns. The wetland restoration areas for each project area have successfully revegetated.

Wetlands at CATS-M were delineated by EA in July of 2019 (EA 2019). During the field investigation, EA identified and mapped five different wetland types within the site. The total amount of wetland area mapped was 3.639 acres, in addition to 773 linear feet of ephemeral stream and 1,149 linear feet of intermittent stream. The wetlands identified include 13 areas of palustrine emergent wetlands; three palustrine emergent seasonally flooded wetlands (PEMA), one palustrine forested temporarily flooded wetland (PFOA), and one palustrine scrub-shrub temporarily flooded wetland area (PSSA), in addition to the riverine, intermittent, streambed, seasonally flooded stream (R4SBC) with observed Ordinary High-Water Mark (OHWM) extending 1,149 feet into the investigation area.

Approximately 3.639 acres of wetland are present at CATS-M, they are primarily located in areas of depressed or terraced topography, along drainageways, and places where ponding or sub-surface saturation is occurring. The most prevalent classification of wetland found on-site was PEMA with a total of 2.975 acres.

5.4.1.3 GTS

Wetlands at GTS were delineated by Olsson in August of 2013 and October 2021 (Olsson 2013b) (Olsson 2021g). The onsite survey for GTS identified 111 wetlands located within the training site (Figure 4-11). The area of wetlands within the installation boundaries is approximately 32.11 acres. Evidence indicates that one of these wetlands is likely a Water of the U.S. (i.e., under the jurisdiction of USACE) due to its position adjacent to a tributary to Big Sandy Creek, which has a significant nexus to the Little Blue River, which has a significant nexus to the Big Blue River (Navigable Water) in central Kansas. All other wetlands located on the installation do not have any apparent significant nexus to waters of the U.S. and therefore are likely to be considered non-jurisdictional by the USACE.

During the site visit, Olsson identified 107 areas of PEMA/PEMC wetlands and three PFOA wetlands. No stream channels were observed. Five previously noted streams no longer had ordinary high-water marks (OHWM) or defined bed and bank.

Olsson delineated wetlands within a 25.08-acre study area adjacent to Big Sandy Creek in the southeastern portion of GTS in September of 2017 (Olsson 2017b). This delineation was performed to set a baseline of the site's current conditions. The on-site investigation identified two wetlands totaling 11.08 acres and one open water feature of 0.01 acre. Both wetlands were classified under the Cowardin system as Palustrine Emergent Temporarily Flooded (PEMA) wetlands, which includes one large wetland (11.08 acres) and one smaller wetland (0.05 acres).

Big Sandy Creek meanders through this study area and is present on the National Hydrography Dataset (NHD) map and is represented as a linear emergent feature on the National Wetlands Inventory (NWI) map. During the field investigation however, Olsson observed this area as completely covered in emergent vegetation and noted no sign of stream characteristics, so it was classified as a wetland.

During the field investigation, Olsson also noted the presence of invasive species in the study area. Both honey locust (*Gleditsia triacanthos)* and reed canary grass (*Phalaris arundinacea)* were observed and have the potential to become invasive if unchecked.

5.4.1.4 GTS-SC

Wetlands at GTS-SC were delineated by Olsson in July of 2013 (Olsson 2013c). The on-site survey for GTS-SC identified approximately 61.83 acres of PEMA wetlands (Figure 4-12). The likely jurisdictional wetland areas (total of 6.07 acres) are located adjacent to Prairie Creek, a tributary to the Platte River, which has a significant nexus to the Missouri River, a Navigable Water of the U.S. Three other wetland areas (total of 0.47 acres) may possibly be jurisdictional as portions of these wetlands extend an undetermined distance south beyond the study area, and may have a significant nexus to other waters of the U.S.

5.4.2 Floodplains

EO 11988, *Floodplain Management,* issued 24 May 1977, 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. EO 11988 is implemented through the CWA and 44 CFR Part 9 *Floodplain Management and Protection of Wetlands*. Floodplains are defined in this EO as "the lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands including, at a minimum, that area subject to a 1 percent or greater chance of flooding in any given year." Flooding in the 100-year floodplain is expected to occur from a flood that has a 1 percent probability of occurring in any given year; therefore, the 100-year floodplain has an annual probability of exceedance of 1 percent.

5.4.2.1 CATS

The floodplain of the Platte River passes through the center of CATS and covers approximately 663 acres (268 ha) (Figure 6-1) (FEMA 2021). Within the boundaries of the installation, the channel of the Platte River is approximately 1,500 to 2,000 ft (457.2 to 609.6 m) wide and is 4 to 6 ft (1.2 to 1.8 m) deep. Flooding in late winter and early spring occur frequently on the installation and are often the result of ice jams that obstruct water flows. As a result, a low levee along the river was constructed in 1967 to protect the buildings (NEANRG 1993).

5.4.2.2 CATS-M

The 100-year floodplain of Johnson Creek passes through the northern half of CATS-M and covers approximately 89 acres (36 ha) (Figure 6-2) (FEMA 2021).

5.4.2.3 GTS

GTS includes several small drainages classified within the 100-year floodplain (Figure 6-3) (FEMA 2017). The area is delineated as being susceptible to flooding and having 1% chance of being equaled or exceeded in any given year. These areas serve to maintain wetlands and contribute to the diversity of wildlife habitat on the installation.

5.4.2.4 GTS-SC

GTS-SC is located in a rural area within the floodplain of the Platte River and Prairie Creek (Figure 6-4) (FEMA 2021). The adjacent landforms surrounding GTS-SC generally are comprised of floodplain valleys and tributary systems draining to the larger nearby Platte and Loup rivers. The land is generally flat with some depressional areas that could hold water for an extended period and are considered hydric or partially hydric wetland areas.

6. MISSION IMPACTS ON NATURAL RESOURCES

6.1 NATURAL RESOURCES CONSTRAINTS TO MISSIONS AND MISSION PLANNING

The Sikes Act requires that INRMPs provide for "…*no net loss in the capability of military installation lands to support the military mission of the installation*" (16 USC §670 et seq.). The INRMP enables the installation to meet the requirements of the military mission within the limitations and legal restrictions of the baseline natural resources at the NEARNG installations.

6.2 LAND USE

6.2.1 CATS

CATS was primarily farmland with bottomland hardwood forest along the banks of the Platte River before it was established as a military property. Natural resource constraints at CATS are shown in Figure 6-1. Current principal land uses at CATS consist of training, agriculture, hunting, recreation, and cantonment.

- Outdoor training operations are conducted throughout the installation. Helicopter operations are held in the maintained/grass areas of CATS. Compass courses, bivouacking, down pilot training, and tactical training occurs in the forested land on the east side of the Platte River. Tactical training and a land navigation course takes place in the forested land on the west side of the Platte River.

- A portion of the grassland area at CATS has been leased to private individuals for hay/agriculture production. Hay/agriculture activity occurs along the far western border of the installation and totals approximately 95 acres.

- Hunting is restricted to the east side of the river and the forested area on the west side of the installment, in an area totaling approximately 350 acres.

- Turner Lake and adjacent camp sites are the primary recreational locations at CATS. They are situated in the southern-most portion of CATS.

- Approximately 110 acres are improved grounds. The cantonment area contains 12 classroom buildings, ten buildings used for enlisted and officer billeting, storage facilities, administrative offices, and vehicle maintenance facilities.

6.2.2 CATS-M

CATS-M was primarily farmland before establishment as a military property. Natural resource constraints at CATS-M are shown in Figure 6-2. Current principal land uses at CATS-M consist of agriculture, training, and cantonment.

- The majority of CATS-M is grassland and has been leased to private individuals for hay/agriculture production.

Figure 6-1. CATS Constraints Map

Figure 6-2. CATS-M Constraints Map

- Training primarily consists of vehicle maneuvers, with some limited field training exercises and land navigation. MOUT missions take place at one of the old missile silos and at a newly constructed area. Vehicle maneuvers occur primarily on paved or gravel roads, although there is some off-road training.

- The cantonment area is located in the far southern portion of CATS-M and is comprised of two buildings, parking lots, roads, and mowed/maintained grass.

6.2.3 GTS

GTS was primarily farmland before establishment as military property. Natural resource constraints at GTS are shown in Figure 6-3. Current principal land uses at GTS consist of agriculture, training, cantonment, and ammunitions storage.

- The majority of GTS is grassland and has been leased to private individuals for hay/agriculture production.

- Training at GTS occurs primarily in field settings that encompass the entire installation and include a MOUT, a multipurpose indoor range facility, mobile conduct of fire trainer, firing ranges, Tank Crew Proficiency Course, and tank-training activities.

- The cantonment area is situated in the north central portion of the installation. Buildings in the area include barracks and a dining facility, as well as administrative, facility maintenance, and training support structures.

- GTS contains many old ammunition bunkers from the NAD. These are now used by the NEARNG or state organizations for storage of various materials.

6.2.4 GTS-SC

GTS-SC was primarily farmland/pasture land before establishment as military property. Natural resource constraints at GTS-SC are shown in Figure 6-4. Current principal land uses at GTS-SC consist of agriculture and an abandoned antenna site.

- The majority of GTS-SC is grassland and traditionally leased to private individuals for hay/agriculture production; however, high amounts of leafy spurge are currently preventing the grassland from being leased.

- The abandoned antenna site consists of a dormitory and associated pump house, concrete slabs from demolished buildings and parking lots, and a small electrical substation.

6.3 CURRENT MAJOR IMPACTS

6.3.1 CATS

The majority of training conducted at CATS revolves around individual soldier training, land navigation, and basic dismounted maneuvers. The CATS training areas are shown in Figure 6-5.

Figure 6-3. GTS Constraints Map

Figure 6-4. GTS-SC Constraints Map

Figure 6-5. CATS Training Areas Map

Training exercises at CATS have the potential to impact vegetation, soil, water quality, and noise. Impacts to vegetation are typically minimal and limited to damage to trees and understory vegetation by dismounted troops and vehicles, and in some cases can simulate natural damage caused by native animals. Additionally, removal of dead trees/branches can reduce fire hazards, safety hazards, and physical obstacles to day and night maneuvers. However, if left unmitigated or done in excess these activities can hinder the habitat's ability to recover and cause long-term harm to the native vegetation at CATS.

Removal of dead trees to support military training will only occur when leaving them in place poses a threat or hazard to humans or installation property. Dead or dying trees provide potential habitat for the Northern long-eared bat; therefore, tree removal will not occur during the maternity roosting season between June 1 and September 1st. If dead or dying trees pose a threat to humans or installation property during roosting season, proper agency consultation will be sought before felling or removing these trees.

Vehicle usage at CATS has the potential to negatively impact vegetation, soil, and water through compaction, leaving large ruts, contamination, and forest damage. A network of roads is maintained throughout the installation, which, by nature, alters the vegetation, segments habitat, and leads to soil compaction.

Helicopter flights and training occur at CATS, and helicopter overflights may have the potential to impact interior least tern and piping plover nesting sites on sandbars. While there are currently no mission requirements for helicopters to approach or land on sandbars in the river, guidance and training will be provided to leadership and helicopter pilots to prevent future operations from impacting ground nesting shorebirds. Any potential impacts to nesting sites and habitat of these species will be evaluated through a threatened and endangered species consultation from the USFWS.

6.3.2 CATS-M

The majority of training conducted at CATS-M revolves around field training exercises, driver's training, land navigation courses, and a tactical training area for aviation assets. The CATS-M training areas are shown in Figure 6-6, and NEARNG plans to build a firing range on the west side of the installation. Training exercises at CATS-M have the potential to impact vegetation, soil, water quality, and noise.

Impacts to vegetation are typically minimal and limited to damage to trees and understory vegetation by dismounted troops and vehicles, and in some cases, can simulate natural damage caused by native animals. However, if left unmitigated or done in excess these activities can hinder the habitat's ability to recover and cause long-term harm to the native vegetation at CATS-M.

Vehicle usage at CATS-M has the potential to negatively impact vegetation, soil, and water through compaction, contamination, and vegetation damage. A network of roads are maintained throughout the installation, which, by nature, alters the vegetation, segments habitat, and leads to soil compaction.

6.3.3 GTS

The majority of training conducted at GTS revolves around weapons qualification and basic soldiering skills for dismounted troops, with some tactical training for NEARNG aviation assets. The GTS training areas are shown in Figure 6-7. These training exercises at GTS have the potential to impact vegetation, soil, water quality, and noise.

Impacts to vegetation are typically minimal and limited to damage to trees and understory vegetation by dismounted troops and vehicles, and in some cases, can simulate natural damage caused by native animals. However, if left unmitigated or done in excess these activities can hinder the habitat's ability to recover and cause long-term harm to the native vegetation at GTS.

Vehicle usage at GTS has the potential to negatively impact vegetation, soil, and water through compaction, contamination, and vegetation damage. A network of roads is maintained throughout the installation, which, by nature, alters the vegetation, segments habitat, and leads to soil compaction.

Figure 6-6. CATS-M Training Areas Map

Figure 6-7. GTS Training Areas Map

6.3.4 GTS-SC

GTS-SC is currently used as a remote facility to train troops for mobilization by helicopter and/or vehicle. The GTS-SC training area is shown in Figure 6-8. Impacts to the natural resources at GTS-SC are considered minimal at this time.

The training activities taking place at GTS-SC are very limited. There is potential for future aviation training at the installation, but there are currently no major potential impacts to threatened and endangered species from helicopter training at the site. Statewide aviation mission formal consultation with USFWS will be completed, and conservation measures implemented if changes to management is needed based on further guidance due to future potential impacts.

6.4 NATURAL RESOURCES NEEDED TO SUPPORT THE MILITARY MISSION

6.4.1 CATS

To support the mission at CATS, a moderate degree of forest growth and overhead cover is necessary. Undulating topography and moderate understory growth is also required to provide cover, concealment, enfilades and defilades. In general, bivouac areas require some cover, moderate vegetation growth, and relatively dry land, these requirements depend on the size of the exercise, type of training being conducted, and the degree of realism desired. Although currently inactive, historic small arms ranges are present at CATS. Small arms ranges require no disturbance beyond mowed/maintained vegetation on relatively flat land besides the remaining berms.

6.4.2 CATS-M

To support the mission at CATS-M, a moderate degree of forest growth, overhead canopy, and understory growth is necessary to provide cover and concealment. In general, bivouac areas require some cover, moderate vegetation growth, and relatively dry land, these requirements depend on the size of the exercise, type of training being conducted, and the degree of realism desired. The non-traditional firearms range requires flat open terrain with controlled vegetation growth on the range and butts.

6.4.3 GTS

To support the mission at GTS various types of natural resources are necessary. The live firearms training and qualification ranges require flat open terrain with controlled vegetation growth on the range and butts. Access controlled fans and buffer zones are also required for safety and are located on flat terrain visible to the range personnel. A moderate degree of forest growth and overhead cover is necessary. Undulating topography and moderate understory growth is also required to provide cover, concealment, enfilades, and defilades. In general, bivouac areas require some cover, moderate vegetation growth, and relatively dry land, these requirements depend on the size of the exercise, type of training being conducted, and the degree of realism desired.

6.4.4 GTS-SC

To support the mission at GTS-SC, the main natural resource needs for training activities include open land with variably gently sloping topography. Natural resources that will support the military training mission also include stabilized, native soils, native and adapted vegetation, and water.

Figure 6-8. GTS-SC Training Areas Map

7. NATURAL RESOURCES PROGRAM MANAGEMENT

This section provides general natural resource management practices that can be applied to NEARNG installations and when necessary, provide management practices that are installation specific. Installation goals and objectives are provided in Section 8.

7.1 NATURAL RESOURCES PROGRAM MANAGEMENT

Natural resources program management includes oversight of several key natural resource elements, including the following:

- Fish and Wildlife Management
- Outdoor Recreation and Public Access of Natural Resources
- Conservation Law Enforcement
- Management of Threatened and Endangered Species and Habitats
- Water Resources Protection
- Wetland Protection
- Grounds Maintenance
- Forest Management
- Wildland Fire Management
- Agricultural Outleasing
- Invasive Species Management
- Cultural Resources Protection
- Public Outreach
- Geographic Information System
- Noise
- Climate Change.

7.2 FISH AND WILDLIFE MANAGEMENT

AR 200-1 requires the conduct of Army habitat management efforts in a manner that conserves and enhances biological diversity, while being consistent with Army goals to accomplish the military mission. The regulation also requires that the management of environmentally sensitive areas and areas of special management concern receive primary consideration. Habitat management activities on NEARNG installations are directed toward the maintenance of healthy ecosystems and the restoration of degraded ecosystems.

Wildlife habitat is a complex mixture of plant communities or cover types that all play a role in meeting the needs of particular species, and all must occur within the species' normal range for the species to be present. The arrangement and interspersion of cover types or plant

communities is important to wildlife, for wildlife distributions can vary depending on management of habitat types and the combinations and scattering of cover types. Consult the NGPC and other state agencies such as the County Extension Service and local Natural Resource District for more explicit management techniques and options on wildlife habitat improvement.

7.2.1 CATS

The basis for managing a rich assemblage of game and nongame wildlife is to provide a mosaic of habitat that is structurally and biologically diverse. The habitat types on CATS include wetlands, open water systems, riparian, grasslands, and forest.

7.2.1.1 Wetland, Open Water, and Riparian Habitat

The aquatic and riparian habitats on CATS are important not only for local wildlife populations but also for migratory Neotropical birds and waterfowl. Protection, restoration, and management of these habitats are essential to maintain and enhance wildlife populations. Important habitat components that can influence species associations and number include the availability, depth, and permanence of water; plant diversity and structure; size of the area; and the quality of invertebrate life. Smaller species requiring only low cover (sparrows, rodents, shorebirds) for breeding or transients using the area for food will more likely use a wetland dominated by non-persistent plants and water cover. The more persistent and taller vegetation of deeper wetlands supports larger wildlife species that need cover, support for nests, and the foods associated with water that is more permanent.

Riparian zones are lands adjacent to streams, rivers, lakes, and wetlands. They are highly productive ecosystems because they receive nutrients, water, and energy from adjacent uplands. Riparian zones are also important habitats for wildlife because the vegetation they support is often unique and very diverse. Riparian zones tend to be linear and create travel corridors to other habitat types. Riparian zones and wetland areas serve to enhance and protect the quality of water entering rivers, stream, lakes, and groundwater by capturing and holding the sediment, nutrients, and pollutants from runoff, and increasing groundwater recharge. Enhancement and protection of these resources is critical to the health and productivity of the surrounding ecosystems and can also provide water quality benefits to downstream users. Management of wetland, open water, and riparian habitats includes the following.

- Protect and maintain riparian and wetland habitat to continue to provide essential breeding, spawning, nesting, and wintering habitats for fish and wildlife species, as well as water quality enhancement and as protection for surface and groundwater resources in the watershed.
- Enhance wetlands, ponds, and lakes for waterfowl, water birds, and aquatic mammals.
- Conduct riparian habitat assessments to document conditions, assess status and trends, and monitor future conditions.

7.2.1.2 Grassland Habitat

Important grassland habitat components that influence faunal species associations and numbers include the amount of nesting and winter cover; the diversity and structure of the grassland; and the nutritional value of the grassland. In addition, brood and young survival can greatly depend on the management of the habitat. In order to maintain diversity and structure of the grassland, encroachment of woody and invasive species should be managed by prescribed burning and mechanical thinning. Prescribed fire is very effective and inexpensive against smaller Eastern red cedar trees, and since Eastern cottonwoods are a weak sprouter, fire generally kills it. Management of grassland plant communities to optimize wildlife habitat and enhance and restore native grassland communities and their associated native fauna includes the following.

- Use prescribed burns and mechanical treatments to control woody encroachment and woody invasive species such as eastern red cedar.
- Implement a haying timetable and strategy to allow sufficient plant growth for wildlife species. No haying operations should occur prior to August 1st.
- Stimulate legumes, plant native grasses and forbs, and control invading trees.

7.2.1.3 Forest Habitat

CATS's forest habitat is consistent with that of a mixed bottomland hardwood community. Important habitat components in forested areas that are critical for certain wildlife species include various vegetation elements, such as riparian zones, snags, logs, forest openings, edges, elevated perches, nest cavities, litter and woody debris on the forest floor. Snags and coarse woody debris found in mature woodlands serve several ecological functions. They provide structural habitat for various plant and animal species, are potentially important in long-term nutrient cycling, and help minimize effects caused by erosion to soil and water resources. Standing dead and dying trees, snags, and live trees with natural cavities are important habitat components for many species: they provide foraging, nesting, roosting and perching sites. These features are important habitat for the many bat species observed at CATS, including the threatened NLEB. NLEB use forest habitat for roosting, foraging, and commuting to and from their hibernacula location. Alive and dead trees, as well as snags and logs on the forest floor provide cracks and crevices for NLEB roosting. Bat survey information at CATS can be found in Section 5.2.2.1. Woody debris, especially large logs, is an important habitat component for many forest-dwelling species. Avian species and numerous species of mammals use these logs as sites for reproduction, foraging and cover. Decaying logs on the forest floor also support several species of amphibians and reptiles. Within a habitat, the vegetation composition also affects wildlife distributions through characteristics such as species palatability and food value. Invasive species, such as the emerald ash borer (EAB), have the potential to negatively impact forest habitat composition and structure. Currently, EAB is not found or considered a problem at CATS but monitoring the forest resource for the presence of invasive species will ensure early detection and eradication of undesirable species. Management of forested habitats includes the following.

- Maintain and preserve native forested areas to provide habitat for a variety of avian species and wildlife.
- Enhance the forested areas to promote wildlife habitat and diversity.
- Monitor forested areas for the presence of invasive floral or faunal invasive species through annual surveys.
- Preserve native forest resource to protect and provide habitat for potential threatened and endangered species on the installation.
- Remove dead or dying trees only outside of roosting season to prevent loss of habitat for NLEB and other forest-dwelling species.

7.2.2 CATS-M

The basis for managing a rich assemblage of game and nongame wildlife is to provide a mosaic of habitat that is structurally and biologically diverse. The habitat types on CATS-M include wetlands, riparian, grasslands, and forest.

7.2.2.1 Wetland and Riparian Habitat

The wetland habitats are areas that are either ponded or contain subsurface saturation for periods during the growing season. Seasonal wetland areas are generally surface depressions within the agricultural fields. These wetlands habitats are important not only for local wildlife populations but also for migratory Neotropical birds and waterfowl. Protection, restoration, and management of wetlands are essential to maintain and enhance these populations. Important habitat components that can influence species associations and number include the availability, depth, and permanence of water; plant diversity and structure; size of the wetland; and the quality of invertebrate life. Breeding by smaller species requiring only low cover (sparrows, rodents, and shorebirds) or by transients using the area for food is likely to occur in a wetland dominated by non-persistent plants and water cover.

Riparian zones are lands adjacent to streams, rivers, lakes, and wetlands. They are highly productive ecosystems because they receive nutrients, water, and energy from adjacent uplands. Riparian zones are also important habitats for wildlife because the vegetation they support is often unique and very diverse. Riparian zones tend to be linear and create travel corridors to other habitat types. Important habitat elements for wildlife in riparian areas include the plant community size (number of acres), continuity of habitat, and water. The size of the habitat can influence the abundance of species; a larger area may provide greater diversity of species and utility of the habitat. The continuity of riparian habitat along the streambed aids in dispersal routes by small mammals, reptiles, and amphibians. Riparian zones and wetland areas serve to enhance and protect the quality of water entering rivers, stream, lakes, and groundwater by capturing and holding the sediment, nutrients, and pollutants from runoff, and increasing groundwater recharge. Enhancement and protection of these resources is critical to the health and productivity of the surrounding ecosystems and can also provide water quality benefits to downstream users. Management of wetland and riparian habitats includes the following.

- Protect and maintain wetland and riparian habitat to continue to provide essential breeding, spawning, nesting, and wintering habitats for wildlife species, as well as protection for the water quality of the watershed.

- Enhance wetlands for waterfowl, water birds, in addition to some mammals.

- Conduct habitat assessments to assess the status and trends of the aquatic resource, and monitor future conditions.

7.2.2.2 Grassland Habitat

Important grassland habitat components that influence faunal species associations and numbers include the amount of nesting and winter cover; the diversity and structure of the grassland; and the nutritional value of the grassland. In addition, brood and young survival can greatly depend on the management of the habitat. Management of grassland plant communities to optimize wildlife habitat and enhance and restore native grassland communities and their associated native fauna includes the following.

Controlling floral invasive species will ensure optimal habitat and forage conditions for grassland species A total of nine invasive and noxious floral species were identified during a recent flora inventory (7.13.1). When managing invasive species at CATS, special consideration should be given to surface and groundwater resources at the site.

- Implement a haying timetable and strategy to allow sufficient plant growth for wildlife species. No haying operations should occur prior to August 1.

- Plant native grasses and forbs and control invading trees.

- Continue monitoring and managing for invasive species outlined in Section 7.13.1 in grassland habitat areas.

7.2.2.3 Forest Habitat

The forest habitat consists of trees in small woodlands and along Johnson Creek and roadsides at CATS-M. Important habitat components in forest areas that are critical for certain wildlife species include various vegetation elements, such as snags, edges, elevated perches, nest cavities, and litter on the woodland floor. Live trees with natural cavities are important habitat components for many species: they provide foraging, nesting, roosting, and perching sites. Within a habitat, the vegetation composition also affects wildlife distributions through characteristics such as species palatability and food value. Management of forested habitats includes the following.

- Maintain and enhance unique trees and diversity in woodland stands that are beneficial to wildlife.

- Allowing natural succession to revegetate areas or plant trees and shrubs to intersperse cover types.

7.2.3 GTS

The basis for managing a rich assemblage of game and nongame wildlife is to provide a mosaic of habitat that is structurally and biologically diverse. The habitat types on GTS include wetlands, riparian, grasslands, windrows, and woodlands.

7.2.3.1 Wetland and Riparian Habitat

The aquatic habitats on GTS are areas that are either ponded or contain subsurface saturation for periods during the growing season. Wetland areas are located primarily in depressions in swales and agricultural fields and along intermittent stream corridors. These wetland habitats are important not only for local wildlife populations but also for migratory Neotropical birds and waterfowl. Protection, restoration, and management of wetlands are essential to maintain and enhance these populations. Important habitat components that can influence species associations and number include the availability, depth, and permanence of water; plant diversity and structure; size of the wetland; and the quality of invertebrate life. A wetland dominated by non-persistent plants and water cover is likely to be used for breeding by smaller species requiring only low cover (sparrows, rodents, shorebirds) or by transients using the area for food. The more persistent and taller vegetation of deeper wetlands supports larger wildlife species that need cover, support for nests, and the foods associated with more permanent water.

Riparian zones are lands adjacent to streams, rivers, lakes, and wetlands. They can be highly productive ecosystems because they receive nutrients, water, and energy from adjacent uplands. Riparian zones are also important habitats for wildlife because the vegetation they support is often unique and very diverse. Riparian zones tend to be linear and create travel corridors to other habitat types. Important habitat elements for wildlife in riparian areas include the plant community size (number of acres), continuity of habitat, and water. The size of the habitat can influence the abundance of species; a larger area may provide greater diversity of species and utility of the habitat. The continuity of riparian habitat along the streambed creates dispersal routes for small mammals, reptiles, and amphibians. Management of wetland and riparian habitats includes the following.

- Protect and maintain wetland habitat to continue to provide essential breeding, spawning, nesting, and wintering habitats for wildlife species.
- Enhance wetlands for waterfowl, water birds, in addition to some mammals.
- Conduct habitat assessments to assess the status and trends of the aquatic resource and monitor future conditions.

7.2.3.2 Grassland Habitat

Important grassland habitat components that influence faunal species associations and numbers include the amount of nesting and winter cover; the diversity and structure of the grassland; and the nutritional value of the grassland. In addition, brood and young survival can greatly depend on the management of the habitat. Management of grassland plant communities to optimize

wildlife habitat and enhance and restore native grassland communities and their associated native fauna includes the following.

- Implement a haying timetable and strategy to allow sufficient plant growth for wildlife species. No haying operations should occur prior to August 1.

- Plant native grasses and forbs and control invading trees.

7.2.3.3 Windrows and Woodland Habitat

Windrows provide nesting areas and food for wildlife species, as well as protective cover when they forage in adjacent areas. They are also important in the winter in providing shelter from exposure to the wind. Shrubs and ground cover on the lee side allow wildlife to perch or rest out of the wind. Windbreaks are also used as travel lanes, providing safe routes from one habitat to another. Additionally, songbirds may use these areas as stopover points on their migration routes in the spring and fall.

A variety of deciduous tree and shrub species provide a habitat structure with a large selection of vertical and horizontal nesting and foraging sites. Conifers provide protected sites for early spring nesters, shelter for migrating songbirds, and winter roosting and loafing sites for species.

- Maintain existing low-growing shrubs for food and cover.

- Enhance the forested areas to promote wildlife habitat and diversity.

7.2.4 GTS-SC

The basis for managing a rich assemblage of game and nongame wildlife is to provide a mosaic of habitat that is structurally and biologically diverse. The habitat types on GTS-SC include wetlands and grasslands.

7.2.4.1 Wetland Habitat

The aquatic habitats on GTS-SC are areas that are either ponded or contain subsurface saturation for periods during the growing season. Wetland areas are located primarily in depressions in swales and agricultural fields and along intermittent stream corridors. These wetland habitats are important not only for local wildlife populations but also for migratory Neotropical birds and waterfowl. Protection, restoration, and management of wetlands are essential to maintain and enhance these populations. Important habitat components that can influence species associations and number include the availability, depth, and permanence of water; plant diversity and structure; size of the wetland; and the quality of invertebrate life. A wetland dominated by non-persistent plants and water cover is likely to be used for breeding by smaller species requiring only low cover (sparrows, rodents, shorebirds) or by transients using the area for food. The more persistent and taller vegetation of deeper wetlands supports larger wildlife species that need cover, support for nests, and the foods associated with more permanent water.

- Protect and maintain wetland habitat to continue to provide essential breeding, spawning, nesting, and wintering habitats for wildlife species.

- Enhance wetlands for waterfowl, water birds, in addition to some mammals.

- Conduct habitat assessments to assess the status and trends of the aquatic resource and monitor future conditions.

7.2.4.2 Grassland Habitat

Important grassland habitat components that influence faunal species associations and numbers include the amount of nesting and winter cover; the diversity and structure of the grassland; and the nutritional value of the grassland. In addition, brood and young survival can greatly depend on the management of the habitat. Management of grassland plant communities to optimize wildlife habitat and enhance and restore native grassland communities and their associated native fauna includes the following.

Controlling floral invasive species will ensure optimal habitat and forage conditions for grassland species. A total of five invasive and noxious floral species were identified during a 2020-2021 flora planning level survey. Specific surface conditions require special consideration when managing for invasive species in grassland habitat at GTS-SC (7.13.4).

- Implement a haying timetable and strategy to allow sufficient plant growth for wildlife species. No haying operations should occur prior to August 1.

- Plant a mixture of tall and short grasses. This provides a mosaic of vegetative heights for attraction of a large variety of avian species and other wildlife.

- Continue monitoring and managing for invasive species outlined in Section 7.13.4 in grassland habitat areas.

7.3 OUTDOOR RECREATION AND PUBLIC ACCESS TO NATURAL RESOURCES

Whenever practical, Army lands with suitable natural resources will be managed to allow for outdoor recreational opportunities. Installations having natural resources suitable to outdoor recreation in addition to hunting, fishing, and trapping are encouraged to develop cooperative agreements with the National Park Service and appropriate state agencies to facilitate the development and management of those programs. Public access to Army properties for outdoor recreation will be allowed whenever compatible with public safety and mission activities. Natural resources used for outdoor recreation on Army land are considered part of the land and belong to the public.

7.3.1 CATS

CATS provides some limited outdoor recreational opportunities in the forms of hunting, camping, fishing, and a small baseball field to the north of the classroom facilities.

7.3.1.1 Public Access

CATS is a nonresidential installation with few public outdoor recreation facilities or activities, available only to current or retired Nebraska Guard personnel or Department of Military

employees. At CATS, outdoor recreation must be limited due to the primary mission of the installation, limited access to areas, limited recreation opportunities, and lack of Law Enforcement Personnel. However, the most notable public outdoor recreational uses of the installation are big game hunting in the fall and morel mushroom hunting in the spring on the east side of the Platte River. The west side of the Platte River is primarily used for military purposes and agriculture. The only areas on the west banks of the Platte River that are considered suitable for recreation include Turner Lake, a few Platte River inlet areas at the north end of the property and select facilities in the cantonment area. Along with the hunting opportunities mentioned, CATS allows fishing using the Platte River inlets on the east and west sides as well as camping and fishing opportunities around Turner Lake. Stand-alone cabins, rooms for stay and Memorial Hall are available for rent in the cantonment area. Hotel/dorm-like rooms for stay and Memorial Hall are also available for rent. Memorial Hall is often used for larger functions including interest group meetings and ceremonial functions (e.g., weddings). All facilities are available on a first-come, first-served basis when not in use for military support. CATS Training Site Staff administers all rental services.

All hunting and fishing are available on a first-come, first-served basis with no associated admission fees on behalf of CATS. Any state permitting requirements and cost are the responsibility of individual to obtain. These activities are restricted to Nebraska National Guard Members (active and retired) and NMD employees and guests.

Information such as the number of users to the facility for recreational purposes is necessary for proper management of the area for plant and wildlife health. Maintaining an adequate record of all users of the recreation facilities to help monitor any impacts is necessary.

For the safety of recreational users, adequate signage indicating off-limits areas is appropriately located throughout the installation. An informational sign may include emergency contact information for recreation users, camper registration (number of people in party, number of vehicles, license plate number, length of stay), rules and regulations, and a site map (including the recreation area and restricted areas). The current camping rules and regulations in place restrict the use of firearms, fireworks, and limits open fires. Place safety rules for anglers in the designated fishing areas in addition to marking designated no-fishing areas. In addition, any person entering the installation for any purpose prohibited by law or lawful regulation is trespassing. Trespassing is a serious matter in that it may endanger the life of the person entering the installation as well as potentially endangering lives of Army National Guardsmen and interfering with training.

Safety measures at CATS are dictated by the installation regulation and oral policy, which prohibits the use of blanks and pyrotechnics on the portion of CATS south of an east-west line originating on the north side of Building 450 (the General's Cabin), where the recreational activities reside. There is no firing of service (live) ammunition allowed at CATS. CATS also has no active basic weapons marksmanship ranges, no direct fire gunnery ranges, no collective live fire ranges, no indirect fire ranges, and no special live fire ranges to create the need for other safety measures for outdoor recreational opportunities. CATS' personnel and law enforcement are the main sources of enforcement and security on the installation.

7.3.1.2 Hunting

The NEARNG, in cooperation with the NGPC, initiated big game hunting for white-tailed deer in the fall of 1999 to determine population densities and serve as a measure of population control. However, hunting also serves to improve overall quality of wildlife habitat, reduce safety hazards to troops, and assist in reducing conflicts with adjacent landowners, while providing the public with a quality recreational opportunity. To further assist in these management goals, turkey and waterfowl hunting are also available on the property east side. Consultation between the NEARNG and NGPC provide hunting recommendations for the area that ensure the harvest levels are appropriate for both recreational and biological purposes. Hunting will continue in future years until enough information is gathered to project future population needs and as the military mission allows. As part of the cooperative agreement between NEARNG and the NGPC, the permit schedules and the basic hunting regulations for the NEARNG are the same as those established for the State of Nebraska. Safety is the key issue with all permitted hunting; therefore, hunts must occur only when the sites are not used to support troop training. Only archery and muzzleloaders are permitted for deer hunting while only archery is allowed for turkey hunting. The east side is portioned into three hunting areas, each allowing one user to do one activity at a time. Guidelines for Management of Hunting Activities include the following.

- Preseason scouting, by licensed hunters, is allowed on the weekend prior to the hunt between 10:00am and 3:00pm. The hunter must carry a valid deer permit while scouting; this serves as authorization to be on the property.

- Adequate safety measures must be implemented. This includes knowing standard state hunting regulations, as well as regulations for the area you are hunting. It is always recommended to wear blaze orange, no matter the hunting season.

- During preseason scouting and during the hunt itself, the hunter will not be accompanied by anyone else, unless they also have a permit for that particular National Guard unit; however, hunters may enlist the aid of others to help retrieve harvested deer.

- Use of tree stands is authorized for these hunts, although hunters must have permission to use existing stands on these areas. Tree stands must be taken down at the conclusion of the hunting season. Consult Nebraska tree stand safety rules, which include using the "three points of contact" rule when climbing a tree and never hanging a tree stand alone.

- It is recommended that all deer harvested during these hunts be checked in at the Ak-sar-ben Aquarium. Although these deer can be checked at any firearm check station for the early hunt, any archery/muzzleloader check stations for the middle hunt, or any late season check station for the late hunt, checking at Ak-sar-ben Aquarium will help NGPC evaluate the hunt and monitor problems that might arise.

- All hunting at CATS will be in accordance with the hunting permit regulations as provided by the NGPC.

Hunting limits are determined for each year from NEARNG monitoring activities. A deer population survey is carried out every summer to monitor deer populations and how they are affected by hunting on the installation. Waterfowl and turkey population surveys are not conducted, however, any species taken must be recorded and submitted to CATS Recreational Access. This serves to monitor species being harvested from the installation.

7.3.1.3 Platte River Access

The Platte River flows northwest to southeast through the installation. Public kayak, canoe, and airboat traffic are permitted to pass through the installation, although they are restricted to the banks of the river and are not permitted to enter onto CATS installation property. Appropriate signage of these restrictions is present on sandbars in the channel of the river. There is no public river access from the installation.

7.3.1.4 Fishing

The permits and the basic fishing regulations for NEARNG are the same as those established for the State of Nebraska by the NGPC. At CATS, the current areas where fishing is allowed for Nebraska National Guard Members (active and retired) and NMD employees and guests include Turner Lake, the western bank of the Platte River, and waterways on the east side. Turner Lake is currently used as a training site for Downed Pilot Recovery (helicopter training). Public fishing is permitted within the Platte River, although entering CATS property is strictly prohibited. Management of fisheries for CATS that enhance the fishing opportunities for anglers, while promoting sustainable populations of the species most suitable for each water body include the following.

- Ensure the size, structure, and biological integrity of the fish communities.
- Detect improvements or degradation in the quality of the stream or lake habitat.
- Avoid impacting bodies of water known to support fisheries resources.

All fish species caught must be recorded and submitted to CATS Recreational Access. This serves to monitor the species and numbers of fish encountered on CATS property. This includes Turner lake and channels on the east side of the installation.

7.3.1.5 Trapping

Trapping at CATS is primarily in the forested areas to remove nuisance animals as needed. Trapping of beavers on the installation may serve as a control measure when their activities are obstructing military objectives or damaging the infrastructure. All trapping activity must be coordinated through installation management prior to use. NGPC regulation, season timing, and permit requirements apply for all trapping activity at CATS.

7.3.1.6 Camping

CATS provides camping facilities adjacent to Turner Lake. The installation has campground amenities including: 19 cement camping pads (each consisting of two concrete lanes), picnic

shelter with picnic benches, 6 electrical hookups, a ready water supply (4 spigots in the area), trash disposal areas, fixed grills, on average four portable latrines, and three stand-alone cabins. Military affiliates and guests may camp and fish at the installation with proper identification and permission from the Training Site Supervisor. Use of the camping and fishing areas and related facilities averages 35/weekends/year.

7.3.1.7 Morel Mushroom Hunting

Morel mushroom hunting for authorized individuals is a high-interest activity every spring at CATS. Its popularity and relatively simple procedure can make portions of the installation susceptible to trespassers. Property boundary locations and staff availability make it impractical to patrol all areas continuously. This is an issue that is monitored as closely as possible through CATS staff with the help of local law enforcement.

7.3.2 CATS-M

CATS-M has no authorized recreational activities and facilities.

7.3.3 GTS

GTS has no authorized recreational activities or facilities.

7.3.4 GTS-SC

GTS-SC has no authorized recreational activities or facilities.

7.4 CONSERVATION LAW ENFORCEMENT

Enforcement of the policies and procedures are the responsibility of the NEARNG environmental program manager and, ultimately, the G3 Director of Operations. The County Sheriff's Department is the primary law enforcement agency and range control personnel are trained to provide initial fire control attack. The range control personnel conduct regular patrols (when feasible), observing on-site activities, and notify the appropriate federal, state, or local law enforcement agency when enforcement services are needed.

7.4.1 CATS

At CATS, the Site Manager conducts routine patrols, observes all activities on the installation, and notifies the appropriate law enforcement agency as needed. CATS regularly works with the county and local police departments for enforcement action needed. NGPC is involved when needed for wildlife or habitat concerns. Security fencing is also utilized for access control. Gate entry is permitted through installation staff.

7.4.2 CATS-M

At CATS-M, the Site Manager conducts routine patrols, observes all activities on the installation, and notifies the appropriate state or county law enforcement agency as needed. The installation regularly works with the county police department for enforcement action needed. NGPC is

involved when needed for wildlife or habitat concerns. Security fencing is also utilized for access control. Gate entry is permitted through installation staff.

7.4.3 GTS

At GTS, the Site Manager conducts routine patrols, observes all activities on the installation, and notifies the appropriate state agency when law enforcement is needed. GTS regularly works with the county and local police departments for enforcement action needed. NGPC is involved when needed for wildlife or habitat concerns. Security fencing is also utilized for access control. Gate entry is permitted through installation staff.

7.4.4 GTS-SC

At GTS-SC, installation security is managed by GTS site staff. Range control personnel conduct patrols when feasible and utilizes local law enforcement for additional patrol assistance. The installation regularly works with the county police department for enforcement action needed. NGPC is involved when needed for wildlife or habitat concerns. Security fencing is also utilized for access control. Gate entry is permitted through installation staff.

7.5 MANAGEMENT OF THREATENED AND ENDANGERED SPECIES

NEARNG's strategy for the management of threatened and endangered species such as the whooping crane, piping plover, and northern long-eared bat (NLEB) is the preservation and management of critical habitat for these species, while maintaining adequate area to support the military mission. NEARNG conducts flora and fauna surveys and monitoring projects each year track relative species populations and the quality of their habitat on the installations. NEARNG is committed to monitoring and survey projects to delineate areas of potential habitat and occurrence to protect threatened and endangered species and prevent impacts from installation training activities. Installation-specific information on threatened and endangered species is included in Section 5.3.

7.5.1 CATS

The species listed in Section 5.3.1 above have the potential to occur in Sarpy and/or Saunders County, near CATS. The following are preferred general management practices for protected species with the potential to occur on CATS.

- Preserve and protect known and potential habitat for protected species. This includes protection of sandbar habitat in the Platte River channel for piping plover and interior least tern nesting.

- Implement conservation measures to avoid impact to NLEBs on the installation as set forth by the voluntary conference between NMD and USFWS for CATS. These conservation measures include:

    - Avoid tree clearing activities from April 1st – September 30th to avoid direct effects to female and juvenile NLEB.

- Retain and avoid impacting potential roost trees and leave dead or dying trees standing where possible and not a safety hazard.
- Avoid prescribed burns during swarming or staging season. Coordinate with USFWS prior to burns.
- Avoid conduction construction activities after sunset in known or suitable habitat.
- Retain and avoid impacting potential roost trees.
- Conduct annual bat surveys as federal funding allows.

- Conduct surveys for listed plants and animals and monitor their habitats. This includes:
  - Annual surveys monitoring occurrence and activity from bald eagles and whooping cranes as they occupy the installation, and
  - Annual nesting surveys for interior least terns and piping plovers.
- Avoid Platte River for all training activities to minimize potential for incidental take of threatened and endangered species.
- Whooping cranes have the potential to occur at CATS. Train all installation personnel to notify NMD of presence of large white birds, implement avoidance if encountered, and contact USFWS for consultation.
- Conduct annual flora and fauna surveys, seek USFWS consultation if threatened or endangered species are identified.

7.5.2 CATS-M

The species listed in Section 5.3.2 above have the potential to occur in Saunders County, near CATS-M. The following are preferred general management practices for protected species with the potential to occur on CATS-M.

- Preserve and protect known and potential habitat for protected species.
- Conduct surveys for listed plants and animals and monitor their habitats.
- NLEB has the potential to occur at CATS-M. Implement conservation measures to avoid impact to NLEBs on the installation.
  - Avoid tree clearing activities from April 1st – September 30th to avoid direct effects to female and juvenile NLEB.
  - Retain and avoid impacting potential roost trees and leave dead or dying trees standing where possible and not a safety hazard.

- Avoid prescribed burns during swarming or staging season. Coordinate with USFWS prior to burns.
- Avoid conduction construction activities after sunset in known or suitable habitat.
- Retain and avoid impacting potential roost trees.
- Conduct annual bat surveys as federal funding allows.

- Conduct annual flora and fauna surveys as funding allows, seek USFWS consultation if threatened or endangered species are identified.

7.5.3 GTS

The species listed in Section 5.3.3 above have the potential to occur in Adams County, near GTS. The following are preferred general management practices for protected species with the potential to occur on GTS.

- Preserve and protect known and potential habitat for protected species.
- Conduct surveys for listed plants and animals and monitor their habitats.
- Whooping cranes have the potential to occur at GTS. Train all installation personnel to notify NMD of presence of large white birds, implement avoidance if encountered, and contact USFWS for consultation.
- Conduct annual flora and fauna surveys as funding allows, seek USFWS consultation if threatened or endangered species are identified.

7.5.4 GTS-SC

The species listed in Section 5.3.4 above have the potential to occur in Nance County, near GTS-SC. The following are preferred general management practices for protected species with the potential to occur on GTS-SC.

- Preserve and protect known and potential habitat for protected species.
- Conduct surveys for listed plants and animals and monitor their habitats.
- Conduct annual flora and fauna surveys as funding allows, seek USFWS consultation if threatened or endangered species are identified.

7.6 WATER RESOURCES PROTECTION

7.6.1 CATS

Management of water resources at CATS includes the following.

- Limit the impact on water bodies and riparian buffers caused by training exercises.
- Maintain a 50-meter-wide buffer around all waterways and creeks to protect and improve the quality of water entering these waterways and creeks.
- Conduct routine water quality analyses (monitoring surface water quality, biomonitoring) on all water bodies within the boundaries of the installation to ensure that water quality standards comply with the standards set by the CWA.
- Monitor and maintain potable water standards through quarterly testing.
- Protect surface water resources including the Platte River and side channels by following recommended best management practices for proposed construction activities in the vicinity of streams and rivers (FISRWG 1998).

7.6.2 CATS-M

The USACE conducts monitoring of monitoring wells at CATS-M owned by the Nebraska Military Department and the frequency of monitoring varies depending on the project and operating unit (Fritzsch pers comm. 2000). The Ashland library archives data from the USACE project.

NEARNG performs water quality testing on a quarterly basis on filtered drinking water as a part of a drinking water permit for any potable water. The USACE Kansas City Division is currently responsible for groundwater testing via groundwater monitoring wells in and around CATS-M installation in conjunction with potential TCE groundwater contamination offsite. The Kansas City USACE does not directly report to NEARNG for groundwater testing results. Currently, there is no threat to installation activities due to groundwater contamination.

Management of water resources at CATS-M includes the following.

- Limit the impact on water bodies and riparian buffers caused by training exercises.
- Maintain a 50-meter-wide buffer around all waterways and creeks to protect and improve the quality of water entering these waterways and creeks.
- Monitor and maintain potable water standards through quarterly testing.
- Monitor potential threats to installation groundwater resources from off-site contamination sources and work with appropriate agencies in the event a threat becomes apparent.

7.6.3 GTS

The monitoring wells at GTS owned by the Nebraska Military Department are monitored by the USACE and the frequency of monitoring varies, depending on the project and operating unit (Fritzsch pers. comm. 2001). The data from the USACE are held in the Hastings City Library. A majority of the wells at Hastings are projected to be closed, leaving only one potable well and

one wash rack (non-potable). GTS has recently begun a program of water monitoring developed and administered by the United States Geological Survey (USGS).

NEARNG performs water quality testing on a quarterly basis on filtered drinking water as a part of a drinking water permit for any potable water. Currently, there is no threat to installation activities due to groundwater contamination.

Management of water resources at GTS includes the following.

- Limit the impact on water bodies and riparian buffers caused by training exercises.
- Maintain a 50-meter-wide buffer around all waterways and creeks to protect and improve the quality of water entering these waterways and creeks.
- Monitor and maintain potable water standards through quarterly testing.
- Monitor potential threats to installation groundwater resources from off-site contamination sources and work with appropriate agencies in the event a threat becomes apparent.

7.6.4 GTS-SC

Water resources at GTS-SC are primarily related to precipitation and associated infiltration and runoff. Management of water resources at GTS-SC includes the following.

- Limit the impact on water bodies caused by training exercises.
- Maintain a 50-meter-wide buffer around all waterways and creeks to protect and improve the quality of water entering these waterways and creeks.
- Monitor and maintain potable water standards through quarterly testing.

7.7 WETLAND PROTECTION

Wetland identification and delineation are based on the presence of three criteria: hydrophytic vegetation, hydric soils, and wetland hydrology. A summary of the wetlands present at each installation is summarized in Section 5.4.1.

7.7.1 CATS

Wetlands at CATS are located primarily in depression areas within the floodplain, on soils that are either ponded or saturated for prolonged periods during the growing season. Management of wetlands at CATS includes the following.

- Protect and enhance wetland areas and stream channels on the installation.
- Comply with all federal, state, and local laws and regulations pertaining to the federal jurisdictional wetland and other riparian areas on the installation.

7.7.2 CATS-M

Wetlands at CATS-M are located primarily in depression areas in agriculture/grassland fields or adjacent to waterways, on soils that are either ponded or saturated for prolonged periods during the growing season. Management of wetlands at CATS-M includes the following.

- Protect and enhance wetland areas and stream channels on the installation.
- Comply with all federal, state, and local laws and regulations pertaining to the federal jurisdictional wetland and other riparian areas on the installation.
- Continue monitoring of the restored wetland areas to ensure that the stream banks continue to be stable and the wetlands continue to revegetate with desirable species.

7.7.3 GTS

Wetlands at GTS are located primarily in depression areas in agriculture/grassland fields or adjacent to waterways, on soils that are either ponded or saturated for prolonged periods during the growing season. Management of wetlands at GTS includes the following.

- Protect and enhance wetland areas and stream channels on the installation.
- Comply with all federal, state, and local laws and regulations pertaining to the federal jurisdictional wetland and other riparian areas on the installation.
- Continued monitoring of the restored wetland areas to ensure that the banks continue to be stable and the wetlands continue to revegetate with desirable species.

7.7.4 GTS-SC

Wetlands at GTS-SC are located primarily in depression areas in agriculture/grassland fields, on soils that are either ponded or saturated for prolonged periods during the growing season. Management of wetlands at GTS-SC includes the following.

- Protect and enhance wetland areas and stream channels on the installation.
- Comply with all federal, state, and local laws and regulations pertaining to the federal jurisdictional wetland and other riparian areas on the installation.

7.8 GROUNDS MAINTENANCE

Any grounds management on federal lands must comply with the Guidance for Presidential Memorandum on Environmentally and Economically Beneficial Landscape Practices on Federal Landscaped Grounds (USEPA 1995). This guidance is intended to promote principles of "sustainable landscape design and management", which recognizes the interconnection of natural resources, human resources, site design, building design, energy management, water supply, waste prevention, and facility maintenance and operation. Management of the grounds includes the following.

- When feasible, use regionally native plants for landscaping. Characteristics of sustainable landscapes include minimizing water use, reducing the need for pesticides and fertilizers, reducing maintenance costs, utilizing hardy plants, and increasing erosion control.

- Use Integrated Pest Management strategies, as outlined in the NEARNG Integrated Pest Management Plan (IPMP), to reduce the need for chemicals in the control of pests.

7.9 FOREST AND GRASSLAND MANAGEMENT

7.9.1 CATS

7.9.1.1 Forest Management

CATS contains both natural and urban forest areas that support its military mission, provide ecologic benefits, and make the camp a more pleasant environment. The camp's natural forest areas are the only dismounted infantry training lands available to tenant units at CATS, as well as military units from the surrounding region. The Forestry Management Plan, summarized in Appendix, establishes goals and defines objectives for managing and improving the natural and urban forest areas within CATS. Section 7.2.1.3 also provides forest management practices.

7.9.1.2 Grassland Management

At CATS, the current management technique for areas representative of grasslands is haying and mowing. Grassland management practices are provided above in Section 7.2.1.2. Management of grassland areas at CATS should incorporate the implementation of BMPs and adaptive management strategies for weed and invasive species as outlined in the Invasive Species Management Plan (ISMP) (EA 2021). Musk thistle and common reed, noxious weed species, are found at CATS, and a combination of repeated mowing and herbicide application in the fall is recommended over multiple years to treat the smaller, isolated infestations. Chemical treatment of noxious and invasive weed species can be used to control infestations, but care should be taken to avoid impacts to aquatic life when surface water is in the proximity of application. Garlic mustard, an invasive species, covers nearly 65 acres at the site. With such a large infestation, herbicide treatment of glyphosate is preferred over mechanical treatment. Specific guidance for control and removal of invasive and noxious species at CATS should sought in the ISMP.

Prescribed burns can be used as a tool to suppress and control woody invasives such as eastern red cedar, as well as woody encroachment into grassland areas at CATS. Specific guidance for fire management at the installation can be found in 7.10 Wildland Fire Management, as well as the NEARING Integrated Wildland Fire Management Plan (EA 2021b).

7.9.2 CATS-M

7.9.2.1 Forest Management

Existing forest resources at CATS-M include natural woodlands along area drainages and adjacent to wetlands, volunteer trees and shrubs on rough ground and around former military

structures, and the remnants of windbreaks or tree plantings which once sheltered farmsteads that existed prior to the development of the Nebraska Ordinance Plant. The tree and shrub masses break the expanse of CATS-M into distinct and defined open spaces. Tree lines trace the edges of former farm fields, as well as follow Johnson Creek and its various tributaries. Scattered tree masses occur along current and former roads, providing shade and improving the roadways' value for truck convoy driver training. Scattered trees near wetlands and on-stream terraces improve the diversity of habitat for wildlife. Collectively these forest resources support the military mission, provide ecological benefits, and make the installation a more pleasant environment. The Forestry Management Plan, summarized in Appendix E, establishes goals and defines objectives for managing and improving the natural and urban forest areas within CATS-M. Section 7.2.2.3 also provides forest management practices.

7.9.2.2 Grassland Management

At CATS-M, the current management technique for areas representative of grasslands is haying and mowing. Grassland management practices are provided above in Section 7.2.2.2 Management of grassland areas at CATS-M should incorporate the implementation of BMPs and adaptive management strategies for weed and invasive species as outlined in the Invasive Species Management Plan (ISMP) (EA 2021a). Musk thistle and Canada thistle, noxious weed species, are found at CATS-M, and a combination of repeated mowing and herbicide application in the fall is recommended over multiple years to treat the infestations. Chemical treatment of noxious and invasive weed species can be used to control infestations, but care should be taken to avoid impacts to aquatic life when surface water is in the proximity of application. Care should also be taken at CATS-M to select herbicide based on land use to reduce damage to crops or desirable vegetation (EA 2021a). Specific guidance for control and removal of invasive and noxious species at CATS-M should sought in the ISMP.

Prescribed burns can be used as a tool to maintain the native grass ecosystem, reduce fire danger, and increase woody areas by reducing fuel loadings. Specific guidance for fire management at the installation can be found in 7.10 Wildland Fire Management, as well as the NEARING Integrated Wildland Fire Management Plan (EA 2021b).

7.9.3 GTS

7.9.3.1 Forest Management

Three types of forest resources occur at GTS. The most evident are the series of east to west windbreaks dating back to the time when the installation was part of the NAD. Within the cantonment at GTS, landscape plantings provide shade and enhance the area's aesthetics. Remnant trees of former farmsteads and naturally occurring trees provide scattered groupings within the installation's grasslands and along its riparian corridors. Collectively these forest resources support the military mission, provide ecological benefits, and make the installation a more pleasant environment. The Forestry Management Plan, summarized in Appendix E, establishes goals and defines objectives for managing and improving the natural and urban forest areas within GTS. Section 7.2.3.3 also provides forest management practices.

7.9.3.2 Grassland Management

At GTS, the current management technique for areas representative of grasslands is haying and mowing. Grassland management practices are provided above in Section 7.2.3.2. Management of grassland areas at GTS should incorporate the implementation of BMPs and adaptive management strategies for weed and invasive species as outlined in the Invasive Species Management Plan (ISMP) (EA 2021a). Musk thistle, a noxious weed species, is found at GTS, and a combination of repeated mowing and herbicide application in the fall is recommended over multiple years to treat the infestations. Sulfur cinquefoil is a priority invasive in Adams County and found at GTS. Chemical treatment of noxious and invasive weed species can be used to control infestations, but care should be taken to avoid impacts to aquatic life when surface water is in the proximity of application. Specific guidance for control and removal of invasive and noxious species at GTS should sought in the ISMP.

Prescribed burns can be used as a tool at GTS to maintain the native grass ecosystem, reduce fire danger, and increase woody areas by reducing fuel loadings. Specific guidance for fire management at the installation can be found in 7.10 Wildland Fire Management, as well as the NEARING Integrated Wildland Fire Management Plan (EA 2021b).

7.9.4 GTS-SC

7.9.4.1 Forest Management

Except for a few trees growing adjacent to historic structures, there are no forested areas at GTS-SC.

7.9.4.2 Grassland Management

At GTS-SC, the current management technique for areas representative of grasslands is haying. Grassland management practices are provided above in Section 7.2.4.2. Management of grassland areas at GTS-SC should incorporate the implementation of BMPs and adaptive management strategies for weed and invasive species as outlined in the Invasive Species Management Plan (ISMP) (EA 2021a). Noxious weed species are found at GTS-SC, and a combination of repeated mowing and herbicide application in the fall is recommended over multiple years to treat the infestations. Chemical treatment of noxious and invasive weed species can be used to control infestations, but care should be taken to avoid impacts to aquatic life and burrowing owl populations on the installation. Specific guidance for control and removal of invasive and noxious species should sought in the ISMP.

Prescribed burns can be used as a tool at GTS-SC to maintain the native grass ecosystem and manage leafy spurge and reduce fire danger that may result from training exercises. Specific guidance for fire management at the installation can be found in 7.10 Wildland Fire Management, as well as the NEARING Integrated Wildland Fire Management Plan (EA 2021b).

7.10 WILDLAND FIRE MANAGEMENT

An Integrated Wildland Fire Management Plan (IWFMP) was completed for the NEARNG in May of 2021. The objective of this plan was to reduce wildfire potential, effectively

protect and enhance valuable natural resources, and implement ecosystem management goals for the NEARNG installations while having no net loss in training ability. Requirements included: incorporation of all applicable laws, regulations, and current policy drivers, discussion of current and desired interagency/mutual aid agreements for fire suppression at each site, and the creation of prescribed fire programs where applicable to enhance training opportunity and restore habitat. A summary for each installation is included below with detailed information on wildland fire management outlined in the NEARNG IWFMP (EA 2021b).

7.10.1 CATS

Wildland fire management is not a major issue at CATS; however, prescribed fire is an appropriate management tool at CATS to help reduce the risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants. Controlled burns are implemented on the installation as needed. In April 2020, a controlled burn that spanned approximately 23 acres was carried out on the eastern portion of CATS.

CATS falls within the tallgrass prairie ecoregion, which is typically comprised of tallgrass prairie species in the uplands with deciduous forests in the lower areas. Fuel quantities can vary considerably, depending on the vegetation composition and recent fire history. Much of the area that historically was known for tallgrass prairie at CATS has been converted due to haying and mowing and the introduction of smooth brome (*Bromus inermis*) and Kentucky bluegrass (*Poa pratensis*). Deciduous forest types represent much of the forest cover at CATS with eastern red cedar forest types dominating three of the delineated stands - stands 8, 9, and 13. Eastern red cedar can burn with extreme flammability when temperatures, moisture, and weather conditions align, even if they are not the only tree species in the stand.

Based on the potential ignition sources and the hazards associated with the current fuel conditions at CATS, the risk of loss has an overall rating of low with the exception of areas with significant eastern red cedar such as stands referenced above, which have a rating of high.

The objective of fire management at CATS is to use prescribed burns to create a cottonwood savannah or an open forest condition that would allow relatively easy foot travel through the forest understory in the forested areas at the installation, and to control woody invasive species such as eastern red cedar. This cottonwood savannah can be achieved through prescribed fire and mechanical treatment, such as removal of fuel from the base of large overstory trees in the savannah stands, and prescribed burning of smaller eastern red cedar stands. It may be necessary to cut larger-diameter cedar trees before a prescribed burn. Leaving the largest diameter cottonwood trees for the overstory can increase resistance to surface fires.

Fuel reduction is accomplished through agricultural practices (haying), mowing, and thinning of forested areas. Historically, fire altered the vegetation in and around this area. Fires would have been started in the past by humans or lightning. In the event that a wildland fire begins, or prescribed burning is used as a management practice at CATS, control and management practices as outlined in the Camp Ashland Training Site Integrated Wildland Fire Management Plan, summarized in Appendix E, should be followed.

7.10.2 CATS-M

Wildland fire management is not a major issue at CATS-M; however, prescribed fire is an appropriate management tool at CATS-M to help reduce the risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants. There are no fire records maintained for CATS-M, but historically fire altered the vegetation in and around this area. Fires would have been started in the past by humans or lightning. Controlled burns are implemented on the installation as needed.

CATS-M falls within the tallgrass prairie ecoregion, which is typically comprised of tallgrass prairie species in the uplands with deciduous forests in the lower areas. Much of the ground cover at CATS-M consists of non-forested (grass/forb and cropland) fuel types, such as smooth brome and alfalfa (*Medicago sativa),* which generally have a low risk for loss. Areas that are forested are typically deciduous stands with eastern red cedar forest types dominating two of the delineated stands – stands 4 and 10. Eastern red cedar can burn with extreme flammability when temperatures, moisture, and weather conditions align, even if they are not the only tree species in the stand.

Based on the potential ignition sources and the hazards associated with the current fuel conditions at CATS-M, the risk of loss has an overall rating of low with the exception of areas with significant eastern red cedar such as stands referenced above, which have a rating of high.

The objective of fire management at CATS-M is to use prescribed burns to help maintain a native grass ecosystem as agricultural areas and smooth brome habitats are converted to native grasses. To achieve this, prescribed burns should be used in combination with other management techniques, such as herbicide treatment. The best time to burn is during late spring when enough dry fuel is present to carry the fire and the smooth brome stand has developed to 4 to 10 inches tall. This generally damages cool-season grasses, such as smooth brome, while native grasses and forbs thrive as their cool-season competitors are weakened.

Fuel reduction is accomplished through agricultural practices (haying and mowing). In the event that a wildland fire begins or prescribed burning is used as a management practice at CATS-M, control and management practices as outlined in the Mead-Greenlief Training Site Integrated Wildland Fire Management Plan, summarized in Appendix E, should be followed.

7.10.3 GTS

Wildland fire management is not a major issue at GTS; however, prescribed fire is an appropriate management tool at GTS to help reduce the risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants. There are no fire records maintained for GTS, but historically fire altered the vegetation in and around this area. Fires would have been started in the past by humans or lightning. Controlled burns are implemented on the installation as needed.

GTS falls within the mixed-grass prairie ecoregion, which is typically comprised of tallgrass prairie species in the moister areas and shortgrass prairie species in the drier areas. The majority of the native Mixed-Grass prairies have been converted to cropland and rangeland, except for

areas of steep topography. Today, much of the ground cover at GTS consists of non-forested (grass/forb and cropland) fuel types, such as smooth brome and large areas of switchgrass (*Panicum virgatum*) and big bluestem (*Andropogon gerardii*), which generally have a low risk for loss. Eastern red cedar, which can burn with extreme flammability when conditions are right, dominates all five forest stands at GTS.

Based on the potential ignition sources and the hazards associated with the current fuel conditions at GTS, the risk of loss has an overall rating of low with the exception of the firing ranges which have a rating of moderate and areas with significant eastern red cedar such as shelterbelts, which have a rating of high.

The objective of fire management at GTS is to use prescribed burns to help maintain a native grass ecosystem as agricultural areas and smooth brome habitats are converted to native grasses. This can be achieved through prescribed burns in conjunction with other management techniques, such as herbicide treatment. Additional fuel reduction is accomplished primarily through agricultural practices (haying and mowing). In the event that a wildland fire begins or prescribed burning is used as a management practice at GTS, control and management practices as outlined in the Mead-Greenlief Training Site Integrated Wildland Fire Management Plan, summarized in Appendix E, should be followed.

7.10.4 GTS-SC

Wildland fire management is not a major issue at GTS-SC; however, prescribed fire is an appropriate management tool at GTS-SC to help reduce the risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants. There are no fire records maintained for GTS-SC, but historically fire altered the vegetation in and around this area. Fires would have been started in the past by humans or lightning. Controlled burns are implemented on the installation as needed.

GTS-SC falls within the mixed-grass prairie ecoregion, which is typically comprised of tallgrass prairie species in the moister areas and shortgrass prairie species in the drier areas. Much of the area that historically was known for mixed-grass prairie at GTS-SC has been converted due to haying, mowing, and the using the area for rangeland. The species that dominate GTS-SC are switchgrass (*Panicum virgatum*), big bluestem (*Andropogon gerardii*), little bluestem (*Schizachyrium scoparium*), and Scribner's panicum (*Dicanthelium oligosanthes*). The noxious weed leafy spurge (*Euphorbia esula*) is also abundant throughout the installation. There are no forested areas at GTS-SC, and the non-forested areas generally have a low risk for loss.

Based on the potential ignition sources and the hazards associated with the current fuel conditions at GTS-SC, the risk of loss has an overall rating of low.

The objective of fire management at GTS-SC is to use prescribed burning to manage native grasslands throughout the installation and specifically aid in managing leafy spurge infestations. This can be achieved through prescribed burns, as well as other management techniques. Fire in conjunction with herbicides has proven effective in providing some control over leafy spurge, which fire alone cannot control. Additional fuel reduction is accomplished through agricultural practices (haying).

7.11 AGRICULTURAL OUTLEASING

Agricultural leases on all NEARNG installations aim to manage leased areas in a manner that reduces fire danger, enhancing the appearance of open areas on the site and providing suitable training environment. The USACE administers the leases on a five-year basis. Tract management plans are drawn up by the NEARNG Environmental Branch. NEARNG has direct contact with lessees through periodic reviews and when reporting needs arise.

7.11.1 CATS

CATS currently leases 114 acres of land on the west side of the installation for hay. The goal of agricultural leases on CATS is to manage leased areas in a manner that enhances their quality, while reducing fire danger, enhancing the appearance of open areas on the installation, and providing suitable training environment. Management of the agriculture outlease at CATS includes the following.

- Maximize quality and quantity of hay production through improved fertilization and pest (weed) management by the lessee.
- Promote a native prairie grasses composition throughout hay lease area, reducing non-native and invasive grass frequency, for a better ecological environment.
- Promote wildlife propagation and conservation, including preserving grassland nesting bird habitat in accordance with the Migratory Bird Treaty Act.
- Manage in a way as to not hinder or interfere with Nebraska Army National Guard (NEARNG) training activities.

7.11.2 CATS-M

CATS-M currently leases 965 acres for hay production. Up to 70% of the land area at CATS-M has been designated 'Prime Farmland', thus assigning agricultural production as the most suitable land use. The goal of agricultural leases on CATS-M is to manage leased areas in a manner that enhances their quality as forage and their use by wildlife, while reducing fire danger, enhancing the appearance of open areas on the installation, and providing suitable training environment. Agricultural outleasing at CATS-M serves to provide financial resources to fund natural resource projects for NEARNG. Managing lands in this manner helps them support propagation and conservation of wildlife as well as help support the military mission. Management of agriculture outlease at CATS-M includes the following.

- Maximize quality and quantity of hay production through improved fertilization and pest (weed) management by the lessee, using management and control methods outlined in the Tract Management Plan.
- Complete no more than one haying after August 1st to protect grassland nesting birds in accordance with the Migratory Bird Treaty Act.

- Convert old alfalfa stands to native prairie grasses to provide habitat and forage for native species and a better adapted, higher functioning ecosystem.

- Optimize haying yield using management practices outlined in the Tract Management Plan.

- Maintain a minimum of a 33-foot grass buffer strip along Johnson Creek where no leasing activities will take place.

- Manage in a way as to not hinder or interfere with NEARNG training activities.

7.11.3 GTS

GTS currently leases 2,640 acres. Up to 94% of the land area at GTS has been designated 'Prime Farmland', thus assigning agricultural production as the most suitable land use. The goal of agricultural leases on GTS is to manage outleased haylands in a manner that enhances their quality as hay and their use by wildlife, while reducing fire danger, enhancing the appearance of open areas on the installation, and providing suitable training environment. Management of agriculture outlease at GTS includes the following.

- Manage outleased haylands in a manner that enhances their quality as hay and their use by wildlife, while reducing fire danger, enhancing the appearance of open areas on the installation, and providing suitable training environment.

- Complete no more than one haying after August 1st to protect grassland nesting birds in accordance with the Migratory Bird Treaty Act.

- Maintain a minimum of a 33-foot buffer strip along Big Sandy Creek and its tributaries where no out-lease activities will take place.

- Maximize quality and quantity of hay production through improved fertilization, promotion of native grasses and pest (weed) management as outlined in the Tract Management Plan.

- Manage in a way as to not hinder or interfere with NEARNG training activities.

7.11.4 GTS-SC

GTS-SC traditionally leases 347 acres of land comprising the majority of the installation. However, the hay lease ended in 2019 due to high amounts of leafy spurge, and there is currently no plan to renew the lease. The goal of agricultural leases on GTS-SC is to manage leased areas in a manner that enhances their quality as forage and their use by wildlife, while reducing fire danger, enhancing the appearance of open areas on the installation, and providing suitable training environment. Management of agriculture outlease at GTS-SC includes the following.

- Maximize quality and quantity of hay production through improved fertilization, promotion of native grasses and pest (weed) management by the lessee.

- Manage in a way as to not hinder or interfere with NEARNG training activities.

7.12 INTEGRATED PEST MANAGEMENT (IPM) PROGRAM

Without appropriate control, pests could interfere with the military mission, damage property, increase maintenance costs and expose installation personnel to potential diseases. A major focus of the integrated pest management program is the use of mechanical and physical treatments, as opposed to chemical controls. The integrated pest management program is responsible for the safe control of pests for the installation. The program identifies total pest management requirements, includes the resources necessary for surveillance and control, and implements appropriate administrative, safety, and environmental requirements in support of the program. Pest Management personnel, who are trained and certified as required by DoD, federal, state, and local regulations for pesticide and herbicide application, use only USEPA and state-approved pesticides and herbicides. All pest control vehicles are equipped with state-of-the art personal protective equipment, and mixing and dispensing devices for use by pest management personnel.

In April 2019, an IPMP was completed for the NEARNG. This plan provides guidance for operating and maintaining an effective pest management program at NEARNG facilities. The plan focuses on the use of integrated pest management, which is the judicious use of both nonchemical and chemical control to suppress or prevent pests from exceeding acceptable thresholds. Integrated pest management strategies rely upon surveillance to establish the need for control and to monitor the effectiveness of management efforts. A State Pesticide Use List (SPUL) was appended to the 2019 IPMP in 2021.

7.13 INVASIVE SPECIES MANAGEMENT PLAN (ISMP)

Invasive and noxious weeds, without appropriate control, can interfere with the military mission, damage property, increase maintenance costs, pose a health hazard to humans and livestock, and outcompete desirable native vegetation for resources. Invasive weeds are typically defined as introduced non-native species that can thrive in habitats and locations beyond their natural range of dispersal. Noxious weeds are typically defined as species that may be difficult to control; or may pose as a health hazard to humans, stock animals, or wildlife; or may be otherwise detrimental to an ecosystem. NEARNG is required by the State of Nebraska and the federal government to monitor and control the spread of noxious weeds and is committed to controlling invasive species to optimize forage production in identified lease areas, and to maintain optimal health of installation natural resources and the surrounding ecosystem.

While vegetative invasive and noxious species pose the greatest threat to the health of installation natural resources and the ecosystem surrounding the installation, detection and management of faunal invasives is also critical in ensuring optimal ecosystem health. NEARNG performs regular flora and fauna planning level surveys at each installation to monitor the composition and occurrence of individual species. Planning level surveys for fauna have not identified invasive faunal species at these installations but these surveys remain an important tool for early detection of such species. NEARNG does not currently have a management plan for invasive faunal species.

An Invasive Species Management Plan was completed for the NEARNG in May of 2021 that was focused on invasive flora species. This plan documents the nature and extent of noxious and invasive flora species at NEARNG installations and puts forth species-specific and installation-specific management plans with recommendations to help control invasive species. The management plans focus on best management practices (BMPs), adaptive management strategies, monitoring methods, and different methods of weed management which, when used in combination with each other, can maximize effective control and minimize negative environmental impacts, all while cultivating and promoting desirable species habitat and communities. The site-specific control recommendations for located and identified invasive species include mechanical, biological, cultural, and chemical controls. Special care and considerations for natural resources at each installation is required when implementing control measures for noxious and invasive species, and these are detailed in the ISMP. Flora inventories were conducted at all four bases in 2020 and 2021. Eleven total invasive and noxious species were identified.

Invasive and Noxious Species Identified	
Canada thistle (*Cirsium arvense*)	Musk thistle (*Carduus nutans)*
Common reed (*Phragmites australis*)	Purple loosestrife (*Lythrum salicaria*)
Downy brome (*Bromus tectorum*)	Reed canary grass (*Phalaris arundinacea)*
Eastern redcedar (*Juniperus virginiana*)	Smooth brome (*Bromus inermis*)
Leafy spurge (*Euphorbia esula*)	Tree of heaven (*Ailanthus altissima*)
Yellow starthistle (*Centaurea solstitialis*)	

Detailed invasive species descriptions and recommended control methods are outlined in the NEARNG Invasive Species Management Plan.

7.13.1 CATS

An installation flora inventory was completed in fall 2020, and spring and summer 2021 (Olsson 2021d). A total of nine invasive and noxious species were identified during this inventory. These species include purple loosestrife, musk thistle, Canada thistle, smooth brome, yellow starthistle, eastern redcedar, downy brome, common reed, and tree of heaven.

Musk thistle, Canada thistle, purple loosestrife, and common reed are all classified as noxious weeds by NEDA.

When managing invasive species at CATS, special consideration should be given to surface and groundwater resources at the site. The Platte River and its' floodplain run through the middle of the site and approximately 27.33 acres of wetlands and 9.42 acres of open waters are present at CATS.

Treatment at CATS should focus on controlling musk thistle, Canada thistle, purple loosestrife, and common reed which are designated noxious weeds. Since the infestations are relatively small and isolated, effective treatment can help prevent their spread to other parts of the installation. A combination of mowing or string trimming before flowering followed by herbicide application in the fall for both species is recommended.

Planning level surveys targeting fauna have not identified invasive species at CATS but remain an important tool for early detection of such species. One species of concern to NEARNG is the emerald ash borer (EAB), *Agrilus planipennis* Fairmaire, which is responsible for killing millions of ash trees across the country since its discovery in 2002 (Herms and McCullough 2014). CATS has the most forested acreage of all four installations by far, including green ash trees, and EAB is one of the greatest threats to the installation's woody resources, as well as habitat for avian, mammal, and threatened and endangered species. Fauna planning level surveys (PLS) have yet to detect the presence of EAB, however, as future PLSs are performed, NEARNG plans to update the INRMP for the status of this species in the annual INRMP updates. It is recommended that NEARNG survey healthy ash trees during adult EAB emergence, which typically occurs mid-June to early July. EAB infestation can be positively identified by locating "D"-shaped holes in the bark of ash trees. Upper canopies of large ash trees are typically colonized first, making early detection in the lower trunk challenging (Herms and McCullough 2014). While some success has been had in eradication by systematic insecticides, options for controlling and eradicating an EAB infestation and saving ash trees is still very limited.

7.13.2 CATS-M

Ground surveys were performed at CATS-M on 17 and 18 June and 12 August 2020 and identified a total of three invasive species: musk thistle, Canada thistle, and reed canary grass. Musk thistle is the dominant invasive at CATS-M covering more than 4 percent of the site, including many small infestations (less than 0.25 acres) throughout the site. Large infestations were observed on the eastern edge of the site and in the northeast corner. Reed canary grass and Canada thistle were observed in smaller infestations. Reed canary grass is considered a nuisance species by NEARNG.

When managing invasive species at CATS-M, special consideration should be given to surface resources at the site. Johnson Creek runs directly through CATS-M and eventually drains to Johnson Creek Reservoir less than one mile southeast of the site. Approximately 15.83 acres of wetlands are present at CATS-M. Groundwater will likely not be impacted by herbicide application at this site.

Treatment at CATS-M should focus on controlling musk thistle and Canada thistle which are designated noxious weeds. Musk thistle control should target the large infestation located on the eastern edge of the site and in the northeast corner. A combination of repeated mowing before flowering followed by herbicide application in the fall is recommended. Herbicide should be selected based on land use to reduce damage to crops or desirable vegetation. Multiple herbicide applications in one season may be necessary to ensure coverage.

Canada thistle populations at the site are small and efforts should be made to eliminate these populations before they spread. Since the populations are small, cultivation combined with herbicide application is recommended. Herbicide should be selected based on land use to reduce damage to crops or desirable vegetation. Many herbicides are effective on both musk thistle and Canada thistle.

Planning level surveys targeting fauna have not identified invasive species at this installation but remain an important tool for early detection of such species. One species of concern to NEARNG is the emerald ash borer (EAB), *Agrilus planipennis* Fairmaire, which is responsible for killing millions of ash trees across the country since its discovery in 2002 (Herms and McCullough 2014). Green ash trees are present at CATS-M, and EAB is one of the greatest threats to the installation's woody resources, as well as habitat for avian, mammal, and threatened and endangered species. Fauna planning level surveys (PLS) have yet to detect the presence of EAB, however, as future PLSs are performed, NEARNG plans to update the INRMP for the status of this species in the annual INRMP updates. It is recommended that NEARNG survey healthy ash trees during adult EAB emergence, which typically occurs mid-June to early July. EAB infestation can be positively identified by locating "D"-shaped holes in the bark of ash trees. Upper canopies of large ash trees are typically colonized first, making early detection in the lower trunk challenging (Herms and McCullough 2014). While some success has been had in eradication by systematic insecticides, options for controlling and eradicating an EAB infestation and saving ash trees is still very limited.

7.13.3 GTS

An installation flora inventory was conducted in fall 2020 and spring and summer 2021 (Olsson 2021e). During this inventory three invasive and noxious species were identified at GTS: musk thistle, smooth brome, and eastern redcedar. Musk thistle infestations were observed throughout GTS with the largest infestations located in the northwest and southeast portions of the site during a 2020 site visit. Smooth brome is not acting as an invasive on the site as it is used for haying, but special surveying should be conducted to ensure no new infestations occur.

Surface resources that should be given special consideration when managing noxious and invasive species include approximately 21.43 acres of wetlands present on the site, along with consideration for the multiple drainages that originate within a quarter mile from the installation.

Invasive species treatment at GTS should focus on controlling musk thistle since it is a noxious weed. A combination of repeated mowing before flowering followed by herbicide application in the fall is recommended. Herbicide should be selected based on land use to reduce damage to crops or desirable vegetation. Multiple herbicide applications in one season may be necessary to ensure coverage.

Planning level surveys targeting fauna have not identified invasive species at GTS but remain an important tool for early detection of such species. One species of concern to NEARNG is the emerald ash borer (EAB), *Agrilus planipennis* Fairmaire, which is responsible for killing millions of ash trees across the country since its discovery in 2002 (Herms and McCullough 2014). Green ash trees are present at GTS, and EAB is one of the greatest threats to the installation's woody resources, as well as habitat for avian, mammal, and threatened and endangered species. Fauna planning level surveys (PLS) have yet to detect the presence of EAB, however, as future PLSs are performed, NEARNG plans to update the INRMP for the status of

this species in the annual INRMP updates. It is recommended that NEARNG survey healthy ash trees during adult EAB emergence, which typically occurs mid-June to early July. EAB infestation can be positively identified by locating "D"-shaped holes in the bark of ash trees. Upper canopies of large ash trees are typically colonized first, making early detection in the lower trunk challenging (Herms and McCullough 2014). While some success has been had in eradication by systematic insecticides, options for controlling and eradicating an EAB infestation and saving ash trees is still very limited.

7.13.4 GTS-SC

An installation flora inventory was conducted in fall 2020 and spring and summer 2021 (Olsson 2021f). During this inventory, five noxious and invasive species were identified at GTS-SC: leafy spurge, eastern redcedar, smooth brome, downy brome, and common reed. Leafy spurge is the dominant invasive at GTS-SC covering 53 acres (more than 15 percent) of the site. Common reed and leafy spurge are classified as noxious weeds and should be controlled.

Specific surface conditions require special consideration when managing for invasive species at GTS-SC. The installation is home to 18 wetlands, totaling approximately 61.03 acres in area. It is also 200 yards north of Prairie Creek, the main stormwater catchment for the site. Groundwater at GTS-SC is also very close to the surface due to its position on bedrock of the Niobrara Formation, and this requires special consideration when applying herbicide at the site. Care should also be taken to avoid impacting burrowing owl's nesting sites, which have been documented at the installation.

Leafy spurge will require the most time and resources to control due to the size and extent of the infestation. A combination of repeated mowing through the growing season followed by herbicide application in the fall is recommended. Any herbicide that contains picloram (Tordon 22K, Tordon, and Grazon P+D) should not be used at GTS-SC due to the permeable soil and shallow groundwater.

Infestations of common reed are smaller, but treatment is recommended to prevent the spread to other areas of GTS-SC. This species can be treated by a combination of mowing before flowering, followed by herbicide application in the fall. When treating populations near surface water, herbicide labeled for aquatic use should be applied.

Planning level surveys targeting fauna have not identified invasive species at GTS but remain an important tool for early detection of such species.

7.14 CULTURAL RESOURCES PROTECTION

The NEARNG currently has a statewide ICRMP (2017). The installation's ICRMP identifies goals and objectives for cultural resource management. The overall goal of the program includes planning and integration of cultural resource management with installation plans, projects, and programs and in support of military missions.

7.15 PUBLIC OUTREACH

Environmental Awareness serves to educate the public and garner their support by effectively communicating the nature of the military mission at each installation and the level of natural resources management at the installation. Newspaper articles, public service announcements, and digital media posts can reach a diverse audience and they can be specifically designed to communicate with and educate one or more categories of receivers. Awards presented to installation personnel are a good topic for such articles/announcements. Newspaper and digital media picture features enhance understanding of the natural resources and are easily understood by most people. Specific examples of articles include natural communities on the installation (forests, wetlands, etc.); use of native species for revegetation; or protection of Neotropical birds. All contact with media outlets should be coordinated with the Public Affairs Office.

Standardized talks or presentations about environmental or natural resource activities on the installation can be given at the request of community groups (e.g. Lion's or Rotary Clubs). A particular topic can be chosen to explain a specific management activity that needs public support or at least understanding. This also leads to an overall awareness by the public that the NEARNG is a responsible steward of the area's natural resources.

Another avenue for building environmental awareness and community support is through cooperation with local school and civic groups. Local schools frequently invite interesting speakers to illustrate subjects that are currently being covered in classes. Local scout groups need help with projects, merit badges, and conservation talks.

7.16 GEOGRAPHIC INFORMATION SYSTEM

The NEARNG utilizes the GIS as a support and planning tool in the management of natural resources. All NEARNG GIS data is maintained in a server-driven environment. Networked data allows access and modification of the data from different locations, often hundreds of miles apart. To allow more uses and better interaction, online applications have been developed.

The NEARNG will incorporate natural resource data specific for management of the installations as information becomes available through surveys and studies. Natural resource data files include but are not limited to:

- Threatened and endangered species;
- Agriculture outleases;
- Burn units/burn plan;
- Vegetation/land cover;
- Vegetative communities;
- Wetlands;
- Fire breaks;
- Elevation contours; and,

- Cultural resources.

7.17 NOISE

One of the goals of the Department of the Army (DA) is to establish effectual programs designed to minimize the adverse impacts of noise from military training upon the quality of the human environment without impairing the NEARNG's military mission. To avoid potential conflicts between military training operations and nearby civilian and agricultural land use, the NEARNG will take reasonable steps to protect the communities from training noise, including working with the local landowners to develop an understanding of military training needs, and conduct training operations to be compatible with the noise environment. In 2007 the NEARNG adapted a Statewide ONMP for operations at the installations.

7.18 CLIMATE CHANGE

DoDM 4715.03 stresses the importance of adopting an adaptive management approach to natural resources management to help ensure the resilience of the ecological systems at military installations. Adaptive management gives the NEARNG and, specifically, the Natural Resources Manager, the ability to react to challenges posed by climate change and to incorporate new management techniques while ensuring the future goals and long-term ecosystem vitality is achieved at the installations. Climate change has the potential to alter species phenology and distribution, fire regimes, and hydrology and also increase habitat fragmentation, pollution, and the abundance of invasive species.

In Nebraska, it is estimated that the average temperature has increased approximately one degree Fahrenheit since 1985. It is predicted that the temperature will continue to rise and there will be an increase in extreme weather events across the state. Changing weather patterns expected to affect Nebraska include longer periods of drought, an increase in wildland fires, more intense rainstorm events leading to increased flooding, a decrease in the amount of snowpack in the Rocky Mountains resulting in the loss of the slow release, steady flows in snowmelt-fed rivers, to name a few (Bathke et al 2014).

Natural resources managers currently face a rapidly, drastically, and unidirectionally changing climate which can lead to extreme persistent ecological changes that can be attributed largely to anthropogenic stressors. These changes can have consequences for the availability, quality, and type of ecosystem goods and services (Millar and Stephenson 2015). These changes, called ecological transformations, are characterized by lasting shifts in many components of the ecosystem which are not easily changed or reversed by natural resource management (Schuurman et al. 2020). Ecological transformations make managing for a "natural" or historical condition more and more challenging, and management decisions must be made to steward natural resources in an age of continuous change. The National Park Service proposes a framework for making such management decisions called "Resist – Accept – Direct Change" (RAD). This framework emphasizes natural resources management for the emergence of conditions for which there may not exist a local precedent (Schuurman et al. 2020). The manager has the option to resist change – that is to maintain or restore processes, either for reducing magnitude of climate change effects or to buy time for species to adapt, accept change – allowing ecosystem changes with little or no intervention, possibly due to lack of funding or

resources, or direct change – adapting to ecological transformations by actively shaping ecosystem conditions toward a new, more resilient, self-sustaining state.

Management of natural resources at NEARNG installations will likely consist of a combination of resisting, accepting, and directing ecological transformations as data, resources, and funding allows. Management decisions must be strategic and forward-thinking with unprecedented shifts in ecological structure and function, and goals and desired outcomes will likely need to be periodically revisited as conditions evolve. Where appropriate, historical conditions can be used as a benchmark, such as native tallgrass prairie conditions and drought tolerant species. However, more climate change-susceptible ecosystems, such as wetland or aquatic habitats, will have to be managed to direct change toward resilient, highly functioning systems. For example, riparian conditions may likely change due to lower snowpack and earlier melting. Directing change would entail actively managing for shift from wet meadow to grassland, and prescribed burns to control woody encroachment.

The 2011 Nebraska Natural Legacy Project, State Wildlife Action Plan provides several "no regrets" adaptation strategies that will provide a net benefit to the natural resources at the installations regardless of the magnitude, rate, and nature of future climate change effects. These strategies are provided below (NGPC 2011):

- Reduce the impacts of non-climate stressors, such as invasive species, pests, pathogens, pollution, and habitat loss, degradation, and fragmentation.
- Restore and maintain ecological processes and ecosystem functions, such as disturbance and hydrologic regimes (e.g., fire, flooding, etc.), energy and nutrient flows, and species dispersal
- Protect and maintain a network of conservation areas to increase the extent of terrestrial and aquatic habitats that are protected from non-climate threats and to protect habitat corridors to allow for species dispersal in response to climate change.
- Restore and maintain habitat and landscape connectivity, this requires strategic planning and investment and meaningful collaboration among public and private parties.
- Increase knowledge about climate change impacts and species and ecosystem responses by conducting vulnerability assessments, monitoring, experiments, and modeling.
- Utilize an adaptive management approach in implementing adaptation strategies to learn from previous management activities and to respond quickly and creatively to the challenges posed by climate change.

7.18.1 CATS

Due to the location along the Platte River and the multiple types of habitat available at CATS, several climate change considerations and management actions will be necessary to ensure the vitality of the natural resources on the installation.

Climate change will likely alter the flow regime of the Platte River. Increased severity of storms and flood events will lead to amplified erosion along the Platte River and Salt Creek. Less snowpack in the Rocky Mountains will lead to lower flows in the Platte River. Steady spring

and summer flows in the Platte River are necessary to support a range of native species as well as several threatened and endangered species. Management actions include:

- Monitor erosion in the banks of the Platte River and the chutes located east of the Platte River and repair when necessary.
- Continue collaborating with location agencies and entities to monitor pallid sturgeon use in the Platte River.
- Continue to monitor nesting birds, specifically during and after flood events.
- Monitor riparian and wetland areas for shifts in hydrology or vegetative structure, remove encroaching woody species, and/ or remove damaged wetland plants.

Increased frequency and magnitude of drought periods and increased temperature at CATS will result in dryer soils which will affect the flora and fauna species composition, increase the likelihood for wildland fires, alter the migration pattern of several fauna species, and give invasive species, especially woody vegetation, a competitive advantage over native species. Management actions include:

- When possible, incorporate native drought tolerant flora species into the landscape.
- Continue to reduce fuel for fires when possible.
- Continue to monitor fauna species, specifically, those that migrate. Record and track shifts in migration.
- When possible, coordinate land management with neighbors to reduce habitat fragmentation.
- Continue to manage invasive species.
- Conduct seeding of resilient grassland species that will thrive in projected conditions.

7.18.2 CATS-M

Due to the multiple types of habitats available at CATS-M and the location of Johnson Creek, several climate change considerations and management actions will be necessary to ensure the vitality of the natural resources on the installation.

Climate change will likely alter the flow regime of the Johnson Creek. Increased severity of storms and flood events will lead to amplified erosion along Johnson Creek. Management actions include:

- Monitor erosion in the banks of the Johnson Creek and repair when necessary.

Increased frequency and magnitude of drought periods and increased temperature at CATS-M will result in dryer soils which will affect the flora and fauna species composition, increase the likelihood for wildland fires, alter the migration pattern of several fauna species, and give invasive species, especially woody vegetation, a competitive advantage over native species. Management actions include:

- When possible, incorporate native drought tolerant flora species into the landscape.
- Conduct seeding of resilient grassland species that will thrive in projected conditions.

- Continue to reduce fuel for fires when possible.
- Continue to monitor fauna species, specifically, those that migrate.
- Continue to manage invasive species.

7.18.3 GTS

Due to the multiple types of habitats that are available at GTS and the location of Big Sandy Creek, several climate change considerations and management actions will be necessary to ensure the vitality of the natural resources on the installation.

Climate change will likely alter the flow regime of the Big Sandy Creek. Increased severity of storms and flood events will lead to amplified erosion along Big Sandy Creek. Management actions include:

- Monitor erosion in the banks of the Big Sandy Creek and repair when necessary.

Increased frequency and magnitude of drought periods and increased temperature at GTS will result in dryer soils which will affect the flora and fauna species composition, increase the likelihood for wildland fires, alter the migration pattern of several fauna species, and give invasive species, especially woody vegetation, a competitive advantage over native species. Management actions include:

- When possible, incorporate native drought tolerant flora species into the landscape.
- Continue to reduce fuel for fires when possible.
- Continue to monitor fauna species, specifically, those that migrate.
- Continue to manage invasive species.

7.18.4 GTS-SC

Increased frequency and magnitude of drought periods and increased temperature at GTS-SC will result in dryer soils which will affect the flora and fauna species composition, increase the likelihood for wildland fires, alter the migration pattern of several fauna species, and give invasive species, especially woody vegetation, a competitive advantage over native species. Management actions include:

- When possible, incorporate native drought tolerant flora species into the landscape.
- Continue to reduce fuel for fires when possible.
- Continue to monitor fauna species, specifically, those that migrate.
- Continue to manage invasive species.

8. MANAGEMENT GOALS AND OBJECTIVES

Specific management objectives and strategies have been identified in a number of subject areas that affect the natural resources present on and immediately adjacent to the four NEARNG installations. This chapter lists the goals and objectives for future natural resources management on each of the installations. The goals are the primary focal point for implementation of the INRMP. A goal should reflect the values of the installation by expressing a vision of the desired condition for the installation's natural resources in the foreseeable future. Each goal is supported by one or more objectives. An objective indicates a management initiative or strategy that will be used to achieve the stated goal. Projects or tasks are the individual component actions required to achieve an objective. Project statements describe the specific methods and procedures that will be used to achieve the objective supported.

Management objectives established in this INRMP were initially developed during a thorough evaluation of the natural resources present at each installation. In accordance with AR200-1 and the principles of adaptive ecosystem management, subject areas were identified and management alternatives developed by an interdisciplinary team of ecologists, biologists, geologists, planners, and environmental scientists. The revision of this INRMP involved a complete review of the original subject areas and management alternatives accomplished during time since the last INRMP revision. This revised section presents the preferred management alternatives based on the professional opinions of the NEARNG Natural Resources Manager, USFWS, and the NGPC. Priorities communicated through the NEARNG upper command and installation staff as they relate to the overall military mission were also taken into consideration. Through these evaluations, the original natural resources planning and management goals have been reevaluated to ensure they represent the most current theories on adaptive ecosystem-based planning. Selection of these management goals has been tempered with the fact that the operational mission at each installation takes primacy over natural resources management. However, through the multiple-use adaptive paradigms used, sound ecological management on the installation should supplement the operational effectiveness and safety of the military missions. Ecosystem management provides a means for the Army to conserve biodiversity and to provide high-quality military readiness. The INRMP is a mechanism through which the NEARNG can maintain sustainable land use through ecosystem management.

The specific "management issues" identified in the previous INRMPs have been reviewed and updated in this revision. These management issues related to a number of subject areas that affect the natural resources present on and immediately adjacent to each installation. The purpose of this section is to identify actions and objectives for each installation to obtain workable and useful solutions for each management issue identified. This chapter is divided into 15 sections, one for each of the natural resource subject areas. For simplicity and clarity within this INRMP, each natural resource subject area is assigned an individual "issue number." Each subject area has been abbreviated, as shown in Table 8-1. For example, the first management objective in Section 8.1, Natural Resources Program Management, is identified as NRP-1. In addition, a series of projects/tasks are presented following the goal and objective for each subject area. The projects/tasks are consecutively numbered for each management objective. A summary of the management objectives is provided in Chapter 10, Annual Project Implementation Tables.

Some of the projects described in this section will be accomplished through interactive partnerships with federal, state, and local organizations. NEARNG natural resources management staff will initiate partnerships based on the benefits to the regional ecosystem and the local environment. Where appropriate, goals, objectives, and projects are listed for each installation. Required projects, which are part of the continued management of each installation, will be internally funded through the ARNG.

Table 8-1. Integrated Natural Resources Management Plan Subject Area Abbreviations

Section	INRMP Subject Area	Abbreviation
8.1	Natural Resources Program Management	NRP
8.2	Fish and Wildlife Management	FWM
8.3	Outdoor Recreation and Public Access to Natural Resources	OR
8.4	Conservation Law Enforcement	CLE
8.5	Threatened and Endangered Species and Habitats	TE
8.6	Water Resources Protection	WRP
8.7	Wetland Protection	WP
8.8	Grounds Maintenance	GM
8.9	Forest and Grassland Management	FGM
8.10	Wildland Fire Management	WFM
8.11	Agricultural Outleasing	AG
8.12	Integrated Pest Management Program	IPM
8.13	Public Outreach	PO
8.14	Geographic Information System	GIS
8.15	Climate Change	CC

8.1 NATURAL RESOURCES PROGRAM MANAGEMENT

Operation and management of each installation is conducted by installation personnel, departments, and stakeholders. Management teams provide support within their areas of expertise to ensure that operation of the installations is implemented successfully. It is necessary that management approaches are consistent between units and with the natural resources management goals and objectives developed in the INRMP. Coordination with installation operators and consistency of natural resources management goals and objectives developed in the INRMP with other installation operational plans and documents will ensure that natural resources management can be implemented successfully in a manner consistent with the missions of the installations.

A crucial function of this INRMP is to utilize an ecosystems approach for the management of resources found at each installation. An ecosystems approach focuses on using an ecosystems model, in which all appropriate factors are accounted for by their function within the model. Natural resources management is emphasized in this INRMP because it is recognized that the mission of the NEARNG is inextricably linked to local, regional, and global ecological integrity. Protecting the ecological integrity of the installation aids in improving the natural resources of the area, including biodiversity and ecosystem health. Such practices also assure that projects are completed with the foundations of sustainable use in mind. Another benefit of conserving the ecological integrity of NEARNG sites is that it can reduce management costs for natural resources over time. Native natural communities are best suited to localized areas and are crucial to maintaining a functional and adaptable ecosystem, which decreases management needs.

Although the ecosystem at each installation have already largely been altered by human activity, it is a priority to manage the remaining natural areas and resources under the principles of ecosystem management. While ecosystem management principles largely consider the complex interaction of natural factors, ecosystem-based management also must consider human needs and uses of an area when establishing suitable ecological management actions.

The natural resource management topics of concern and associated goals and objectives for each installation are listed below. These goals focus on conserving and enhancing biodiversity by managing the ecosystem rather than focusing on a single biotic or abiotic component of the ecosystem. Ecosystem-focused management encompasses both the function and the structure of the ecosystem and the processes that link them.

The following goals apply to projects listed for each installation in Table 10-2.

NRP GOAL 1: COMMUNICATION OF ECOSYSTEM MANAGEMENT PHILOSOPHY TO CATS PERSONNEL AND VISITING UNITS

- NRP OBJECTIVE 1.1: Promote discussion with installation personnel and pertinent stakeholders about incorporating ecosystem-management philosophy into command decisions and natural resources planning on an annual basis. This should include training and education of installation personnel and visitors in applying an ecosystem-management approach to natural resources management decisions and actions.

NRP GOAL 2: UPDATE THE INRMP WHEN ENVIRONMENTAL OR MISSION CONDITIONS CHANGE AS REQUIRED BY THE SIKES ACT (16 USC 670A) AND DODI 4715.03

- NRP OBJECTIVE 2.1: Coordinate with installation organizations to ensure there is an understanding of management goals and actions developed in the INRMP and to ensure that management actions developed in the INRMP are consistent with current management instructions and plans.

- NRP OBJECTIVE 2.2: Conduct external stakeholder annual review and update the INRMP as needed based on pertinent review findings. The INRMP needs to be reviewed internally on an annual basis to assess the suggested management practices in terms of their appropriateness for current conditions at the installation. Recurring annual review with minor update and tripartite coordination is generally performed in-house or others, but may include incidental costs associated with physical update of INRMP documentation. The NEARNG will coordinate with the USFWS and NGPC to review and assess conservation goals and objectives and to determine if updates to the INRMP need to be made. In addition, the INRMP should be updated whenever there is a modification to the installation's mission, or when there is a substantial change to the installation's resources.

- NRP OBJECTIVE 2.3: During annual reviews, determine if an update or revision of the INRMP is necessary based on changes in environmental conditions or the mission, as

required by the Sikes Act (16 USC 670a) and DoDI 4715.03. The Sikes Act requires INRMPs to be reviewed for operation and effect no less than once every 5 years.

8.2 FISH AND WILDLIFE MANAGEMENT

Wildlife management is defined as manipulation of the environment and wildlife populations to produce desired objectives. Management can be performed in a manner that enhances biodiversity through the reestablishment of native habitats. Conversely, habitat management could be required to decrease the abundance of certain wildlife species to reduce animal damage. Traditionally, wildlife management was confined to large tracts of naturally vegetated land. Observations and discussions with installation and federal and state agency personnel identified a number of important wildlife species on each installation. The variety of habitats present on the installations (e.g., wetland complexes, upland forests, grasslands) contributes to the diversity of species found on each installation.

Wildlife population and habitat management on each installation will attempt to deter animals from foraging or roosting near or adjacent to areas where they would be in opposition to installation missions and actions, or where they present a risk to safety or practices. Management actions include attracting wildlife away from these areas to more suitable locations and protecting and conserving threatened and endangered species through habitat conservation at selected locations at the installations. Additionally, non-habitat wildlife management approaches, such as incorporating food plots, hunting/trapping, and fish-stocking, are also implemented at the installations. These approaches have been chosen due to the relative abundance and variety of wildlife species present on each installation, and the low likelihood of excluding all wildlife species from the installation that pose a significant threat to the safety of the mission.

The primary goal of fish and wildlife management at each installation is to maintain and control wildlife populations to provide quality non-consumptive wildlife associated recreation that is compatible with the military missions of the installation.

The following goals apply to projects listed for each installation in Table 10-2.

8.2.1 CATS

FWM GOAL 1: MANAGE HABITAT FOR ALL NATIVE SPECIES AT CATS

- FWM OBJECTIVE 1.1: Identify pollinator habitat at CATS. Pollinators have been in severe decline in recent years. The declining trend results from habitat loss and fragmentation, pesticide exposure, disease, parasites, and effects of introduced species. CATS is an ecologically important area and is uniquely positioned to contribute to pollinator conservation by enhancing habitat for monarch butterflies and other pollinators on the installation. Monitoring will be focused primarily in the grassland and wooded habitat areas encompassing approximately 650 acres.

- FWM OBJECTIVE 1.2: Identify bird populations on the installation and any potential threats in order to minimize future potential impacts to training. Monitoring will be focused primarily in the grassland, wooded, and aquatic habitat areas encompassing

approximately 1,000 acres. The Platte River is an important habitat to include in monitoring efforts as the sandbars are key areas for nesting and foraging of many species.

- FWM OBJECTIVE 1.3: Maintain fisheries and wildlife resources by protecting and enhancing aquatic habitat.

- FWM OBJECTIVE 1.4: Incorporate habitat management measures that benefit both game and nongame species.

- FWM OBJECTIVE 1.5: Identify and avoid disturbing migratory bird nesting sites. Nesting sites should be left undisturbed until offspring have been fledged, permits are obtained, and/or consultation has been completed.

8.2.2 CATS-M

FWM GOAL 2: MANAGE HABITAT FOR ALL NATIVE SPECIES AT CATS-M

- FWM OBJECTIVE 2.1: Identify pollinator habitat at CATS-M. Pollinators have been in severe decline in recent years. The declining trend results from habitat loss and fragmentation, pesticide exposure, disease, parasites, and effects of introduced species. CATS-M is an ecologically important area and is uniquely positioned to contribute to pollinator conservation by enhancing habitat for monarch butterflies and other pollinators on the installation. Monitoring will be focused primarily in the grassland and wooded habitat areas encompassing approximately 1,150 acres.

- FWM OBJECTIVE 2.2: Identify bird populations on the installation and any potential threats in order to minimize future potential impacts to training. Monitoring will be focused primarily in the grassland and wooded habitat areas encompassing approximately 1,150 acres.

- FWM OBJECTIVE 2.3: Incorporate habitat management measures that benefit both game and nongame species.

- FWM OBJECTIVE 2.4: Identify and avoid disturbing migratory bird nesting sites. Nesting sites should be left undisturbed until offspring have been fledged, permits are obtained, and/or consultation has been completed.

8.2.3 GTS

FWM GOAL 3: MANAGE HABITAT FOR ALL NATIVE SPECIES AT GTS

- FWM OBJECTIVE 3.1: Identify pollinator habitat at GTS. Pollinators have been in severe decline in recent years. The declining trend results from habitat loss and fragmentation, pesticide exposure, disease, parasites, and effects of introduced species. GTS is an ecologically important area and is uniquely positioned to contribute to pollinator conservation by enhancing habitat for monarch butterflies and other pollinators

on the installation. Monitoring will be focused primarily in the grassland and wooded habitat areas encompassing approximately 3,000 acres.

- FWM OBJECTIVE 3.2: Identify bird populations on the installation and any potential threats in order to minimize future potential impacts to training. Monitoring will be focused primarily in the grassland and wooded habitat areas encompassing approximately 3,000 acres.

- FWM OBJECTIVE 3.3: Incorporate Habitat Management Measures that Benefit both Game and Nongame species.

- FWM OBJECTIVE 3.4: Identify and avoid disturbing migratory bird nesting sites. Nesting sites should be left undisturbed until offspring have been fledged, permits are obtained, and/or consultation has been completed.

8.2.4 GTS-SC

FWM GOAL 4: MANAGE HABITAT FOR ALL NATIVE SPECIES AT GTS-SC

- FWM OBJECTIVE 4.1: Identify pollinator habitat at GTS-SC. Pollinators have been in severe decline in recent years. The declining trend results from habitat loss and fragmentation, pesticide exposure, disease, parasites, and effects of introduced species. GTS-SC is an ecologically important area and is uniquely positioned to contribute to pollinator conservation by enhancing habitat for monarch butterflies and other pollinators on the installation. Monitoring will be focused primarily in the grassland and wooded habitat areas encompassing approximately 370 acres.

- FWM OBJECTIVE 4.2: Identify bird populations on the installation and any potential threats in order to minimize future potential impacts to training. Monitoring will be focused primarily in the grassland and wooded habitat areas encompassing approximately 370 acres.

- FWM OBJECTIVE 4.3: Incorporate habitat management measures that benefit both game and nongame species.

- FWM OBJECTIVE 4.4: Identify and avoid disturbing migratory bird nesting sites. Nesting sites should be left undisturbed until offspring have been fledged, permits are obtained, and/or consultation has been completed.

8.3 OUTDOOR RECREATION AND PUBLIC ACCESS TO NATURAL RESOURCES

There are outdoor recreation opportunities at several of the installations, however they can be limited due to the dangers associated with each installation's mission. The level of enjoyment that is derived from these activities is directly related to the quality of the natural resources present. Maintaining a quality outdoor recreation program is dependent on proper management of natural resources and efficient program administration and oversight.

People and social uses/needs are an integral part of ecosystem management. The outdoor recreation program is based on providing quality experiences while sustaining ecosystem integrity. Activities that have a direct effect on species populations will be monitored to determine effects, and adaptive management (e.g., water bars on trails) incorporated to mitigate negative impacts. Special consideration is given to protecting sensitive areas from negative impacts due to outdoor recreation or ecosystem management activities. Based on these considerations, goals and objectives have been identified to manage outdoor recreation resources and activities on each installation.

The following goals apply to projects listed for each installation in Table 10-2.

8.3.1 CATS

OR GOAL 1: PROVIDE QUALITY OUTDOOR RECREATION EXPERIENCES WHILE SUSTAINING ECOSYSTEM INTEGRITY. ENSURE THAT OUTDOOR RECREATION ACTIVITIES ARE NOT IN CONFLICT WITH MISSION PRIORITIES AT CATS

- OR OBJECTIVE 1.1: Continue availability of recreational fishing, game hunting, mushroom hunting, and wildlife watching opportunities.
- OR OBJECTIVE 1.2: Continue educational opportunities.

8.3.2 CATS-M

OR GOAL 2: PROVIDE QUALITY OUTDOOR RECREATION EXPERIENCES WHILE SUSTAINING ECOSYSTEM INTEGRITY. ENSURE THAT OUTDOOR RECREATION ACTIVITIES ARE NOT IN CONFLICT WITH MISSION PRIORITIES CATS-M

- OR OBJECTIVE 2.1: Establish recreational opportunities where feasible.

8.3.3 GTS-SC

OR GOAL 4: PROVIDE QUALITY OUTDOOR RECREATION EXPERIENCES WHILE SUSTAINING ECOSYSTEM INTEGRITY. ENSURE THAT OUTDOOR RECREATION ACTIVITIES ARE NOT IN CONFLICT WITH MISSION PRIORITIES GTS-SC

- OR OBJECTIVE 4.1: Establish recreational opportunities where feasible.

8.3.4 GTS

OR GOAL 3: PROVIDE QUALITY OUTDOOR RECREATION EXPERIENCES WHILE SUSTAINING ECOSYSTEM INTEGRITY. ENSURE THAT OUTDOOR RECREATION ACTIVITIES ARE NOT IN CONFLICT WITH MISSION PRIORITIES GTS

- OR OBJECTIVE 3.1: Establish recreational opportunities where feasible.

8.4 CONSERVATION LAW ENFORCEMENT

DoDI 5525.17, Conservation Law Enforcement Program, ensures that installations remain in compliance with appropriate environmental, natural, and cultural resource laws and regulations. Conservation law enforcement also includes regulating hunting and fishing programs on the installation. In Nebraska, the NGPC is responsible for enforcing fishing and hunting regulations. The NEARNG works with the NGPC and the local sheriff's office to enforce conservation laws. DoDI 5525.17 states that with an INRMP, the Conservation Law Enforcement section will provide specific goals and objectives to ensure compliance with laws and regulations to support the overarching goals of the INRMP (DoDI 5525.17 2(b)). There are a number of federal statutes and directives addressing specific requirements pertaining to natural resources. A comprehensive list of these regulations can be found in Appendix D.

The following goals apply to projects listed for each installation in Table 10-2.

8.4.1 CATS

CLE GOAL 1: ENSURE THAT THE ENFORCEMENT OF NATURAL RESOURCE LAWS AND REGULATIONS IS IMPLEMENTED

- CLE OBJECTIVE 1.1: Continue coordination to ensure that game species are properly managed at CATS.

- CLE OBJECTIVE 1.2: Continue to coordinate the enforcement of natural resource regulations.

8.4.2 CATS-M

CLE GOAL 2: ENSURE THAT THE ENFORCEMENT OF NATURAL RESOURCE LAWS AND REGULATIONS IS IMPLEMENTED

- CLE OBJECTIVE 2.1: Continue to coordinate the enforcement of natural resource regulations.

8.4.3 GTS

CLE GOAL 3: ENSURE THAT THE ENFORCEMENT OF NATURAL RESOURCE LAWS AND REGULATIONS IS IMPLEMENTED

- CLE OBJECTIVE 3.1: Continue to coordinate the enforcement of natural resource regulations.

8.4.4 GTS-SC

CLE GOAL 4: ENSURE THAT THE ENFORCEMENT OF NATURAL RESOURCE LAWS AND REGULATIONS IS IMPLEMENTED

- CLE OBJECTIVE 4.1: Continue to coordinate the enforcement of natural resource regulations.

8.5 MANAGEMENT OF THREATENED AND ENDANGERED SPECIES AND HABITATS

The occurrence of threatened and endangered species is important to the overall management of natural resources at each installation. The adaptive ecosystem management used does not focus on the management of individual species of wildlife; it instead provides comprehensive management actions to all species by enhancing ecosystem structure and function on which all species rely. Off-installation management by adjacent landowners (e.g., private landowners) needs to be considered in the application of the management actions identified in this INRMP.

The goals for this section are to manage each installation on a regional ecosystem-based approach that manages sensitive species and their associated ecosystems while protecting the operational functionality of the missions of the installation. Also, the NEARNG Natural Resources Manager will work to promote ecosystem-based management in the local region. Sensitive species will be managed by implementing specific management actions that enhance habitat for these species and by initiating specific actions that address immediate needs of threatened and endangered and other sensitive species on the installation. In addition, adherence to the goals set for threatened and endangered species management will ensure that the installation remains in compliance with the ESA and applicable state regulations.

The following goals apply to projects listed for each installation in Table 10-2.

8.5.1 CATS

TE GOAL 1: PROTECT LISTED THREATENED AND ENDANGERED SPECIES AND THEIR HABITAT AT CATS

- TE OBJECTIVE 1.1: Monitor threatened and endangered species found within CATS and communicate locations and occurrences to NEARNG personnel.

- TE OBJECTIVE 1.2: Conserve known threatened and endangered species and habitat found within CATS. Approximately 300 acres of wooded habitat are monitored closely for NLEB activity. There are also seasonal clearing restrictions for protection of roost trees. Special emphasis is also given to protection of sandbar habitat within the Platte River portion of CATS for piping plover and least tern nesting.

- TE OBJECTIVE 1.3: Reduce/mitigate potential impacts from installation mission activities to threatened and endangered species.

8.5.2 CATS-M

TE GOAL 2: PROTECT LISTED SPECIES AND THEIR HABITATS AT CATS-M

- TE OBJECTIVE 2.1: Monitor threatened and endangered species found within CATS-M, and communicate locations and occurrences to NEARNG personnel.

- TE OBJECTIVE 2.2: Conserve known threatened and endangered species and habitat found within CATS-M.

- TE OBJECTIVE 2.3: Reduce/mitigate potential impacts from installation mission activities to threatened and endangered species.

8.5.3 GTS

TE GOAL 3: PROTECT LISTED SPECIES AND THEIR HABITATS AT GTS

- TE OBJECTIVE 3.1: Monitor threatened and endangered species found within GTS, and communicate locations and occurrences to NEARNG personnel.

- TE OBJECTIVE 3.2: Conserve known threatened and endangered species and habitat found within GTS.

- TE OBJECTIVE 3.3: Reduce/mitigate potential impacts from installation mission activities to threatened and endangered species.
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8.5.4 GTS-SC

TE GOAL 4: PROTECT LISTED SPECIES AND THEIR HABITATS AT GTS-SC

- TE OBJECTIVE 4.1: Monitor threatened and endangered species found within GTS-SC, and communicate locations and occurrences to NEARNG personnel.

- TE OBJECTIVE 4.2: Conserve known threatened and endangered species and habitat found within GTS-SC.

- TE OBJECTIVE 4.3: Reduce/mitigate potential impacts from installation mission activities to threatened and endangered species.

8.6 WATER RESOURCES PROTECTION

Water resources protection is important to natural resources management because it directly affects surface water quality and the value of aquatic habitats. The NEARNG currently complies with a number of federal, state, local, and Army environmental regulations that require the installation to have detailed spill control and response procedures and to implement stormwater management goals to reduce the pollutant loadings in point source and non-point source discharges and to ensure efficient water reuse. The objective of these regulations is to prevent pollutants from entering the watershed, thus protecting surface waters. Specific watershed protection measures used by the installation include spill clean-up equipment at industrial locations, IPM, and reduction of fertilizer applications.

The water resource protection objectives and actions presented in this INRMP are designed to reduce/control nutrient and sediment inputs into the watershed. In addition, the NEARNG Natural Resources Manager seeks to minimize nonpoint source pollution of both surface water and groundwater in the watershed. To effectively manage the watersheds of each installation,

installation personnel and the NEARNG Natural Resources Manager must understand ecosystem dynamics within the watershed in an effort to prevent or respond to threats to its integrity.

The following goals apply to projects listed for each installation in Table 10-2.

8.6.1 CATS

WRP GOAL 1: REMAIN IN COMPLIANCE WITH FEDERAL, STATE, LOCAL, AND ARNG ENVIRONMENTAL REGULATIONS AND POLICIES AT CATS

- WRP OBJECTIVE 1.1: Monitor, maintain, protect, and improve water quality at CATS.

8.6.2 CATS-M

WRP GOAL 2: REMAIN IN COMPLIANCE WITH FEDERAL, STATE, LOCAL, AND ARNG ENVIRONMENTAL REGULATIONS AND POLICIES AT CATS-M

- WRP OBJECTIVE 2.1: Monitor, maintain, protect, and improve water quality at CATS-M.

8.6.3 GTS

WRP GOAL 3: REMAIN IN COMPLIANCE WITH FEDERAL, STATE, LOCAL, AND ARNG ENVIRONMENTAL REGULATIONS AND POLICIES AT GTS

- WRP OBJECTIVE 3.1: Monitor, maintain, protect, and improve water quality at GTS.

8.6.4 GTS-SC

WRP GOAL 4: REMAIN IN COMPLIANCE WITH FEDERAL, STATE, LOCAL, AND ARNG ENVIRONMENTAL REGULATIONS AND POLICIES AT GTS-SC

- WRP OBJECTIVE 4.1: Monitor, maintain, protect, and improve water quality at GTS-SC.

8.6.5 CATS-M

WRP GOAL 5: PROTECT CATS-M INSTALATION WATER RESOURES FROM POTENTIAL OFF-SITE IMPACTS

- WRP OBJECTIVE 5.1: Monitor and respond to potential threats to CATS-M installation groundwater resources from off-site contamination sources.

8.6.6 GTS

WRP GOAL 6: PROTECT GTS INSTALATION WATER RESOURES FROM POTENTIAL OFF-SITE IMPACTS

- WRP OBJECTIVE 6.1: Monitor and respond to potential threats to GTS installation groundwater resources from off-site contamination sources.

8.7 WETLAND PROTECTION

Wetlands are protected as a subset of the "waters of the United States" under Section 404 of the CWA. The term "waters of the United States" has broad meaning under the CWA and incorporates deep water aquatic habitats and special aquatic habitats (including wetlands). Jurisdictional waters of the United States are areas regulated under the CWA and also include coastal and inland waters, lakes, rivers, ponds, streams, intermittent streams, vernal pools, and "other" waters that if degraded or destroyed could affect interstate commerce.

Section 404 of the CWA authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredged or fill materials into the waters of the United States, including wetlands. Therefore, even an inadvertent encroachment into wetlands or other waters of the United States that results in displacement or movement of soil or fill materials has the potential to be viewed as a violation of the CWA if an appropriate permit has not been issued by the USACE. Wetlands are also protected under EO 11990, Protection of Wetlands (43 Federal Register 6030) (National Archives and Records Administration 1977). The purpose of this EO is to reduce adverse impacts associated with the destruction or modification of wetlands.

Any actions that require a federal permit, license, or approval that results in a discharge into waters of the United States, including Section 404 individual dredge and fill permits and nationwide permits, require a state water quality certification. The Planning Unit at the Nebraska Department of Environmental Quality Section 401 Water Quality Certification Program in accordance with Section 401 of the Clean Water Act for the state of Nebraska. Nebraska Department of Environment and Energy evaluates applications for federal section 404 permits authorizing dredge and fill activities in surface waters and determines if the proposed activity complies with NDEE Title 117 – Nebraska Surface Water Quality Standards. NDEE has the authority and responsibility under Title 117 for all surface waters and dredge and fill activities in wetlands are subject to the Anti-degradation Clause of Title 117.

The NEARNG is responsible for identifying and locating jurisdictional waters of the United States, including wetlands occurring on each installation, where these resources have the potential to be impacted by military mission activities. Such impacts could include construction of roads, buildings, navigational aids, and other appurtenant structures or activities as simple as culvert crossings of small intermittent streams, rip-rap placement in stream channels to curb accelerated erosion, and incidental fill and grading of wet depressions.

The major goal in wetland management is to minimize the impact that the NEARNG missions have on wetlands. The NEARNG strives to enhance healthy, functional wetlands that can sustain minor operational influences outside indirect infringement of wetlands. When possible, the goal is set to enhance wetland functions to create wetlands that maximize the values that wetlands have within the ecosystem and to society. It is also the goal to maximize floral diversity of wetland communities that, in turn, maximize the faunal diversity of the ecosystem. To meet the goals of wetland management, the following topics of concern identify actions that

compromise achieving particular goals and presents objectives and management actions designed to meet the wetland management goals.

The following goals apply to projects listed for each installation in Table 10-2.

8.7.1 CATS

WP GOAL 1: MAINTAIN HEALTHY, FUNCTIONAL WETLANDS AT CATS

- WP OBJECTIVE 1.1: Determine the federal and state regulatory status of the wetlands at CATS.
- WP OBJECTIVE 1.2: Conserve wetland habitats at CATS.
- WP OBJECTIVE 1.3: Monitor the wetlands of the East Chute. The East Chute was restored by the USACE as a mitigation measure for construction of the Western Sarpy Clear Creek Levee (WSCC) and to ensure that this system is functioning as designed.
- WP OBJECTIVE 1.4: Restore/create wetlands to enhance watershed function and value.
- WP OBJECTIVE 1.5: Maintain updated inventory of wetland and riparian areas at CATS. Update inventory with data from delineations and biological surveys.

8.7.2 CATS-M

WP GOAL 2: MAINTAIN HEALTHY, FUNCTIONAL WETLANDS AT CATS-M

- WP OBJECTIVE 2.1: Determine the federal and state regulatory status of the wetlands at CATS-M.
- WP OBJECTIVE 2.2: Conserve wetland habitats at CATS-M.
- WP OBJECTIVE 2.3: Monitor the wetlands along Johnson Creek. The Johnson Creek has numerous areas repaired to promote better habitat for all wildlife and to reduce erosion along Johnson Creek by implementing rock riffle structures and meandering.
- WP OBJECTIVE 2.4: Restore/create wetlands to enhance watershed function and value.
- WP OBJECTIVE 2.5: Maintain updated inventory of wetland and riparian areas at CATS-M. Update inventory with data from delineations and biological surveys.

8.7.3 GTS

WP GOAL 3: MAINTAIN HEALTHY, FUNCTIONAL WETLANDS AT GTS

- WP OBJECTIVE 3.1: Determine the federal and state regulatory status of the wetlands at GTS.

- WP OBJECTIVE 3.2: Conserve wetland habitats at GTS.
- WP OBJECTIVE 3.3: Restore/create wetlands to enhance watershed function and value.
- WP OBJECTIVE 1.5: Maintain updated inventory of wetland and riparian areas at GTS. Update inventory with data from delineations and biological surveys.

8.7.4 GTS-SC

WP GOAL 4: MAINTAIN HEALTHY, FUNCTIONAL WETLANDS AT GTS-SC

- WP OBJECTIVE 4.1: Determine the federal and state regulatory status of the wetlands at GTS-SC.
- WP OBJECTIVE 4.2: Conserve wetland habitats at GTS-SC.
- WP OBJECTIVE 2.3: Restore/create wetlands to enhance watershed function and value.
- WP OBJECTIVE 1.5: Maintain updated inventory of wetland and riparian areas at GTS-SC. Update inventory with data from delineations and biological surveys.

8.8 GROUNDS MAINTENANCE

Installation grounds maintenance personnel perform most grounds maintenance activities at each installation. Normal grounds maintenance operations are focused on lawn care, trail maintenance, landscaping maintenance, pest management, and snow removal.

The following goals apply to projects listed for each installation in Table 10-2.

8.8.1 CATS

GM GOAL 1: COMPLETE GROUNDS MAINTENANCE AND LAND MANAGEMENT ACTIONS THAT ENHANCE AND BALANCE THE PHYSICAL (SOIL AND WATER) AND BIOLOGICAL (PLANT AND ANIMAL) COMMUNITIES AT CATS

- GM OBJECTIVE 1.1: Maintain optimal land conditions at CATS.

8.8.2 CATS-M

GM GOAL 2: COMPLETE GROUNDS MAINTENANCE AND LAND MANAGEMENT ACTIONS THAT ENHANCE AND BALANCE THE PHYSICAL (SOIL AND WATER) AND BIOLOGICAL (PLANT AND ANIMAL) COMMUNITIES AT CATS-M

- GM OBJECTIVE 2.1: Maintain optimal land conditions at CATS-M.

8.8.3 GTS

GM GOAL 3: COMPLETE GROUNDS MAINTENANCE AND LAND MANAGEMENT ACTIONS THAT ENHANCE AND BALANCE THE PHYSICAL (SOIL AND WATER) AND BIOLOGICAL (PLANT AND ANIMAL) COMMUNITIES AT GTS

- GM OBJECTIVE 3.1: Maintain optimal land conditions at GTS.

8.8.4 GTS-SC

GM GOAL 4: COMPLETE GROUNDS MAINTENANCE AND LAND MANAGEMENT ACTIONS THAT ENHANCE AND BALANCE THE PHYSICAL (SOIL AND WATER) AND BIOLOGICAL (PLANT AND ANIMAL) COMMUNITIES AT GTS-SC

- GM OBJECTIVE 4.1: Maintain optimal land conditions at GTS-SC.

8.9 FOREST AND GRASSLAND MANAGEMENT

Each installation is a mix of forest and grassland areas that require management to maintain a native habitat and control invasive species. Several aspects of forest and grassland management are also included in other elements of this INRMP.

The following goals apply to projects listed for each installation in Table 10-2.

8.9.1 CATS

FGM GOAL 1: MAINTAIN HEALTHY, FUNCTIONAL FORESTS AND GRASSLANDS AT CATS

- FGM OBJECTIVE 1.1: Maintain healthy forest ecosystem by implementing the Forestry Management Plan.

- FGM OBJECTIVE 1.2: Conserve and create grassland habitat by implementing goals and objectives outlined in the Prairie/Tract Management Plans and understanding and managing the resource.

8.9.2 CATS-M

FGM GOAL 2: MAINTAIN HEALTHY, FUNCTIONAL FORESTS AND GRASSLANDS AT CATS-M

- FGM OBJECTIVE 2.1: Maintain healthy forest ecosystem by implementing the Forestry Management Plan.

- FGM OBJECTIVE 2.2: Conserve grassland habitat by implementing the goals and objectives outlined in the Prairie/Tract Management Plans and understanding and managing the resource.

8.9.3 GTS

FGM GOAL 3: MAINTAIN HEALTHY, FUNCTIONAL FORESTS AND GRASSLANDS AT GTS

- FGM OBJECTIVE 3.1: Maintain healthy forest ecosystem by implementing the Forestry Management Plan.
- FGM OBJECTIVE 3.2: Conserve grassland habitat by implementing the goals and objectives outlined in the Prairie/Tract Management Plans and understanding and managing the resource.

8.9.4 GTS-SC

FGM GOAL 4: MAINTAIN HEALTHY, FUNCTIONAL FORESTS AND GRASSLANDS AT GTS-SC

- FGM OBJECTIVE 4.1: Maintain healthy forest ecosystem by implementing the Forestry Management Plan.
- FGM OBJECTIVE 4.2: Conserve grassland habitat by implementing goals and objectives outlined in the Prairie/Tract Management Plans and understanding and managing the resource.
- FGM OBJECTIVE 4.3: Identify and restore prairie ecosystem areas to a native mixed-grass prairie.

8.10 WILDLAND FIRE MANAGEMENT

Successful wildland fire management can be used as a tool to prevent an accidental fire, reduce fuels, and to aid in the management of prairie ecology. An Integrated Wildland Fire Management Plan (IWFMP) is necessary to ensure appropriate fire management oversight.

The following goals apply to projects listed for each installation in Table 10-2.

8.10.1 CATS

WFM GOAL 1: PROVIDE LAND MANAGEMENT UTILIZING PRESCRIBED BURNS

- WFM OBJECTIVE 1.1: Outline the specific guidance, procedures, and protocols in wildfire management and the planning and operating procedures involved with prescribed burning.
- WFM OBJECTIVE 1.2: Manage herbaceous habitat using prescribed burns at CATS.

8.10.2 CATS-M

WFM GOAL 2: PROVIDE LAND MANAGEMENT UTILIZING PRESCRIBED BURNS

- WFM OBJECTIVE 2.1: Outline the specific guidance, procedures, and protocols in wildfire management and the planning and operating procedures involved with prescribed burning.

- WFM OBJECTIVE 2.2: Manage herbaceous habitat using prescribed burns at CATS-M.

8.10.3 GTS

WFM GOAL 3: PROVIDE LAND MANAGEMENT UTILIZING PRESCRIBED BURNS

- WFM OBJECTIVE 3.1: Outline the specific guidance, procedures, and protocols in wildfire management and the planning and operating procedures involved with prescribed burning.

- WFM OBJECTIVE 3.2: Manage herbaceous habitat using prescribed burns at GTS.

8.10.4 GTS-SC

WFM GOAL 4: PROVIDE LAND MANAGEMENT UTILIZING PRESCRIBED BURNS

- WFM OBJECTIVE 4.1: Outline the specific guidance, procedures, and protocols in wildfire management and the planning and operating procedures involved with prescribed burning.

- WFM OBJECTIVE 4.2: Manage herbaceous habitat using prescribed burns at GTS-SC.

8.11 AGRICULTURAL OUTLEASING

The NEARNG is committed to maintaining agricultural leases at through producing and harvesting forage grasses and controlling invasive species to optimize forage production in identified lease areas. Agricultural outleasing to regional producers not only provides the public with access to an installation for production, but also is necessary as a maintenance tool in this ecosystem. Cattle grazing and hay production are used in some local areas to mimic the graze/fire dependent prairie ecosystem. However, due to the potential environmental damage that can result from impact associated with these activities, management goals have been developed to ensure that these activities remain productive and sustainable while providing beneficial ecosystem results. Leases must be managed to ensure that noxious weeds are controlled, the public is protected from installation operations, sustainable levels of harvest are conducted, that land and facilities are maintained, and that no significant alteration of the ecosystem occurs.

The following goals apply to projects listed for each installation in Table 10-2.

8.11.1 CATS

AG GOAL 1: MANAGE AGRICULTURAL OUTLEASING PROGRAM FOR OPTIMAL ENVIRONMENTAL HEALTH AND PRODUCTIVITY AT CATS

- AG OBJECTIVE 1.1: Ensure lease terms are maintained with specific focus on the tract management plan.
- AG OBJECTIVE 1.2: Control the spread of invasive woody vegetation and noxious and invasive weeds.
- AG OBJECTIVE 1.3: Reduce fuel loads to minimize the threat of wildfire within and around CATS property.
- AG OBJECTIVE 1.4: Manage outlease areas to promote wildlife propagation and conservation within and around CATS property.
- AG OBJECTIVE 1.5: Manage outlease areas in a way that provides suitable training environment in support of the military mission.

8.11.2 CATS-M

AG GOAL 2: MANAGE AGRICULTURAL OUTLEASING PROGRAM FOR OPTIMAL ENVIRONMENTAL HEALTH AND PRODUCTIVITY AT CATS-M

- AG OBJECTIVE 2.1: Ensure lease terms are maintained with specific focus on the tract management plan.
- AG OBJECTIVE 2.2: Control the spread invasive woody vegetation and noxious and invasive weeds.
- AG OBJECTIVE 2.3: Reduce fuel loads to minimize the threat of wildfire within and around CATS-M property.
- AG OBJECTIVE 2.4: Manage outlease areas to promote wildlife propagation and conservation within and around CATS-M property.
- AG OBJECTIVE 2.5: Manage outlease areas in a way that provides suitable training environment in support of the military mission.

8.11.3 GTS

AG GOAL 3: MANAGE AGRICULTURAL OUTLEASING PROGRAM FOR OPTIMAL ENVIRONMENTAL HEALTH AND PRODUCTIVITY AT GTS

- AG OBJECTIVE 3.1: Ensure lease terms are maintained with specific focus on the tract management plan.
- AG OBJECTIVE 3.2: Control the spread invasive woody vegetation and noxious and invasive weeds.
- AG OBJECTIVE 3.3: Reduce fuel loads to minimize the threat of wildfire within and around GTS property.

- AG OBJECTIVE 3.4: Manage outlease areas to promote wildlife propagation and conservation within and around GTS property.

- AG OBJECTIVE 3.5: Manage outlease areas in a way that provides suitable training environment in support of the military mission.

8.11.4 GTS-SC

AG GOAL 4: MANAGE AGRICULTURAL OUTLEASING PROGRAM FOR OPTIMAL ENVIRONMENTAL HEALTH AND PRODUCTIVITY AT GTS-SC

- AG OBJECTIVE 4.1: Ensure lease terms are maintained with specific focus on the tract management plan.

- AG OBJECTIVE 4.2: Control the spread invasive woody vegetation and noxious and invasive weeds.

- AG OBJECTIVE 4.3: Reduce fuel loads to minimize the threat of wildfire within and around GTS-SC property.

- AG OBJECTIVE 4.4: Manage outlease areas to promote wildlife propagation and conservation within and around GTS property.

- AG OBJECTIVE 4.5: Manage outlease areas in a way that provides suitable training environment in support of the military mission.

8.12 INTEGRATED PEST MANAGEMENT PROGRAM

Native plant and animal communities have been adversely impacted by development and the introduction of non-native species. Non-native species are those plants or animal species that were not present during European settlement. Due to aggressive growth habits of many non-native species, the species have become invasive and out-compete the native plants and animals. "An invasive species is defined as a species that is non-native (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health" (EO 13112) (National Archives and Records Administration 1999). Invasive species put native plants and animals at risk. Invasive plants, which can be both native and non-native, result in the loss of diversity within a local plant community.

DoDI 4150.7, Pest Management Program, is a DoD policy to establish and maintain safe, effective, and environmentally sound Pest and Invasive Species Management Plans 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. The policy set Measures of Merit for pest management, which require each installation to develop an Invasive Species Management Plan, use sound invasive species management strategies, and certify all pesticide applicators. A copy of the ISMP is summarized in Appendix E. The NEARNG will control invasive species using an ecosystem-based approach that conserves biodiversity while preserving the military mission from associate infringement.

The following goals apply to projects listed for each installation in Table 10-2.

8.12.1 CATS

IPM GOAL 1: CONTROL NOXIOUS AND INVASIVE SPECIES

- IPM OBJECTIVE 1.1: On an annual basis, implement protocols established in the ISMP.
- IPM OBJECTIVE 1.2: Conduct noxious and invasive species surveys as needed and continue to monitor known infestation areas. Implement control measures at the installation level as resources and staffing allows.
- IPM OBJECTIVE 1.3: Control the spread of native invasive flora such as Eastern red cedar and reed canary grass by maintaining hay leases and applying mechanical thinning and spot spraying treatments when necessary.

8.12.2 CATS-M

IPM GOAL 2: CONTROL NOXIOUS AND INVASIVE SPECIES

- IPM OBJECTIVE 2.1: On an annual basis, implement protocols established in the ISMP.
- IPM OBJECTIVE 2.2: Conduct noxious and invasive species surveys as needed and continue to monitor known infestation areas. Implement control measures at the installation level as resources and staffing allows.
- IPM OBJECTIVE 2.3: Control the spread of native invasive flora such as Eastern red cedar and reed canary grass by maintaining hay leases and applying mechanical thinning and spot spraying treatments when necessary.

8.12.3 GTS

IPM GOAL 3: CONTROL NOXIOUS AND INVASIVE SPECIES

- IPM OBJECTIVE 3.1: On an annual basis, implement protocols established in the ISMP.
- IPM OBJECTIVE 3.2: Conduct noxious and invasive species surveys as needed and continue to monitor known infestation areas. Implement control measures at the installation level as resources and staffing allows.
- IPM OBJECTIVE 3.3: Control the spread of native invasive flora such as Eastern red cedar and reed canary grass by maintaining hay leases and applying mechanical thinning and spot spraying treatments when necessary.

8.12.4 GTS-SC

IPM GOAL 4: CONTROL NOXIOUS AND INVASIVE SPECIES

- IPM OBJECTIVE 4.1: On an annual basis, implement protocols established in the ISMP.

- IPM OBJECTIVE 4.2 Conduct noxious and invasive species surveys as needed and continue to monitor known infestation areas. Implement control measures at the installation level as resources and staffing allows.

- IPM OBJECTIVE 4.3: Control the spread of invasive flora such as Eastern red cedar and reed canary grass by maintaining hay leases and applying mechanical thinning and spot spraying treatments when necessary.

8.13 PUBLIC OUTREACH

Maintaining a quality public outreach program is dependent on military mission, proper management of natural resources, and efficient program administration and oversight. The unique characteristics and needs of military operations make the evaluation criteria more specific and the spectrum of opportunities narrower.

When military activity in any given area is not compatible with a particular public use, that area will be closed until the military activity is completed. Closure of gates indicates no admittance. To assist in the management, study, or monitoring of natural resources, federal, state, and local officials and natural resource management professionals are given access to Installation natural resources after proper safety and security measures are met. Additionally, selected areas and impoundments may be closed to recreational access for management purposes (e.g., population management, weed control, habitat restoration, or habitat/species protection).

People and social uses/needs are an integral part of ecosystem management. The needs of the military mission determine the extent of public outreach activities allowed. Special consideration will be given to protecting critical areas from negative impacts due to public access or ecosystem management activities.

The following goals apply to projects listed for each installation in Table 10-2.

8.13.1 CATS

PO GOAL 1: PROVIDE QUALITY PUBLIC OUTREACH EXPERIENCES, WHILE SUSTAINING ECOSYSTEM INTEGRITY. ENSURE THAT PUBLIC OUTREACH OPPORTUNITIES ARE NOT IN CONFLICT WITH CATS MISSION PRIORITIES

- PO OBJECTIVE 1.1: Develop a Public Outreach Program to promote the involvement of CATS with community groups and other agencies to assist with regional conservation efforts, research opportunities, and public outreach programs.

8.13.2 CATS-M

PO GOAL 2: PROVIDE QUALITY PUBLIC OUTREACH EXPERIENCES, WHILE SUSTAINING ECOSYSTEM INTEGRITY. ENSURE THAT PUBLIC OUTREACH OPPORTUNITIES ARE NOT IN CONFLICT WITH CATS-M MISSION PRIORITIES

- PO OBJECTIVE 2.1: Develop a Public Outreach Program to promote the involvement of CATS-M with community groups and other agencies to assist with regional conservation efforts, research opportunities, and public outreach programs.

8.13.3 GTS

PO GOAL 3: PROVIDE QUALITY PUBLIC OUTREACH EXPERIENCES, WHILE SUSTAINING ECOSYSTEM INTEGRITY. ENSURE THAT PUBLIC OUTREACH OPPORTUNITIES ARE NOT IN CONFLICT WITH GTS MISSION PRIORITIES

- PO OBJECTIVE 3.1: Develop a Public Outreach Program to promote the involvement of GTS with community groups and other agencies to assist with regional conservation efforts, research opportunities, and public outreach programs.

8.13.4 GTS-SC

PO GOAL 4: PROVIDE QUALITY PUBLIC OUTREACH EXPERIENCES, WHILE SUSTAINING ECOSYSTEM INTEGRITY. ENSURE THAT PUBLIC OUTREACH OPPORTUNITIES ARE NOT IN CONFLICT WITH GTS-SC MISSION PRIORITIES

- PO OBJECTIVE 4.1: Develop a Public Outreach Program to promote the involvement of GTS-SC with community groups and other agencies to assist with regional conservation efforts, research opportunities, and public outreach programs.

8.14 GEOGRAPHIC INFORMATION SYSTEM

The use of a GIS is to manage and catalog information acquired in natural resources research. The 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.

The following goals apply to projects listed for each installation in Table 10-2.

8.14.1 CATS

GIS GOAL 1: CONTINUED USE, DEVELOPMENT, AND MAINTENANCE OF GEODATABASE FOR NATURAL RESOURCES MANAGEMENT AT CATS

- GIS OBJECTIVE 1.1: Continue to update GIS database with data as it is collected. Update and digitize natural resources and infrastructure information to allow a comprehensive GIS tool to be used by installation personnel. Updating and Compiling Data from Natural Resource Surveys and Studies Completed on the installation.

8.14.2 CATS-M

GIS GOAL 2: CONTINUED USE, DEVELOPMENT, AND MAINTENANCE OF GEODATABASE FOR NATURAL RESOURCES MANAGEMENT AT CATS-M

- GIS OBJECTIVE 2.1: Continue to update GIS database with data as it is collected. Update and digitize natural resources and infrastructure information to allow a comprehensive GIS tool to be used by installation personnel. Updating and Compiling Data from Natural Resource Surveys and Studies Completed on the installation.

8.14.3 GTS

GIS GOAL 3: CONTINUED USE, DEVELOPMENT, AND MAINTENANCE OF GEODATABASE FOR NATURAL RESOURCES MANAGEMENT AT GTS

- GIS OBJECTIVE 3.1: Continue to update GIS database with data as it is collected. Update and digitize natural resources and infrastructure information to allow a comprehensive GIS tool to be used by installation personnel. Updating and Compiling Data from Natural Resource Surveys and Studies Completed on the installation

8.14.4 GTS-SC

GIS GOAL 4: CONTINUED USE, DEVELOPMENT, AND MAINTENANCE OF GEODATABASE FOR NATURAL RESOURCES MANAGEMENT AT GTS-SC

- GIS OBJECTIVE 4.1: Continue to update GIS database with data as it is collected. Update and digitize natural resources and infrastructure information to allow a comprehensive GIS tool to be used by installation personnel. Updating and Compiling Data from Natural Resource Surveys and Studies Completed on the installation.

8.15 CLIMATE CHANGE

Climate change can happen on a local level that could impact the military mission. Changes in precipitation and temperature ranges could result in changes to the species of vegetation or wildlife habitat present at each installation that could impact training areas. Because of the geographic size of the installations, the NEARNG will look at existing information including regional plans, partnerships (including the NGPC), or reports that other entities are conducting on assessing and/or implementing climate change adaptation strategies for collaboration of ecosystem management.

The following goals apply to projects listed for each installation in Table 10-2.

8.15.1 CATS

CC GOAL 1: INCORPORATE CLIMATE CHANGE ADAPTATION STRATEGIES

- CC OBJECTIVE 1.1: Implement climate change adaptation strategies to target installation-specific areas of concern including but not limited to: increased storm severity, flooding, drought, fire, and species range shifts. Incorporate guidance from

climate change experts as well as local and regional conservation/land management organizations.

8.15.2 CATS-M

CC GOAL 2: INCORPORATE CLIMATE CHANGE ADAPTATION STRATEGIES

- CC OBJECTIVE 2.1: Implement climate change adaptation strategies to target installation-specific areas of concern including but not limited to: increased storm severity, flooding, drought, fire, and species range shifts. Incorporate guidance from climate change experts as well as local and regional conservation/land management organizations.

8.15.3 GTS

CC GOAL 3: INCORPORATE CLIMATE CHANGE ADAPTATION STRATEGIES

- CC OBJECTIVE 3.1: Implement climate change adaptation strategies to target installation-specific areas of concern including but not limited to: increased storm severity, flooding, drought, fire, and species range shifts. Incorporate guidance from climate change experts as well as local and regional conservation/land management organizations.

8.15.4 GTS-SC

CC GOAL 4: INCORPORATE CLIMATE CHANGE ADAPTATION STRATEGIES

- CC OBJECTIVE 4.1: Implement climate change adaptation strategies to target installation-specific areas of concern including but not limited to: increased storm severity, flooding, drought, fire, and species range shifts. Incorporate guidance from climate change experts as well as local and regional conservation/land management organizations.

9. INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN IMPLEMENTATION

9.1 INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN IMPLEMENTATION

9.1.1 Implementation

The INRMP Program has been organized to ensure the implementation of year-round, cost-effective management activities and projects that meet the requirements of the installation. The various organizations on the installation that are responsible for implementation of the INRMP are described below.

Installation Stakeholders—The NEARNG Natural Resources Manager is responsible for the overall implementation of the INRMP. The INRMP Working Group will be comprised of key installation personnel from the NEARNG, in addition to the NGB Natural Resources Program Manager who will provide technical assistance when necessary.

The Commander of the NEARNG will be the official signatory for the INRMP and the annual reviews. The installation's Natural Resources Manager is responsible for ensuring the activities associated with the implementation of this plan adhere to applicable federal, state, local, and US Army environmental regulations and guidelines. The NGB Natural Resources Program Manager tracks DoD and US Army policies and approves funding for projects and studies identified as a priority in this plan. The NGB Natural Resources Program Manager acts as a technical point of contact on all natural resources-related activities. Projects proposed in this plan are reviewed by the installation's Natural Resources Manager and the NGB Natural Resources Program Manager. Deviation from the projects proposed in this plan should be independently reviewed by the NGB Natural Resources Program Manager.

External Stakeholders—The USFWS and NGPC can provide technical assistance to the installation. Specifically, these agencies will alert the Natural Resources Manager whenever new species that have the potential for inhabiting the installation are added to the federal and state endangered species lists. In addition, these agencies will be involved in the annual review of the INRMP and updates to the INRMP determined to be necessary because of changes in environmental conditions or the mission.

9.1.2 Monitoring Integrated Natural Resources Management Plan Implementation

A variety of metrics will be used to measure the extent of INRMP implementation. In general, the Natural Resources Manager will be responsible for implementing the goals, objectives, and projects described in this INRMP. The following monitoring criteria have been established for each resource management.

- ***Natural Resources Program Management—***Monitoring criteria will include documented completion of the annual coordination meeting with USFWS and NGPC. When the annual INRMP review is conducted, concurrence from the signatory agencies will be obtained, and the INRMP document will be amended accordingly.

- ***Fish and Wildlife Management***—Monitoring criteria will include assessing habitat and wildlife on the installations to ensure healthy populations.

- ***Outdoor Recreation and Public Access to Natural Resources—***Monitoring criteria will include monitoring use of the nature trails and hunting, fishing, and camping by civilians and installation personnel, when applicable.

- ***Conservation Law Enforcement***—Monitoring criteria will include ensuring that the Site Manager or appropriate personnel conducts routine patrols, observes activities on the installations, and notifies the appropriate state agency when law enforcement is needed.

- ***Threatened and Endangered Species and Habitats Management***—Monitoring criteria will include annual updates of the listed rare, threatened, and endangered species or their habitats occurring on the installations. Management actions will be implemented to avoid or minimize impacts to any protected species or habitats if they occur.

- ***Water Resource Protection***—Monitoring criteria will include regular inspections of stormwater and erosion and sediment control BMPs to ensure proper functioning. These controls and practices are set in place to make sure that impacts to water resources associated with accidental spills and leakage from vehicles and equipment are minimized.

- ***Wetland Protection***—Monitoring criteria for wetlands will include assessing the effectiveness of wetlands management to curtail wetland encroachment. Any unavoidable impacts to wetlands will be fully mitigated and in compliance with regulations.

- ***Grounds Maintenance***—Monitoring criteria will include regular assessment of the use of native species throughout the installations. Drainage patterns will also be monitored to ensure that problems do not occur.

- ***Forest and Grassland Management***—Monitoring criteria will include regular surveys to determine the health of the trees and grasslands throughout the installations.

- ***Wildland Fire Management***—Monitoring criteria will include surveys to determine if prescribed burns are an effective measure to manage invasive species and to maintain herbaceous habitat.

- ***Agriculture Outlease***—Monitoring criteria will include surveys to determine if the agriculture outleases are an effective measure to manage invasive species and to reduce fuel for fire.

- ***Integrated Pest Management***—Monitoring criteria will include ensuring that IPM practices are incorporated into pest management approaches on the installation. The ISMP will be updated based on USDA Animal and Plant Health Inspection Service Wildlife Services recommendations. After treatment of invasive species and removal of

nuisance species, post-monitoring will be implemented to determine the success of the effort.

- ***Public Outreach*—**Monitoring criteria will include assessing the overall success of programs offered at the installation.

- ***GIS*—**Monitoring will include measuring the effectiveness and accuracy of the Natural Resources Geodatabase.

- ***Climate Change***—Monitoring criteria will include assessing the short-term and long-term impacts of climate change and implementing BMPs to mitigate the effects climate change has on the installations.

9.2 ANNUAL INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN REVIEW AND COORDINATION REQUIREMENTS

To ensure that this INRMP properly addresses all aspects of the natural resources present on the installations and proposes actions that are in accordance with US Army goals and objectives, this plan and all its components are subject to review by NEARNG's Environmental Management Office and the NGB Natural Resources Program Manager. Similarly, all changes to be incorporated into this plan must be approved by the installation, USFWS, and NGPC.

9.3 INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN UPDATE AND REVISION PROCESS

This INRMP is in effect from the date that all required signatures have been received; however, the Operational Component Plans must be updated annually during preparation of the NEARNG's environmental budgets.

This INRMP should be reviewed internally on an annual basis to assess the recommended management practices in terms of their appropriateness for current conditions at the installation. The INRMP should also be coordinated annually with the USFWS and NGPC. In addition, the INRMP should be updated whenever there is a modification to the installation's missions, or when there is a substantial change to the installation's natural or cultural resources.

10. ANNUAL PROJECT IMPLEMENTATION TABLES

The purpose of this chapter is to present a road map for the execution of specific actions to achieve management goals and objectives identified in this INRMP.

The tables provided in Chapter 10 summarize the management actions for the NEARNG installations and propose priorities for their implementation from 2022 through 2026. The actions proposed for this INRMP are aggressive and might not be accomplished within the established timelines due to a number of factors (e.g., budget and manpower constraints, wartime tasks). However, their importance to the proper management of the installation's natural resources cannot be understated. Therefore, the management actions presented in the Chapter 10 tables should be modified as part of the annual review of this INRMP by the INRMP Working Group to ensure that these goals are continually emphasized and accomplished when practicable.

This INRMP reflects the commitment set forth by the NEARNG to conserve, protect, and enhance the natural resources present on the installation. This INRMP is the final plan that will direct the natural resources management at the installation from Fiscal Years 2022 through 2026. An ecosystem approach was used to develop the management measures for each resource area. Implementation of the management measures will maintain, conserve, and enhance the ecological integrity of the installation and the biological communities occurring on the installation. In addition, the natural resources management measures described in this plan will protect the installation's ecosystems and their components from unacceptable damage or degradation and identify and restore previously degraded habitats.

Natural resources and land use management issues are not the only factors contributing to the development and implementation of the INRMP. Installation management and other seemingly unrelated issues affect the implementation of this Plan. It is of utmost importance to the implementation of this INRMP that installation personnel take "ownership" of the Plan (i.e., individual or organizational primary responsibility to implement the INRMP), provide the necessary resources (i.e., personnel and equipment), and allocate the appropriate funding to enact the Plan. It is extremely important that an INRMP Working Group be established to aid in the continued development of and commitment to the implementation of this INRMP. The INRMP Working Group should be comprised of key installation personnel and will assume an oversight role to ensure the effective implementation of this plan. Top- and middle-level management representation, as well as representation from several individuals with day-to-day on-installation field experience, will provide the INRMP Working Group with the leadership and structure necessary for the successful implementation of this INRMP.

Any requirement for the obligation of funds for projects in this INRMP shall be subject to the availability of funds appropriated by Congress, and none of the proposed projects shall be interpreted to require obligation or payment of funds in violation of any applicable federal law. Implementation of the actions and projects described in this INRMP are guided by how budget priorities are assessed for environmental work on DoD installations. This is described in DoDI 4715.03, *Natural Resources Conservation Program*, which implements policy, assigns responsibilities, and prescribes procedures for the integrated management of natural and cultural resources on property under DoD control.

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 the projects and programs identified in this INRMP will receive immediate funding. As such, these programs and projects have been placed into four priority-based categories:

- Priority 0 – Day-to-day recurring projects
- Priority 1 – High priority projects
- Priority 2 – Medium importance projects
- Priority 3 – Low importance projects.

The prioritization of the projects is based on need, and need is based on a project's importance in moving the natural resources management program closer toward successfully achieving its goal. DoDI 4715.03 defines recurring and non-recurring conservation requirements as follows:

Table 10-1. Recurring and Non-recurring Conservation Requirements

Priority 0: Recurring Natural Resources Conservation Management Requirements
a. Administrative, personnel, and other costs associated with managing the DoD Natural Resources Conservation Program that are necessary to meet applicable compliance requirements in federal and state laws, regulations, EOs, and DoD policies, or in direct support of the military mission. b. DoD components shall give priority to recurring natural resources conservation management requirements associated with the operation of facilities, installations, and deployed weapons systems. These activities include day-to-day costs of sustaining an effective natural resources management program, and annual requirements, including manpower, training, supplies, permits, fees, testing and monitoring, sampling and analysis, reporting and recordkeeping, maintenance of natural resources conservation equipment, and compliance self-assessments.
Priority 1 (High): Non-Recurring Natural Resources Management Requirements. Current Compliance.
Includes installation projects and activities to support: a. Installations currently out of compliance (e.g., received an enforcement action from an authorized federal or state agency or local authority). b. Signed compliance agreement or consent order. c. Meeting requirements with applicable federal and state regulations, standards, EOs, or DoD policies. d. Immediate and essential maintenance of operational integrity or military mission sustainment. e. Projects or activities that will be out of compliance if not implemented in the current program year including the following:

Priority 1 (High): Non-Recurring Natural Resources Management Requirements. Current Compliance (continued)

i. Environmental analyses for natural resources conservation projects and monitoring and studies required to assess and mitigate potential impacts of the military mission on conservation resources.

ii. Planning documentation, master plans, compatible development planning, and INRMPs.

iii. Natural resources planning-level surveys.

iv. Reasonable and prudent measures included in incidental take statements of Biological Opinions; biological assessments; surveys; monitoring; reporting of assessment results; or habitat protection for listed, at-risk, and candidate species so that proposed or continuing actions can be modified.

v. Mitigation to meet existing regulatory permit conditions or written agreements.

vi. Non-point source pollution or watershed management studies or actions needed to meet compliance dates cited in approved state coastal non-point source pollution control plans, as required to meet consistency determinations consistent with Coastal Zone Management.

vii. Wetlands delineations critical for the prevention of adverse impacts on wetlands, so that continuing actions can be modified to ensure mission continuity.

Compliance with missed deadlines established in DoD-executed agreements.

Priority 2 (Medium): Non-Recurring Natural Resources Management Requirements. Maintenance Requirements.

Includes those projects and activities needed to meet an established deadline beyond the current program year and maintain compliance. Examples include the following:

a. Compliance with future deadlines.

b. Conservation, GIS mapping, and data management to comply with federal, state, and local regulations; EOs; and DoD policy.

c. Efforts undertaken in accordance with non-deadline specific compliance requirements of leadership initiatives.

d. Wetlands enhancement to minimize wetlands loss and enhance existing degraded wetlands.

e. Conservation recommendations in biological opinions issued pursuant to the ESA.

Priority 3 (Low): Non-Recurring Natural Resources Management Requirements. Enhancement Actions Beyond Compliance.

Includes those projects and activities that enhance conservation resources or the integrity of the installation's mission, or are needed to address overall environmental goals and objectives, but are not specifically required by law, regulation, or EO, and are not of an immediate nature. Examples include:

a. Community outreach activities, such as International Migratory Bird Day, Earth Day, National Public Lands Day, Pollinator Week, and Arbor Day activities.

b. Educational and public awareness projects, such as interpretive displays, oral histories, Watchable Wildlife areas, nature trails, wildlife checklists, and conservation teaching materials.

c. Restoration or enhancement of natural resources when no specific compliance requirement dictates a course, or timing of action.

d. Management and execution of volunteer and partnership programs.

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Table 10-2. FY 2022 Project Implementation Table

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
NRP 1.1	CATS	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	CATS-M	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	GTS	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	GTS-SC	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 2.1	CATS	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	CATS-M	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	GTS	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	GTS-SC	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	CATS	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.1	CATS-M	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.1	GTS	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
NRP 2.1	GTS-SC	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.2	CATS	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	CATS-M	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	GTS	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	GTS-SC	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.3	CATS	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	CATS-M	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	GTS	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	GTS-SC	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 6.1	CATS	Remain members of the Lower Platter River Corridor Alliance in order to coordinate efforts with surrounding areas, receive LIDAR data and assistance with management strategies.	0	Reoccurring	In-house
NRP 2.1	CATS	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	CATS-M	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	GTS	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	GTS-SC	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FWM 1.1	CATS	Monitor and protect active bald eagle nesting areas and communicate locations or occurrences of eagle nests to NEARNG command and staff.	0	Reoccurring	In-house
FWM 4.2	GTS-SC	Monitor and protect active bald eagle nesting areas and communicate locations or occurrences of eagle nests to NEARNG command and staff.	0	Reoccurring	In-house
FWM 1.4	CATS	Continue to conduct biological monitoring of chutes as levee mitigation through the University of Nebraska and timelapse photography produced by Platte Basin Timelapse.	0	Reoccurring	Contract
FWM 1.4	CATS	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 3.3	GTS	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 1.4	CATS	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 3.3	GTS	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 1.4	CATS	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 3.3	GTS	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 1.5	CATS	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FWM 2.4	CATS-M	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 3.4	GTS	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 4.4	GTS-SC	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 1.2	CATS	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 2.2	CATS-M	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 3.2	GTS	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 4.2	GTS-SC	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 1.4	CATS	Conduct a deer population survey.	0	Reoccurring	In-house
OR 1.1	CATS	Monitor usage and harvest levels of outdoor recreation program through RecAccess.	2	Reoccurring	Contract
OR 1.1	CATS	Conduct hunting seasons to maintain and control healthy populations of white-tailed deer and other game species.	0	Reoccurring	In-house
OR 1.1	CATS	Provide outdoor recreation opportunities to soldiers, employees, and family members in the form of hunting, fishing, trapping, bird watching, mushroom gathering, etc.	0	Reoccurring	In-house
OR 1.2	CATS	Continue Ashland School environmental learning activities	0	Reoccurring	In-house
CLE 1.2	CATS	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 2.1	CATS-M	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 3.1	GTS	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 4.1	GTS-SC	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
TE 1.1	CATS	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 2.1	CATS-M	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 3.1	GTS	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 4.1	GTS-SC	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 1.1	CATS	Continue to monitor for piping plover and least tern.	0	Reoccurring	In-house
TE 1.1	CATS	Continue to monitor for NLEB.	0	Reoccurring	Contract
TE 2.1	CATS-M	Continue to monitor for NLEB.	0	Reoccurring	Contract
TE 1.3	CATS	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 2.3	CATS-M	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 3.3	GTS	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 4.3	GTS-SC	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
TE 1.1	CATS	Conduct a T&E species planning level survey.	0	One Time	Contract
TE 2.1	CATS-M	Conduct a T&E species planning level survey.	0	One Time	Contract
TE 3.1	GTS	Conduct a T&E species planning level survey.	0	One Time	Contract
TE 4.1	GTS-SC	Conduct a T&E species planning level survey.	0	One Time	Contract
TE 1.1	CATS	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 2.1	CATS-M	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 3.1	GTS	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 4.1	GTS-SC	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
WRP 1.1	CATS	Continue to conduct routine water quality analyses on all water bodies within the site boundaries to ensure that water quality standards comply with the standards set by the CWA and safe drinking water act.	0	Reoccurring	In-house
WRP 1.1	CATS	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 2.1	CATS-M	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 3.1	GTS	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 4.1	GTS-SC	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 1.1	CATS	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WRP 2.1	CATS-M	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 3.1	GTS	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 4.1	GTS-SC	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 3.1	GTS	Maintain water monitoring program developed and administered by the USGS that aims to monitor, protect, and improve water quality.	2	Reoccurring	In-house
WRP 3.1	GTS	Identify and restore degraded aquatic habitats and prevent degradation of water quality.	2	Reoccurring	In-house
WP 1.5	CATS	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 2.5	CATS-M	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 3.5	GTS	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 4.5	GTS-SC	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 1.2	CATS	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 2.2	CATS-M	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WP 3.2	GTS	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 4.2	GTS-SC	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 1.3	CATS	Monitor the East Chute for sediment nutrient exchange, vegetation, soil, water quality, erosion, and wildlife usage. The monitoring should be conducted twice per year along established transects.	0	Reoccurring	In-house
WP 2.3	CATS-M	Monitor Johnson Creek for vegetation, soil, water quality, erosion and wildlife usage.	0	Reoccurring	In-house
WP 1.4	CATS	Monitor and restore/create wetlands identified in biological surveys to enhance watershed function and value on CATS.	0	Reoccurring	In-house
WP 2.4	CATS-M	Monitor and restore/create wetlands identified in biological surveys to enhance watershed function and value on CATS-M.	0	Reoccurring	In-house
WP 1.5	CATS	Conduct a wetland planning level survey.	0	One Time	Contract
WP 2.5	CATS-M	Conduct a wetland planning level survey.	0	One Time	Contract
WP 3.5	GTS	Conduct a wetland planning level survey.	0	One Time	Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WP 4.5	GTS-SC	Conduct a wetland planning level survey.	0	One Time	Contract
WP 1.2	CATS	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions.	0	Reoccurring	In-House
WP 2.2	CATS-M	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions.	0	Reoccurring	In-House
WP 3.2	GTS	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions.	0	Reoccurring	In-house
WP 4.2	GTS-SC	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions.	0	Reoccurring	In-house
GM 1.1	CATS	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 2.1	CATS-M	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 3.1	GTS	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 1.1	CATS	Control poison ivy near high-use training areas in accordance with the PMP.	0	Reoccurring	In-house
GM 2.1	CATS-M	Control poison ivy near high-use training areas in accordance with the PMP.	0	Reoccurring	In-house
GM 1.1	CATS	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 2.1	CATS-M	Remove dead timber with potential safety risk.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
GM 3.1	GTS	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 1.1	CATS	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 2.1	CATS-M	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 3.1	GTS	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 1.1	CATS	Conduct soil planning level surveys to identify soil types	2	One Time	Contract
FGM 1.1	CATS	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract
FGM 2.1	CATS-M	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract
FGM 3.1	GTS	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract
FGM 4.2	GTS-SC	Flag important prairie areas prior to training exercises near the prairie area.	1	Reoccurring	In-house
FGM 4.2	GTS-SC	Plan off-road vehicle courses and any improvements to conserve identified critical native prairie habitat.	1	Reoccurring	In-house
FGM 4.2	GTS-SC	Create and maintain a vegetative cover database with information from biological surveys.	0	Reoccurring	In-house
FGM 1.1	CATS	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract
FGM 2.1	CATS-M	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FGM 3.1	GTS	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract
FGM 1.2	CATS	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
FGM 2.2	CATS-M	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
FGM 3.2	GTS	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
FGM 4.2	GTS-SC	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
FGM 1.2	CATS	Continue to create a nature trail adjacent to Turner Lake campground that includes approximately 10 acres of native prairie restoration.	3	One Time	In-house
FGM 1.2	CATS	Maintain and manage native grasslands on a three-year cycle to promote diversity, optimize wildlife habitat, and reduce invasive species and woody plants.	3	One Time	In-house
FGM 2.2	CATS-M	Maintain and manage native grasslands on a three-year cycle to promote diversity, optimize wildlife habitat, and reduce invasive species and woody plants.	3	One Time	In-house
FGM 3.2	GTS	Maintain and manage native grasslands on a three-year cycle to promote diversity, optimize wildlife habitat, and reduce invasive species and woody plants.	3	One Time	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WFM 1.1	CATS	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 2.1	CATS-M	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 3.1	GTS	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 4.1	GTS-SC	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
AG 1.1	CATS	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 2.1	CATS-M	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 3.1	GTS	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
AG 4.1	GTS-SC	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 1.2	CATS	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 2.2	CATS-M	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 3.2	GTS	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 4.2	GTS-SC	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 1.2	CATS	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
AG 2.2	CATS-M	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
AG 3.2	GTS	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
AG 4.2	GTS-SC	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
IPM 1.1	CATS	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 2.1	CATS-M	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 3.1	GTS	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
IPM 4.1	GTS-SC	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 1.2	CATS	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 2.2	CATS-M	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 3.2	GTS	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 4.2	GTS-SC	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 1.1	CATS	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 2.1	CATS-M	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 3.1	GTS	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 4.1	GTS-SC	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
PO 1.1	CATS	Continue the Ashland-Greenwood School Operation Bald Eagle program.	3	Reoccurring	In-house
PO 1.1	CATS	Establish an annual Family Fishing Derby for soldiers, employees, and their family members at Turner Lake. Includes stocking of Turner Lake with rainbow trout.	3	Reoccurring	In-house
PO 1.1	CATS	Partner with local organizations to provide outdoor recreation opportunities to disabled veterans, gold star family members, and other combat veterans.	3	Reoccurring	In-house
PO 3.1	GTS	Partner with local organizations to provide outdoor recreation opportunities to disabled veterans, gold star family members, and other combat veterans.	3	Reoccurring	In-house
GIS 1.1	CATS	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at CATS.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
GIS 2.1	CATS-M	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at CATS-M.	0	Reoccurring	In-house
GIS 3.1	GTS	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at GTS.	0	Reoccurring	In-house
GIS 4.1	GTS-SC	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at GTS-SC.	0	Reoccurring	In-house
CC 1.1	CATS	Coordinate with NGPC as a source of information on climate change	2	One Time	In-house
CC 2.1	CATS-M	Coordinate with NGPC as a source of information on climate change	2	One Time	In-house
CC 3.1	GTS	Coordinate with NGPC as a source of information on climate change	2	One Time	In-house
CC 4.1	GTS-SC	Coordinate with NGPC as a source of information on climate change	2	One Time	In-house
CC 1.1	CATS	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 2.1	CATS-M	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 3.1	GTS	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 4.1	GTS-SC	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house

Table 10-3. FY 2023 Project Implementation Table

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
NRP 1.1	CATS	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	CATS-M	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	GTS	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	GTS-SC	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 2.1	CATS	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	CATS-M	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	GTS	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	GTS-SC	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	CATS	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.1	CATS-M	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.1	GTS	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
NRP 2.1	GTS-SC	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.2	CATS	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	CATS-M	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	GTS	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	GTS-SC	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.3	CATS	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	CATS-M	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	GTS	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	GTS-SC	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 6.1	CATS	Remain members of the Lower Platter River Corridor Alliance in order to coordinate efforts with surrounding areas, receive LIDAR data, and assistance with management strategies.	0	Reoccurring	In-house
NRP 2.1	CATS	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	CATS-M	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	GTS	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	GTS-SC	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FWM 1.1	CATS	Monitor and protect active bald eagle nesting areas and communicate locations or occurrences of eagle nests to NEARNG command and staff.	0	Reoccurring	In-house
FWM 4.2	GTS-SC	Monitor and protect active bald eagle nesting areas and communicate locations or occurrences of eagle nests to NEARNG command and staff.	0	Reoccurring	In-house
FWM 1.4	CATS	Continue to conduct biological monitoring of chutes as levee mitigation through the University of Nebraska and timelapse photography produced by Platte Basin Timelapse.	0	Reoccurring	Contract
FWM 1.4	CATS	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 3.3	GTS	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 1.4	CATS	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 3.3	GTS	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 1.4	CATS	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 3.3	GTS	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 1.5	CATS	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FWM 2.4	CATS-M	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 3.4	GTS	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 4.4	GTS-SC	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 1.2	CATS	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 2.2	CATS-M	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 3.2	GTS	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 4.2	GTS-SC	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 1.4	CATS	Conduct a deer population survey.	0	Reoccurring	In-house
OR 1.1	CATS	Monitor usage and harvest levels of outdoor recreation program through RecAccess.	2	Reoccurring	Contract
OR 1.1	CATS	Conduct hunting seasons to maintain and control healthy populations of white-tailed deer and other game species.	0	Reoccurring	In-house
OR 1.1	CATS	Provide outdoor recreation opportunities to soldiers, employees, and family members in the form of hunting, fishing, trapping, bird watching, mushroom gathering, etc.	0	Reoccurring	In-house
OR 1.2	CATS	Continue Ashland School environmental learning activities	0	Reoccurring	In-house
CLE 1.2	CATS	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 2.1	CATS-M	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 3.1	GTS	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 4.1	GTS-SC	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
TE 1.1	CATS	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 2.1	CATS-M	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 3.1	GTS	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 4.1	GTS-SC	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 1.1	CATS	Continue to monitor for piping plover and least tern.	0	Reoccurring	In-house
TE 2.1	CATS-M	Continue to monitor for piping plover and least tern.	0	Reoccurring	In-house
TE 1.1	CATS	Continue to monitor for NLEB.	0	Reoccurring	Contract
TE 2.1	CATS-M	Continue to monitor for NLEB.	0	Reoccurring	Contract
TE 1.3	CATS	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 2.3	CATS-M	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 3.3	GTS	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 4.3	GTS-SC	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
TE 1.1	CATS	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 2.1	CATS-M	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 3.1	GTS	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 4.1	GTS-SC	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
WRP 1.1	CATS	Continue to conduct routine water quality analyses on all water bodies within the site boundaries to ensure that water quality standards comply with the standards set by the CWA and safe drinking water act.	0	Reoccurring	In-house
WRP 1.1	CATS	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 2.1	CATS-M	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 3.1	GTS	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 4.1	GTS-SC	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 1.1	CATS	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 2.1	CATS-M	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 3.1	GTS	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 4.1	GTS-SC	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WRP 3.1	GTS	Maintain water monitoring program developed and administered by the USGS that aims to monitor, protect, and improve water quality.	2	Reoccurring	In-house
WRP 3.1	GTS	Identify and restore degraded aquatic habitats and prevent degradation of water quality.	2	Reoccurring	In-house
WP 1.5	CATS	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 2.5	CATS-M	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 3.5	GTS	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 4.5	GTS-SC	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 1.2	CATS	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 2.2	CATS-M	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 3.2	GTS	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WP 4.2	GTS-SC	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 1.3	CATS	Monitor the East Chute for sediment nutrient exchange, vegetation, soil, water quality, erosion, and wildlife usage. The monitoring should be conducted twice per year along established transects.	0	Reoccurring	In-house
WP 2.3	CATS-M	Monitor Johnson Creek for vegetation, soil, water quality, erosion, and wildlife usage.	0	Reoccurring	In-house
WP 1.4	CATS	Monitor and restore/create wetlands identified in biological surveys to enhance watershed function and value on CATS.	0	Reoccurring	In-house
WP 2.4	CATS-M	Monitor and restore/create wetlands identified in biological surveys to enhance watershed function and value on CATS-M.	0	Reoccurring	In-house
WP 1.2	CATS	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-House
WP 2.2	CATS-M	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-House
WP 3.2	GTS	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WP 4.2	GTS-SC	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-house
GM 1.1	CATS	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 2.1	CATS-M	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 3.1	GTS	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 1.1	CATS	Control poison ivy near high-use training areas in accordance with the PMP.	0	Reoccurring	In-house
GM 2.1	CATS-M	Control poison ivy near high-use training areas in accordance with the PMP.	0	Reoccurring	In-house
GM 1.1	CATS	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 2.1	CATS-M	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 3.1	GTS	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 1.1	CATS	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 2.1	CATS-M	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 3.1	GTS	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
FGM 1.1	CATS	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract
FGM 2.1	CATS-M	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FGM 3.1	GTS	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract
FGM 4.2	GTS-SC	Flag important prairie areas prior to training exercises near the prairie area.	1	Reoccurring	In-house
FGM 4.2	GTS-SC	Plan off-road vehicle courses and any improvements to conserve identified critical native prairie habitat.	1	Reoccurring	In-house
FGM 4.2	GTS-SC	Create and maintain a vegetative cover database with information from biological surveys.	0	Reoccurring	In-house
FGM 1.1	CATS	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract
FGM 2.1	CATS-M	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract
FGM 3.1	GTS	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract
FGM 1.2	CATS	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
FGM 2.2	CATS-M	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
FGM 3.2	GTS	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FGM 4.2	GTS-SC	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
FGM 1.2	CATS	Conduct a vegetation planning level survey	0	One-time	Contract
FGM 2.2	CATS-M	Conduct a vegetation planning level survey	0	One-time	Contract
FGM 3.2	GTS	Conduct a vegetation planning level survey	0	One-time	Contract
FGM 4.2	GTS-SC	Conduct a vegetation planning level survey	0	One-time	Contract
WFM 1.1	CATS	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 2.1	CATS-M	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 3.1	GTS	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 4.1	GTS-SC	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
AG 1.1	CATS	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
AG 2.1	CATS-M	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 3.1	GTS	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 4.1	GTS-SC	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 1.2	CATS	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 2.2	CATS-M	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 3.2	GTS	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 4.2	GTS-SC	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 1.2	CATS	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
AG 2.2	CATS-M\	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
AG 3.2	GTS	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
AG 4.2	GTS-SC	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
IPM 1.1	CATS	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 2.1	CATS-M	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 3.1	GTS	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 4.1	GTS-SC	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 1.2	CATS	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 2.2	CATS-M	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 3.2	GTS	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 4.2	GTS-SC	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 1.1	CATS	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 2.1	CATS-M	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 3.1	GTS	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 4.1	GTS-SC	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
PO 1.1	CATS	Continue the Ashland-Greenwood School Operation Bald Eagle program.	3	Reoccurring	In-house
PO 1.1	CATS	Establish an annual Family Fishing Derby for soldiers, employees, and their family members at Turner Lake. Includes stocking of Turner Lake with rainbow trout.	3	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
PO 1.1	CATS	Partner with local organizations to provide outdoor recreation opportunities to disabled veterans, gold star family members, and other combat veterans.	3	Reoccurring	In-house
PO 3.1	GTS	Partner with local organizations to provide outdoor recreation opportunities to disabled veterans, gold star family members, and other combat veterans.	3	Reoccurring	In-house
GIS 1.1	CATS	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at CATS.	0	Reoccurring	In-house
GIS 2.1	CATS-M	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at CATS-M.	0	Reoccurring	In-house
GIS 3.1	GTS	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at GTS.	0	Reoccurring	In-house
GIS 4.1	GTS-SC	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at GTS-SC.	0	Reoccurring	In-house
CC 1.1	CATS	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 2.1	CATS-M	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 3.1	GTS	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 4.1	GTS-SC	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house

Table 10-4. FY 2024 Project Implementation Table

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
NRP 1.1	CATS	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	CATS-M	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	GTS	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	GTS-SC	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 2.1	CATS	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	CATS-M	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	GTS	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	GTS-SC	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	CATS	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.1	CATS-M	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.1	GTS	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
NRP 2.1	GTS-SC	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.2	CATS	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	CATS-M	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	GTS	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	GTS-SC	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.3	CATS	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	CATS-M	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	GTS	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	GTS-SC	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 6.1	CATS	Remain members of the Lower Platter River Corridor Alliance in order to coordinate efforts with surrounding areas, and receive LIDAR data and assistance with management strategies.	0	Reoccurring	In-house
NRP 2.1	CATS	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	CATS-M	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	GTS	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	GTS-SC	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FWM 1.1	CATS	Monitor and protect active bald eagle nesting areas and communicate locations or occurrences of eagle nests to NEARNG command and staff.	0	Reoccurring	In-house
FWM 4.2	GTS-SC	Monitor and protect active bald eagle nesting areas and communicate locations or occurrences of eagle nests to NEARNG command and staff.	0	Reoccurring	In-house
FWM 1.4	CATS	Continue to conduct biological monitoring of chutes as levee mitigation through the University of Nebraska and timelapse photography produced by Platte Basin Timelapse.	0	Reoccurring	Contract
FWM 1.4	CATS	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 3.3	GTS	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 1.4	CATS	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 3.3	GTS	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 1.4	CATS	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 3.3	GTS	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 1.5	CATS	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FWM 2.4	CATS-M	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 3.4	GTS	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 4.4	GTS-SC	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 1.2	CATS	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 2.2	CATS-M	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 3.2	GTS	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 4.2	GTS-SC	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 1.4	CATS	Conduct a deer population survey.	0	Reoccurring	In-house
OR 1.1	CATS	Monitor usage and harvest levels of outdoor recreation program through RecAccess.	2	Reoccurring	Contract
OR 1.1	CATS	Conduct hunting seasons to maintain and control healthy populations of white-tailed deer and other game species.	0	Reoccurring	In-house
OR 1.1	CATS	Provide outdoor recreation opportunities to soldiers, employees, and family members in the form of hunting, fishing, trapping, bird watching, mushroom gathering, etc.	0	Reoccurring	In-house
OR 1.2	CATS	Continue Ashland School environmental learning activities	0	Reoccurring	In-house
CLE 1.2	CATS	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 2.1	CATS-M	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 3.1	GTS	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 4.1	GTS-SC	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
TE 1.1	CATS	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 2.1	CATS-M	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 3.1	GTS	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 4.1	GTS-SC	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 1.1	CATS	Continue to monitor for piping plover and least tern.	0	Reoccurring	In-house
TE 2.1	CATS-M	Continue to monitor for piping plover and least tern.	0	Reoccurring	In-house
TE 1.1	CATS	Continue to monitor for NLEB.	0	Reoccurring	Contract
TE 2.1	CATS-M	Continue to monitor for NLEB.	0	Reoccurring	Contract
TE 1.3	CATS	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 2.3	CATS-M	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 3.3	GTS	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 4.3	GTS-SC	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
TE 1.1	CATS	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 2.1	CATS-M	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 3.1	GTS	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 4.1	GTS-SC	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
WRP 1.1	CATS	Continue to conduct routine water quality analyses on all water bodies within the site boundaries to ensure that water quality standards comply with the standards set by the CWA and safe drinking water act.	0	Reoccurring	In-house
WRP 1.1	CATS	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 2.1	CATS-M	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 3.1	GTS	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 4.1	GTS-SC	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 1.1	CATS	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 2.1	CATS-M	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 3.1	GTS	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 4.1	GTS-SC	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WRP 3.1	GTS	Maintain water monitoring program developed and administered by the USGS that aims to monitor, protect, and improve water quality.	2	Reoccurring	In-house
WRP 3.1	GTS	Identify and restore degraded aquatic habitats and prevent degradation of water quality.	2	Reoccurring	In-house
WP 1.5	CATS	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 2.5	CATS-M	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 3.5	GTS	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 4.5	GTS-SC	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 1.2	CATS	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 2.2	CATS-M	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WP 3.2	GTS	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 4.2	GTS-SC	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 1.3	CATS	Monitor the East Chute for sediment nutrient exchange, vegetation, soil, water quality, erosion, and wildlife usage. The monitoring should be conducted twice per year along established transects.	0	Reoccurring	In-house
WP 2.3	CATS-M	Monitor Johnson Creek for vegetation, soil, water quality, erosion and wildlife usage.	0	Reoccurring	In-house
WP 1.4	CATS	Monitor and restore/create wetlands identified in biological surveys to enhance watershed function and value on CATS.	0	Reoccurring	In-house
WP 2.4	CATS-M	Monitor and restore/create wetlands identified in biological surveys to enhance watershed function and value on CATS-M.	0	Reoccurring	In-house
WP 1.2	CATS	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-House

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WP 2.2	CATS-M	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-House
WP 3.2	GTS	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-house
WP 4.2	GTS-SC	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-house
GM 1.1	CATS	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 2.1	CATS-M	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 3.1	GTS	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 1.1	CATS	Control poison ivy near high-use training areas in accordance with the PMP.	0	Reoccurring	In-house
GM 2.1	CATS-M	Control poison ivy near high-use training areas in accordance with the PMP.	0	Reoccurring	In-house
GM 1.1	CATS	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 2.1	CATS-M	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 3.1	GTS	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 1.1	CATS	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 2.1	CATS-M	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
GM 3.1	GTS	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
FGM 1.1	CATS	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract
FGM 2.1	CATS-M	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract
FGM 3.1	GTS	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract
FGM 4.2	GTS-SC	Flag important prairie areas prior to training exercises near the prairie area.	1	Reoccurring	In-house
FGM 4.2	GTS-SC	Plan off-road vehicle courses and any improvements to conserve identified critical native prairie habitat.	1	Reoccurring	In-house
FGM 4.2	GTS-SC	Create and maintain a vegetative cover database with information from biological surveys.	0	Reoccurring	In-house
FGM 1.1	CATS	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract
FGM 2.1	CATS-M	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract
FGM 3.1	GTS	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract
FGM 1.2	CATS	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FGM 2.2	CATS-M	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
FGM 3.2	GTS	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
FGM 4.2	GTS-SC	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
WFM 1.1	CATS	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 2.1	CATS-M	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 3.1	GTS	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 4.1	GTS-SC	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
AG 1.1	CATS	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
AG 2.1	CATS-M	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 3.1	GTS	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 4.1	GTS-SC	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 1.2	CATS	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 2.2	CATS-M	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 3.2	GTS	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 4.2	GTS-SC	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 1.2	CATS	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
AG 2.2	CATS-M\	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
AG 3.2	GTS	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
AG 4.2	GTS-SC	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
IPM 1.1	CATS	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 2.1	CATS-M	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 3.1	GTS	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 4.1	GTS-SC	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 1.2	CATS	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 2.2	CATS-M	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 3.2	GTS	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 4.2	GTS-SC	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 1.1	CATS	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 2.1	CATS-M	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 3.1	GTS	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 4.1	GTS-SC	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
PO 1.1	CATS	Continue the Ashland-Greenwood School Operation Bald Eagle program.	3	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
PO 1.1	CATS	Establish an annual Family Fishing Derby for soldiers, employees, and their family members at Turner Lake. Includes stocking of Turner Lake with rainbow trout.	3	Reoccurring	In-house
PO 1.1	CATS	Partner with local organizations to provide outdoor recreation opportunities to disabled veterans, gold star family members, and other combat veterans.	3	Reoccurring	In-house
PO 3.1	GTS	Partner with local organizations to provide outdoor recreation opportunities to disabled veterans, gold star family members, and other combat veterans.	3	Reoccurring	In-house
GIS 1.1	CATS	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at CATS.	0	Reoccurring	In-house
GIS 2.1	CATS-M	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at CATS-M.	0	Reoccurring	In-house
GIS 3.1	GTS	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at GTS.	0	Reoccurring	In-house
GIS 4.1	GTS-SC	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at GTS-SC.	0	Reoccurring	In-house
CC 1.1	CATS	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 2.1	CATS-M	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 3.1	GTS	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 4.1	GTS-SC	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house

Table 10-5. FY 2025 Project Implementation Table

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
NRP 1.1	CATS	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	CATS-M	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	GTS	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	GTS-SC	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 2.1	CATS	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	CATS-M	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	GTS	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	GTS-SC	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	CATS	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.1	CATS-M	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.1	GTS	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
NRP 2.1	GTS-SC	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.2	CATS	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	CATS-M	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	GTS	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	GTS-SC	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.3	CATS	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	CATS-M	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	GTS	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	GTS-SC	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 6.1	CATS	Remain members of the Lower Platter River Corridor Alliance in order to coordinate efforts with surrounding areas, receive LIDAR data, and assistance with management strategies.	0	Reoccurring	In-house
NRP 2.1	CATS	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	CATS-M	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	GTS	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	GTS-SC	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FWM 1.1	CATS	Monitor and protect active bald eagle nesting areas and communicate locations or occurrences of eagle nests to NEARNG command and staff.	0	Reoccurring	In-house
FWM 4.2	GTS-SC	Monitor and protect active bald eagle nesting areas and communicate locations or occurrences of eagle nests to NEARNG command and staff.	0	Reoccurring	In-house
FWM 1.4	CATS	Continue to conduct biological monitoring of chutes as levee mitigation through the University of Nebraska and timelapse photography produced by Platte Basin Timelapse.	0	Reoccurring	Contract
FWM 1.4	CATS	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 3.3	GTS	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 1.4	CATS	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 3.3	GTS	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 1.4	CATS	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 3.3	GTS	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FWM 1.5	CATS	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 2.4	CATS-M	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 3.4	GTS	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 4.4	GTS-SC	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 1.2	CATS	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 2.2	CATS-M	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 3.2	GTS	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 4.2	GTS-SC	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 1.4	CATS	Conduct a deer population survey.	0	Reoccurring	In-house
OR 1.1	CATS	Monitor usage and harvest levels of outdoor recreation program through RecAccess.	2	Reoccurring	Contract
OR 1.1	CATS	Conduct hunting seasons to maintain and control healthy populations of white-tailed deer and other game species.	0	Reoccurring	In-house
OR 1.1	CATS	Provide outdoor recreation opportunities to soldiers, employees, and family members in the form of hunting, fishing, trapping, bird watching, mushroom gathering, etc.	0	Reoccurring	In-house
OR 1.2	CATS	Continue Ashland School environmental learning activities	0	Reoccurring	In-house
CLE 1.2	CATS	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 2.1	CATS-M	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 3.1	GTS	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 4.1	GTS-SC	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
TE 1.1	CATS	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 2.1	CATS-M	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 3.1	GTS	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 4.1	GTS-SC	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 1.1	CATS	Continue to monitor for piping plover and least tern.	0	Reoccurring	In-house
TE 2.1	CATS-M	Continue to monitor for piping plover and least tern.	0	Reoccurring	In-house
TE 1.1	CATS	Continue to monitor for NLEB.	0	Reoccurring	Contract
TE 2.1	CATS-M	Continue to monitor for NLEB.	0	Reoccurring	Contract
TE 1.3	CATS	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 2.3	CATS-M	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 3.3	GTS	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 4.3	GTS-SC	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
TE 1.1	CATS	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 2.1	CATS-M	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 3.1	GTS	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 4.1	GTS-SC	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
WRP 1.1	CATS	Continue to conduct routine water quality analyses on all water bodies within the site boundaries to ensure that water quality standards comply with the standards set by the CWA and safe drinking water act.	0	Reoccurring	In-house
WRP 1.1	CATS	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 2.1	CATS-M	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 3.1	GTS	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 4.1	GTS-SC	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 1.1	CATS	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 2.1	CATS-M	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 3.1	GTS	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 4.1	GTS-SC	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WRP 3.1	GTS	Maintain water monitoring program developed and administered by the USGS that aims to monitor, protect, and improve water quality.	2	Reoccurring	In-house
WRP 3.1	GTS	Identify and restore degraded aquatic habitats and prevent degradation of water quality.	2	Reoccurring	In-house
WP 1.5	CATS	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 2.5	CATS-M	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 3.5	GTS	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 4.5	GTS-SC	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 1.2	CATS	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 2.2	CATS-M	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 3.2	GTS	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WP 4.2	GTS-SC	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 1.3	CATS	Monitor the East Chute for sediment nutrient exchange, vegetation, soil, water quality, erosion, and wildlife usage. The monitoring should be conducted twice per year along established transects.	0	Reoccurring	In-house
WP 2.3	CATS-M	Monitor Johnson Creek for vegetation, soil, water quality, erosion and wildlife usage.	0	Reoccurring	In-house
WP 1.4	CATS	Monitor and restore/create wetlands identified in biological surveys to enhance watershed function and value on CATS.	0	Reoccurring	In-house
WP 2.4	CATS-M	Monitor and restore/create wetlands identified in biological surveys to enhance watershed function and value on CATS-M.	0	Reoccurring	In-house
WP 1.2	CATS	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-House
WP 2.2	CATS-M	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-House
WP 3.2	GTS	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WP 4.2	GTS-SC	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-house
GM 1.1	CATS	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 2.1	CATS-M	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 3.1	GTS	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 1.1	CATS	Control poison ivy near high-use training areas in accordance with the PMP.	0	Reoccurring	In-house
GM 2.1	CATS-M	Control poison ivy near high-use training areas in accordance with the PMP.	0	Reoccurring	In-house
GM 1.1	CATS	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 2.1	CATS-M	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 3.1	GTS	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 1.1	CATS	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 2.1	CATS-M	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 3.1	GTS	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
FGM 1.1	CATS	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract
FGM 2.1	CATS-M	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FGM 3.1	GTS	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract
FGM 4.2	GTS-SC	Flag important prairie areas prior to training exercises near the prairie area.	1	Reoccurring	In-house
FGM 4.2	GTS-SC	Plan off-road vehicle courses and any improvements to conserve identified critical native prairie habitat.	1	Reoccurring	In-house
FGM 4.2	GTS-SC	Create and maintain a vegetative cover database with information from biological surveys.	0	Reoccurring	In-house
FGM 1.1	CATS	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract
FGM 2.1	CATS-M	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract
FGM 3.1	GTS	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract
FGM 1.2	CATS	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
FGM 2.2	CATS-M	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
FGM 3.2	GTS	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FGM 4.2	GTS-SC	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
FGM 1.2	CATS	Maintain and manage native grasslands on a three-year cycle to promote diversity, optimize wildlife habitat, and reduce invasive species and woody plants.	3	One-time	In-house
FGM 2.2	CATS-M	Maintain and manage native grasslands on a three-year cycle to promote diversity, optimize wildlife habitat, and reduce invasive species and woody plants.	3	One-time	In-house
FGM 3.2	GTS	Maintain and manage native grasslands on a three-year cycle to promote diversity, optimize wildlife habitat, and reduce invasive species and woody plants.	3	One-time	In-house
WFM 1.1	CATS	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 2.1	CATS-M	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 3.1	GTS	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 4.1	GTS-SC	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
AG 1.1	CATS	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
AG 2.1	CATS-M	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 3.1	GTS	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 4.1	GTS-SC	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 1.2	CATS	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 2.2	CATS-M	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 3.2	GTS	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 4.2	GTS-SC	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 1.2	CATS	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
AG 2.2	CATS-M\	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
AG 3.2	GTS	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
AG 4.2	GTS-SC	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
IPM 1.1	CATS	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 2.1	CATS-M	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 3.1	GTS	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 4.1	GTS-SC	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 1.2	CATS	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 2.2	CATS-M	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 3.2	GTS	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 4.2	GTS-SC	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 1.1	CATS	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 2.1	CATS-M	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 3.1	GTS	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 4.1	GTS-SC	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
PO 1.1	CATS	Continue the Ashland-Greenwood School Operation Bald Eagle program.	3	Reoccurring	In-house
PO 1.1	CATS	Establish an annual Family Fishing Derby for soldiers, employees, and their family members at Turner Lake. Includes stocking of Turner Lake with rainbow trout.	3	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
PO 1.1	CATS	Partner with local organizations to provide outdoor recreation opportunities to disabled veterans, gold star family members, and other combat veterans.	3	Reoccurring	In-house
PO 3.1	GTS	Partner with local organizations to provide outdoor recreation opportunities to disabled veterans, gold star family members, and other combat veterans.	3	Reoccurring	In-house
GIS 1.1	CATS	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at CATS.	0	Reoccurring	In-house
GIS 2.1	CATS-M	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at CATS-M.	0	Reoccurring	In-house
GIS 3.1	GTS	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at GTS.	0	Reoccurring	In-house
GIS 4.1	GTS-SC	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at GTS-SC.	0	Reoccurring	In-house
CC 1.1	CATS	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 2.1	CATS-M	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 3.1	GTS	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 4.1	GTS-SC	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house

Table 10-6. FY 2026 Project Implementation Table

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
NRP 1.1	CATS	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	CATS-M	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	GTS	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 1.1	GTS-SC	Obtain relevant training necessary for resource managers to develop an understanding of an ecosystem management approach to natural resources.	0	Reoccurring	In-house
NRP 2.1	CATS	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	CATS-M	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	GTS	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	GTS-SC	Conduct a formal meeting and internal review with installation operation and management organizations on an annual basis to ensure that there is an understanding of goals, objectives, and projects presented in this INRMP.	0	Reoccurring	In-house
NRP 2.1	CATS	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.1	CATS-M	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.1	GTS	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
NRP 2.1	GTS-SC	Conduct annual review with USFWS and NGPC as part of tripartite agreement.	0	Reoccurring	In-house
NRP 2.2	CATS	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	CATS-M	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	GTS	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.2	GTS-SC	Utilize internal and external stakeholder comments to update the INRMP.	0	Reoccurring	In-house
NRP 2.3	CATS	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	CATS-M	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	GTS	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 2.3	GTS-SC	Conduct an internal and external evaluation of the INRMP annually to determine if an update or revision is necessary based on changes in environmental conditions or the mission.	0	Reoccurring	In-house
NRP 6.1	CATS	Remain members of the Lower Platter River Corridor Alliance in order to coordinate efforts with surrounding areas, and receive LIDAR data and assistance with management strategies.	0	Reoccurring	In-house
NRP 2.1	CATS	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	CATS-M	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	GTS	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house
NRP 1.1	GTS-SC	Include consideration of management that incorporates an ecosystem approach in direction provided by the environmental office on all land management objectives.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FWM 1.1	CATS	Monitor and protect active bald eagle nesting areas and communicate locations or occurrences of eagle nests to NEARNG command and staff.	0	Reoccurring	In-house
FWM 4.2	GTS-SC	Monitor and protect active bald eagle nesting areas and communicate locations or occurrences of eagle nests to NEARNG command and staff.	0	Reoccurring	In-house
FWM 1.4	CATS	Continue to conduct biological monitoring of chutes as levee mitigation through the University of Nebraska and timelapse photography produced by Platte Basin Timelapse.	0	Reoccurring	Contract
FWM 1.4	CATS	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 3.3	GTS	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Continue to monitor wildlife via trail camera program.	0	Reoccurring	In-house
FWM 1.4	CATS	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 3.3	GTS	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Communicate results of biological surveys during Task Force meetings.	0	Reoccurring	In-house
FWM 1.4	CATS	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 2.3	CATS-M	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 3.3	GTS	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 4.3	GTS-SC	Develop a comprehensive database to document the results of the biological surveys and update the database with the results of the five-year biological surveys.	0	Reoccurring	In-house
FWM 1.5	CATS	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FWM 2.4	CATS-M	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 3.4	GTS	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 4.4	GTS-SC	Do not disturb migratory bird nest sites (with the exception of Canada geese) until offspring have been fledged, any required permits are obtained, and/or consultation has been completed.	0	Reoccurring	In-house
FWM 1.2	CATS	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 2.2	CATS-M	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 3.2	GTS	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 4.2	GTS-SC	Continue to conduct breeding bird surveys.	2	Reoccurring	In-house
FWM 1.4	CATS	Conduct a deer population survey.	0	Reoccurring	In-house
OR 1.1	CATS	Monitor usage and harvest levels of outdoor recreation program through RecAccess.	2	Reoccurring	Contract
OR 1.1	CATS	Conduct hunting seasons to maintain and control healthy populations of white-tailed deer and other game species.	0	Reoccurring	In-house
OR 1.1	CATS	Provide outdoor recreation opportunities to soldiers, employees, and family members in the form of hunting, fishing, trapping, bird watching, mushroom gathering, etc.	0	Reoccurring	In-house
OR 1.2	CATS	Continue Ashland School environmental learning activities	0	Reoccurring	In-house
CLE 1.2	CATS	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 2.1	CATS-M	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 3.1	GTS	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
CLE 4.1	GTS-SC	Contact NGPC staff or the County Sherriff for assistance in natural resource regulation enforcement as needed.	0	Reoccurring	In-house
TE 1.1	CATS	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
		information is released by the USFWS or NGPC or is gathered as part of a biological survey.			
TE 2.1	CATS-M	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 3.1	GTS	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 4.1	GTS-SC	Continually monitor the presence of threatened and endangered species and create/revise the database of threatened and endangered species with potential to occur on site whenever new information is released by the USFWS or NGPC or is gathered as part of a biological survey.	0	Reoccurring	In-house
TE 1.1	CATS	Continue to monitor for piping plover and least tern.	0	Reoccurring	In-house
TE 2.1	CATS-M	Continue to monitor for piping plover and least tern.	0	Reoccurring	In-house
TE 1.1	CATS	Continue to monitor for NLEB.	0	Reoccurring	Contract
TE 2.1	CATS-M	Continue to monitor for NLEB.	0	Reoccurring	Contract
TE 1.3	CATS	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 2.3	CATS-M	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 3.3	GTS	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract
TE 4.3	GTS-SC	Continue to work with local, state, and federal entities to reduce and/or mitigate potential impacts from aviation flights to Whooping crane migration activities.	0	Reoccurring	In-house/Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
TE 1.1	CATS	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 2.1	CATS-M	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 3.1	GTS	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
TE 4.1	GTS-SC	Develop and implement an education program that communicates locations or occurrences of threatened and endangered species for NEARNG personnel.	0	Reoccurring	In-House
WRP 1.1	CATS	Continue to conduct routine water quality analyses on all water bodies within the site boundaries to ensure that water quality standards comply with the standards set by the CWA and safe drinking water act.	0	Reoccurring	In-house
WRP 1.1	CATS	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 2.1	CATS-M	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 3.1	GTS	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 4.1	GTS-SC	Maintain native vegetative buffers around water sources, providing habitat for instream and upland species and supporting biodiversity.	0	Reoccurring	In-house
WRP 1.1	CATS	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 2.1	CATS-M	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 3.1	GTS	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house
WRP 4.1	GTS-SC	Reduce or eliminate pesticide, fertilizer, and other pollutant use and limit activities adjacent wetland/waterway areas.	2	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WRP 3.1	GTS	Maintain water monitoring program developed and administered by the USGS that aims to monitor, protect, and improve water quality.	2	Reoccurring	In-house
WRP 3.1	GTS	Identify and restore degraded aquatic habitats and prevent degradation of water quality.	2	Reoccurring	In-house
WP 1.5	CATS	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 2.5	CATS-M	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 3.5	GTS	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 4.5	GTS-SC	Update wetland data with information from biological surveys.	0	Reoccurring	In-house
WP 1.2	CATS	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 2.2	CATS-M	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 3.2	GTS	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
WP 4.2	GTS-SC	Maintain 50 to 100-foot buffer zones around wetlands where it is determined that a wetland has, or could have, significant habitat value, or where current activities adjacent to wetlands are causing noticeable adverse impacts on the habitat. Activities within buffer zones are limited to those that would cause little or no impact on or disturbance to the wetlands. In cases where established activities already occur within buffers and cannot be reasonably changed, those wetlands are subject to increasing monitoring, and use of BMPs to avoid or minimize impacts.	0	Reoccurring	In-house
WP 1.3	CATS	Monitor the East Chute for sediment nutrient exchange, vegetation, soil, water quality, erosion, and wildlife usage. The monitoring should be conducted twice per year along established transects.	0	Reoccurring	In-house
WP 2.3	CATS-M	Monitor Johnson Creek for vegetation, soil, water quality, erosion and wildlife usage.	0	Reoccurring	In-house
WP 1.4	CATS	Monitor and restore/create wetlands identified in biological surveys to enhance watershed function and value on CATS.	0	Reoccurring	In-house
WP 2.4	CATS-M	Monitor and restore/create wetlands identified in biological surveys to enhance watershed function and value on CATS-M.	0	Reoccurring	In-house
WP 1.2	CATS	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-House
WP 2.2	CATS-M	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-House
WP 3.2	GTS	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions	0	Reoccurring	In-house
WP 4.2	GTS-SC	Develop and implement a training program for NEARNG personnel regarding current wetland regulations and management and the locations of wetlands at the installations to avoid wetland	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
		impacts to the maximum extent possible and mitigate unavoidable impacts on wetland functions			
GM 1.1	CATS	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 2.1	CATS-M	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 3.1	GTS	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Continue to repair and maintain trails on the installation as necessary.	0	Reoccurring	In-house
GM 1.1	CATS	Control poison ivy near high-use training areas in accordance with the PMP.	0	Reoccurring	In-house
GM 2.1	CATS-M	Control poison ivy near high-use training areas in accordance with the PMP.	0	Reoccurring	In-house
GM 1.1	CATS	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 2.1	CATS-M	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 3.1	GTS	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Remove dead timber with potential safety risk.	0	Reoccurring	In-house
GM 1.1	CATS	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 2.1	CATS-M	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 3.1	GTS	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
GM 4.1	GTS-SC	Assist in evaluating the impacts of military training and proposed construction on natural resources.	0	Reoccurring	In-house
FGM 1.1	CATS	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract
FGM 2.1	CATS-M	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FGM 3.1	GTS	Continually monitor the presence of eastern red cedar, thorny locust, and other invasive trees and utilize mechanical, chemical, and/or prescribed fire to control.	0	Reoccurring	In-house/Contract
FGM 4.2	GTS-SC	Flag important prairie areas prior to training exercises near the prairie area.	1	Reoccurring	In-house
FGM 4.2	GTS-SC	Plan off-road vehicle courses and any improvements to conserve identified critical native prairie habitat.	1	Reoccurring	In-house
FGM 4.2	GTS-SC	Create and maintain a vegetative cover database with information from biological surveys.	0	Reoccurring	In-house
FGM 1.1	CATS	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract
FGM 2.1	CATS-M	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract
FGM 3.1	GTS	Implement management strategies outlined in the Forestry Management Plan as well as proposed phasing plans for removal of existing trees in poor health and establishment of new plantings.	2	Reoccurring	In-house/Contract
FGM 1.2	CATS	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
FGM 2.2	CATS-M	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
FGM 3.2	GTS	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
FGM 4.2	GTS-SC	Implement goals and objectives outlined in the Prairie/Tract Management Plans including the creation of a shifting mosaic of habitat types that include native prairie, agricultural areas, and hay/rest cycles that provide diverse training opportunities and habitat availability for native wildlife.	2	Reoccurring	In-house/Contract
WFM 1.1	CATS	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 2.1	CATS-M	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 3.1	GTS	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
WFM 4.1	GTS-SC	Implement static rotation of controlled burns to help reduce risk of wildland fire, promote diverse native vegetation, and help reduce invasive species and woody plants as outlined in the Integrated Wildland Fire Management Plan.	2	Reoccurring	In-house
AG 1.1	CATS	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 2.1	CATS-M	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 3.1	GTS	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species,	0	Reoccurring	Contract

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
		including nesting periods. Review leases annually to assure contract specifications are being achieved.			
AG 4.1	GTS-SC	Continue hay lease program that establishes leases with local ranchers or farmers that specifies cost, performance requirements, haying schedules, access rules, and avoids adverse impacts to threatened, endangered, and sensitive species, including nesting periods. Review leases annually to assure contract specifications are being achieved.	0	Reoccurring	Contract
AG 1.2	CATS	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 2.2	CATS-M	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 3.2	GTS	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 4.2	GTS-SC	Coordinate the responsibility of the lessees for controlling woody vegetation and noxious weeds including small dense patches.	0	Reoccurring	In-house
AG 1.2	CATS	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
AG 2.2	CATS-M\	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
AG 3.2	GTS	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
AG 4.2	GTS-SC	Implement biological, physical, or chemical controls to reduce woody vegetation under the guidance of county foresters	0	Reoccurring	In-house
IPM 1.1	CATS	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 2.1	CATS-M	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 3.1	GTS	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
IPM 4.1	GTS-SC	Implement management practices including monitoring and treatment as recommended in the Integrated Pest Management Plan.	1	Reoccurring	In-house
IPM 1.2	CATS	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 2.2	CATS-M	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 3.2	GTS	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 4.2	GTS-SC	Notify adjacent land managers of non-native and invasive plant occurrences and offer to assist in plant removal projects.	3	Reoccurring	In-house
IPM 1.1	CATS	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 2.1	CATS-M	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 3.1	GTS	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
IPM 4.1	GTS-SC	Coordinate with state and local regulators to obtain appropriate permits for non-native and invasive plant species control efforts.	0	Reoccurring	In-house
PO 1.1	CATS	Continue the Ashland-Greenwood School Operation Bald Eagle program.	3	Reoccurring	In-house
PO 1.1	CATS	Establish an annual Family Fishing Derby for soldiers, employees, and their family members at Turner Lake. Includes stocking of Turner Lake with rainbow trout.	3	Reoccurring	In-house
PO 1.1	CATS	Partner with local organizations to provide outdoor recreation opportunities to disabled veterans, gold star family members, and other combat veterans.	3	Reoccurring	In-house
PO 3.1	GTS	Partner with local organizations to provide outdoor recreation opportunities to disabled veterans, gold star family members, and other combat veterans.	3	Reoccurring	In-house
GIS 1.1	CATS	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at CATS.	0	Reoccurring	In-house

Objective No.	Training Site	Projects	Priority Level	Year	Notes (include actions and dates)
GIS 2.1	CATS-M	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at CATS-M.	0	Reoccurring	In-house
GIS 3.1	GTS	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at GTS.	0	Reoccurring	In-house
GIS 4.1	GTS-SC	Update the Natural Resources GIS database as new data are collected and produce and periodically update GIS maps of natural resources at GTS-SC.	0	Reoccurring	In-house
CC 1.1	CATS	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 2.1	CATS-M	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 3.1	GTS	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house
CC 4.1	GTS-SC	Explore ways to address climate change such as considering drought resistant plantings, reducing fuel for fires, and preparing for range shifts in species.	2	Reoccurring	In-house

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APPENDICES

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