

Final

Environmental Assessment

for Construction and Operation of a Zero Range, Relocation of the M203 Grenade Launcher Range, and Implementation of Roadway Improvements at the Sparta Training Area

CONTRACT # W91278-12-D-0022; DELIVERY ORDER # 0018
MILCON PROJECT NO. 171001



Prepared for:
ILLINOIS ARMY NATIONAL GUARD
Department of Military Affairs
Camp Lincoln
1301 North MacArthur Blvd.
Springfield, IL 62702



March 2016

FINAL

ENVIRONMENTAL ASSESSMENT

FOR

CONSTRUCTION AND OPERATION OF A ZERO RANGE, RELOCATION OF THE M203 GRENADE LAUNCHER RANGE, AND IMPLEMENTATION OF ROADWAY IMPROVEMENTS

AT THE

**SPARTA TRAINING AREA
SPARTA, RANDOLPH COUNTY, ILLINOIS**



ILLINOIS ARMY NATIONAL GUARD

**DEPARTMENT OF MILITARY AFFAIRS
CAMP LINCOLN
1301 NORTH MACARTHUR BLVD.
SPRINGFIELD, IL 62702**

CONTRACT # W91278-12-D-0022; DELIVERY ORDER # 0018

MILCON PROJECT No. 171001

MARCH 2016



Printed on 30% Post-Consumer Recycled Paper

This Page Has Been Left Intentionally Blank

ENVIRONMENTAL ASSESSMENT ORGANIZATION

This Environmental Assessment (EA) evaluates the potential environmental, socioeconomic, and cultural effects of constructing a Zero Range, relocating the existing M203 Grenade Launcher Range and implementing road improvements at the Sparta Training Area (STA) in Sparta, Randolph County, Illinois. As required by the National Environmental Policy Act of 1969 (NEPA; 42 United States Code [USC] 4321 *et seq.*), the Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and 32 CFR Part 651 (Environmental Analysis of Army Actions, Final Rule), the potential effects of the Proposed Action and Alternatives are analyzed. This EA will facilitate the decision process regarding the Proposed Action and its alternatives, and is organized as follows:

EXECUTIVE SUMMARY: Describes the Proposed Action; summarizes environmental, cultural, and socioeconomic consequences; and compares potential effects associated with the three considered alternatives

SECTION 1 PURPOSE AND NEED FOR THE PROPOSED ACTION: Summarizes the purpose of and need for the Proposed Action, provides relevant background information, and describes the scope of the EA.

SECTION 2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES: Describes the Proposed Action and presents alternatives for implementing the Proposed Action.

SECTION 3 AFFECTED ENVIRONMENT: Describes the existing environmental, cultural, and socioeconomic setting of the STA.

SECTION 4 ENVIRONMENTAL CONSEQUENCES: Identifies individual and cumulative potential environmental, cultural, and socioeconomic effects of implementing the Proposed Action and alternatives, and identifies proposed mitigation measures.

SECTION 5 COMPARISON OF ALTERNATIVES AND CONCLUSIONS: Compares the environmental effects of the considered alternatives and summarizes the significance of individual and expected cumulative effects of these alternatives.

SECTION 6 REFERENCES: Provides bibliographical information for cited sources.

SECTION 7 GLOSSARY: Defines terms used in the EA.

SECTION 8 LIST OF PREPARERS: Identifies document preparers and their areas of expertise.

SECTION 9 AGENCIES AND INDIVIDUALS CONSULTED: Lists agencies and individuals consulted during EA preparation.

APPENDICES:

APPENDIX A. Public Participation, Agency Coordination and Native American Consultation

APPENDIX B. Regulatory Framework for NEPA Subject Areas

APPENDIX C. US Army Public Health Command Operational Noise Consultation for Proposed Range Development at STA

APPENDIX D. Small Arms Range Safety Area (SARSA) Request and Approval

APPENDIX E. Illinois Joint Permit Application and Floodplain Waiver

-
- ✓ **Funding Source:** MILCON Project No. 171001
 - ✓ **Proponent:** Illinois Army National Guard
 - ✓ **Fiscal Year (FY):** Zero Range in 2014 Range Complex Master Plan, FY 2016; Relocation of M203 Grenade Launcher, FY 2016; and Roadway Improvements, FY 2016-2021.

This Page Has Been Left Intentionally Blank

ENVIRONMENTAL ASSESSMENT

SIGNATURE PAGE

LEAD AGENCY: Army National Guard (ARNG)

COOPERATING AGENCIES: None

TITLE OF PROPOSED ACTION: Construction and Operation of a Zero Range, Relocation of the M203 Grenade Launcher Range, and Implementation of Roadway Improvements at the Sparta Training Area (STA)

AFFECTED JURISDICTION: Sparta, Randolph County, Illinois

POINT OF CONTACT: Mr. Anthony Janas, Illinois Army National Guard, Camp Lincoln, 1301 North MacArthur Blvd, Springfield, IL 62702, Telephone: (618) 443-9618

PROPONENTS: Illinois Army National Guard (ILARNG)

REVIEWED BY:

REVIEWED BY:

REVIEWED BY:

RICHARD J. HAYES JR.
Major General, ILARNG
The Adjutant General

CRAIG HOLAN
COL, National Guard Director
Army Facilities and Engineering
Illinois Army National Guard

RODNEY THACKER
COL, National Guard Director
Plans, Operations and Training
Illinois Army National Guard

REVIEWED BY:

KENNETH E. BARRY
Acting Chief, Environmental Branch
Illinois Army National Guard
Springfield, Illinois

DOCUMENT DESIGNATION: Final Environmental Assessment

ABSTRACT: The ILARNG proposes to construct and operate a 10-25 meter (m) Zero Range and reroute the existing high voltage power line to accommodate this range, to relocate the existing M203 40 millimeter (mm) Training Practice (TP) Grenade Launcher Range, and to implement roadway improvements at the STA in Randolph County, Illinois. The Proposed Action is necessary to ensure ILARNG provides complete range and training facilities for its units, ensure attainment of a full readiness posture, and meet training objectives with sufficient land area as defined in Training Circular (TC) 25-1, *Training Land*. Providing these ranges would serve the wartime mission and combat readiness goals of the ILARNG, as evaluated in the current ILARNG Range Complex Master Plan (RCMP).

This Environmental Assessment (EA) evaluates the individual and cumulative effects of the Proposed Action (implementation of 10-25m Zero Range construction, M203 Range relocation, and roadway improvement projects) and the No Action Alternative with respect to the following criteria: land use and cover; air quality; noise; topography, geology, and soils; water resources, biological resources, cultural resources, socioeconomics; environmental justice; infrastructure; and hazardous and toxic materials/wastes. The evaluation performed in this EA concludes there would be no significant adverse impact, either individually or cumulatively, to the local environment or quality of life associated with implementing the Proposed Action, provided routine Best Management Practices (BMPs) and project-specific mitigation measures specified in this EA are implemented. As such, the EA recommends implementation of the Preferred Action Alternative.

This Page Has Been Left Intentionally Blank

EXECUTIVE SUMMARY

This Environmental Assessment (EA) evaluates the proposal of the Illinois Army National Guard (ILARNG) to construct and operate a 10-25 meter (m) Zero Range, relocate the existing M203 40 millimeter (mm) Training Practice (TP) Grenade Launcher Range, and implement roadway improvements at the Sparta Training Area (STA) in Randolph County, Illinois. Implementation of the Proposed Action would provide the requisite range and infrastructure improvements at the STA for units of the ILARNG, neighboring states' National Guard members, and other active duty, reserve, or guard units.

This EA has been prepared under the provisions of, and in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 United States Code [USC] 4321 et seq.), the *Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA* (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR 651 (*Environmental Analysis of Army Actions*, Final Rule, 29 March 2002). This EA will facilitate the decision-making process regarding the Proposed Action and its alternatives considered by the ILARNG.

PROPOSED ACTION

The Proposed Action includes three proposed projects: (1) construction and operation of a 10-25m Zero Range and relocation of the existing high voltage power line to accommodate this range, (2) relocation of the existing M203 Grenade Launcher Range, and (3) implementation of roadway improvements. The proposed 10-25m Zero Range is identified as a FY 2016 range project for STA in the 2014 Range Complex Master Plan (RCMP) and would be constructed using Military Construction (MILCON) funds (Project Number 171001). Relocation of the M203 Grenade Launcher Range at STA is necessary to accommodate the new Zero Range configuration. Thus, construction of the new Zero Range is dependent on the other range project being implemented. Furthermore, in order to accommodate the proposed 10-25m Zero Range, the existing aboveground high voltage power line that traverses through the center of STA must be relocated outside the proposed Zero Range Surface Danger Zones (SDZs). The proposed relocated high voltage power line would be rerouted along existing right-of-ways, and would require approximately 3.6 miles (50-foot corridor) of new aboveground power line. Southern Illinois Power Cooperative (SIPC) is the owner of the power line; they will handle the relocation of the poles and Egyptian Electric's distribution lines affixed to their poles.

Ranges consist of two primary components: the physical range footprint, consisting of the firing positions, targetry, and support structures (i.e., as specified in Training Circular [TC] 25-8); and the SDZ. A SDZ¹ is a mathematically-predicted area a projectile will impact upon return to earth, either by direct fire or ricochet. The SDZ is the area extending from a firing point to a distance downrange based on the projectiles fired and weapon system used. The SDZ has specific dimensions for the expected caliber or the weapon being fired, so that all projectile fragments are contained in this area. The standard dimensions for SDZs are found in Department of the Army Pamphlet (DA PAM) 385-63, *Range Safety* (2014).

¹ The SDZ delineates that portion of the earth and the air above in which personnel and/or equipment may be endangered by ground weapons firing or demolition activities.

Total land disturbance for the range projects would be up to approximately 30 acres, which includes the proposed connected action of rerouting the high voltage power line. Land improvement activities would include land clearing, road improvements, fencing, general site improvements, and utility line modifications and extensions to serve the project areas, notably the small arms range operation and control area (SAROCA) facilities and target locations. No land alterations or disturbance is proposed within the range SDZs.

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance / rehabilitation activities over the next 5 years. Maintenance activities include resurfacing gravel roads (when needed), trail repair, and the addition of gravel and riprap around the edges of existing LWCs. No paved roads occur within the STA, and there are no plans to construct them. This project includes the establishment of approximately 10.2 miles of new gravel roads (24 feet wide) and 6.8 miles of new dirt trails (18 feet wide) to accommodate increased training site use within the non-Cantonment Areas at STA. Total land disturbance associated with new road improvements is estimated to be approximately 40 acres.

For the roadway improvement projects, the ILARNG Construction Facilities Management Office (CFMO) and Environmental Branch will be responsible for coordinating annually on upcoming roadway improvement projects. The Environmental Branch will coordinate with the US Army Corps of Engineers (USACE) St. Louis District to determine if permits are required prior to project implementation. For projects requiring a Clean Water Act (CWA) Section 404 permit, CWA Section 401 Water Quality Certification and/or Construction in a Floodplain permit, the ILARNG will follow the Illinois Joint Permit Application process. The ILARNG will be responsible for implementing all permit conditions and any mitigation measures (if deemed necessary) by the agencies during the permitting process.

No streams, wetlands, floodplains or other water bodies occur within the proposed range footprints or relocated power line footprint. However impacts to streams and Federal Emergency Management Act (FEMA) 100-year floodplains would occur as a result of some of the roadway improvement projects and a proposed LWCs. To comply with Executive Order (EO) 11988 (Floodplain Management) and EO 11990 (Protection of Wetlands), the ILARNG conducted an analysis of alternatives to request approval and a waiver from the Army National Guard (ARNG) Installation Division and the Department of Army (DA) to construct LWC #12 in the 100-year floodplain. Impacts to water resources will be minor adverse impacts through implementation of Best Management Practices (BMPs) and permit conditions.

PURPOSE AND NEED

The *purpose* of the Proposed Action is to provide the requisite range and infrastructure improvements at the STA for in-state training for ILARNG units, particularly those located in southern Illinois, as well as other military units². The proposed projects would support the ILARNG's organizational goal for STA to become tiered as a Collective Training Center (CTC) in accordance with National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (2007) and the 2014 Master Plan for STA.

² The new range would be available to all ARNG units, as well as other Department of Defense (DoD) and civilian users as scheduling permits. Scott Air Force Base (AFB) is nearby and is anticipated to be a regular site user once these facilities are constructed as well as units in Missouri (ILARNG 2014).

The Proposed Action is **needed** to: (1) ensure ILARNG provides complete range and training facilities for its units, 2) ensure attainment and maintenance of a full readiness posture, and 3) meet mission training objectives with sufficient land area as defined in TC 25-1, *Training Lands* (2004). With presently available training facilities, local units are forced to travel greater than 25% of available Inactive Duty Training (IDT) weekend time to conduct much of the required training. The ILARNG cannot currently meet Standards in Training Commission (STRAC) requirements using in-state facilities. According to the RCMP, there are several considerable range deficits within the state that include, but are not limited to, a Qualification Training Range, Light Demolition Range, Hand Grenade Familiarization Range and Urban Assault Course. As a result, ILARNG's basic marksmanship training is often conducted at out-of-state training facilities, such as Fort McCoy in Wisconsin, Camp Atterbury in Indiana, Fort Campbell in Kentucky, and Fort Leonard Wood in Missouri. This travel time frequently violates Department of Defense Instruction (DoDI) 1215.13, *Reserve Component Member and Participation* (2009), which establishes a reasonable travel distance as 100 miles or 3 hours for the unit for IDT. The aforementioned sites are located at substantially greater distances than this allowance. Without the proposed range projects, the need to travel to northern Illinois or out-of-state for yearly training requirements would continue, thereby resulting in impacts to troop morale, training, and efficient use of fiscal resources. Further, the Proposed Action is also needed to ensure the continued and long-term viability of the STA as a training center capable of providing the land and resources necessary to support the ILARNG's and other military users' assigned training missions.

ALTERNATIVES

NEPA, CEQ regulations, and 32 CFR 651 require all reasonable alternatives to be explored and objectively evaluated. Alternatives that are eliminated from detailed study must be identified along with a brief discussion of the reasons for eliminating them. For purposes of analysis, an alternative was considered "reasonable" only if it would enable the ILARNG to accomplish the primary mission of providing land, facilities, and resources at STA and to meet the purpose of and need for the Proposed Action. "Unreasonable" alternatives would not enable the ILARNG to meet the purpose of and need for the Proposed Action. The ILARNG considered the following alternatives: (1) use an existing ILARNG training site, (2) establish a new training site in southern Illinois, (3) implement a reduced-scale alternative, and (4) construct proposed projects in different locations at STA. These alternatives were eliminated from further consideration because they did not meet one or more of the screening criteria.

The ILARNG developed and applied the following criteria to screen and evaluate possible alternatives for the Proposed Action. The ILARNG identified that a suitable site would meet the majority, if not all, of the following criteria:

- 1) Be located within an existing ILARNG owned or controlled facility to avoid land acquisition costs.
- 2) Avoid excessive travel times and costs for ILARNG units located in southern Illinois by minimizing travel in and out of state to meet mission and training requirements.
- 3) Have a sufficient amount of land, preferably previously disturbed or cleared, to accommodate the required facilities.
- 4) Retain all range SDZs within the installation's boundaries on ILARNG owned or controlled property per Army Regulation (AR) 385-63, *Range Safety* (2012).

- 5) Achieve a shared impact area with common SDZs to the maximum extent possible.
- 6) Maximize concurrent operation, with a goal of concurrent training on all proposed ranges and training areas to maximize training use availability.
- 7) Be proximate to existing, related facilities within the installation, including the roadway network and buildings (i.e., logistical considerations).
- 8) Have reasonable access to necessary utility connections.
- 9) Be within areas with few existing known environmental constraints (i.e., notably wetlands and other waters, wooded areas, endangered or threatened species habitat, or cultural resources).
- 10) Be compatible with other current and approved future land uses within the installation and the surrounding area.
- 11) Be located at a site where new noise impacts to surrounding communities are minimized or avoided (e.g., residences).
- 12) Be compatible with the installation Master Plan and its goals and objectives.
- 13) Ensure no net loss in the capacity of the ILARNG or the installation to support the military mission and conduct training operations.

Through application of the first three screening criteria and the evaluation process, it became readily apparent to the ILARNG that locating the facilities at STA was the only alternative capable of meeting these screening criteria because no other training site controlled by the ILARNG within the vicinity of the STA is physically capable of supporting these facilities in terms of land area required. Therefore, the subsequent ten screening criteria were used to identify proposed project siting within STA.

Once the STA was identified as the only viable installation, the ILARNG undertook a rigorous siting analysis between September 2012 and December 2013 to identify available sites within the STA that achieve the purpose of and need for the Proposed Action, as well as best meet the above configuration criteria. The outcome of this analysis was documented in the 2014 Master Plan for STA. Where possible, similar training facilities were co-located or grouped to increase usage of common areas and infrastructure components and to further reduce overall development needs and costs. Numerous range and facility layouts and sites within the STA were investigated and eliminated from further consideration due to conflicts with other training uses, location of existing utilities, lack of overall land area, existing environmental constraints surrounding residential areas, or other limiting factors. The identified Proposed Action components are highly restricted in their ability to be altered or relocated within the STA. No other layout was identified for the 10-25m Zero Range that would allow the SDZs to remain on-Post.

This EA examines in-depth two alternatives, the Preferred Action Alternative and No Action Alternative, defined as follows:

- Preferred Action Alternative – Implement the Proposed Action by executing the development projects, as described in **Section 2.2**, to provide the requisite ranges and infrastructure improvements at STA for in-state training for ILARNG units, particularly those located in southern Illinois, as well as other military units, and to fulfill the assigned mission requirements of the ILARNG. Under the Preferred Action Alternative, the ILARNG would be authorized to use

M855 (5.56mm lead) and M855A1 (5.56mm lead-free) ammunition on the proposed Zero Range.

- No Action Alternative – Continue with operations as currently conducted and do not implement the Proposed Action.

The Preferred Action Alternative provides the best combination of land and resources to sustain quality military training and to maintain and improve the units' readiness postures. The No Action Alternative would limit the capability of the ILARNG to carry out its assigned mission to provide adequate training facilities, and would not meet the purpose of or need for the Proposed Action. However, the No Action Alternative is comparatively analyzed within this EA as required under Federal law.

AFFECTED ENVIRONMENT

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois and is approximately 45 miles southeast of St. Louis, Missouri (see **Figures 1 and 2**). The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company (PCC) on 31 October 1986 for military training and an additional 396.5 acres of land conveyed by the City of Sparta. The land dedicated by PCC was certified reclaimed by Illinois Department of Natural Resources (IDNR) Office of Mines and Minerals (OMM) Industrial/Commercial Standard. The OMM released the reclamation bond in 2001 and the National Pollutant Discharge Elimination System (NPDES) permits were closed by Illinois Environmental Protection Agency (IEPA) in January 2004. PCC transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

The STA is primarily undeveloped and has been divided into 14 Training Areas (TAs) (see **Figure 2**). The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses in the central and northern portions, and Plum Creek and its associated forested riparian corridor in the north (see **Figures 9a and 9b**). Surrounding land use is agricultural with low-density rural development. Several agricultural fields, farms, and residences lie adjacent to or in the vicinity of the STA boundary. Light commercial and residential properties are located to the south and southeast. The 1,620-acre IDNR World Shooting and Recreational Complex adjoins the northwestern portion of the STA along Plum Creek (**Figures 1 and 2**). The 631st Engineer Support Company and 661st and 662nd Firefighting Teams are based at the Sparta Armory and Fire Station, which are adjacent to the STA boundary at the intersection of Hillcrest Drive and W Stevenson Drive (see **Figures 2 and 6**).

ENVIRONMENTAL CONSEQUENCES

The Proposed Action was evaluated to determine its potential direct or indirect impact(s) on the physical, environmental, cultural, and socioeconomic aspects of the STA and the surrounding area. Technical areas evaluated include: land use and cover; air quality; noise; geology, topography and soils; water resources; biological resources; cultural resources; socioeconomics; environmental justice; infrastructure and hazardous and toxic materials and waste. The Preferred Action Alternative and No Action Alternative would result in the impacts identified throughout **Section 4** and summarized in **Table ES-1**.

Table ES-1. Alternative Comparison Matrix

Technical Resource Area	No Action Alternative	Preferred Action Alternative
Land Use and Cover	No impact attributable to the ILARNG action. STA's full training potential would continue to be limited and the facilities necessary to accommodate the training mission and to become a CTC would not be available. The failure to provide the required training facilities would negatively impact the long-term viability of the STA as a training center, resulting in a <u>potentially significant long-term adverse</u> land use impact.	Long-term <u>positive</u> impact to land use and the STA mission is expected by improving the training use, capability, sustainability and value of these areas. No major effect to on-Post land use is expected as components of the Proposed Action were sited to maximize training value and use. No conflict with existing or proposed off-Post land use is anticipated at this time. However, the ILARNG will work with local zoning officials to ensure surrounding area land use remains compatible in the future. Short-term and long-term, <u>less-than-significant adverse</u> effects to land cover are anticipated. ILARNG would minimize clearing and earthwork to the maximum extent possible to minimize disturbance and associated construction costs.
Air Quality	No impact attributable to the ILARNG action. Ongoing operations' emissions would continue.	Short-term, <u>less-than-significant adverse</u> impact due to the potential for dust generation from construction activities and the proximity of sensitive receptors. Long-term <u>less-than-significant adverse</u> impact to local air quality due to increased training site use, weapons firing and vehicle traffic. Impacts would be reduced with implementation of BMPs.
Noise	No impact attributable to the ILARNG action. Ongoing noise associated with current training operations would continue.	Short-term, <u>less-than-significant adverse</u> impact due to the potential for noise generation from construction activities and the proximity of sensitive receptors. Long-term, <u>less-than-significant adverse</u> impacts due to increased noise levels associated with proposed firing ranges and training site usage and the proximity of sensitive receptors. Impacts would be reduced with implementation of BMPs.
Topography, Geology, and Soils	No impact attributable to the ILARNG action. Long-term <u>positive</u> soil impacts from the proposed roadway maintenance projects would not be recognized, and could lead to <i>adverse</i> impacts associated with soil erosion.	Short-term, <u>less-than-significant adverse</u> impact during land disturbing activities within the Proposed Action area, respectively. Impacts would be reduced with implementation of BMPs. Long-term <u>positive</u> impacts due to roadway improvement projects. Potential <i>significant adverse</i> impact to soils from range operations. Impacts would be reduced to less-than-significant levels with implementation of mitigation measures.
Water Resources	No impact attributable to the ILARNG action. <i>Long-term positive</i> soil impacts from the proposed roadway maintenance projects would not be recognized, and could lead to <i>adverse</i> impacts associated with increased soil erosion and sedimentation.	Potential short-term, <u>less-than-significant adverse</u> impact to water quality during project activities resulting in erosion and sedimentation, and to streams, wetlands and floodplains from construction. Impacts would be reduced with implementation of BMPs. Potential <i>significant adverse</i> impacts to surface water and groundwater quality from range operations. Impacts will be reduced to less-than-significant levels with implementation of mitigation measures.

Table ES-1. Alternative Comparison Matrix

Technical Resource Area	No Action Alternative	Preferred Action Alternative
Biological Resources	No impact attributable to the ILARNG action.	Short-term, <u>less-than-significant adverse</u> impact to biological resources from construction noise and vegetation removal. Long-term, <u>less-than-significant adverse</u> impacts due to elimination of vegetation and wildlife habitat, which would be minor on a regional and local scale. Potential <i>significant adverse</i> impact to federally listed and state-listed species from construction, and increased training site use and range operations. Impacts would be reduced to less-than-significant levels with implementation of mitigation measures.
Cultural Resources	No impact attributable to the ILARNG action.	No effect to cultural resources are anticipated as a result of the Proposed Action. If an inadvertent discovery of cultural resources is made during ground disturbing activities, impacts would be reduced to <u>less-than-significant</u> levels with implementation of BMPs.
Socioeconomics (including Environmental Justice and Protection of Children)	No impact attributable to the ILARNG action. Health and safety risks would continue due to out-of-state travel to meet training requirements.	Short-term, <u>positive</u> impacts to the socioeconomic environment, including environmental justice. Potential <i>significant adverse</i> impact to public safety from range SDZs. Impacts would be reduced to less-than-significant levels with implementation of mitigation measures.
Infrastructure	No impact attributable to the ILARNG action. Utility usage would continue as under current conditions. Beneficial impacts to on-Post infrastructure would not be recognized.	Potential <u>less-than-significant adverse</u> impact to utility consumption from increased training site use, utility extensions, and the relocation of the high voltage power line. Short-term and long-term, <u>less-than-significant adverse</u> impacts due to construction traffic and increased site usage. Impacts would be reduced with implementation of BMPs. Potential <i>significant adverse</i> impact to local airport and aviation travel from operation of a small arms range. Impacts would be reduced to less-than-significant levels with implementation of mitigation measures.
Hazardous and Toxic Materials and Wastes (HTMW)	No impact attributable to the ILARNG action. The ILARNG Pollution Prevention (P2) Plan, STA Spill Prevention Control and Countermeasure Plan (SPCCP), and Installation Spill Contingency Plan would continue to be implemented.	Short-term and long-term, <u>less-than-significant adverse</u> impacts due to construction activities and increased training site use. Impacts would be controlled through BMPs and ongoing regulatory compliance.

MITIGATION MEASURES

Mitigation measures are defined as project specific requirements, not routinely implemented by the ILARNG, that are necessary to reduce identified potentially significant adverse environmental impacts to *less-than-significant* levels. Best Management Practices (BMPs) are regulatory compliance measures that the ILARNG regularly implements as part of their activities, as appropriate, across the State of Illinois. Per established protocols, procedures, and requirements, the ILARNG will satisfy all applicable regulatory requirements in association with the proposed construction, renovation, conversion and demolition projects. These “BMPs” are summarized in **Section 4.13.1** of this EA, and are included as components of the Preferred Action Alternative. To reduce impacts associated with the Preferred Action Alternative to *less-than-significant levels*, the following project-specific mitigation measures are required.

Soils. To minimize the migration of lead or other constituents from ammunition spent on the proposed ranges from soil corrosion and other factors, the ILARNG will implement the following mitigation measures from the Army Small Arms Training Range Environmental Manual to prevent or minimize lead or other contaminant migration off-site (Fabian and Watts 2005). Implementation of these measures would reduce potential *adverse* effects to *less-than-significant* levels. The ILARNG CFMO and Environmental Branch and STA Training Site Manager will be responsible for ensuring these measures are implemented.

- A back and side berms will be constructed to reduce metals migration and projectiles from entering STA lakes.
- Lead-free ammunition (e.g., M855A1 Enhanced Performance Round [EPR]) will be utilized on the Zero Range, when feasible.
- Firing lanes on the Zero Range that have a lower likelihood of projectiles entering waterbodies will be used more regularly, when feasible, to further minimize lead and other constituents from entering waterbodies.
- All operational ranges at the Sparta must be periodically re-evaluated to determine if there is a release or substantial threat of release of munitions constituents of concern (MCOC) from an operational range to an off-range area in accordance with the STA Operational Range Assessment Program (ORAP). Ranges categorized as “unlikely” are to be re-evaluated at least every 5 years. Re-evaluation may occur sooner if significant changes (e.g., changes in range operations or site conditions, regulatory changes) occur that affect determinations made during the Phase I Assessment.

Water Resources. To minimize adverse effects to surface water and groundwater quality from the migration of lead or other constituents from ammunition spent on the proposed ranges, the ILARNG CFMO, Training Site and Environmental Branch will implement the mitigation measures outlined above under Soils.

Threatened and Endangered Species. To avoid the potential for incidental take of a federal or state-listed species and ensure adverse effects are reduced to a *less-than-significant* level, the following mitigation measures will be implemented by the ILARNG for the Indiana bat, northern long-eared bat, bald eagle and state-listed species.

- **Indiana Bat and Northern Long-Eared Bat:** During informal Endangered Species Act (ESA) Section 7 consultation with the US Fish and Wildlife Service (USFWS) (see 5 June 2015 USFWS determination letter in **Appendix A**), it was determined the Proposed Action is not likely to adversely affect the Indiana bat or the northern long-eared bat if the following mitigation measures are implemented: (1) tree clearance will be avoided and minimized to the extent possible, and will NOT occur between 1 April and 14 October; (2) artificial light on proposed ranges will be minimized to reduce the potential for light pollution; (3) training activities and vehicle movement will be restricted to existing roads within forested areas at STA; and (4) the use of smoke, CS gas, and pyrotechnics will be prohibited in the Plum Creek corridor between 1 April and 14 October; and (5) an Indiana Bat Monitoring Plan will be developed in close coordination with USFWS that will identify the frequency and type of surveys (i.e., acoustic and/or mist netting surveys) necessary to monitor the Indiana bat colony at STA and any potential effects from the proposed training and range. The ILARNG CFMO and Environmental Branch and STA Range Control will be responsible for implementing these measures.
- **Bald Eagle:** If a bald eagle is observed flying overhead of the proposed ranges, a cease fire will be implemented by STA Range Control until the bald eagle leaves the area. If a bald eagle nest is found on or near STA in the future, the ILARNG Environmental Branch will initiate consultation in accordance with the Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA) and implement the *National Bald Eagle Management Guidelines* (USFWS 2007).
- **State-Listed Species:** The ILARNG Environmental Branch will coordinate with IDNR on a case-by-case basis prior to implementing construction projects (since they will occur over several years) to identify the appropriate conservation measures to be implemented based on the species of priority concern in that given project location and obtain an Incidental Take Authorization pursuant to the Illinois Endangered Species Protection Act (520 Illinois Compiled Statutes [ILCS] 10/5.5) for projects with the potential to result in incidental take of a state-listed species. As a further protection measure, the ILARNG Environmental Branch will develop educational materials with identification information, protection status, and notification and relocation protocols for all state-listed species. All personnel conducting construction activities at STA will be provided these materials. Should any of these species be observed (alive or dead) during construction activities, the ILARNG Environmental Branch will notify IDNR immediately.

Public Safety and Aviation Traffic. To ensure impacts to public safety and aircraft using the airspace above and within the vicinity of STA are reduced to a *less-than-significant* level, the following mitigation measures will be implemented by the STA Range Control in conjunction with Sparta Community Airport–Hunter Field and Indianapolis Air Route Traffic Control Center (ARTCC).

- The STA Range Control will adhere to the approved STA Small Arms Range Safety Area (SARSA) requirements (see **Appendix D**) which include: (1) the SARSA will be managed in

accordance with DA PAM 385-63; (2) a red warning streamer will be posted during daylight hours and a red warning light during night fire; (3) Local Notices to Airmen (NOTAM) will be made prior to initiating live firing activities on the Zero Range by STA Range Control and Indianapolis ARTCC; (4) the Local NOTAM will include the location and description of activities to be conducted and the date and times of use; (5) firing will not be conducted when the ceiling (cloud height) is less than 1,000 feet above the vertical hazard of the caliber being utilized; (6) no projectile shall enter a cloud formation; and (7) STA Range Control will provide safety briefings to range operation that includes the proximity of the airport to STA and the Range Officer in Control's (OIC) responsibilities; and (8) the Range OIC will ensure skies are monitored for low flying aircraft in the vicinity of the range area and immediately initiate a "check fire" in the event an aircraft approaches the SARSA.

- The STA Range Control will integrate with the existing Sparta Community Airport– Hunter Field Automated Weather Observing System Series 3 (AWOS-3) and the Common Traffic Advisory Frequency (CTAF). The AWOS-3 will provide the STA Range Control with the specific information required by the SARSA. The STA Range Control will monitor the CTAF, which pilots use to coordinate their arrivals and departures safely by providing positioning reports and acknowledging other aircraft in the airfield pattern.
- The following eight physical structures would be constructed to accommodate the proposed Zero Range project: (1) range tower, (2) aerated vault latrine, (3) ammunition breakdown building, (4) operations/storage building, (5) bleacher enclosure, (6) covered mess shelter, (7) back berm for the range, and (8) new power lines tower. Prior to constructing these structures, the ILARNG will submit an application to the Federal Aviation Administration (FAA) for an Obstruction Evaluation/Airport Airspace Analysis in accordance with 14 CFR 77.

Local Economy. To minimize the potential for adverse economic impacts to the airport, the ILARNG will prepare a brochure for the Sparta Community Airport – Hunter Field to educate pilots and other concerned public. The brochure will outline the safety precautions that are being implemented and the associated benefits of the proposed range at the STA. Prior to distribution, the ILARNG will provide the Sparta Community Airport – Hunter Field with the opportunity to review and approve the content of this brochure.

AGENCY AND PUBLIC INVOLVEMENT

Agencies consulted for this EA include the include the USFWS, US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), US Environmental Protection Agency (USEPA), US Department of Transportation (DOT) FAA, USACE St. Louis District, US Army Public Health Command (USAPHC), Illinois Department of Transportation (DOT), IDNR, IEPA, and Illinois Historic Preservation Agency (IHPA)³. Several local entities/stakeholders were also contacted that include Randolph County Planning Commission, Egyptian Electric Cooperative, Sparta Community Airport – Hunter Field, City of Sparta, IDNR World Shooting Complex, Ameren, and other local entities. Agency information and comments have been incorporated into this EA. Copies of relevant correspondence can be found in **Appendix A**.

³ State Historic Preservation Office (SHPO)

The ILARNG has consulted with federally recognized Native American tribes as required under Department of Defense Instruction (DoDI) 4710.02. The ILARNG has considered the *Annotated Department of Defense (DoD) American Indian and Alaska Native Policy*, EO 13175, and AR 200-1. **Section 9** and **Appendix A** contains a list of the federally recognized tribes that were invited to consult and a Memorandum for Record (MFR), which summarizes the consultation efforts by the ILARNG.

The draft EA was made available for public review and comment from 25 January 2016 through 24 February 2016. No comments were received on the draft EA during the 30-day public comment period.

The ILARNG, as the proponent of the Proposed Action, will publish and distribute the draft and final EA and the draft Finding of No Significant Impact (FNSI) for a 15-day public review and comment period, as announced by a Notice of Availability (NOA) published in *Southern Illinoisan* and the *Randolph County Herald Tribune*. Review copies will also be made available for public review at the Sparta Public Library, the ILARNG's Sparta Armory, and the ILARNG's website (<http://www.il.ngb.army.mil/MilitaryAffairs/STA/Default.aspx>). Throughout this process, the public may obtain information on the status and progress of the EA through the Illinois National Guard Public Affairs Office at (217) 761-3569.

CONCLUSIONS

The evaluation performed within this EA concludes there would be *no significant adverse impact*, either individually or cumulatively, to the local environment or quality of life as a result of implementing the Preferred Action Alternative, provided BMPs and mitigation measures specified in this EA are implemented. This EA's analysis determines, therefore, an Environmental Impact Statement (EIS) is unnecessary for implementing the Proposed Action, and that a mitigated FNSI is appropriate. The Preferred Action Alternative was determined by the ILARNG to provide the best combination of land and resources to sustain quality military training and to maintain and improve the units' readiness postures. The No Action Alternative was not found to satisfy the purpose of and need for the project. This alternative would limit the capability of the ILARNG to carry out its assigned mission to provide adequate training facilities, and would jeopardize the proficiency and military readiness of the ILARNG. As such, this EA recommends implementation of the Preferred Action Alternative.

Because the roadway improvement project would be implemented over an extended period of time (approximately 5 years), the ILARNG will review this NEPA analysis, in consultation with ARNG's Environmental Program Division (ARNG-ILE), prior to project execution to ensure no substantial changes have occurred to environmental resources or regulatory requirements since the completion of this EA. If changes have occurred the ILARNG will prepare an updated NEPA analysis in the form of an EA or tiered Categorical Exclusion. This original EA would be utilized as the foundation for the updated analysis and supplemental NEPA analyses would focus on those issues that have changed.

This Page Has Been Left Intentionally Blank

CONTENTS

<u>SECTION</u>	<u>PAGE</u>
SECTION 1: PURPOSE OF AND NEED FOR THE PROPOSED ACTION.....	1
1.1 Introduction.....	1
1.1.1 Overview.....	1
1.1.2 Background	1
1.2 Purpose and Need	2
1.3 Scope of the EA	4
1.4 Decision-Making.....	5
1.5 Public and Agency Involvement.....	6
1.5.1 Public Review	6
1.5.2 Agency Coordination	6
1.5.3 Native American Consultation/Coordination	7
1.6 Related NEPA, Environmental, and Other Documents	7
1.7 Regulatory Framework.....	8
SECTION 2: DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES.....	9
2.1 Introduction.....	9
2.2 Proposed Action.....	9
2.2.1 Proposed Ranges.....	9
2.2.1.1 Surface Danger Zones.....	11
2.2.1.2 Utilities	12
2.2.1.3 Weapons and Ammunition	12
2.2.1.4 Range Operations and Control Areas	13
2.2.1.5 Night Lighting.....	13
2.2.1.6 Access and Maintenance Roads	14
2.2.2 Proposed Roadway Improvements	14
2.2.3 Projected Facility Usage.....	16
2.3 Alternatives Considered	17
2.3.1 Alternatives Development (Screening Criteria)	18
2.3.2 Evaluated Alternatives.....	19
2.3.2.1 Preferred Action Alternative.....	19
2.3.2.2 No Action Alternative	20
2.3.3 Alternatives Eliminated From Further Consideration	20
2.3.3.1 Use of Other ILARNG Training Sites.....	21
2.3.3.2 Establish a New Training Site in Southern Illinois	22
2.3.3.3 Reduced-scale Alternative.....	22
2.3.3.4 Alternate Location of Range Footprints within the STA.....	22
2.3.4 Impacts Comparison Matrix for Proposed Alternatives	22
SECTION 3: AFFECTED ENVIRONMENT.....	26
3.1 Location Description.....	26
3.2 Land Use and Cover	26
3.3 Air Quality.....	27
3.3.1 Ambient Air Quality.....	27

3.3.2	Sensitive Receptors.....	28
3.4	Noise	28
3.4.1	Background	28
3.4.2	Current Noise Environment	29
3.5	Topography, Geology, and Soils.....	29
3.5.1	Topography	29
3.5.2	Geology and Soils	30
3.6	Water Resources	31
3.6.1	Surface Waters.....	32
3.6.2	Floodplains	33
3.6.3	Wetlands.....	34
3.6.4	Groundwater.....	34
3.7	Biological Resources.....	35
3.7.1	Vegetation and Wildlife.....	35
3.7.2	Endangered and Threatened Species.....	37
3.8	Cultural Resources.....	40
3.8.1	Overview.....	40
3.8.2	Archaeological and Architectural Resources	40
3.8.3	Native American Consultation	40
3.9	Socioeconomics	41
3.9.1	Population Demographics	41
3.9.2	Regional Economy	41
3.9.3	Housing	42
3.9.4	Schools.....	43
3.9.5	Shops and Services.....	43
3.9.6	Recreational Facilities	43
3.9.7	Public and Occupational Health and Safety.....	44
3.9.8	Protection of Children	44
3.10	Environmental Justice	45
3.11	Infrastructure	46
3.12	Hazardous and Toxic Materials/Wastes	47
SECTION 4: ENVIRONMENTAL CONSEQUENCES		48
4.1	Introduction.....	48
4.2	Land Use and Cover	48
4.2.1	Preferred Action Alternative	48
4.2.2	No Action Alternative	49
4.2.3	Mitigation	49
4.3	Air Quality.....	50
4.3.1	Preferred Action Alternative	50
4.3.2	No Action Alternative	51
4.3.3	Mitigation	51
4.4	Noise	51
4.4.1	Preferred Action Alternative	51
4.4.2	No Action Alternative	55

4.4.3	Mitigation	55
4.5	Geology, Topography, and Soils.....	55
4.5.1	Preferred Action Alternative	55
4.5.2	No Action Alternative	58
4.5.3	Mitigation	58
4.6	Water Resources	59
4.6.1	Preferred Action Alternative	59
4.6.2	No Action Alternative	61
4.6.3	Mitigation	61
4.7	Biological Resources.....	62
4.7.1	Preferred Action Alternative	62
4.7.1.1	Vegetation.....	62
4.7.1.2	Wildlife	63
4.7.1.3	Endangered and Threatened Species.....	64
4.7.2	No Action Alternative	68
4.7.3	Mitigation	68
4.8	Cultural Resources.....	69
4.8.1	Preferred Action Alternative	69
4.8.2	No Action Alternative	70
4.8.3	Mitigation	70
4.9	Socioeconomics	70
4.9.1	Preferred Action Alternative	70
4.9.2	No Action Alternative	72
4.9.3	Mitigation	72
4.10	Environmental Justice	72
4.10.1	Preferred Action Alternative	73
4.10.2	No Action Alternative	73
4.10.3	Mitigation	73
4.11	Infrastructure	73
4.11.1	Preferred Action Alternative	73
4.11.2	No Action Alternative	75
4.11.3	Mitigation	75
4.12	Hazardous and Toxic Materials and Wastes	76
4.12.1	Preferred Action Alternative	76
4.12.2	No Action Alternative	77
4.12.3	Mitigation	77
4.13	Best Management Practices and Mitigation Measures.....	77
4.13.1	Best Management Practices	77
4.13.2	Mitigation Measures	80
4.14	Cumulative Effects	82
4.14.1	Cumulative Effects within the Area.....	83
4.14.2	Cumulative Effects of the Proposed Action.....	84
4.14.3	Inter-relationship of Cumulative Effects.....	85
SECTION 5:	COMPARISON OF ALTERNATIVES AND CONCLUSIONS	86

5.1	Comparison of the Environmental Consequences of the Alternatives	86
5.2	Conclusions.....	88
SECTION 6:	REFERENCES.....	89
SECTION 7:	GLOSSARY	95
SECTION 8:	LIST OF PREPARERS	99
SECTION 9:	AGENCIES AND INDIVIDUALS CONSULTED	100

TABLES

Table 1.	Summary of the Proposed Action.....	3
Table 2.	Proposed Range Development Projects and Land Requirements	10
Table 3.	Anticipated Weapons and Ammunition Usage	13
Table 4.	Summary of Proposed Roadway Improvement Projects	15
Table 5.	Summary of Alternatives Eliminated from Further Consideration	20
Table 6.	Alternative Comparison Matrix	23
Table 7.	Land Cover within the Proposed Action Area	27
Table 8.	Noise Limits for Land Use Compatibility.....	29
Table 9.	Major Soils Types on STA.....	31
Table 10.	Threatened and Endangered Species known to occur in Randolph County, Illinois	38
Table 11.	Randolph County and State Population Projections	41
Table 12.	Regional Income.....	42
Table 13.	Housing Characteristics	42
Table 14.	Regional Educational Attainment of Persons 25 years and Older	43
Table 15.	Total Population Versus Population Under Age 18.....	44
Table 16.	Regional Population by Race	45
Table 17.	Peak Noise Levels Expected from Typical Construction Equipment	53
Table 18.	Alternative Comparison Matrix	86

CHARTS

Chart 1.	Total Man-Days by Type of Site User.....	17
Chart 2.	Measured pH Levels within STA Lakes.....	33

FIGURES

- Figure 1. Site Location Map
- Figure 2. STA Facility Map
- Figure 3. Proposed Action
- Figure 4. Proposed Zero Range Construction and M203 Range Relocation
- Figure 5. Proposed Roadway Implementation Projects
- Figure 6. Existing Environment & Sensitive Receptors
- Figure 7. STA Topography
- Figure 8. Soils Map
- Figure 9a. Water Resources (North)
- Figure 9b. Water Resources (South)
- Figure 10. Census Tracts
- Figure 11. Sparta Community Airport (KSAR) Traffic Patterns
- Figure 12. Proposed Noise Environment

APPENDICES

- APPENDIX A** — Agency Coordination, Native American Consultation, and Public Participation
- APPENDIX B** — Regulatory Framework for NEPA Subject Areas
- APPENDIX C** — US Army Public Health Command Operational Noise Consultation for Proposed Range Development at STA
- APPENDIX D** — Small Arms Range Safety Area (SARSA) Request and Approval
- APPENDIX E** — Illinois Joint Permit Application and Floodplain Waiver

ACRONYMS AND ABBREVIATIONS

AAR	After Action Review	DDD	Dichlorodiphenyldichloroethane
AFB	Air Force Base	DDE	Dichlorodiphenyldichloroethylene
ARFORGEN	Army Force Generation	DDT	Dichlorodiphenyltrichloroethane
AIRFA	American Indian Religious Freedom Act	DMAIL	Illinois Department of Military Affairs
amsl	Above mean sea level	DoD	Department of Defense
AR	Army Regulation	DoDI	Department of Defense Instruction
ARDEC	Aeroballistics Division at the Armament Research, Development and Engineering Center	DOT	Department of Transportation
ARNG	Army National Guard	E&S	Erosion and Sedimentation
ARNG-ILE	ARNG Environmental Programs Division	EA	Environmental Assessment
ARPA	Archaeological Resources Protection Act	EBS	Environmental Baseline Study
ARTCC	Air Route Traffic Control Center	ECOP	Environmental Condition of Property
ATSC	Army Training Support Center	EIS	Environmental Impact Statement
AWOS-3	Automated Weather Observing System Series 3	EO	Executive Order
BGEPA	Bald and Golden Eagle Protection Act	EPR	Enhanced Performance Round
BMP	Best Management Practice	ESA	Endangered Species Act
BRAC	Base Realignment and Closure	FAA	Federal Aviation Administration
CAA	Clean Air Act	FEMA	Federal Emergency Management Agency
CATS	Combined Arms Training Strategies	FICUN	Federal Interagency Committee on Urban Noise
CEQ	Council on Environmental Quality	FIRM	Federal Insurance Rate Map
CFMO	Construction Facilities Management Office	FISP	Federal Inventory and Support Plan
CFR	Code of Federal Regulations	FM	Field Manual
CO	Carbon monoxide	FMTV	Family of Medium Tactical Vehicles
CTAF	Common Traffic Advisory Frequency	FNSI	Finding of No Significant Impact
CTC	Collective Training Center	FPPA	Farmland Protection Policy Act
CWA	Clean Water Act	FY	Fiscal Year
DA	Department of the Army	HEMTT	Heavy Expanded Mobility Tactical Truck
DA PAM	Department of the Army Pamphlet	HMMWV	High-Mobility Multipurpose Wheeled Vehicle
DAR	Department of the Army Representative	HRPA	Historic Resources Preservation Act
dB	Decibel	HTMW	Hazardous and Toxic Materials and Wastes
dBp	Peak Sound Level	IAW	In accordance with
DCEO	Department of Commerce and Economic Opportunity	ICRMP	Integrated Cultural Resources Management Plan

IDES	Illinois Department of Employment Security	NHPA	National Historic Preservation Act
IDNR	Illinois Department of Natural Resources	NOA	Notice of Availability
IDT	Inactive Duty Training	NOI	Notice of Intent
IEPA	Illinois Environmental Protection Agency	NO _x	Nitrogen Oxides
IESP	Illinois Endangered Species Protection	NOTAM	Notices to Airmen
IHPA	Illinois Historic Preservation Agency	NPDES	National Pollutant Discharge Elimination System
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning	NRCS	Natural Resources Conservation Service
ILARNG	Illinois Army National Guard	O ₃	Ozone
ILCS	Illinois Compiled Statutes	OIC	Officer in Charge
INHD	Illinois Natural Heritage Database	OMM	Office of Mines and Minerals
INHS	Illinois Natural History Survey	ONMP	Operational Noise Management Plan
INRMP	Integrated Natural Resources Management Plan	ORAP	Operational Range Assessment Program
IP	Illinois Power	OSHA	Occupational Health and Safety Administration
ISGS	Illinois State Geological Survey	OWR	Office of Water Resources
L	Lake	P2	Pollution Prevention
LMTV	Light Medium Tactical Vehicle	PAO	Public Affairs Officer
LTC	Local Training Center	Pb	Lead
LURS	Land Use Requirement Study	PCC	Peabody Coal Company
LWC	Low water stream crossing	PEM	Palustrine emergent
m	meters	PFO	Palustrine forested
mm	millimeters	PM	Particulate matter
MBTA	Migratory Bird Treaty Act	PM ₁₀	Particulate matter less than or equal to 10 micrometers in aerodynamic size
MCOC	Munitions constituents of concern	PM _{2.5}	Particulate matter less than or equal to 2.5 micrometers in aerodynamic size
MFR	Memorandum for Record	PSS	Palustrine scrub-shrub
MILCON	Military Construction	PUB	Palustrine unconsolidated bottom
MOV	Military Owned Vehicles	RC&D	Resource Conservation and Development
MTC	Marseilles Training Center	RCMP	Range Complex Master Plan
NAAQS	National Ambient Air Quality Standards	REC	Record of Environmental Consideration
NAGPRA	Native American Graves Protection and Repatriation Act	REST	Range Evaluation Software Tool
NEPA	National Environmental Policy Act	ROI	Region of Influence
NFSAM	National Food Security Act Manual	RV	Recreational vehicle
NGB	National Guard Bureau	SARNAM	Small Arms Range Noise Assessment Model
NGIL	National Guard Illinois		
NG PAM	National Guard Pamphlet		
NGR	National Guard Regulation		

SAROCA	Small arms range operation and control area	TAG	The Adjutant General
SARSA	Small Arms Range Safety Areas	TC	Training Circular
SDZ	Surface Danger Zone	TP	Training Practice
SHPO	State Historic Preservation Office	TRADOC	Training and Doctrine Command
SIPC	Southern Illinois Power Cooperative	USACE	United States Army Corps of Engineers
SO ₂	Sulfur dioxide	USAPHC	United States Army Public Health Command
SOC	Species of Concern	USAR	United States Army Reserve
SPCCP	Spill Prevention Control and Countermeasure Plan	USC	United States Code
SR	State Route	USDA	United States Department of Agriculture
SRM	Short-range marksmanship	USEPA	United States Environmental Protection Agency
SRTA	Small range training ammunition	USFWS	United States Fish and Wildlife Service
STA	Sparta Training Area	VOC	Volatile organic compound
STRAC	Standards in Training Commission	WQC	Water Quality Certification
SWPPP	Storm Water Pollution Prevention Plan		
TA	Training Area		
TADSS	Training aids, devices, and simulations systems		

SECTION 1: PURPOSE OF AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

1.1.1 Overview

This Environmental Assessment (EA) evaluates the proposal of the Illinois Army National Guard (ILARNG) to construct and operate a 10-25 meter (m) Zero Range, with a connected action of rerouting the existing high voltage power line; to relocate the existing M203 40 millimeter (mm) Training Practice (TP) Grenade Launcher Range; and to implement roadway improvements at the Sparta Training Area (STA) in Randolph County, Illinois. The Proposed Action is intended to meet current range requirements as set forth in Training Circular (TC) 25-8, *Training Ranges* (Department of the Army [DA] 2010). Providing these ranges would serve the wartime mission and combat readiness goals of the ILARNG, as evaluated in the current ILARNG Range Complex Master Plan (RCMP) (ILARNG 2014). Furthermore, these projects would facilitate ILARNG's organizational goal for the STA to become a Collective Training Center (CTC) in accordance with the 2014 Master Plan for STA (Leidos 2014). A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (2007).

This EA has been prepared under the provisions of, and in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 United States Code [USC] 4321 et seq.), the *Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA* (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR 651 (*Environmental Analysis of Army Actions*, Final Rule, 29 March 2002). This EA will facilitate the decision-making process regarding the Proposed Action and its alternatives considered by the ILARNG.

1.1.2 Background

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois and is approximately 45 miles southeast of St. Louis, Missouri (see **Figures 1 and 2**). The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company (PCC) on 31 October 1986 for military training and an additional 396.5 acres of land conveyed by the City of Sparta. The land dedicated by PCC was certified reclaimed by Illinois Department of Natural Resources (IDNR) Office of Mines and Minerals (OMM) Industrial/Commercial Standard. The OMM released the reclamation bond in 2001 and the National Pollutant Discharge Elimination System (NPDES) permits were closed by Illinois Environmental Protection Agency (IEPA) in January 2004. PCC transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

The STA was acquired to reduce the shortfall of maneuver training area for ILARNG units identified in the ILARNG's Land Use Requirements Study (LURS) (ILARNG 2001). The LURS estimated that only about 2% of the maneuver training area required for tactical missions was available in 2001. Acquisition of the STA doubled available training areas and reduced the shortfall in critical platoon mission essential training maneuver areas (ILARNG 2011a).

The STA is currently classified as a Local Training Center (LTC), which supports individual and unit training at or near the home station, and makes the maximum use of training aids, devices, and simulations systems (TADSS). An LTC has minimal cantonment facilities capable of accommodating a company-size unit. Full-time support and Federal Inventory and Support Plan (FISP) support for facilities meeting criteria of National Guard Pamphlet (NG PAM) 415-12, *Army National Guard Facilities* (2011), are authorized; however, some types of funding are limited and only available on a case-by-case basis. By increasing the training capabilities of an installation, the garrison training center category can be increased and in turn the site would become a recognized Department of Defense (DoD) training center with greater funding opportunities. Training capability is determined by available ranges (live and non-live fire), maneuver area, billeting, real property inventory, and special training facilities as well as DoD utilization in accordance with NGR 5-3. The organizational goal for STA is to be tiered as a CTC.

A Master Plan for STA was first developed in 2007 that provided a basic framework for developing and managing the STA and identified both short-term and long-term training and facility support projects (ILARNG 2007). In September 2012, the ILARNG initiated an update of the 2007 Master Plan. A series of meetings and a Range and Facilities Charrette were conducted to obtain information and discuss ILARNG's vision for the STA. The data and information gathered from the various stakeholder meetings was analyzed and then used to develop the 2014 STA Master Plan. The STA Master Plan identifies construction projects that are necessary to meet the requirements of a CTC (Leidos 2014). Projects included in this EA are included in the 2014 Master Plan.

The ILARNG's (2014) RCMP identifies required range training facilities – either existing but not modernized, or not available – at the ILARNG training sites, including the STA. Requirements are based on the requirements to meet the training cycles of the Army Force Generation (ARFORGEN)⁴ model as it applies to the State of Illinois. Requirements are a function of the Combined Arms Training Strategies (CATS) and Standards in Training Commission (STRAC) resourced training requirements developed and approved by Training and Doctrine Command (TRADOC) and the Army Training Support Center (ATSC). The proposed 10-25m Zero Range is identified as a programmed range for STA in the RCMP.

1.2 Purpose and Need

The **purpose** of the Proposed Action is to provide the requisite range and infrastructure improvements at the STA for in-state training for ILARNG units, particularly those located in Southern Illinois, as well as other military units⁵. The proposed projects would support the ILARNG's organizational goal for STA to become tiered as a CTC in accordance with NGR 5-3.

The Proposed Action is **needed** to: (1) ensure ILARNG provides complete range and training facilities for its units, 2) ensure attainment and maintenance of a full readiness posture, and 3) meet

⁴ ARFORGEN is the structured progression of increased unit readiness over time resulting in recurring periods of availability of trained, ready, and cohesive units. Operational requirements drive the ARFORGEN training and readiness process. These same requirements support the prioritization and synchronization of resourcing, recruiting, organizing, staffing, equipping, training, sustaining, sourcing, mobilizing, and deploying cohesive units more effectively and efficiently (DA 2007).

⁵ The new range would be available to all Army National Guard (ARNG) units, as well as other DoD and civilian users as scheduling permits. Scott Air Force Base (AFB) is nearby and is anticipated to be a regular site user once these facilities are constructed as well as units in Missouri (ILARNG 2014).

mission training objectives with sufficient land area as defined in TC 25-1, *Training Lands* (2004). With presently available training facilities, local units are forced to travel greater than 25% of available Inactive Duty Training (IDT) weekend time to conduct much of the required training. The ILARNG cannot currently meet STRAC requirements using in-state facilities. According to the RCMP, there are several considerable range deficits within the state that include, but are not limited to, a Qualification Training Range, Light Demolition Range, Hand Grenade Familiarization Range and Urban Assault Course. As a result, ILARNG's basic marksmanship training is often conducted at out-of-state training facilities, such as Fort McCoy in Wisconsin, Camp Atterbury in Indiana, Fort Campbell in Kentucky, and Fort Leonard Wood in Missouri. This travel time frequently violates Department of Defense Instruction (DoDI) 1215.13, *Reserve Component Member and Participation* (2009), which establishes a reasonable travel distance as 100 miles or 3 hours for the unit for IDT. The aforementioned sites are located at substantially greater distances than this allowance. Without the proposed range projects, the need to travel to northern Illinois or out-of-state for yearly training requirements would continue, thereby resulting in impacts to troop morale, training, and efficient use of fiscal resources.

The Proposed Action is also needed to ensure the continued and long-term viability of the STA as a training center capable of providing the land and resources necessary to support the ILARNG's and other military users' assigned training missions. As an LTC, current site usage for STA has been on average approximately 4,567 man-days per year since 2007 (see **Section 2.2.3**). The ILARNG estimates STA utilization could eventually increase by approximately 100% over current levels, or to roughly 9,000 man-days per year as result of the Proposed Action. The development of the proposed 10-25 m Zero Range would facilitate the STA in becoming a CTC capable of providing the land and resources necessary to support higher quality mission-essential training activities at the STA. Additional requirements specific to the three STA development projects, comprising the Proposed Action, are listed in **Table 1**.

Proposed Project	Estimated Implementation (FY)	Training Requirement
10-25m Zero Range	2016	80% of ARNG and USAR Soldiers are required to zero and qualify IAW FM 3-22.9 every 12 months. <i>Requirement Documents: TC 25-8, FM 3-22.9, FM 3-22.65, FM 3-22.68, FM 3-05.213</i>
M203 Grenade Launcher Range – <i>Relocation</i>	2016	The existing M203 Grenade Launcher range needs to be re-oriented north-south to accommodate the proposed 10-25m Zero Range. 80% of ARNG and USAR Soldiers are required to zero and qualify IAW FM 3-22.31 every 12 months. <i>Requirement Documents: TC 25-8, DA PAM 350-38, FM 3-22.31, AR 385-63</i>

Table 1. Summary of the Proposed Action		
Proposed Project	Estimated Implementation (FY)	Training Requirement
Road and Trail Improvements	2016-2021	Road and trail improvements, including low water crossing maintenance/installation, are needed to make traffic flow more efficient within STA, to accommodate increased vehicle use throughout the installation, and maintain roadway infrastructure over the long-term
KEY: AR = Army Regulation; DA PAM = Department of the Army Pamphlet; FM = Field Manual; IAW = In accordance with; TC = Training Circular; USAR = US Army Reserve		
Source: Leidos 2014, ILARNG 2014		

1.3 Scope of the EA

As required by the NEPA (42 USC 4321 et seq.), the *CEQ Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508), 32 CFR Part 651 (*Environmental Analysis of Army Actions*, Final Rule; 29 March 2002), and the *Army National Guard (ARNG) NEPA Handbook, Guidance on Preparing Environmental Documentation for ARNG Actions in Compliance with the NEPA of 1969* (ARNG 2011a), the potential direct, indirect, and cumulative physical, environmental, cultural, and socioeconomic effects of this federal Proposed Action are analyzed in this EA. A detailed description of the Proposed Action is provided in **Section 2.2**.

The ILARNG developed screening criteria (described in **Section 2.3.1**) to determine potential sites that would meet the *purpose of and need for* the Proposed Action. After an examination of existing ARNG facilities, the development of a new facility and the use of existing local facilities, it became apparent to the ILARNG that locating the facilities on STA was the only suitable alternative (see **Section 2.3.3**). In accordance with NEPA and CEQ Regulations, this EA considers two alternatives for implementing the Proposed Action:

- Preferred Action Alternative – Implement the Proposed Action by executing the development projects, as described in **Section 2.2**, to provide the requisite ranges and infrastructure improvements at STA for in-state training for ILARNG units, particularly those located in southern Illinois, as well as other military units, and to fulfill the assigned mission requirements of the ILARNG. Under the Preferred Action Alternative, the ILARNG would be authorized to use M855 (5.56mm lead) and M855A1 (5.56mm lead-free) ammunition on the proposed Zero Range.
- No Action Alternative – Continue with operations as currently conducted and do not implement the Proposed Action.

This EA evaluates the potential impacts of implementing the three STA development projects outlined in the RCMP (ILARNG 2014) and STA Master Plan (Leidos 2014); this EA also evaluates the impacts of the No Action Alternative. Resource categories described in **Section 3** and evaluated in **Section 4** include: land use and cover; air quality; noise; geology, topography and

soils; water resources; biological resources, including vegetation, wildlife, and endangered and threatened species; cultural resources; socioeconomics; environmental justice; infrastructure; and hazardous and toxic materials and wastes (HTMW). This EA also considers the cumulative effects of this Proposed Action; the 2011 Final EA projects (see below); and other past, present, and reasonably foreseeable actions within the Region of Influence (ROI). The ROI includes the STA, its immediate vicinity, and Randolph County. Meaningful effects beyond this ROI would not be anticipated, based on the nature and scope of the Proposed Action and its considered alternatives.

The *Final EA and Finding of No Significant Impact (FNSI) for the 2007 Master Plan in Support of the Training Mission Operations at STA, Randolph County, Illinois* (ILARNG 2011a) provides an in-depth analysis and baseline information relevant to ongoing activities at STA, including information pertaining to the natural, physical, and socioeconomic environment. General information presented in the 2011 Final EA is referenced whenever possible. New information specific to implementation of the Proposed Action analyzed in this EA is included as needed and appropriate. Information pertaining to the STA natural, physical, and socioeconomic environment that has become available or updated since the aforementioned document was completed is included in this EA.

As specified under the NEPA and CEQ regulations (40 CFR 1500-1508), a monetary cost-benefit analysis is not required as part of the EA. The Proposed Action and its alternatives have been developed based on military training needs and mission requirements. As such, no quantitative financial assessment has been performed as part of this EA. However, economic factors that result in socioeconomic impacts to the STA and its surrounding region of influence are addressed in this document, as required under NEPA.

1.4 Decision-Making

As described in 32 CFR Part 651.5, the NEPA process is intended to provide the Army's planners and decision-makers with a meaningful review of environmental considerations associated with a given action. The analysis set forth in this EA allows the decision-makers to carefully balance the protection of these environmental resources while fulfilling the Army's essential role, including national defense. Both environmental staff and military personnel within the ILARNG were consulted and provided guidance on the development of this EA.

Per amendments to 10 USC 10501, described in DoD Directive 5105.77 (21 May 2008), the National Guard Bureau (NGB) is a joint activity of the DoD. NGB serves as a channel of communication and funding between the US Army and state Guard organizations in the 54 US states and territories. The ARNG is a Directorate within NGB. The ARNG's Environmental Programs Division (ARNG-ILE) is the division within ARNG that is responsible for environmental matters, including compliance with the NEPA. As ARNG is the federal decision-maker concerning this Proposed Action and controls the federal funds that would be used for its implementation, this is a federal Proposed Action. The federal decision-making on the part of the ARNG includes selecting an alternative to implement, and identifying the actions that the Government will commit to undertake to minimize environmental effects, as required under the NEPA, CEQ Regulations, and 32 CFR Part 651.

1.5 Public and Agency Involvement

The ILARNG invites public participation in decision-making on new proposals through the NEPA process. Consideration of the views and information of all interested persons promotes open communication and enables better decision-making. Agencies, organizations, and members of the public with a potential interest in the Proposed Action, including minority, low-income, disadvantaged, and Native American groups, are urged to participate. A record of public involvement, agency coordination, and Native American consultation associated with this EA is provided in **Appendix A**.

1.5.1 Public Review

The draft EA was made available for public review and comment from 25 January 2016 through 24 February 2016, as announced by a Notice of Availability (NOA) published in *The Randolph County Herald Tribune* and *Southern Illinoisan* newspapers. Review copies were made available to the public at the Sparta Public Library, ILARNG's Sparta Armory, and the ILARNG's website (<http://www.il.ngb.army.mil/MilitaryAffairs/STA/Default.aspx>). No comments were received on the draft EA during the 30-day public comment period.

The ILARNG, as the proponent of the Proposed Action, will publish and distribute the final EA and the draft FNSI for a 15-day public review and comment period, as announced by a NOA published in *Southern Illinoisan* and the *Randolph County Herald Tribune*. Review copies will also be made available to the public at the same locations listed above. The State Public Affairs Officer (PAO) is responsible for reviewing notices prior to publication in the local newspaper, and will be the primary contact for local news media inquiries. The ILARNG environmental office will be responsible for receiving comments resulting from the 15-day public comment period.

If it is determined implementation of the Proposed Action would result in significant impacts, the ILARNG would either not take this action as proposed, or would publish in the Federal Register a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS). Throughout this process, the public may obtain information on the status and progress of the EA through the Illinois National Guard Public Affairs Office at (217) 761-3569.

1.5.2 Agency Coordination

Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) is a federally-mandated process for informing and coordinating with other governmental agencies regarding federal Proposed Actions. CEQ Regulations require intergovernmental notifications prior to making any detailed statement of environmental impacts. Through the IICEP process, the ILARNG notifies relevant federal, state, and local agencies and allows them sufficient time to make known their environmental concerns specific to a Proposed Action. Comments and concerns submitted by these agencies during the IICEP process are subsequently incorporated into the analysis of potential environmental impacts conducted as part of the EA. This coordination fulfills requirements under Executive Order (EO) 12372 (superseded by EO 12416, and subsequently supplemented by EO 13132), which requires federal agencies to cooperate with and consider state and local views in implementing a federal proposal. It also constitutes the IICEP process for this EA.

Agencies consulted for this EA include the US Fish and Wildlife Service (USFWS), US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), US Environmental Protection Agency (USEPA), US Department of Transportation (DOT) Federal Aviation Administration (FAA), US Army Corps of Engineers (USACE) St. Louis District, US Army Public Health Command (USAPHC), Illinois DOT, IDNR, IEPA, and Illinois Historic Preservation Agency⁶ (IHPA). Several local entities/stakeholders were also contacted that include Randolph County Planning Commission, Egyptian Electric Cooperative, Sparta Community Airport – Hunter Field, City of Sparta, IDNR World Shooting Complex, Ameren, and other local entities. Agency information and comments will be incorporated into this EA. Copies of relevant correspondence can be found in **Appendix A**.

1.5.3 Native American Consultation/Coordination

The ILARNG has consulted with federally recognized Native American tribes as required under DoDI 4710.02, *DoD Interactions with Federally Recognized Tribes* (2006), which implements the Annotated DoD American Indian and Alaska Native Policy (dated 27 October 1999); AR 200-1; NEPA; the National Historic Preservation Act (NHPA); and the Native American Graves and Protection and Repatriation Act (NAGPRA). Tribes were invited to participate in the EA and NHPA Section 106 processes as Sovereign Nations per EO 13175, *Consultation and Coordination with Indian Tribal Governments*, 6 November 2000.

Section 9 contains a list of the federally recognized tribes with possible ancestral ties to the STA area that were invited to consult in 15 January 2015. Two tribes, Delaware Nation and Peoria Tribes of Indians of Oklahoma, were identified based on the ILARNG Integrated Cultural Resources Management Plan (ICRMP) (ILARNG 2011c), consultation, personal correspondence and research by the ILARNG Cultural Resources Manager. All correspondence was conducted by certified letters. Letters sent to these tribes and their responses are included in **Appendix A**. A Memorandum for Record (MFR), which summarizes the consultation efforts by the ILARNG, is included in **Appendix A**.

1.6 Related NEPA, Environmental, and Other Documents

The RCMP for ILARNG presents a detailed analysis of training requirements and the best method for meeting these requirements with available land resources (ILARNG 2014). This plan provides background and planning information on the proposed 10-25m Zero Range included in the Proposed Action and analyzed in this EA.

The ILARNG's Master Plan for STA is the primary installation planning document. The purpose of Master Plan is to identify the missions, requirements, vision, opportunities, constraints, and conditions of the STA and, based on these data, generate a long-range Real Property Master Plan that describes the best use of the property based on currently planned and future growth (Leidos 2014). The STA Master Plan addresses the proposed activities, location and issues related to the Proposed Action analyzed in this EA. Information gathered during the planning process for this plan

⁶ State Historic Preservation Office (SHPO)

was used in preparation of this EA. The 2014 STA Master Plan is an update of the original ILARNG (2007) Master Plan for the STA.

An EA for Implementation of the 2007 Master Plan in Support of the Training Mission Operations at STA (ILARNG 2011a) was prepared to identify what, if any, proposed 2007 Master Plan projects could have potential significant adverse environmental effects at STA, and to establish a baseline environmental analysis from which ILARNG can "tier off" supplemental NEPA documents for the site specific analysis of individual training and facilities projects. In this EA, ILARNG identified the need for additional site specific NEPA analysis for each of the proposed 2007 Master Plan projects prior to implementation. The proposed 10-25m Zero Range construction and M203 Grenade Launcher Range relocation projects were not included in the 2007 Master Plan, and therefore, were not analyzed in the 2011 EA.

The Integrated Natural Resources Management Plan (INRMP) for STA was first prepared in 2005 (ILARNG 2005) and an EA was prepared for the 2005 STA INRMP to fulfill the requirements of the NEPA. The INRMP for STA was updated in 2013 (ILARNG 2013). An Environmental Checklist and a Record of Environmental Consideration (REC) were prepared for the INRMP update because implementation of the updated INRMP was adequately covered in the EA for the 2005 STA INRMP. Information from the 2013 INRMP and previous installation natural resources planning level surveys for topography, soils, water resources, flora, fauna and rare species was used to gather information on the existing environmental conditions at the STA.

1.7 Regulatory Framework

This section identifies all applicable federal, state, and local regulations that apply to the Proposed Action and considered alternatives. This EA has been prepared under the provisions of, and in accordance with NEPA (42 USC 4321 et seq.), the *CEQ Regulations Implementing the Procedural Provisions of NEPA* (Sec. 1502.9 Draft, final, and supplemental statements; 40 CFR Parts 1500-1508), and 32 CFR 651 (*Environmental Analysis of Army Actions*, Final Rule). In addition, the document has been prepared as prescribed in the ARNG NEPA Handbook (ARNG 2011a). A summary of regulations relevant to resource areas analyzed in this EA is included as **Appendix B**.

Because the roadway improvement project would be implemented over an extended period of time, the ILARNG will review this NEPA analysis, in consultation with ARNG-ILE, prior to project execution to ensure no substantial changes have occurred to environmental resources or regulatory requirements since the completion of this EA. If changes have occurred the ILARNG will prepare an updated NEPA analysis in the form of an EA or tiered Categorical Exclusion. This original EA would be utilized as the foundation for the updated analysis and supplemental NEPA analyses would focus on those issues that have changed.

SECTION 2: DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Introduction

Implementation of the Proposed Action would provide the requisite range and infrastructure improvements at the STA for units of the ILARNG, neighboring states' National Guard members, and other active duty, reserve, or guard units. The following sections provide a detailed description of the Proposed Action and the alternatives considered to meet the purpose of and need for the Proposed Action. Development and evaluation of alternative sites, screening criteria for site selection, and specific facility configurations are presented in **Section 2.3**. The proposed 10-25m Zero Range is a FY 2016 Military Construction (MILCON) project (Project Number 171001).

2.2 Proposed Action

The Proposed Action includes three proposed projects: (1) construction and operation of a 10-25m Zero Range and the connected action of rerouting the existing high voltage power line to accommodate this range, (2) relocation of the existing M203 Grenade Launcher Range, and (3) implementation of roadway improvements (see **Figures 3, 4 and 5**). The proposed 10-25m Zero Range is identified as a FY 2016 range project for STA in the RCMP (ILARNG 2014) and would be constructed using MILCON funds. Relocation of the M203 Grenade Launcher Range at STA is necessary to accommodate the new Zero Range configuration. Thus, construction of the new Zero Range is dependent on the other range project being implemented. The proposed range projects and roadway improvements are discussed in detail under **Section 2.2.1** and **2.2.2**, respectively.

Furthermore, an Environmental Condition of Property (ECOP) investigation is required for all MILCON funded projects in accordance with AR 200-1, and the 2011 ARNG ECOP Handbook (ARNG 2011b). ECOP investigations are required for MILCON actions to ensure protection of construction workers, staff and Soldiers, and to ensure unforeseen cleanup costs and delays are avoided. ECOPs are typically valid for six months, but may be valid longer depending on site-specific issues and proposed activities. Under the Proposed Action, the ILARNG would conduct an ECOP prior to implementing the MILCON funded projects.

Land improvement activities would include land clearing, road improvements, fencing, general site improvements, and utility line modifications and extensions to serve the project areas, notably the small arms range operation and control area (SAROCA) facilities and target locations. A NPDES permit for construction activities is required prior to construction from IEPA. The ILARNG's Environmental Branch along with the Architect and Engineering Firm, when applicable, will prepare or review a Notice of Intent (NOI) in order to obtain this permit. IEPA permits normally take three months to obtain.

2.2.1 Proposed Ranges

Ranges consist of two primary components: the physical range footprint, consisting of the firing positions, targetry, and support structures (i.e., as specified in TC 25-8); and the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used (see **Section 2.2.1.1**). Ranges can be configured to overlap or have common

areas, including the SDZs and the range support structure areas. The land requirement (see **Table 2**) to construct the two proposed range projects with no overlapping is approximately 460 acres, which would be operationally inefficient, given the areas involved and other ongoing, mission-essential training activities at the installation. The ILARNG conducted a siting analysis to evaluate various range configuration alternatives. The analysis and preferred configuration (i.e., the Preferred Action Alternative) are discussed in **Section 2.3** and illustrated in **Figure 4**. The following sections provide details on the construction and operation of these proposed ranges, including information related to SDZs, weapons and ammunition, SAROCA facilities, lighting, access roads, and utility extensions.

Table 2. Proposed Range Development Projects and Land Requirements				
Range Project	Description		Approximate Land Requirement (Acres)	
	Range	SAROCA	Range	with SDZ
10-25m Zero Range	<p>This range is used to train individual Soldiers on the skills necessary to align the sights and practice basic marksmanship techniques against stationary targets. The range is designed for training shot grouping and zeroing exercises with the M16 and M4 series rifles as well as crew-served machine guns. This range is also used for short-range marksmanship (SRM) training and qualification.</p> <p>Primary features include: 32 target frames at 25 meters, 16 target frames at 10 meters, 32 foxholes.</p> <p>This range requires no automation. All targets are fixed at 25 meters from the firing line for M16/M4 and fixed at 10 meters for machine gun.</p> <p>A back berm and side berms would be constructed for this range (Figure 4). The existing high power line is required to be relocated outside the range SDZ (see Figures 2 and 3) to accommodate this project and would result in up to 10 acres of additional ground disturbance (see Section 2.2.1.6).</p> <p>Standard SAROCA facilities are required excluding the operations/storage building and classroom facility.</p>	✓	4	440
M203 Grenade Launcher Range – <i>Relocation</i>	<p>This range would be re-oriented from an east-west to a north-south layout in Training Area (TA) 105 to accommodate the proposed 10-25m Zero Range.</p> <p>This facility is used to train and test individual soldiers on the skills necessary to engage and defeat stationary target emplacements.</p> <p>Primary features include four individual firing stations. No automation is required for this facility. All targets/facades are fixed at required distances.</p> <p>Standard SAROCA facilities are required excluding classroom facility and classroom operations storage.</p>	✓	6	20
Total Potential Land Requirement			10	460
Note: Range SDZs can be configured to overlap. The total land requirement for the SDZs in this table does not account for this overlap.				

2.2.1.1 Surface Danger Zones

A SDZ⁷ is a mathematically-predicted area a projectile will impact upon return to earth, either by direct fire or ricochet. The SDZ is the area extending from a firing point to a distance downrange based on the projectiles fired and weapon system used. The SDZ has specific dimensions for the expected caliber or the weapon being fired, so that all projectile fragments are contained in this area. The standard dimensions for SDZs are found in Department of the Army Pamphlet (DA PAM) 385-63, *Range Safety* (2014). The SDZ for a range must be contained within the controlled boundaries of a training site for the range to be considered buildable and usable without a special waiver. The ILARNG proposes to configure ranges to allow common SDZs as much as possible without causing training conflicts (i.e., to allow all proposed ranges to be used simultaneously, to the maximum extent possible). The existing and proposed STA range SDZs are illustrated in **Figures 3** and **4**, respectively.

During the range siting process, it was determined the standard SDZs⁸ for the M203 Grenade Launcher Range relocation project could be accommodated within the STA boundaries. However, the standard SDZs for the 10-25m Zero Range prescribed in DA PAM 385-63, *Range Safety* (DA 2014), for all ammunition types (**Table 3**) could not be accommodated within the STA boundary. The primary ammunition used on the 10-25m Zero Range is 5.56mm. Thus, the ILARNG requested the US Army Aeroballistics Division at the Armament Research, Development and Engineering Center (ARDEC) to conduct a probability-based SDZ analysis for the 10-25m Zero Range. A probability-based SDZ analysis quantifies the risk associated with conducting training on the proposed range within the available real estate. The objective of the analysis is to determine if the ranges could be sited on STA in manner that would support a waiver from the existing SDZ templates prescribed in DA PAM 385-63. Per DA PAM 385-63, a special waiver can be granted if the SDZ analysis determines the chances of a hazardous fragment escapement are less than one in one million (1:1,000,000).

The probability-based SDZ analysis applied the range layout positions of all targets and firing points, and modeled the local terrain, meteorological conditions, and defined training scenarios for the 5.56mm M855A1 Enhanced Performance Round (EPR), which produces the largest SDZ at the 5.56mm caliber size⁹. As a result of the detailed SDZ analysis, ARDEC identified a range layout for the Zero Range that could be accommodated within the STA boundaries (see **Figure 4**). The ILARNG has decided to construct the Zero Range with a back berm and side berms to ensure the SDZs for this range remain within the property boundary. In addition, the back berm design was chosen to prevent or minimize lead or other contaminant migration off-site based on the results generated by the Range Evaluation Software Tool (REST) v. 2.1 (ILARNG 2010b).

The proposed range layout and SDZs identified by ARDEC are shown in **Figure 4**. This layout would ensure a less than 1:1 million probability of a hazardous fragment escaping beyond the installation boundary (ARDEC 2013). As part of the ricochet analysis for the 10-25m Zero Range, the maximum altitudes for all trajectories were also assessed. Based on these findings, the vertical

⁷ The SDZ delineates that portion of the earth and the air above in which personnel and/or equipment may be endangered by ground weapons firing or demolition activities.

⁸ The standard SDZ prescribed in DA PAM 385-63 is meant to serve as a one-size fits all, and does not take into account for site-specific features, such as local terrain.

⁹ 5.56mm caliber size ammunition has the largest SDZ of all ammunitions proposed in **Table 3**

hazard¹⁰ for the Zero Range would be 490 meters or 1,608 feet above mean sea level (amsl) with the back berm (ARDEC 2013). The ILARNG is in the process of obtaining the waiver for the Zero Range in accordance with DA PAM 385-63 and AR 25-30, *The Army Publishing Program* (2006). All waiver requests must be reviewed and approved by ILARNG Safety, National Guard Bureau, and The Adjutant General (TAG) of Illinois National Guard.

2.2.1.2 Utilities

In order to accommodate the proposed 10-25m Zero Range, the existing aboveground high voltage power line that traverses through the center of STA (see **Figure 2**) is required to be relocated outside the proposed range SDZs. **The construction of the Zero Range and relocation of the high voltage power line are connected actions.** The proposed relocated high voltage power line would be rerouted along existing right-of-ways, and would require approximately 3.6 miles (50-foot corridor) of new aboveground power line (see **Figure 3**). Southern Illinois Power Cooperative (SIPC) is the owner of the power line; they will handle the relocation of the poles and Egyptian Electric's distribution lines affixed to their poles. Ground disturbance associated with the installation of the relocated power line would occur primarily within the existing right-of-way easement of the new utility poles. The proposed utility poles would occur approximately every 300-400 feet along the power line and would be approximately 40 feet in height. The new utility right-of-way would encompass approximately 23 acres; however, estimated land disturbance associated with power line relocation is anticipated to be less than 10 acres and mostly temporary.

Additionally, the proposed range projects would require utility extensions for electricity, potable water, telecommunications (e.g., cable, phones, and Internet). No sewer line extensions are needed. With the range area, latrines will include aerated toilet systems. However, potable water will be needed for sinks. Phone service would be provided at every range. Data service would also be provided at every automated range. During the master planning process, the installation of a natural gas line out to the ranges was deemed impracticable (Leidos 2014). The use of a liquid propane gas tank is proposed as an alternative for heating structures outside of the Cantonment Area if necessary.

2.2.1.3 Weapons and Ammunition

The types of ammunition anticipated to be fired on the proposed ranges are listed in **Table 3**. The lead-based 5.56mm M855 round could be discontinued, and ultimately replaced by the lead-free M855A1 in the future. Therefore, both types of 5.56mm ammunition are being considered.

¹⁰ Vertical hazard limits were based on the maximum heights of the ricochets (ARDEC 2013).

Range Project	Weapon(s)	Ammunition
10-25m Zero Range	Rifles: M-4, M-16 Series Pistols: 9mm & .45 Caliber Shotgun: 12 Gage, M60, M240B, M24, M2 .50 Cal	5.56 mm ball (linked and individual) M855 & M855A1 9mm & .45 (M882, M1911) 12 G BS (M19/M162) 7.62 SRТА only for M60, M240B, & M24 .50 SRТА (M858)
M203 Grenade Launcher Range – <i>Relocation</i>	Grenade Launcher: M-203	Grenades: M-385 (40 mm TP)
<p><u>Caliber</u> – Bullet diameter in hundredths of an inch (US) or mm (metric) <u>Ball</u> – General-purpose cartridge with primer, ball, full powder charge <u>Linked</u> – Ammunition loaded in flexible, linked strips for machine gun use <u>SRТА</u> – Small range training ammunition <u>TP</u> - Training Practice (inert)</p>		

2.2.1.4 Range Operations and Control Areas

According to TC 25-8, the proposed ranges, listed in **Table 2**, require a set of range support structures called SAROCA facilities. A SAROCA is the center for overall control and operation of the range, training exercises, administrative services, and support facilities. Standard range operations and control facilities include the range operations center (tower), operations/storage building, classroom facility, latrine, bleacher enclosure, covered mess shelter, and ammo breakdown building. The range operations center and operations/storage building are used to operate and maintain the range. The bleacher enclosure and classroom facility are used for pre-event and post-event instruction. The remaining buildings are to support the training of the troops being trained. From the SAROCA, downrange target and simulation equipment are operated, and activities are monitored for scoring and performance data review. The data are collected and distributed to the participants for an After Action Review (AAR). The AAR allows leaders to assess the unit's performance and design training programs to overcome the identified shortcomings.

The existing M203 Grenade Launcher Range to be relocated does not currently have SAROCA facilities. The ILARNG proposes to combine SAROCA facilities for the two proposed range projects to the extent possible to reduce cost, increase efficiency, and reduce land requirements associated with the Proposed Action.

2.2.1.5 Night Lighting

Lighting requirements vary by range, and are prescribed in TC 25-8 and Army range design manuals. Red lenses or red lamps would be provided when required – in addition to standard lighting – to prevent interference with specialized equipment used during night training operations. Lighting within the various SAROCAs and along range baselines could have both red and white lighting. White light is required for range set-up, emergencies, and clean-up. Red light is required during night training, so as not to impact soldiers' night vision. Lighting would be designed to

minimize the potential for lighting adjacent, non-range areas; and be contained within the confines of the STA and not observable from off-Post areas.

2.2.1.6 Access and Maintenance Roads

Access to the ranges would be provided by crushed stone roadways extending to the ranges from the existing STA road network, to minimize new impervious surfaces. Access roadways would be designed to support vehicles anticipated to use the ranges, and would meet site-specific soil conditions. Maintenance roads would also be constructed of crushed stone, located around range perimeters to provide access to target emplacements for installation and maintenance operations. These roads would be designed to meet site-specific engineering requirements as part of the formal range design process, conducted after this NEPA process is complete.

2.2.2 Proposed Roadway Improvements

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) (see **Figure 5** and **Table 4**) and maintenance / rehabilitation activities over the next 5 years. Maintenance activities include resurfacing gravel roads (see **Table 4**), trail rehabilitation on a 2-year rotational basis, and the addition of gravel and riprap around the edges of existing LWCs when needed (see **Figure 2**).

No paved roads occur within the STA, and there are no plans to construct them. This project includes the establishment of approximately 9.3 miles of new gravel roads (24 feet wide) and 5.6 miles of new dirt trails (18 feet wide) to accommodate increased training site use within the non-Cantonment Areas at STA (see **Figure 5** and **Table 4**). Proposed STA roads would be developed and maintained with crushed stone to reduce impervious surface on-site. Total land disturbance associated with this project is estimated to be approximately 40 acres.

This project includes the installation of five LWCs and two culverts along the northern and eastern STA boundaries. The LWCs will be designed in accordance with the Illinois Urban Manual developed by NRCS. A LWC is a structure that provides access across a stream during normal flow, but may be periodically closed as a result of flooding. LWCs can provide low cost alternatives to bridges or culverts for areas with low traffic volumes such as training roads on STA. They are particularly suitable across streams that are sometimes dry or with low normal depth of flow.

The ILARNG anticipates project implementation could begin as early as FY 2016 and would occur over an extended period of time – over the next 5 years or more – depending on funding availability. As discussed in **Section 1.7**, the ILARNG will review this NEPA analysis, in consultation with ARNG-ILE, prior to project execution to ensure no substantial changes have occurred to environmental resources or regulatory requirements since the completion of this EA due to project implementation occurring over an extended period of time.

Table 4. Summary of Proposed Roadway Improvement Projects				
Type of Project	Priority	Road / Trail / Crossing Designation	Training Area	Project Implementation
LWC	1	LWC 16	104	FY 2016 Project; implement using Troop Labor.
	2	LWC 6	104	FY 2017 Project; implement using Troop Labor.
	3	LWC 12	111	FY 2017 Project; implement using Troop Labor.
	4	LWC 11	112	FY 2018 Project; implement using Troop Labor.
	5	LWC 13	112	FY 2018 Project; implement using Troop Labor or a Contractor (funding dependent).
Culvert	1	LWC 5	104	FY 2017 Project; implement using a Contractor.
	2	LWC 1	101	FY 2018 Project; implement using a Contractor.
New Trails	1	TR 108	108	FY 2016 Project; 0.4-mile trail project conducted using Troop Labor.
	2	TR 102	102	FY 2017 Project; 0.9-mile trail project conducted using Troop Labor.
	3	TR 110	110	FY 2018 Project; 0.6-mile trail project conducted using Troop Labor.
	4	TR 109	109	FY 2018 Project; 0.9-mile trail project conducted using Troop Labor.
	5	TR 112	112	FY 2019 Project; 1.0-mile trail project conducted using Troop Labor.
	6	TR 202	202	FY 2019 Project; 1.1-mile trail project conducted using Troop Labor.
	7	TR 201	201	FY 2020 Project; 0.6-mile trail project conducted using Troop Labor.
Gravel Road Network (Proposed)	1	Road 15	201 / 202	FY 2016 Project; 2.8-mile road project conducted using Troop Labor.
	2	Road 15	202	FY 2017 Project; 0.9-mile road project conducted using Troop Labor.
	3	Road 10	101	FY 2017 Project; 1.6-mile road project conducted using Troop Labor
	4	Road 5	106	FY 2018 Project; 1.8-mile road project conducted using Troop Labor or a Contractor
	5	Road 8	104	FY 2019 Project; 0.8-mile road project conducted using Troop Labor.
	6	Road 11	103	FY 2019 Project; 1.5-mile road project conducted using Troop Labor or a Contractor

Type of Project	Priority	Road / Trail / Crossing Designation	Training Area	Project Implementation
Gravel Road Network (Maintenance / Repair only)	1	Road 2	105	FY 2016 Project; 1.3-mile road project conducted using Troop Labor.
	2	Road 3	101	FY 2016 Project; 0.2-mile road project conducted using Troop Labor.
	3	Road 6	107	FY 2017 Project; 0.4-mile road project conducted using Troop Labor.
	4	Road 4	108	FY 2017 Project; 3.0-mile road project conducted using Troop Labor or Contractor
	5	Road 16	104	FY 2018 Project; 0.7-mile road project conducted using Troop Labor
	6	Road 7	103	FY 2018 Project; 0.9-mile road project conducted using Troop Labor or a Contractor

2.2.3 Projected Facility Usage

As discussed in **Section 1.1.2**, the ILARNG began conducting training activities at STA in FY 2007. Between FY 2007 and FY 2014, site usage has been rather limited with approximately 4,567 personnel trained on average. Site usage has ranged between 2,577 man-days (FY 2008) and 7,781 man-days (FY 2010) with peak site usage occurring typically within the summer months. During the past 8 years, approximately 99% of site usage has been DoD personnel, which have mainly included ARNG units. **Chart 1** further illustrates total personnel trained per year from FY 2007 to FY 2014.

The ILARNG anticipates site usage would increase to approximately 9,000 man-days per year as a result of implementing the Proposed Action. Operation of the proposed ranges and other facilities would be conducted in accordance with AR 385-63 and Illinois Department of Military Affairs (DMAIL) Regulation 350-12, *Training at STA* (2008). The new range would be available to all ARNG units, as well as other DoD and civilian users as scheduling permits.

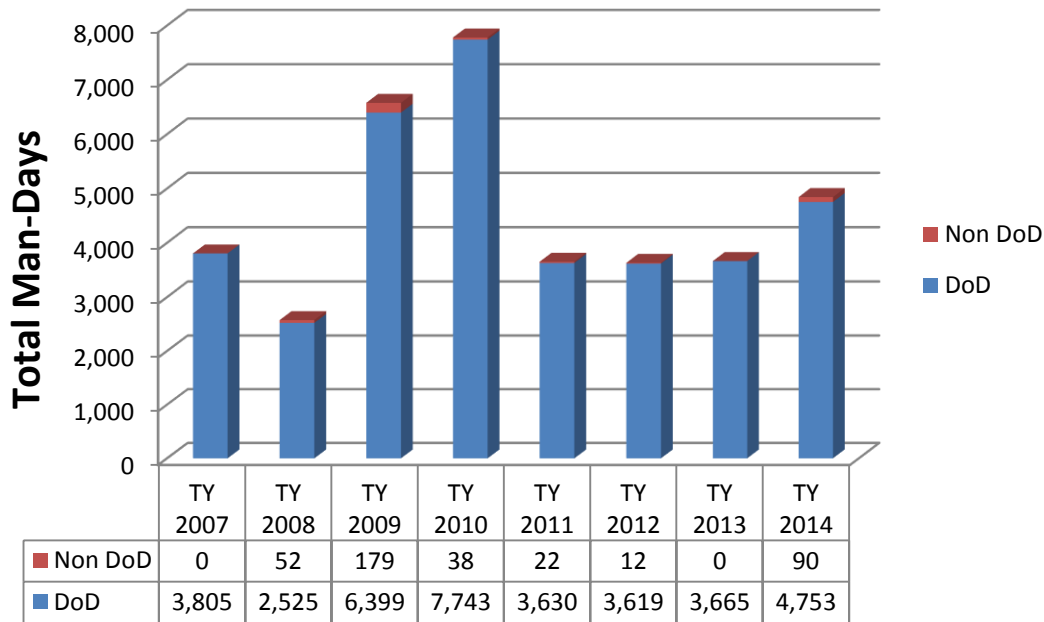


Chart 1. Total Man-Days by Type of Site User

Vehicle Use: Vehicle use related to the proposed ranges and training facilities would involve troop and equipment transport activities. Troop and equipment transport would occur within the STA boundaries and between STA and the home unit locations. Both military and personal vehicles would be used. Military vehicles could include the High-Mobility Multipurpose Wheeled Vehicle (HMMWV), the Heavy Expanded Mobility Tactical Truck (HEMTT), 5-ton capacity Family of Medium Tactical Vehicles (FMTV), the five-ton capacity Light Medium Tactical Vehicle (LMTV), and military tractor trailers. Stryker¹¹ vehicle training and use is proposed at the STA, and is being assessed with a NGB Programmatic EA.

The actual number of vehicles would depend on the mix of drivers and military vehicles. Total traffic volumes of STA-related users may increase by 87% over current conditions in the vicinity of STA, and would occur during both daytime and nighttime hours. Approximately 20% of this traffic would be expected to occur during nighttime hours. Most vehicular traffic on STA occurs in the spring and summer months.

2.3 Alternatives Considered

NEPA, CEQ regulations, and 32 CFR 651 require all reasonable alternatives to be explored and objectively evaluated. Alternatives that are eliminated from detailed study must be identified along with a brief discussion of the reasons for eliminating them. For purposes of analysis, an alternative was considered “reasonable” only if it would enable the ILARNG to accomplish the primary mission of providing land, facilities, and resources at STA and to meet the purpose of and need for the

¹¹ Stryker is a family of eight-wheeled all-wheel-drive armored combat vehicle.

Proposed Action. “Unreasonable” alternatives would not enable the ILARNG to meet the purpose of and need for the Proposed Action.

2.3.1 Alternatives Development (Screening Criteria)

The ILARNG developed and applied the following criteria to screen and evaluate possible alternatives for the Proposed Action. The ILARNG identified that a suitable site would meet the majority, if not all, of the following criteria:

- 1) Be located within an existing ILARNG owned or controlled facility to avoid land acquisition costs.
- 2) Avoid excessive travel times and costs for ILARNG units located in southern Illinois by minimizing travel in and out of state to meet mission and training requirements.
- 3) Have a sufficient amount of land, preferably previously disturbed or cleared, to accommodate the required facilities.
- 4) Retain all range SDZs within the installation’s boundaries on ILARNG owned or controlled property per AR 385-63, *Range Safety* (2012).
- 5) Achieve a shared impact area with common SDZs to the maximum extent possible.
- 6) Maximize concurrent operation, with a goal of concurrent training on all proposed ranges and training areas to maximize training use availability.
- 7) Be proximate to existing, related facilities within the installation, including the roadway network and buildings (i.e., logistical considerations).
- 8) Have reasonable access to necessary utility connections.
- 9) Be within areas with few existing known environmental constraints (i.e., notably wetlands and other waters, wooded areas, endangered or threatened species habitat, or cultural resources).
- 10) Be compatible with other current and approved future land uses within the installation and the surrounding area.
- 11) Be located at a site where new noise impacts to surrounding communities are minimized or avoided (e.g., residences).
- 12) Be compatible with the installation Master Plan and its goals and objectives.
- 13) Ensure no net loss in the capacity of the ILARNG or the installation to support the military mission and conduct training operations.

Through application of the first three screening criteria and the evaluation process provided in **Section 2.3.3**, it became readily apparent to the ILARNG that locating the facilities at STA was the only alternative capable of meeting these screening criteria. Therefore, the subsequent ten screening criteria were used to identify proposed project siting within STA.

Once the STA was identified as the only viable installation, the ILARNG undertook a rigorous siting analysis between September 2012 and December 2013 to identify available sites within the STA that achieve the purpose of and need for the Proposed Action, as well as best meet the above

configuration criteria. The outcome of this analysis was documented in the 2014 Master Plan for STA. Where possible, similar training facilities were co-located or grouped to increase usage of common areas and infrastructure components and to further reduce overall development needs and costs. Numerous range and facility layouts and sites within the STA were investigated and eliminated from further consideration due to conflicts with other training uses, location of existing utilities, lack of overall land area, existing environmental constraints surrounding residential areas, or other limiting factors.

2.3.2 Evaluated Alternatives

This EA evaluates the potential direct, indirect, and cumulative environmental, cultural, socioeconomic, and physical effects of two alternatives to implementing the Proposed Action.

2.3.2.1 Preferred Action Alternative

Under this alternative, the three proposed projects would be constructed and operated as described in **Section 2.2** and illustrated in **Figures 3, 4, 5 and 12**. This is the ILARNG's Preferred Action Alternative because it best meets the screening criteria set forth in **Section 2.3.1**. It effectively provides the best combination of land and resources to sustain quality military training and to maintain and improve the units' readiness postures. This alternative provides many advantages:

- Located within an existing ILARNG facility, and therefore, no land acquisition costs.
- Eliminates the need for ILARNG units to travel out of state to meet mission and training requirements.
- Provides ample space/acreage for the required facilities.
- Located on previously disturbed land with proposed projects sited in areas with few environmental concerns.
- Located near existing STA infrastructure and available off-Post utility connections.
- Maximizes functional use of land on STA by keeping training area functions separate, allowing for good overall training site accessibility for units, and providing room for future expansion on STA.
- Places noise-producing facilities further away from noise-sensitive areas within and adjacent to STA (i.e., keep quiet zone in southern portion of STA, which is where residential areas primarily occur off-Post).
- Complies with range requirements per AR 385-63 and AR 25-30.

No other configurations were identified that would better meet these criteria while achieving the purpose of and need for the Proposed Action. Components of the Preferred Action Alternative have been sited within the STA to minimize and/or avoid potential impacts to known environmental resources. Under the Preferred Action Alternative, up to approximately 73 acres of land would be impacted directly by range construction, high voltage power line relocation, and roadway improvement activities. An additional 440 acres would be required to accommodate the range SDZs.

2.3.2.2 No Action Alternative

Under this alternative, the Proposed Action would not be implemented and current installation operations would continue. New construction projects would be authorized with appropriate NEPA documentation. Projects currently under construction, contracted for construction, or authorized for construction (i.e., those Proposed Actions analyzed and approved in the ILARNG's [2011] Final EA and FNSI for the 2007 Master Plan) will also continue. This alternative would limit the capability of the ILARNG to carry out its assigned mission to provide adequate training facilities, and would not meet the purpose of or need for the Proposed Action. However, this alternative was retained to provide a comparative baseline analysis as required under federal law, 40 CFR Part 1502.14.

Under the No Action Alternative, STA's full training potential would continue to be limited and the facilities necessary to accommodate the ILARNG's mission and training requirements would continue to be unavailable in Southern Illinois. Required training would continue to be conducted by the ILARNG at out-of-state installations where the necessary ranges and training facilities are available, primarily in the states of Wisconsin, Indiana, Kentucky, Tennessee, and Missouri. This would continue to cause ILARNG units to risk not meeting STRAC requirements, and to use excessive training time for travel, potentially resulting in a decreased ability to meet training proficiency standards.

2.3.3 Alternatives Eliminated From Further Consideration

Alternatives that are eliminated from detailed study must be identified along with a brief discussion of the reasons for eliminating them. For purposes of analysis, an alternative was considered "unreasonable" if it would not enable the ILARNG to meet the purpose of and need for the Proposed Action. The ILARNG considered the following alternatives: (1) use an existing ILARNG training site, (2) establish a new training site in southern Illinois, (3) implement a reduced-scale alternative, and (4) construct proposed projects in different locations at STA. These alternatives were eliminated from further consideration because they did not meet one or more of the screening criteria included in **Section 2.3.1**, and summarized in **Table 5**. For additional information on eliminated alternatives, refer to the following sections.

Screening Criteria (see Section 2.3.1)		Alternatives Eliminated and the Screening Criteria that would <i>not</i> be met			
		Use of existing ILARNG training site	Establish a New Training Site in Illinois	Reduced-Scale Alternative	Alternate Location of Range Footprints within the STA
		Section 2.3.3.1	Section 2.3.3.2	Section 2.3.3.3	Section 2.3.3.4
1	Be located within an existing ILARNG owned or controlled facility to avoid land acquisition costs		✓		
2	Avoid excessive travel times and costs for ILARNG units located in southern Illinois	✓		✓	

Screening Criteria (see Section 2.3.1)		Alternatives Eliminated and the Screening Criteria that would <i>not</i> be met			
		Use of existing ILARNG training site	Establish a New Training Site in Illinois	Reduced-Scale Alternative	Alternate Location of Range Footprints within the STA
		Section 2.3.3.1	Section 2.3.3.2	Section 2.3.3.3	Section 2.3.3.4
3	Have a sufficient amount of land, preferably previously disturbed or cleared, to accommodate the required facilities	✓			✓
4	Retain all range SDZs within the installation's boundaries on ILARNG owned or controlled property per AR 385-63, <i>Range Safety</i>				✓
5	Achieve a shared impact area with common SDZs				✓
6	Maximize concurrent operation, with a goal of concurrent training on all proposed ranges and training areas				✓
7	Be proximate to existing, related facilities within the installation				✓
8	Have reasonable access to necessary utility connections				✓
9	Be within areas with few existing known environmental constraints				✓
10	Be compatible with other current and approved future land uses within the installation and the surrounding area			✓	✓
11	Be located at a site where new noise impacts to surrounding communities are minimized or avoided				✓
12	Be compatible with the installation Master Plan and its goals and objectives	✓	✓	✓	✓
13	Ensure no net loss in the capacity of the ILARNG or the installation to support the military mission and conduct training operations	✓	✓	✓	✓

2.3.3.1 Use of Other ILARNG Training Sites

Through applying the site screening criteria and subsequent analysis described in **Section 2.3.1**, the ILARNG determined no other suitable location within the State of Illinois is currently available to satisfy the purpose of and need for this Proposed Action. The ILARNG has two large training sites in Illinois: Marseilles Training Center (MTC) and STA. The MTC is located in the northern

portion of the state, approximately 78 miles southwest of Chicago and 275 miles (approximately 5 hours) from the STA. The use of this site would continue to cause ILARNG units in Southern Illinois to use excessive training time for travel, potentially resulting in an inability to meet training proficiency standards. Therefore, the MTC was eliminated from further consideration because it does not meet Screening Criteria #2 as outlined in **Section 2.3.1**. No other suitable training sites are available within the State of Illinois to accommodate this proposal.

2.3.3.2 Establish a New Training Site in Southern Illinois

This alternative was examined but eliminated due to the fact that, as a primary component of Base Realignment and Closure (BRAC), the DoD is eliminating and/or consolidating many installations throughout the US. As sufficient land area is available at the STA to accommodate the required ranges and training facilities, the ILARNG determined that, in accordance with DoD directives and vision, establishment of a new training site was neither feasible nor necessary. This alternative does not meet Screening Criteria #1, #12, and #13 as outlined in **Section 2.3.1**.

2.3.3.3 Reduced-scale Alternative

The potential for a reduced-scale alternative was considered and evaluated by the ILARNG. The Proposed Action represents the optimum, and minimum, facility development proposal necessary to meet the purpose of and need for the Proposed Action. For example, the Zero Range layout cannot be accommodated unless the existing M203 Grenade Launcher Range is reconfigured. The ILARNG determined that there are no nonessential components per DA PAM 385-63 and NGR 5-3. The reduced-scale alternative does not meet Screening Criteria #2, #10, #12 and #13 as outlined in **Section 2.3.1**, and therefore, was eliminated from further consideration.

2.3.3.4 Alternate Location of Range Footprints within the STA

During the range siting process, additional range configurations were evaluated, but were eliminated due to various land constraints. Given the large amount of land this range requires and the available land at STA, siting options were limited for this range. The initial 10-25m Zero Range configuration was rotated south by 3 degrees from the Preferred Action Alternative. This range was initially sited in TA 105 north of Range Road. However, during the SDZ ricochet analysis, the initial configuration for this range in TA 105 was eliminated because the SDZs were extending off-Post (Screening Criteria #4). With the exception of the Preferred Action Alternative, no other layout was identified for the 10-25m Zero Range that would allow the SDZs to remain on-Post. All other range layout alternatives were eliminated because they did not meet one or more of Screening Criteria #3 through #13 as outlined in **Section 2.3.1**.

2.3.4 Impacts Comparison Matrix for Proposed Alternatives

This EA evaluates the potential direct, indirect, and cumulative environmental, cultural, socioeconomic, and physical effects of two alternatives to implementing the proposed ranges and roadway improvements. A comparison of the environmental consequences of these alternatives is provided in **Table 6**.

Table 6. Alternative Comparison Matrix		
Technical Resource Area	No Action Alternative	Preferred Action Alternative
Land Use and Land Cover	No impact attributable to the ILARNG action. STA's full training potential would continue to be limited and the facilities necessary to accommodate the training mission and to become a CTC would not be available. The failure to provide the required training facilities would negatively impact the long-term viability of the STA as a training center, resulting in a <u>potentially significant long-term adverse</u> land use impact.	Long-term <u>positive</u> impact to land use and the STA mission is expected by improving the training use, capability, sustainability and value of these areas. No major effect to on-Post land use is expected as components of the Proposed Action were sited to maximize training value and use. No conflict with existing or proposed off-Post land use is anticipated at this time. However, the ILARNG will work with local zoning officials to ensure surrounding area land use remains compatible in the future. Short-term and long-term, <u>less-than-significant adverse</u> effects to land cover are anticipated. ILARNG would minimize clearing and earthwork to the maximum extent possible to minimize disturbance and associated construction costs.
Air Quality	No impact attributable to the ILARNG action. Ongoing operations' emissions would continue.	Short-term, <u>less-than-significant adverse</u> impact due to the potential for dust generation from construction activities and the proximity of sensitive receptors. Long-term <u>less-than-significant adverse</u> impact to local air quality due to increased training site use, weapons firing and vehicle traffic. Impacts would be reduced with implementation of Best Management Practices (BMPs).
Noise	No impact attributable to the ILARNG action. Ongoing noise associated with current training operations would continue.	Short-term, <u>less-than-significant adverse</u> impact due to the potential for noise generation from construction activities and the proximity of sensitive receptors. Long-term, <u>less-than-significant adverse</u> impacts due to increased noise levels associated with proposed firing ranges and training site usage and the proximity of sensitive receptors. Impacts would be reduced with implementation of BMPs.
Topography, Geology, and Soils	No impact attributable to the ILARNG action. Long-term <u>positive</u> soil impacts from the proposed roadway maintenance projects would not be recognized, and could lead to <u>adverse</u> impacts associated with soil erosion.	Short-term, <u>less-than-significant adverse</u> impact during land disturbing activities within the Proposed Action area, respectively. Impacts would be reduced with implementation of BMPs. Long-term <u>positive</u> impacts due to roadway improvement projects. Potential <u>significant adverse</u> impact to soils from range operations. Impacts would be reduced to less-than-significant levels with implementation of mitigation measures.

Table 6. Alternative Comparison Matrix		
Technical Resource Area	No Action Alternative	Preferred Action Alternative
Water Resources	No impact attributable to the ILARNG action. <i>Long-term positive</i> soil impacts from the proposed roadway maintenance projects would not be recognized, and could lead to <i>adverse</i> impacts associated with increased soil erosion and sedimentation.	Potential short-term, <u>less-than-significant adverse</u> impact to water quality during project activities resulting in erosion and sedimentation, and to streams, wetlands and floodplains from construction. Impacts would be reduced with implementation of BMPs. Potential <i>significant adverse</i> impacts to surface water and groundwater quality from range operations. Impacts will be reduced to less-than-significant levels with implementation of mitigation measures.
Biological Resources	No impact attributable to the ILARNG action.	Short-term, <u>less-than-significant adverse</u> impact to biological resources from construction noise and vegetation removal. Long-term, <u>less-than-significant adverse</u> impacts due to elimination of vegetation and wildlife habitat, which would be minor on a regional and local scale. Potential <i>significant adverse</i> impact to federal and state-listed species from construction, increased training site use and range operations. Impacts would be reduced to less-than-significant levels with implementation of mitigation measures.
Cultural Resources	No impact attributable to the ILARNG action.	No effect to cultural resources are anticipated as a result of the Proposed Action. If an inadvertent discovery of cultural resources is made during ground disturbing activities, impacts would be reduced to <u>less-than-significant</u> levels with implementation of BMPs.
Socioeconomics (including Environmental Justice and Protection of Children)	No impact attributable to the ILARNG action. Health and safety risks would continue due to excess out-of-state travel to meet training requirements.	Short-term, <u>positive</u> impacts to the socioeconomic environment, including environmental justice. Potential <i>significant adverse</i> impact to public safety from range SDZs. Impacts would be reduced to less-than-significant levels with implementation of mitigation measures.
Infrastructure	No impact attributable to the ILARNG action. Utility usage would continue as under current conditions. Beneficial impacts to on-Post infrastructure would not be recognized.	Potential <u>less-than-significant adverse</u> impact to utility consumption from increased training site use, utility extensions, and the relocation of the high voltage power line. Short-term and long-term, <u>less-than-significant adverse</u> impacts due to construction traffic and increased site usage. Impacts would be reduced with implementation of BMPs. Potential <i>significant adverse</i> impact to local airport and aviation travel from operation of a small arms range. Impacts would be reduced to less-than-significant levels with implementation of mitigation measures.

Table 6. Alternative Comparison Matrix		
Technical Resource Area	No Action Alternative	Preferred Action Alternative
Hazardous and Toxic Materials and Wastes	No impact attributable to the ILARNG action. The ILARNG Pollution Prevention (P2) Plan, STA Spill Prevention Control and Countermeasure Plan (SPCCP), and Installation Spill Contingency Plan would continue to be implemented.	Short-term and long-term, <u>less-than-significant adverse</u> impacts due to construction activities and increased training site use. Impacts would be controlled through BMPs and ongoing regulatory compliance.

SECTION 3: AFFECTED ENVIRONMENT

Sections within the Affected Environment that have not substantially changed since the 2011 Final EA are referenced within this text, without reproducing the entire section. Sections within the Affected Environment that have changed or where newer data is available have been updated, with emphasis on those resources potentially impacted by the Proposed Action. **Section 4**, Environmental Consequences, identifies potential direct, indirect, and cumulative effects of the identified project alternatives on each of the issue areas presented in this section. The reader is referred to the **Appendix B** for an overview of the regulatory framework for each of the technical areas discussed in this section.

3.1 Location Description

The 2,642-acre STA is located in Randolph County in southwestern Illinois and is approximately 45 miles southeast of St. Louis, Missouri (see **Figures 1 and 2**). The STA is composed of 2,245.5 acres of strip-mined land dedicated by PCC on 31 October 1986 for military training and an additional 396.5 acres of land conveyed by the City of Sparta. PCC transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in FY 2007.

3.2 Land Use and Cover

The STA is located mainly within the City of Sparta's incorporated boundary (see **Figure 1**). Surrounding land use is agricultural with low-density rural development. Several agricultural fields, farms, and residences lie adjacent to or in the vicinity of the STA boundary. Light commercial and residential properties are located to the south and southeast (PGAV 2008). The 1,620-acre IDNR World Shooting and Recreational Complex adjoins the northwestern portion of the STA along Plum Creek. The 631st Engineer Support Company and 661st and 662nd Firefighting Teams are based at the Sparta Armory and Fire Station, which are adjacent to the STA boundary at the intersection of Hillcrest Drive and W Stevenson Drive (see **Figures 2 and 6**).

According to the City of Sparta Zoning District Map, the STA is zoned primarily as a Light Industrial District with some areas identified as an Agricultural District. The land immediately adjacent to the STA is zoned similarly. Areas zoned for Residential Districts occur within approximately 0.5 mile to the east of the STA; they occur primarily east of Hillcrest Drive with the exception of a few small parcels (HMG Engineers 2012).

Approximately 90% of the STA was previously strip-mined. The STA is primarily undeveloped and has been divided into 14 TAs (see **Figure 2**). The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses in the central and northern portions, and Plum Creek and its associated forested riparian corridor in the north (see **Figures 9a and 9b**). TA 201 is outleased for agriculture. The lease is for hay production only.

Total acreage of land cover types (most to least) consists of grassland (approximately 1,863 acres), water (approximately 310 acres), forest (approximately 306 acres), agriculture (approximately 144 acres), and disturbed/impervious areas (approximately 19 acres) (see **Figure 2**). Disturbed/impervious areas include existing infrastructure, gravel roads, dirt trails, and sediment

basins. Existing facilities on STA include an administration building, battalion maintenance shelter, and barracks building in the eastern portion of TA 101; three Land Navigation Courses; an M203 Grenade Launcher Range that uses chalk training practice rounds only in TA 105; an Engineering Training Area in TA 101; and a Bayonet Assault Course, Hand Grenade Qualification Course, and Tactical Training Base in TA 103. Existing training facilities and land cover are illustrated in **Figure 2**.

Land cover types within the proposed project area include forest, grass, open water, and other non-vegetated land (e.g., roads/trails). Land cover types by project component are summarized in **Table 7**.

Proposed Project Components	Estimated Land Cover (acres)*					% Formerly Strip-Mined
	Total	Forest	Grass	No Vegetation	Open Water	
10-25m Zero Range Footprint	4	0	4	0	0	100%
M203 Grenade Launcher Range – <i>Relocation</i>	6	0	6	0	0	100%
Relocation of High Voltage Power Line for 10-25m Zero Range (~3.6 miles; 50-foot corridor)	23	<0.1	22.9	0	0	85%
New roads and trails (includes culverts and LWCs)	40	>0.5	35	4.5	>0.5	95%
Range SDZs (<i>No land disturbance</i>)	440	11	371	8	50	95%

* Land cover within each project area is based on aerial coverage and in-the-field ground-truthing by the STA Environmental Office

3.3 Air Quality

3.3.1 Ambient Air Quality

The ambient air quality in an area can be characterized in terms of whether or not it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS). The Clean Air Act, as amended (CAA) requires the USEPA to set NAAQS for pollutants considered harmful to public health and the environment. NAAQS are provided for six principal pollutants, called “criteria pollutants” (as listed under Section 108 of the CAA): carbon monoxide (CO); lead (Pb); nitrogen oxides (NO_x); ozone (O₃); particulate matter (PM), divided into two size classes of 1) aerodynamic size less than or equal to 10 micrometers (PM₁₀), and 2) aerodynamic size less than or equal to 2.5 micrometers (PM_{2.5}); and sulfur dioxide (SO₂). The General Conformity Rule (40 CFR Part 51, Subpart W) requires federal agencies to prepare written Conformity Determinations for federal actions in or affecting NAAQS in non-attainment areas, except when the action is covered under the Transportation Conformity Rule or when the action is exempted because the total increase in emissions is insignificant, or a *de minimis* amount.

Air quality within Randolph County is “in attainment” for all NAAQS criteria pollutants with the exception of PM_{2.5} (1997 standard). However, only Baldwin Township within Randolph County is classified as a nonattainment area for PM_{2.5} (1997). The remainder of the county, including the

STA, is considered “in attainment” (USEPA 2014). Therefore, the procedural requirements of the General Conformity Provision of the CAA do not apply to the Proposed Action and no Conformity Determination is required.

3.3.2 Sensitive Receptors

There are few sensitive receptors for air pollutants due to the STA's rural nature. Sensitive receptors for air quality include, but are not limited to, asthmatics, children, and the elderly, as well as specific facilities, such as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, and childcare centers.

In general, the majority of sensitive receptors in the vicinity of STA are located southeast of the training site near the center of the town. Sensitive receptors within 1 mile of the STA boundary include the Sparta Community Hospital, three schools, three churches, the Sparta Country Club, and numerous residences. Single-family residences are found in all directions within 1 mile of the STA boundary; however, higher concentrations of single-family homes and residential communities occur south and southeast of the STA. As shown on the aerial, the largest residential concentrations occur between Hillcrest Drive and State Route (SR) 4. The closest residential community occurs immediately south of W Stevenson Drive, approximately 0.3 mile from the eastern STA boundary (see **Figure 6**).

Two residences occur within 0.7 and 0.8 mile to east of the proposed range footprints; all other sensitive receptors are 1 mile or greater. Four residences occur within 1,000 to 2,000 feet from the proposed power line corridor. A total of 14 residences occur within 1,000 feet of the new roads and trails that are proposed near the STA boundary in TAs 103, 106, 108, 109, 110, 201, and 202. Of these residences, 10 of them are already separated by an existing, off-Post roadway (see **Figure 6**).

3.4 Noise

3.4.1 Background

Noise is generally defined as unwanted sound. It can be any sound that is undesirable because it interferes with communications or other human activities, is intense enough to affect hearing, or is otherwise annoying. Noise may be intermittent or continuous, steady, or impulsive. Human response to noise varies, depending on the type of the noise, distance from the noise source, sensitivity, and time of day.

Land use guidelines identified by the Federal Interagency Committee on Urban Noise (FICUN) are used to determine compatible levels of noise exposure for land use planning and control (FICUN 1980). Chapter 14 of AR 200-1 implements federal regulations associated with environmental noise from DA activities. The decibel (dB) is the accepted unit of measurement for noise level, and it uses a logarithmic scale. One of the metrics used by the DA to quantify the noise environment at DA installations is peak sound level (dBP), which is the maximum instantaneous sound level of an event. The dBP is neither weighted nor time integrated, and is used to further define noise zones. AR 200-1 Section 14-4 defines land use compatibility concerning environmental noise for DA activities. A summary of expected noise levels for three general defined noise zones is presented in **Table 8**.

Noise Zone	Population Highly Annoyed	Noise Sensitive Land Use	Small Arms Peak
Zone I	<15%	Acceptable	<87 dBP
Zone II	15%-39%	Normally Not Recommended	87-104 dBP
Zone III	>39%	Not Recommended	>104 dBP

3.4.2 Current Noise Environment

The USAPHC developed a statewide noise management plan for all ILARNG's facilities in 2013. The Operational Noise Management Program (ONMP) is the primary tool the ARNG uses to analyze noise impacts and land use compatibility. The ONMP develops studies to identify noise contours with both location and intensity described. Management practices are then implemented to isolate and minimize noise based on the results of the study (USAPHC 2013).

Currently, the primary noise-generating activity at STA is when the M203 40mm TP Grenade Launcher Range is in use, which is located near the center of the training site (see **Figure 2**). Simulators and non-live fire of rifles and machine guns are also authorized within the TAs; however, these activities are rare. For example, firing 5.56mm and 7.62 blank rounds and 0.5 caliber plastic rounds does not occur at set firing points or locations, but rather occurs at multiple locations and in multiple directions on STA. Thus, noise contours cannot be generated for non-fixed firing points. However, by examining peak noise levels, the area experiencing Zone II levels can be assessed. The highest peak noise levels from non-fixed firing activities occur when firing in the direction of the receiver and under unfavorable wind conditions (i.e., wind blowing in the direction of the receiver). When combining these unfavorable conditions, it was determined that peak noise levels could reach Zone II levels within in a 200 meter (667 feet) buffer around the firing location when firing 5.56mm blanks and an 800 meter (2,665 feet) buffer when firing 7.62mm blanks or .50 caliber plastic rounds (USAPHC 2014).

As discussed previously, STA is located primarily within the incorporated area of Sparta with the majority of sensitive receptors occurring south and southeast of the facility. For more information on sensitive receptors in the vicinity of STA, refer to **Section 3.3.2** and **Figure 6 and 12**.

3.5 Topography, Geology, and Soils

3.5.1 Topography

The STA is located within the Central Lowland Province, which is characterized by gently rolling fertile plains carved and leveled by glaciers during the Ice Age (Lloyd and Lyke 1995). The Central Plains consist of four distinct sections: Wisconsin Driftless, Dissected Till Plains, Till Plains, and Great Lakes. The STA lies within the Mount Vernon Hill Country subsection of the Till Plain region (Illinois State Geological Survey [ISGS] 2014). The topography of the training site is characterized by cool and warm seasoned prairie grassland with man-made lakes carved out during surface mining activities. Maximum lake depths range from 3.5 meters (approximately 11.5 feet) to 32 meters (approximately 105 feet). Slopes along lakes tend to be rather steep and susceptible to erosion.

Land elevations range from approximately 130 to 162 meters (426 to 532 feet) above sea level (see **Figure 7**). In general, topography slopes down from the eastern boundary of the training site toward the northwestern portion. The highest elevation is located in the southeastern corner of the STA, while the lowest elevations tend to occur along Plum Creek.

3.5.2 Geology and Soils

A detailed description of the geology and regional and local coal mining for STA is provided in the 2011 Final EA. The reader is referred to that document for further detailed context and description.

Surficial geology of the region is characterized by unconsolidated Quaternary deposits less than 100 feet deep and consisting of sand, gravel, and sometimes clay beds. These Quaternary deposits are underlain by Pennsylvanian age limestone (upper and middle portions of sequence) and sandstones (lower portions of sequence) (Lloyd and Lyke 1995).

Approximately 10% of the soil cover on the STA is Banlic, Wakeland, and Birds silt loams, which are bottomland soils along the Plum Creek floodplain. Wakeland and Birds soils, which make up the majority of the bottomland soils, are more susceptible to flooding and high water tables (Leeper 2004). Birds silt loams with 0 to 2% slopes are classified as hydric soils on the National Hydric Soils List (NRCS 2014). Wakeland soils can be a flooding hazard for bivouacking and other similar activities. The remaining 90% of the STA soil cover is upland soils that formed as a result of surface mining with Swanwick and Lenzburg silt loams being the most common. Soil series within STA are summarized in **Table 9** and illustrated in **Figure 8**.

Approximately 40% of the soils found within the STA have management limitations or concerns. Erosion is a hazard and equipment limitations are a concern for Banlic, Blair, Blair-Grantfork, Birds, Bunkum, Bunkum-Couterville, Couterville-Oconee, Marine, Oconee, Orthents, Swanwick, and Wakeland soils along slopes. Machinery should be used only when soil is firm enough to support the equipment (Leeper 2004).

Approximately 90% of the soil types at the STA have high shrink-swell potential and when combined with seasonal wetness can limit these sites for road, building, or other structural use. These soils include Banlic, Blair, Blair-Grantfork, Bunkum, Bunkum-Couterville, Homen, Homen-Atlas, Lenzburg, Oconee, Oconee-Couterville, Orthents (hilly), Ruma, and Swanwick soils. To reduce limitations build reinforced footings and foundations to prevent structural damage, and elevated floors of dwellings without basements. Additionally, sites with Lenzburg soils (approximately 57% of the site) are hindered by subsidence if a dwelling is built over a former slurry pit. A floating foundation may resolve this planning concern. Blair soils typically have high water tables. Tile drains near the foundation or interceptor drains on higher adjacent slopes are suggested by the NRCS for lowering water tables. During construction, erosion hazards and sedimentation into surface waters can be reduced through the use of sediment basins (Leeper 2004).

The majority of the project areas are sited on formally strip-mined lands (see **Table 7**). Thus, approximately 96% (~70 acres) of the project areas with proposed land disturbance are mapped as Swanwick and Lenzburg silt loams or Orthents loamy soils that resulted from previous surface mining. The proposed range footprints and gravel roads are all sited within these soil types.

Approximately 1.3 miles (~2.5 acres) of the proposed roads and trails and 0.5 mile (~3 acres) of the relocated power line project footprints near the STA boundaries contain the following soil types: Banlic, Birds, Bunkum-Couterville, Couterville-Oconee, Homen, Marine and Ruma (see **Figure 8**).

Table 9. Major Soils Types on STA					
Soil Type	Site Cover *		Slope	Hydric	Limitations
	Acres	%	%		
Banlic silt loam	43.1	1.6	0 to 2	No	Erosion hazard, equipment limitations, shrink-swell
Birds silt loam, wet	50.0	1.9	0 to 2	Yes	Flooding, high water tables, erosion hazard, equipment limitations
Blair silt loam	7.7	<1	5 to 18	No	Erosion hazard, equipment limitations, shrink-swell
Blair-Grantfork silt loam	2.6	<1	7 to 15	No	Erosion hazard, equipment limitations, shrink-swell
Bunkum silt loam	6.3	<1	5 to 18	No	Erosion hazard, equipment limitations, shrink-swell
Bunkum-Couterville silt loam	56.9	2.2	2 to 18	No	Erosion hazard, equipment limitations, shrink-swell
Couterville-Oconee silt loam	60.9	2.3	0 to 5	No	Erosion hazard, equipment limitations, shrink-swell
Homen silt loam	19.5	<1	2 to 10	No	Erosion hazard, shrink-swell
Homen-Atlas silty clay loam	2.5	<1	10 to 18	No	Erosion hazard, shrink-swell
Lenzburg gravelly silty clay loam	967.0	36.7	1 to 70	No	Rock fragments, erosion, shrink-swell, subsidence,
Marine silt loam	54.5	2.1	0 to 5	No	Erosion hazard, equipment limitations
Oconee silt loam	9.5	<1	0 to 2	No	Erosion hazard, equipment limitations, shrink-swell
Orthents loamy, undulating and rolling	133.3	5.1	1 to 20	No	Erosion hazard, equipment limitations, shrink-swell
Ruma silt loam	4.0	<1	5 to 10	No	Erosion hazard, shrink-swell
Swanwick silt loam	844.9	32.0	5 to 10	No	Erosion hazard, equipment limitations, shrink-swell
Wakeland silt loam	163.5	6.2	0 to 1	Yes	Flooding, high water tables
* Note: 209 acres or 7.9 % of the STA is water					
Source: NRCS 2015; NRCS 2014; Leeper 2004					

3.6 Water Resources

Surface water resources include lakes, rivers and streams, and are important for a variety of reasons including ecological, economic, recreational and human health. Groundwater comprises subsurface water resources and is an essential resource in many areas because it is used as a source of potable water, for agricultural irrigation, and for industrial purposes. Groundwater

properties are often described in terms of depth to aquifer, aquifer or well capacity, water quality and the surrounding geology. Additional information on surface waters and groundwater for the region and STA is provided in the 2011 Final EA and INRMP for STA (ILARNG 2013). The reader is referred to these documents for further details.

3.6.1 Surface Waters

The STA is located within the Lower Kaskaskia River Watershed. The Kaskaskia River Watershed includes portions of 22 counties from Champaign County (northeastern end) to Randolph County (southwestern end), and covers 10.2 percent (approximately 5,740 square miles) of the State of Illinois. Sedimentation is a concern within this watershed, and most likely resulted from a combination of bank-cutting, agricultural runoff, or head cutting (Southwestern Illinois Resource Conservation and Development [RC&D] 2002).

Surface water on the STA includes Plum Creek, two large lakes (L1 and L2), and thirteen lakes (S1-S13). An additional lake (L3) is located adjacent to the property on the northwest side (see **Figures 9a and 9b**). Some of the lakes on the STA property capture water from Plum Creek, which floods annually. Plum Creek flows from the northeast to the southwest along the northern STA property boundary, and eventually converges with the Kaskaskia River, which drains into the Mississippi River on the western Illinois border. Dog Creek, a small tributary of Plum Creek, enters near the northeastern end of the STA property. Based on the Illinois 303(d) list, Plum Creek is in partial support for aquatic life, its designated use. Potential causes for this impairment are total suspended solids, phosphorus and sedimentation/siltation (IEPA 2014).

Aquatic baseline surveys were conducted between fall 2002 and early winter 2004 in Dog Creek, Plum Creek, and the 15 man-made lakes on STA. Dog Creek was found to add a disproportionate amount of sediment to Plum Creek, which is likely caused by agricultural activities along this stream. However, water quality appears to improve downstream where riparian corridors are better established. Contaminants detected within Plum Creek included dichlorodiphenyltrichloroethane (DDT) and its metabolites dichlorodiphenyldichloroethylene (DDE), and dichlorodiphenyldichloroethane (DDD). In addition, atrazine and simazine, potentially a result of historical agriculture practices in the area, were common herbicides detected in water samples within Plum Creek. However, sedimentation appears to be the major problem affecting water quality (Garvey et al. 2005). Trace contaminants found in lakes include DDT, dieldrin, permethrin, chlordane, endrin, heptachlor, and DDE. Contaminants varied greatly between lakes and were the result of historical applications (e.g., DDT banned over 40 years ago) or adjacent land use (Garvey et al. 2005).

During spring baseline surveys in 2003/2004 (Garvey et al. 2005) and 2015, pH levels were obtained in several of the STA lakes and illustrated in **Chart 2**. Measured pH levels ranged between 7.8 and 9.0 in 2015 and 8.4 and 8.8 in 2003/2004. Lakes L1, L2, and S12 are located within the proposed range SDZ footprints (**Figure 9a**).

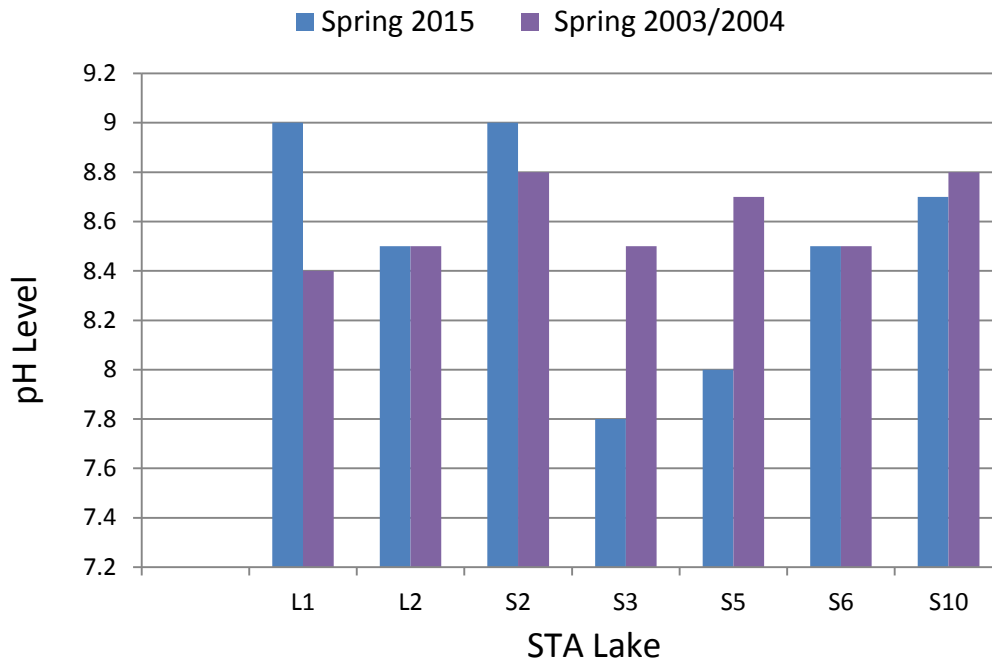


Chart 2. Measured pH Levels within STA Lakes

A hydrologic analysis was conducted for STA to assess the pond and lake network system and to provide recommendations to control lake levels and flow directions. A physical survey of the entire stormwater collection system north of Industrial Drive within STA was completed in support of this analysis (ILARNG 2011b). Drainage sub-basins for the ponds/lakes were delineated and ranged between 10 acres and 1,163 acres. In addition, the streams/ditches on site were ordered using Strahler's Method. The streams within the STA ranged from 1st order to 4th order streams. Plum Creek was not included because its order is dependent on the entire upstream drainage basin that extends well beyond this study area. Generally, the 1st and 2nd order streams were on steep slopes and dry (i.e., ephemeral streams/ditches).

An intermittent stream/ditch occurs north of the proposed M203 Range footprint. This surface water feature occurs outside of the proposed land disturbance area within a steep ravine. In general, proposed roads and trails occur within the upland areas of STA with the exception of the proposed culverts/LWCs (**Figures 9a and 9b**), the proposed road segment located south of Industrial Drive in TA 202 that crosses an unnamed tributary to Plum Creek (**Figures 2 and 9b**) and the proposed trail segment in the northeast corner that crosses Plum Creek (**Figure 9a**). Lakes L1, L2 and S12 and Plum Creek occur within the proposed range SDZs for the 10-25m Zero Range (**Figure 9a**). The proposed power line corridor traverses a few ephemeral drainages (**Figures 9a and 9b**).

3.6.2 Floodplains

Floodplains are generally low areas adjacent to streams, rivers, or lakes prone to flooding. The Federal Emergency Management Agency (FEMA) identifies flood-prone areas on Flood Insurance Rate Maps (FIRM). FIRMs are primarily based on historic, meteorological, hydrologic, and hydraulic data. Open-space conditions, flood control works, and development are also taken into account in creating FIRMs. Base flood areas, or the 100-year floodplain, are delineated on FIRMs. An area

within the 100-year floodplain has a 1-percent chance of flooding each year or a 26% chance of flooding over a 30-year period.

EO 11988 *Floodplain Management* requires agencies to assess the effects that their actions may have on floodplains and to consider alternatives to avoid adverse effects and incompatible development on floodplains. FEMA has identified 100-year floodplains within the STA as shown on the FIRM 17157C0090D, effective 5 November 2008 (FEMA 2008). The 100-year floodplains are located along Plum Creek in the northern portion the STA and along an unnamed tributary in TA 202 (see **Figures 9a and 9b**). The ILARNG has fulfilled the EO 11988 floodplain requirements (see **Appendix E** for a copy of the waivers and supporting documentation).

3.6.3 Wetlands

The USACE defines wetlands as “those areas that are inundated or saturated with ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas” (33 CFR Part 328). Wetlands are protected as a subset of the “waters of the United States” under Section 404 of the Clean Water Act (CWA). Section 401 of the CWA gives the State of Illinois the authority to regulate, through the State water quality certification program, proposed federally-permitted activities that may result in a discharge to water bodies, including wetlands. In the State of Illinois, IEPA issues Section 401 permits. Furthermore, wetlands are protected under EO 11988 *Protection of Wetlands*. The purpose of this EO is to reduce the adverse impacts associated with the destruction or modification of wetlands through federal actions.

An installation-wide wetland planning survey was conducted at STA in August 2003 (CDM 2003). Wetland delineation methodology was performed based on the USACE *1987 Wetland Delineation Manual* (USACE 1987) and the *National Food Security Act Manual (NFSAM) 3rd Edition, Amendment 2* (NRCS 1996). Wetlands were classified using the USFWS nomenclature (Cowardin 1979). CDM (2003) identified approximately 191.7 acres of wetland, which included palustrine forested (PFO) wetland (162.5 acres), palustrine scrub-shrub (PSS) wetland (14.6 acres), palustrine unconsolidated bottom (PUB) wetland (14.1 acres), and palustrine emergent (PEM) wetland (0.6 acres). Wetlands identified during the CDM (2003) wetland survey are shown in **Figures 9a and 9b**.

No wetlands occur within the proposed project footprints that comprise the Proposed Action. While a portion of the range SDZs overlay forested wetlands along Plum Creek, no land disturbance would occur in this area.

3.6.4 Groundwater

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

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

The ILARNG conducted an Environmental Baseline Study (EBS) in 1998 to gather information on the STA property to make an informed decision on the real estate transaction with PCC. During the EBS, a groundwater monitoring well in the northern section of the STA property was located. Analysis results found no analytes above method detection limits with the exception of chloride and total dissolved solids, which are indicative of hard water (ILARNG 1998).

The IEPA reported the groundwater to be non-potable (Class IV) at STA due to past site activities. Therefore, the groundwater should not be used for drinking purposes on site (ILARNG 1998).

3.7 Biological Resources

3.7.1 Vegetation and Wildlife

Numerous installation-wide surveys have been conducted to gather baseline information for STA. Previous surveys have been conducted on STA for vegetation (Lambert and LaMontagne 2010, Fehmi et al. 2003), birds (Pitts and Casebeer 2003), bats (Carter et al. 2014, Hellgren et al. 2012, Carter 2002), mammals (Pitts and Casebeer 2003), reptiles and amphibians (Holland et al. 2013, Pitts and Casebeer 2003), fish (Phelps and Garvey 2009, Garvey et al. 2005), and aquatic macroinvertebrates (Garvey et al. 2005). No terrestrial invertebrate surveys have been conducted at the STA. A detailed summary of the vegetation and wildlife on STA was presented in the 2011 Final EA and INRMP for STA (ILARNG 2013). The reader is referred to these documents for detailed information on general vegetation and wildlife species documented at STA.

The ILARNG is responsible under the Migratory Bird Treaty Act (MBTA), 50 CFR 21, and EO 13186 (*Responsibilities of Federal Agencies to Protect Migratory Birds*) to promote, support, and contribute to the conservation of migratory birds. The MBTA prohibits, unless permitted by regulations, the pursuit, hunting, take, capture, killing or attempting to take, capture, kill, or possess any migratory bird included in the Migratory Bird Treaty, including any part, nest, or egg of any such bird (16 USC 703). Per 50 CFR 21.15, *Authorization of Take Incidental to Military Readiness Activities*, the DoD is authorized to incidentally take migratory birds in the course of military readiness activities, but with limitations. The ILARNG must confer and cooperate with the USFWS to develop and implement appropriate conservation measures for actions that, determined through the NEPA process, may result in a significant adverse effect on a population of migratory bird species.

EO 13186 requires each Federal Agency to develop a Memorandum of Understanding (MOU) with the USFWS that promotes the conservation of migratory birds. Effective in July 2006, the MOU

between DoD and USFWS outlines a collaborative approach to promote the conservation of migratory bird populations. This MOU specifically pertains to actions that are not classified as military readiness activities and places emphasis on migratory bird species of concern (SOC), which are species that may experience greater degrees of impacts from direct or indirect disturbances. The NEPA process is used to assess the direct and indirect impacts of a proposed action on migratory birds, and their habitat, within the project area.

Land cover types within the proposed project areas include forest, grass, open water, and other non-vegetated land (e.g., roads/trails), with the vast majority of the land being composed of grassland (see **Table 7**). According to INRMP, several species of migratory birds have been observed at STA, including migratory bird SOC (ILARNG 2013, Pitts and Casebeer 2003). Due to population declines, threats to habitat, and other factors that define a species as a SOC, these migratory bird species are the most susceptible to experiencing impacts at the population level, with the exception of those species already listed as federal or state endangered and threatened species. Based on the eight different priority lists¹² used to determine migratory bird species of concern, a total of 23 migratory bird SOC have been observed at STA (DoD 2015). Two of these species, the loggerhead shrike (*Lanius ludovicianus*) and northern harrier (*Circus cyaneus*), are listed as state endangered and are discussed in **Section 3.7.2**. The remaining migratory bird SOC found on STA are summarized below based on their preferred habitat.

- **Grassland habitat:** eastern meadowlark (*Sturnella magna*), mourning dove (*Zenaidura macroura*), eastern kingbird (*Tyrannus tyrannus*), dickcissel (*Spiza americana*), grasshopper sparrow (*Ammodramus saviarum*), killdeer (*Charadrius vociferous*), chimney swift (*Chaetura pelagica*), and common flicker (*Colaptes auratus*)
- **Brush land, thickets, and open forest habitat:** orchard oriole (*Icterus spurius*), eastern towhee (*Pipilo erythrophthalmus*), field sparrow (*Spizella pusilla*), and brown thrasher (*Toxostoma rufum*).
- **Forested habitat:** wood thrush (*Hylocichla mustelina*), Carolina chickadee (*Parus carolinensis*), yellow-billed cuckoo (*Coccyzus americanus*), eastern wood-pewee (*Contopus virens*), great-crested flycatcher (*Myiarchus crinitus*), and red-bellied woodpecker (*Melanerpes carolinus*).
- **Open water habitat:** blue-winged teal (*Anas discors*), Canada goose (*Branta canadensis*), and mallard (*Anas platyrhynchos*).

¹² USFWS' 2008 Migratory Birds of Conservation Concern; North American Waterbird Conservation Plan; U.S. Shorebird Conservation Plan; Partners in Flight Bird Conservation Plans; species or populations of waterfowl identified as high, or moderately high, continental priority in the North American Waterfowl Management Plan; listed threatened and endangered bird species; and MBTA listed game birds below desired population sizes.

3.7.2 Endangered and Threatened Species

The USFWS administers the Endangered Species Act (ESA) of 1973 as amended. This law provides federal protection for species designated as federally endangered or threatened. An endangered species is “in danger of extinction throughout all or a significant portion of its range,” and a threatened species “is likely to become an endangered species within the foreseeable future” (USFWS 1988). Special status species are listed as threatened or endangered, are proposed for listing, or are candidates for listing by the state and/or federal government. The IDNR, Illinois Endangered Species Protection (IESP) Board determines the state status of species. The IESP Board was created as a result of the Illinois Endangered Species Protection Act in 1972 (520 Illinois Compiled Statutes [ILCS] 10/). **Table 10** presents a list of federal and state-listed species known to occur within Randolph County, Illinois as well as those species observed at the STA.

Federally listed species with known occurrence in Randolph County, Illinois include the endangered Indiana bat, endangered least tern (*Sterna antillarum*), endangered pallid sturgeon (*Scaphirynchus albus*), threatened small whorled pogonia (*Isotria medeoloides*), and the threatened Northern long-eared bat (*Myotis septentrionalis*). With the exception of the Indiana bat and Northern long-eared bat, none of these species has been documented on STA during previous surveys (Carter et al. 2014, Hellgren et al. 2012, Lambert and LaMontagne 2010, Phelps and Garvey 2009, Garvey et al. 2005, Fehmi et al. 2003, Pitts and Casebeer 2003, Carter 2002).

Six bat species have been captured during previous mist netting efforts (Hellgren et al. 2012, Carter 2002). While no federally endangered Indiana bats were captured by Carter (2002), 14 Indiana bats were captured in August 2012 throughout the Plum Creek corridor in TA 108 and along the wooded drainage in TA 202 (Hellgren et al. 2012) and multiple maternity colonies were located within the Plum Creek corridor in 2014 (Carter et al. 2014). The threatened northern long-eared bat was captured during a mist net survey by Carter (2002) in the northwestern corner of the Plum Creek floodplain on STA. However, this bat species was not documented during the most recent 2012 and 2014 surveys (Carter et al. 2014, Hellgren et al. 2012).

A total of 31 state-listed species are known to occur in Randolph County (Illinois Natural Heritage Database [INHD] 2015, USFWS 2014). Nine of these species have been observed during previous survey efforts at the STA, which include the Indiana bat, northern long-eared bat, chick-will's widow (*Caprimulgus carolinensis*), northern harrier (*Circus cyaneus*), loggerhead shrike (*Lanius ludovicianus*), shortleaf pine (*Pinus echinata*), Great Plain's rat snake (*Pantherophis emoryi*), ornate box turtle (*Terrapene ornata*), and smooth softshell turtle (*Apalone mutica*). No other state listed species are known to occur at the STA. A brief summary of the previously documented state listed species is provided below.

- **Chick-will's widow** – The chick-will's widow is restricted as a breeder to southern Illinois. It breeds in pine, oak-hickory, and other forested areas, but tends to occur in more open areas than the similar whip-poor-will (*Antrostomus vociferus*) (Straight and Cooper 2000). This species was observed at the STA, and is a rare summer resident (Pitts and Casebeer 2003).

- **Northern harrier** – The northern harrier is a common migrant and winter resident of Illinois, and has occasionally been noted as a summer resident. Its general habitat is terrestrial and riparian areas, but it has also been observed in agricultural pastures and non-forested wetlands (Illinois Natural History Survey [INHS] 2015). This species was observed at the STA, and is an uncommon winter resident (Pitts and Casebeer 2003).
- **Loggerhead shrike** –Shrikes prefer “edge” habitat for nesting (e.g., along roadsides and hedgerows in agricultural areas) and tree species with thorns. They prefer open habitat characterized by grasses and forbs of low stature interspersed with bare ground and shrubs or low trees (Cornell University 2014). This species was observed at the STA, and is most likely a rare summer resident (Pitts and Casebeer 2003).
- **Shortleaf pine** – Two of these trees were observed in the southwestern portion of TA 201 on STA (Lambert and LaMontagne 2010).
- **Great Plains rat snake** – Habitat for this snake consists of rocky, wooded hillsides, hill prairies, bluffs and adjacent brushy fields (INHS 2015). Prior to the study done at STA by Holland et al. (2013), the Great Plains rat snake had only been found along the Mississippi River bluffs from Jersey to Randolph Counties (INHS 2015). One Great Plains rat snake was found in the grassland areas of STA during this survey (Holland et al. 2013).
- **Ornate box turtle** – Habitat for this turtle consists of prairies or open fields in former prairie (INHS 2015). This species was observed at STA during previous surveys by Holland et al. (2013) and Pitts and Casebeer (2003).
- **Smooth softshell turtle** – This turtle occurs in rivers and large streams that contain sand substrate, bars, and banks (INHS 2015), and has witnessed significant population declines due to agricultural runoff, siltation, and pollution (Phillips et al. 1999). Smooth softshells were found during the 2002 survey (Pitts and Casebeer 2004). Holland et al. (2013) did not observe this species, but rather observed numerous individuals of the spiny softshell (*Apalone spinifera*). The spiny softshell may be occupying the area previously inhabited by smooth softshell due to its high tolerance of disturbed areas (Mankowski 2010).

Table 10. Threatened and Endangered Species known and with the potential to occur in Randolph County, Illinois

Common Name	Scientific Name	State Status	Federal Status
Birds			
Bald Eagle	<i>Haliaeetus leucocephalus</i>	-	BGEPA**
Barn Owl	<i>Tyto alba</i>	LT	-
Chick-Will's Widow*	<i>Caprimulgus carolinensis</i>	LT	-
Least Tern	<i>Sternula antillarum</i>	LE	E
Loggerhead Shrike *	<i>Lanius ludovicianus</i>	LE	-
Mississippi Kite	<i>Ictinia mississippiensis</i>	LT	-
Northern Harrier *	<i>Circus cyaneus</i>	LE	-
Short-eared Owl	<i>Asio flammeus</i>	LE	-

Table 10. Threatened and Endangered Species known and with the potential to occur in Randolph County, Illinois

Common Name	Scientific Name	State Status	Federal Status
Fish			
American Eel	<i>Anguilla rostrata</i>	LT	-
Bigeye Shiner	<i>Notropis boops</i>	LE	-
Pallid Sturgeon	<i>Scaphirhynchus albus</i>	LE	E
Western Sand Darter	<i>Ammocrypta clarum</i>	LE	-
Mammals			
Indiana Bat*	<i>Myotis sodalis</i>	LE	E
Northern Long-eared Bat*	<i>Myotis septentrionalis</i>	LT	T
Plants			
Bellows Beak Sedge	<i>Carex physorhyncha</i>	LE	-
Bradley's Spleenwort	<i>Asplenium bradleyi</i>	LE	-
Crested Coralroot Orchid	<i>Hexalectris spicata</i>	LE	-
Fameflower	<i>Talinum calycinum</i>	LE	-
Missouri Orange Coneflower	<i>Rudbeckia missouriensis</i>	LT	-
Mock Bishop's Weed	<i>Ptilimnium nuttallii</i>	LE	-
Shortleaf Pine*	<i>Pinus echinata</i>	LE	-
Small Whorled Pogonia	<i>Isotria medeoloides</i>	LE	T
Whitlow Grass	<i>Draba cuneifolia</i>	LE	-
Yellow Honeysuckle	<i>Lonicera flava</i>	LE	-
Amphibians and Reptiles			
Coachwhip	<i>Masticophis flagellum</i>	LE	-
Eastern Narrowmouth Toad	<i>Gastrophryne carolinensis</i>	LT	-
Flathead Snake	<i>Tantilla gracilis</i>	LT	-
Great Plains Rat Snake*	<i>Pantherophis emoryi</i>	LE	-
Ornate Box Turtle*	<i>Terrapene ornata</i>	LT	-
Smooth Softshell*	<i>Apalone mutica</i>	LE	-
Timber Rattlesnake	<i>Crotalus horridus</i>	LT	-
* Species observed at the STA.			
** No longer listed under Endangered Species Act; protected under Bald and Golden Eagle Protection Act			
FEDERAL STATUS			
E = Endangered = Danger of extinction throughout range			
T = Threatened = Likely to become endangered in foreseeable future throughout range			
PE = Proposed as Endangered			
BGEPA = Bald and Golden Eagle Protection Act			
ILLINOIS STATUS			
LE = Endangered includes any species which is in danger of extinction as a breeding species in Illinois			
LT = Threatened includes any breeding species which is likely to become a state endangered species within the foreseeable future in Illinois			
Sources: USFWS 2014, INHD 2015, Holland et al. 2013, Hellgren et al. 2012, Lambert and LaMontagne 2010, Phelps and Garvey 2009, Garvey et al. 2005, Fehmi et al. 2003, Pitts and Casebeer 2003			

3.8 Cultural Resources

3.8.1 Overview

Cultural resources are historic properties as defined by the NHPA, cultural items as defined by the NAGPRA, archaeological resources as defined by the Archaeological Resources Protection Act (ARPA), sacred sites as defined by EO 13007 to which access is afforded under the American Indian Religious Freedom Act (AIRFA), and collections and associated records as defined by 36 CFR 79. NEPA requires consideration of “important historic, cultural, and natural aspects of our natural heritage.” Consideration of cultural resources under NEPA includes the necessity to independently comply with the applicable procedures and requirements of other federal and state laws, regulations, EOs, presidential memoranda, and ARNG guidance. The ILARNG ICRMP, prepared in consultation with the IHPA¹³, provides detailed guidelines and procedures to enable the ILARNG to meet legal responsibilities for identification, evaluation, and treatment of historic properties under its jurisdiction in accordance with applicable federal and state regulations affording protection to cultural resources (ILARNG 2011c).

3.8.2 Archaeological and Architectural Resources

The STA land was dedicated to the ILARNG on 31 October 1986 from PCC. In April 2004, the DMAIL acquired the site for no cost for the purposes of military training. Approximately 90% of the STA was strip-mined for coal production. No structures occur within the STA over 50 years old.

Archeological surveys were conducted by PCC prior to property transfer. These surveys covered all but an approximately 250-acre area of low riparian environment that abuts the active channel of Plum Creek. No cultural resources of significance were identified during the surveys according to state site files at the Illinois State Museum. The remaining approximately 250 acres was evaluated by Dr. Brian Butler, Center for Archaeological Investigations, Southern Illinois University Carbondale. His conclusion from this examination was that there is no reasonable expectation of finding prehistoric or significant historic remains because of the site topography and stream conditions. The IHPA concurred in writing that there are no significant cultural resources within the STA on 19 October 2004.

As discussed in **Section 1.5.2**, the ILARNG initiated consultation with the IHPA on 22 December 2014 for this EA. In a letter dated 15 January 2015, the IHPA made the determination that no historic properties would be affected as a result of the proposed projects (see **Appendix A**).

3.8.3 Native American Consultation

The ILARNG has consulted with federally recognized Native American tribes as required under DoDI 4710.02. During this process, the ILARNG has considered the *Annotated DoD American Indian and Alaska Native Policy*, EO 13175, and AR 200-1. The ILARNG contacted two federally recognized Native American tribes that may have ancestral ties to the STA, which include the Peoria Tribes of Indians of Oklahoma and Delaware Nation of Oklahoma. A copy of the correspondence letters and an MFR are included in **Appendix A**. The ILARNG will continue to

¹³ The IHPA is the State Historic Preservation Office in the State of Illinois.

consult with the IHPA and interested tribes in accordance with the NHPA on a project-by-project basis as proposed roadway projects are planned over the next five years.

3.9 Socioeconomics

The following subsections identify and describe the socioeconomic environment surrounding the STA. Presented data provide an understanding of the socioeconomic factors that have developed the area. Socioeconomic areas of discussion include the local demographics, regional and local economy, local housing, and local recreation activities. Data used in preparing this section was collected from the 2008-2012 American Community Survey (US Census Bureau 2014), 2010 US Census Bureau, Illinois Department of Commerce and Economic Opportunity (DCEO), and Illinois Department of Employment Security (IDES).

3.9.1 Population Demographics

The population of Randolph County was 33,893 in 2000 and 33,476 in 2010 – a decrease of 1.2% (US Census Bureau 2010). The State of Illinois had a population of 12,830,362 in 2010, an overall increase of 3.3% from 2000, much less than the overall 9.3% increase in US population over the same period (US Census Bureau 2010). As with Randolph County, the City of Sparta's population decreased by 4.1% between 2000 (4,486) and 2010 (4,302). However, population projections predict that this trend will reverse (see **Table 11**).

Year	State of Illinois	Randolph County
2010	13,279,091	34,432
2015	13,748,695	35,090
2020	14,316,487	35,743
2025	14,784,968	36,260
2030	15,138,849	37,004
Projected Change, 2010-2030 (%)	14.0%	7%

Source: DCEO 2014a

3.9.2 Regional Economy

The labor force in 2012 was 15,297 in Randolph County and 2,234 in the City of Sparta. Regional economic information is provided in **Table 12**. The top five industry types in the region are: (1) educational, health, and social services (21.3%); (2) manufacturing (14.5%); (3) retail trade (11.7%); (4) construction (10%); and transportation and warehousing, and utilities (8.5%). These industries employ 66% of the civilian labor force in the Sparta area (US Census Bureau 2014).

Per capita and median household income statistics from the 2008-2012 American Community Survey indicate that Randolph County has lower incomes in comparison to the State and City of Sparta. However, poverty levels for County are lower than the overall levels for the State, and nearly 40% lower than the City of Sparta (US Census Bureau 2014).

The US unemployment rate in September 2014 was 5.9%. Randolph County had an unemployment rate of 5.9%, which is tied for 32nd lowest in Illinois (102 counties total). The overall state unemployment rate is 6.6%, with the highest unemployment rate in Franklin and Hardin Counties at 8.9%. Sparta unemployment was 5.9% (IDES 2014).

The ILARNG began conducting training activities at STA in FY 2007. Between FY 2007 and FY 2014, site usage has been rather limited with approximately 4,567 personnel trained on average. Site usage has ranged between 2,577 man-days (FY 2008) and 7,781 man-days (FY 2010) with peak site usage occurring typically within the summer months. During the past 8 years, approximately 99% of site usage has been DoD personnel, which have mainly included ARNG units.

Area	Number of Households	Median Household Income	Per Capita Income	Percent of Population Below Poverty Level	Unemployment Rate (%) September 2014
State of Illinois	4,774,275	56,853	29,519	13.7	6.6
Randolph County	11,820	48,383	21,600	12.4	5.9
Sparta	1,866	43,056	23,194	20.3	5.9

Sources: US Census Bureau 2014, IDES 2014

3.9.3 Housing

Median home values in the State of Illinois are twice as high as Randolph County, with the county being slightly higher than the City of Sparta. Owner occupancy rates are higher in Randolph County than in Sparta or Illinois. Overall occupied housing units are very similar between the Randolph County and Sparta, though the State of Illinois has more occupied housing than both of these. **Table 13** presents selected housing characteristics for the areas surrounding the STA.

Area	Housing Units Available	Occupied (%)	Owner-Occupied (%)	Median Value	Median Home Mortgage	Renter-Occupied (%)	Median Contract Rent
State of Illinois	5,293,619	90.2	68.0	190,800	1,727	32.0	877
Randolph County	13,718	86.2	76.1	89,300	996	23.9	636
Sparta	2,160	86.4	64.4	78,600	880	35.6	625

Source: US Census Bureau 2014

3.9.4 Schools

Several education facilities are located within 1 mile of the STA in the City of Sparta. These include Sparta Primary Attendance Center, Sparta High School and St John Lutheran Pre-School. Sparta-Lincoln Attendance Center is more than 1 mile from the southern STA boundary to the south. Ten colleges and universities are located within 50 miles of the STA, notably more in the St. Louis area to the northwest.

According to the US Census statistics, the State of Illinois has a higher percentage of individuals with a post-secondary degree compared with Randolph County and Sparta. However, the City of Sparta has a slightly higher percentage of individuals with a high school diploma than the State, and both the city and state are higher than Randolph County. **Table 14** provides regional educational attainment for persons 25 years and older.

Area	No Diploma (%)	High School Graduates (%)	Post-Secondary Graduates (%)
State of Illinois	13.1	87.0	31.1
Randolph County	19.0	81.0	11.5
Sparta	10.6	89.4	19.4

Source: US Census Bureau 2014

3.9.5 Shops and Services

Commercial shops and services are available in Sparta with businesses in close proximity to the southeastern portion of the STA. The northern portion of Sparta, closest to the STA is where the large commercial areas are located. Route 1 (N Market Street), which runs north-south to the east of the STA, is the main corridor of shops and services in the city. In addition, smaller commercial land use is concentrated where Route 1 intersects Broadway.

3.9.6 Recreational Facilities

Hunting, fishing and trapping are authorized on STA for those individuals that possess the STA hunting, fishing, and trapping permit in accordance with the National Guard Illinois (NGIL) Regulation 200-13-001, *Draft STA Hunting and Fishing Regulation* (2015) as well as applicable State of Illinois license, tags, permits, or stamp in accordance with the provisions of the Illinois Wildlife Code (520 ILCS 5/) and Illinois Fish and Aquatic Code (515 ILCS 5/). STA hunting and fishing permits are available to all current and 20-year retired military members and their dependents in possession of a valid military identification card and to employees of the DMAIL. Access is by foot traffic only and occurs during non-training periods. Permits are issued by the STA Natural Resource Manager, located in the STA Headquarters Building. Currently the taking of game other than whitetail deer is prohibited at STA.

Recreational areas nearby include the Sparta Country Club and city parks to the south, and the 1,620-acre World Shooting and Recreational Complex that abuts the northern boundary of the STA along Plum Creek. The World Shooting and Recreational Complex is owned and operated by the

IDNR and was opened to the public on 1 September 1 2006. The 1,620-acre complex includes 24 skeet fields, the longest trap line in the world with 120 trap fields, 2 sporting clay courses, a cowboy action shooting corral, archery, camping, and a multi-use recreation center. The complex also features a multi-purpose recreational facility and nearly 750 recreational vehicle (RV) campsites with electric, water, and sanitary services, as well as an additional 264 sites with electrical service. Two lakes within the complex have been stocked with various game fish, and are equipped with boat ramps and fish docks.

3.9.7 Public and Occupational Health and Safety

The ILARNG is responsible for law enforcement patrol at the STA, and reports issues to local law enforcement. The Sparta Police Department, a full service law enforcement agency, is located approximately 2.5 miles south of STA in City Hall. The Sparta Fire Department is located approximately 2.5 miles south of STA. In addition, the 631st Engineer Support Company and 661st and 662nd Firefighting Teams are stationed at the Sparta Armory and Fire Station that lies adjacent to the STA Cantonment Area.

The closest medical facility to STA is the Sparta Community Hospital, which is a 39-bed facility located approximately 3 miles southeast of STA. This hospital's service area encompasses a 25-mile radius including the local communities of Sparta, Steelville, Coulterville, and Marissa.

3.9.8 Protection of Children

Because children may suffer disproportionately from environmental health risks and safety risks, EO 13045 *Protection of Children from Environmental Health Risks and Safety Risks* (1997) was intended to prioritize identification and assessment of environmental health risks and safety risks that may affect children and to ensure federal agencies' policies, programs, activities, and standards address environmental and safety risks to children.

No individuals currently live on STA, and the installation is restricted to authorized personnel only. The general public does not have access to the STA. There are existing security gates and fencing in portions of the installation and signs throughout the STA. Thus, the potential for children to be present would be limited to non-training days for recreation or public outreach events, and concentrations of children are not anticipated to be frequent or great in number. Some single-family homes are located in the vicinity of the STA, but given the rural nature of the area these homes are limited immediately adjacent to the property. The percentage of the population under age 18 is generally similar between the city, county and state with the City of Sparta being the highest and Randolph County the lowest number of individuals who are under 18 (see **Table 15**).

Area	Total Population	Population Under 18	% Population under 18
State of Illinois	12,823,860	3,072,262	19.3
Randolph County	33,353	6,399	16.9
Sparta	4,307	798	21.2

Source: US Census Bureau 2014

3.10 Environmental Justice

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (1994), requires federal agencies to identify and address disproportionate adverse effects of their programs, policies, and activities on minority and low-income populations. Potential environmental justice considerations are determined by comparing demographic and economic characteristics (minority population composition and poverty rates) within the study area to the same characteristics in the surrounding region.

The term “minority population” includes persons who identify themselves as African American, Asian or Pacific Islander, Native American or Alaska Native, or Hispanic. A minority population exists where the percentage of minorities in an affected area either exceeds 50% or is meaningfully greater than in the general population of the large surrounding area. **Table 16** presents regional demographics by race for the areas surrounding the proposed site (US Census Bureau 2014). The city of Sparta and Randolph County have a lower minority percentage than the State of Illinois. The project area does not fit the definition of a minority population area.

Area	All Individuals	White (%)	African-American (%)	American Indian and Alaska Native (%)	Asian or Pacific Islander (%)	Other Race (%)	Hispanic or Latino* (%)
State of Illinois	12,823,860	74.2	15.4	0.6	5.3	6.6	15.8
Randolph County	33,353	89.6	10.3	0.4	0.5	0.1	2.6
Sparta	4,307	78.4	21.2	0.4	0.4	0.0	0.1

* Persons of Hispanic or Latino origin may be of any race

Source: US Census Bureau 2014

The US Census Bureau defines a “poverty area” as a census tract where 20% or more of the residents have incomes below the poverty threshold, and an “extreme poverty area” as one with 40% or more below the poverty level. Sparta’s poverty rate was estimated at 20.3%, which just meets the definition of a poverty area. However, Randolph County’s poverty rate is less than the overall rate for Illinois (US Census Bureau 2014).

Because the City of Sparta technically meets the definition of a poverty area and the STA is situated within the incorporated area of Sparta, poverty levels were examined further. Additional poverty level data was gathered by census tract. The STA is located entirely within census tract 9506 with the exception of a small area in the west-central portion of the installation located in census tract 9507. The poverty level within the census tract 9506 and 9507 were 19.9 and 11.5%, respectively (U.S. Census Bureau 2014). Poverty levels were 17.8% within census tract 9505, which lies directly adjacent to STA to the east. Thus, poverty levels for the census tracts within and adjacent to the STA were all found to be below 20% as illustrated in **Figure 10**. Therefore, the area in the vicinity of STA does not meet the definition of the poverty level.

3.11 Infrastructure

Infrastructure resources include potable water supply, wastewater treatment, energy sources, solid waste disposal, and transportation systems. Utility infrastructure improvements at the STA were assessed and approved in the 2011 Final EA. It was determined that current systems would have the adequate capacity to support the increase in demand. Since the 2011 Final EA, proposed utility improvements have not yet been installed with the exception of a few utility extensions to accommodate the new administration building, battalion maintenance shelter, and billeting building that were constructed west of the Sparta Armory and Fire Station. A brief updated summary of the existing infrastructure at STA is provided below.

Water supply and wastewater treatment is provided by the City of Sparta's water and sewer service. The City's water reservoir has a treatment capacity of 2,160,000 gallons per day and currently has a demand of 652,000 gallons per day (DCEO 2014b). Electricity and natural gas at STA is provided by Ameren Illinois Power (IP) through power lines. Egyptian Electric also supplies power to this area of Sparta. SIPC is the owner of the existing high voltage power line that crosses through the northern side of STA. Egyptian Electric's transmission lines are affixed to SIPC's infrastructure. Solid waste disposal to the Armory is provided through Burriss Disposal Services and Quivey Sanitation. Telecommunications (cable, phones, and Internet) are supplied by Verizon. The adjacent Armory maintains two 3,000-gallon diesel fuel tanks.

The main roadways traversing through the City of Sparta include Illinois SR 153, SR 154, and SR 4. Industrial Drive (adjacent to the north of TA 202) runs east-west through the installation and is open to the public. No other paved roads exist within STA. Existing roads within the STA property include gravel roadbeds created during previous ownership. Some of these roads have become overgrown to varying degrees with grasses planted during reclamation. Gravel roads on STA that have been maintained are classified as secondary roads, while previous roads/trails that are overgrown are classified as tertiary roads. Primary roads (i.e., paved) include Industrial Drive and surrounding roads. The STA currently contains approximately 5.47 miles of gravel roads and 9.69 miles of dirt trails. LWSCs and culverts are found throughout the STA along the training area roadways as illustrated in **Figure 2**.

The Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern boundary of the STA and approximately 2.5 miles from the western boundary (**Figure 2**). The airport does not have a control tower. Aircraft based at this airport include single-engine airplanes, multi-engine airplanes and helicopters. Aircraft operations include 46% transient general aviation, 29% local general aviation, 18% air taxi, and 7% military use. Average aircraft operations are 93 per day. Regular business hours are Monday through Saturday 8:00 am to 5:00 pm. Notification to the airport is necessary for assistance outside these hours (AirNav 2014).

The primary runway is 4,002 foot long and 75 foot wide with asphalt pavement. This runway is oriented in a north-south direction, or 18/36. The secondary runway is 2,646 foot long and 100 foot wide and is a turf landing strip. This runway is oriented in an east-west direction, or 9/27. Runway elevations range from 518.4 feet and 537.6 feet amsl (AirNav 2014). The traffic pattern for runways 36 and 09 are directly over the proposed 10-25m Zero Range SDZs (see **Figure 11**). They extend from the surface (538 feet amsl) up to 1,500 feet amsl. In addition, aircraft flying in and out on either

runway have the potential to fly over these SDZs during normal operations (S. Marquardt, personal communication, 7 January 2015; see **Appendix A**).

3.12 Hazardous and Toxic Materials/Wastes

Hazardous and toxic materials or substances are generally defined as materials or substances that pose a risk (through either physical or chemical reactions) to human health or the environment. Regulated hazardous substances and petroleum products are identified through a number of federal laws and regulations. The most comprehensive list is contained in 40 CFR 302, and identifies quantities of these substances that, when released to the environment, require notification to a federal government agency.

STA currently is a Conditionally Exempt Small Quantity Generator and generates 100 kilograms or less per month of hazardous waste, or 1 kilogram or less per month of acutely hazardous waste. Examples of hazardous materials likely to be handled at STA include antifreeze, motor oil, brake fluid, hydraulic oil, grease, battery acid, fuel oil, diesel fuel, and other fuels for vehicle maintenance; kerosene, paint, and solvents for facility upkeep and maintenance; and pesticides including insecticides, herbicides, fungicides, and rodenticides for pest management on the property.

The ILARNG maintains a statewide P2 Plan and an installation-specific SPCCP for STA. These plans identify potential sources of pollution, BMPs to limit this potential, and procedures to respond to pollution events. At the STA, hazardous materials are handled in accordance with the Installation Spill Contingency Plan.

SECTION 4: ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

This section describes the potential direct, indirect, and cumulative effects of implementing the Proposed Action or Alternatives, as well as Best Management Practices (BMPs) and mitigation measures that would reduce the level of identified impacts. **The ILARNG considers BMPs integral to implementation, and they are not considered separate from the Proposed Action.** Mitigation measures are identified that, when implemented, would reduce the level of identified impacts to acceptable, *less-than-significant* levels. For more information on BMPs and mitigation measures, refer to **Section 4.13**. Definitions of key terms used throughout **Section 4** and a summary of the regulatory framework for NEPA subject areas are included in **Appendix B**.

4.2 Land Use and Cover

4.2.1 Preferred Action Alternative

Under the Preferred Action Alternative, *short-term and long-term, less-than-significant adverse* effects to land cover are anticipated along with a *long-term positive* impact to land use and the STA mission.

Implementation of the Preferred Action Alternative would facilitate and enhance existing training activities at the STA. Land use impacts would be minimal and would be similar in nature to existing conditions. No significant on-Post land use impacts are anticipated as a result of the proposed construction projects, as components of the Preferred Action Alternative have been specifically sited to maximize the training value and use of the installation without use conflicts. Roadway improvement projects would provide long-term beneficial effects to training lands by reducing off-road vehicle use at STA that currently occurs due to limited road and trail access, and by providing long-term maintenance of existing infrastructure. Therefore, *minor, long-term positive* land use impacts are anticipated on STA by improving the training use, capability, sustainability and value of these areas.

Under the Preferred Action Alternative, on-Post building function and architecture impacts are not anticipated. Historic context issues related to this area are addressed in **Section 4.8**.

Implementation of the Preferred Action Alternative is not anticipated to produce significant indirect impacts to off-Post land uses. There is no need for additional off-Post housing currently or an increase in permanent occupancy of areas adjacent to the installation. The services required to support this training increase would be provided by existing or planned infrastructure and land uses. Night lighting at the proposed ranges occasionally required for training is not anticipated to effect adjacent land uses. Proposed ranges would be constructed within the center of STA and would be more than 0.5 mile from the STA boundary. Light would be attenuated by the distance to off-post land uses and design to direct light away from off-Post areas. Potential air and noise impacts to off-Post land uses are discussed in **Sections 4.3.1 and 4.4.1**, respectively.

No conflict with existing or proposed off-Post land use management plans or zoning is anticipated. While the surrounding land is currently comprised primarily of agricultural land use, residential

areas to the south and southeast have increased over the years. The ILARNG will work with the City of Sparta and Randolph County's zoning and planning departments to prevent further encroachment and ensure zoning around the STA remains compatible with on-Post operations and land use to protect the long-term viability of the installation.

The STA mission to provide sufficient lands to support required military training would be achieved under the Preferred Action Alternative. Up to 73 acres of land would be directly disturbed as a result of new construction. Approximately 96% (70 acres) of this land occurs within formerly strip-mined land, and approximately 99% (72 acres) is currently comprised of grassland or unvegetated land (see **Table 7**). No land cover changes are anticipated within the SDZs as result of the Preferred Action Alternative. Additionally, the designation of approximately 440 acres as range SDZ would limit additional development in this area during the operational life of these ranges.

Not all 73 acres within the construction footprints would be directly and/or permanently disturbed. Disturbance, in the form of land cover changes within the proposed range footprints, would occur at the firing points, target/berm locations, SAROCA facilities, access roads, parking areas, underground utility corridors, and equivalent facilities. Estimated land disturbance within the approximately 23-acre aboveground power line corridor is anticipated to be less than 10 acres and mostly temporary. Permanent disturbance would result from new utility poles and some tree clearance in the northeast portion of the corridor (see **Figure 3**). The ILARNG would minimize clearing and earthwork to the maximum extent possible to minimize disturbance and associated construction costs. With the exception of the SAROCA facilities (e.g., tower, classroom), no impervious surfaces are proposed. Under the Preferred Action Alternative, all proposed roadway improvements and parking areas would be developed and maintained with crushed stone to reduce impervious surfaces on-site. Given the limited amount of clearing and impervious surfaces proposed, coupled with the fact that nearly all of these areas have been previously disturbed during past strip-mining activities, the impact to land cover would be negligible under the Preferred Action Alternative.

4.2.2 No Action Alternative

Under the No Action Alternative, existing land use and cover would not change and current installation operations would continue. Training area roadway improvements projects would not be conducted, which could result in more costly rehabilitation projects in the future.

The ILARNG would have to travel out-of-state to meet STRAC requirements due to range deficits in State. In turn, STA's full training potential would continue to be limited and the facilities necessary to accommodate the training mission and to become a CTC would not be available. Therefore, the failure to provide the required training ranges would reduce the use of and potential to enhance training at the STA, resulting in a *potentially significant long-term adverse* impact to future land use.

4.2.3 Mitigation

No mitigation measures will be necessary to reduce any adverse environmental impacts to below significant levels.

4.3 Air Quality

4.3.1 Preferred Action Alternative

Air emissions generated from the Preferred Action Alternative would have *less-than-significant (minor) direct, short-term and long-term adverse impacts* to the existing air quality environment around the STA. Implementation of this Alternative would allow additional training activities to be conducted at the STA, with a commensurate increase in local fugitive air emissions.

Direct impacts would include minor short-term and long-term increased air emission levels as a result of: 1) construction activities, 2) operation of the new Zero Range, 3) vehicular use within STA, and (4) travel to and from the training area. Air pollutant generating sources present during construction activities would be associated primarily with standard large-scale construction equipment. A minor increase in fugitive dust, weapons firing and vehicular engine emissions would be expected.

The ILARNG would ensure dust control associated with the construction of the new Zero Range, relocation of the existing M203 Grenade Launcher Range, and roadway improvements are conducted in accordance with the NRCS (2002) Illinois Urban Manual. To minimize the potential for adverse air quality impacts, the ILARNG would implement the following typical dust control BMPs, as applicable:

- Use appropriate dust suppression methods during on-site construction activities, and if necessary, during dry weather training activities (i.e., available methods include application of water [fresh water only], soil stabilizers, or vegetation; use of enclosures, covers, silt fences, or wheel washers; and suspension of earth-movement or disturbance activities during high wind conditions;
- Require a speed of less than 15 miles per hour for construction equipment on unpaved surfaces;
- Use low volatile organic compounds (VOC) architectural materials, supplies, and equipment;
- Repair and service construction equipment to prevent excess emissions;
- Shut down heavy equipment when not needed; and
- Clean excess soil from heavy equipment and trucks leaving the construction zone to prevent off-site transport.

These dust-reducing measures would be briefed to the contractor at the construction kick-off meeting. The ILARNG's on-site construction manager would be responsible to bring air quality issues, if they arise, to the ILARNG for resolution. The ILARNG will communicate regularly with the surrounding residents, including sensitive populations identified in **Section 3.3.2**, regarding construction schedules.

Minor long-term adverse operational air quality impacts are expected. Long-term impacts from site activities would be associated with proposed range use and increased vehicle traffic, with additional insignificant emissions from routine facility maintenance and operations. The ILARNG anticipates

site usage would increase from approximately 4,567 to 9,000 man-days per year on average, and total traffic of STA-related users could increase by 87% over current conditions as a result of implementing the Preferred Action Alternative. While usage would nearly double, greenhouse gas emissions are anticipated to only increase slightly in the area from increased operations. Further, regional greenhouse gas emissions related to vehicular use are anticipated to remain the same or potentially decrease slightly because soldiers would no longer have to travel out of state installations to meet their STRAC requirements. Therefore, no effect to regional greenhouse gas emissions are anticipated to occur due to proposed travel associated with privately-owned and military-owned vehicles.

The ILARNG would visually monitor operational activities within the STA regularly, and particularly during extended periods of dry weather. In addition, the ILARNG would ensure that operational activities with the potential to produce airborne dust are conducted (e.g., driving on gravel roads and trails near the STA boundary) using the dust control BMPs identified above to minimize the potential for air quality impacts.

The Proposed Action Alternative would not cause an exceedance of the NAAQS and would occur in an area currently in full attainment with NAAQS. A conformity analysis is not required, and no *significant adverse impacts* to air quality would occur as a result implementing the Preferred Action Alternative.

4.3.2 No Action Alternative

Under the No Action Alternative, no air quality impacts would occur. Current operations and emissions would continue.

4.3.3 Mitigation

No mitigation measures will be necessary to reduce any adverse environmental impacts to below significant levels.

4.4 Noise

4.4.1 Preferred Action Alternative

Under the Preferred Action Alternative, *less-than-significant (minor), short-term and long-term adverse* effects to the local noise environment would be anticipated. Direct impacts would include *short-term* increased noise levels as a result of construction activities and *long-term* increased noise levels as a result of increased training site use and Zero Range operation at the STA.

Construction Activities: Noise generating sources during construction activities would be associated primarily with standard construction equipment. These increased noise levels could directly affect sensitive receptors (see **Section 3.3.2** and **Figure 6**). Given the distance between proposed construction sites and sensitive receptors (the majority of sensitive receptors occurring >1,000 feet from proposed construction footprints), coupled with the short duration of these activities conducted during normal business hours, construction noise impacts are not considered to be significant.

Sensitive receivers near the construction boundary would be directly impacted by general construction noise, based on the existing noise levels and anticipated use of construction equipment. Construction activities generate noise by their very nature and are highly variable, depending on the type, number, and operating schedules of equipment. Construction projects are usually executed in stages, each having its own combination of equipment and noise characteristics and magnitudes. Construction activities are expected to be typical of other similar construction projects and would include mobilization, site preparation, excavation, placing foundations, utility development, and heavy equipment movement. The most prevalent noise source at construction sites is the internal combustion engine. General construction equipment using engines includes, but is not limited to: heavy, medium, and light equipment such as excavators; roller compactors; front-end loaders; bulldozers; graders; backhoes; dump trucks; water trucks; concrete trucks; pump trucks; utility trucks; cranes; sheet pile drivers; man lifts; forklifts; and lube, oil, and fuel trucks.

Peak noise levels vary at a given location based on line of sight, topography, vegetation, and atmospheric conditions. In addition, peak noise levels would be variable and intermittent because each piece of equipment is only operated when needed. However, peak construction noise levels would be considerably higher than existing noise levels. Relatively high peak noise levels in the range of 93-108 dBA would occur on the active construction site, decreasing with distance from the construction areas. **Table 17** presents peak noise levels that could be expected from a range of construction equipment during proposed construction activities.

Generally speaking, peak noise levels within 50 feet of active construction areas and material transportation routes would most likely be considered “striking” or “very loud”, comparable to peak crowd noise at an indoor sports arena. At approximately 200 feet, peak noise levels would be loud, approximately comparable to a garbage disposal or vacuum cleaner at 10 feet. At ¼ mile, construction noise levels would generally be quiet enough so as to be considered insignificant, although transient noise levels may be noticeable at times.

Combined peak noise levels, or worst-case noise levels when several loud pieces of equipment are used in a small area at the same time as described in **Table 17**, are expected to occur rarely, if ever, during the project. However, under these circumstances, peak noise levels could exceed 90 dBA within 200 feet of the construction area, depending on equipment being used.

Table 17. Peak Noise Levels Expected from Typical Construction Equipment								
Source	Peak Noise Level (dBA, attenuated)							
	Distance from Source (feet)							
	0	50	100	200	400	1,000	1,700	2,500
Heavy Truck	95	84-89	78-93	72-77	66-71	58-63	54-59	50-55
Dump Truck	108	88	82	76	70	62	58	54
Concrete Mixer	108	85	79	73	67	59	55	51
Jack-hammer	108	88	82	76	70	62	58	54
Scraper	93	80-89	74-82	68-77	60-71	54-63	50-59	46-55
Bulldozer	107	87-102	81-96	75-90	69-84	61-76	57-72	53-68
Generator	96	76	70	64	58	50	46	42
Crane	104	75-88	69-82	63-76	55-70	49-62	45-48	41-54
Loader	104	73-86	67-80	61-74	55-68	47-60	43-56	39-52
Grader	108	88-91	82-85	76-79	70-73	62-65	58-61	54-57
Pile driver	105	95	89	83	77	69	65	61
Forklift	100	95	89	83	77	69	65	61
Worst-Case Combined Peak Noise Level (Bulldozer, Jackhammer, Scraper)								
Combined Peak Noise Level	Distance from Source (feet)							
	50	100	200	¼ Mile		½ Mile		
	103	97	91	74		68		
Source: Tipler 1976								

Although noise levels would be quite loud in the immediate area, the intermittent nature of peak construction noise levels would not create the steady noise level conditions for an extended duration that could lead to hearing damage. Construction workers would follow standard federal Occupational Safety and Health Administration (OSHA) requirements to prevent hearing damage.

Areas that would be most affected by noise from construction include those closest to the construction footprint. The majority of sensitive receptors are greater than 1,000 feet from the proposed construction footprints. However, there are 14 residences that occur in the vicinity of the new roads and trails proposed near the STA boundary in TAs 103, 106, 108, 109, 110, 201, and 202. However, only the residences near TA 103 occur within 200 to 500 feet of proposed roadway footprint; these houses all occur on the west side of Plum Creek Road. Residences discussed above would experience adverse noise impacts during construction activities; however, these impacts are not anticipated to be significant because they would be temporary. BMPs would be implemented to reduce noise impacts.

Indirect impacts include noise from workers commuting and material transport. Area traffic volumes and noise levels would increase slightly as construction employees commute to and from work at the project areas, and delivery and service vehicles (including trucks of various sizes) transit to and from the site. Because trucks are present during most phases of construction and leave and enter the site via local thoroughfares, truck noises tend to impact more people over a wider area. For this project, people living in the residential areas near STA would experience temporary increases in traffic noise during day-time hours. These effects are not considered significant because they are

temporary. Furthermore, the roadway improvement projects would be implemented in-house by ILARNG personnel, separately as funding becomes available and over several years, thus no large influx of traffic is anticipated.

The following BMPs would be used by the ILARNG as appropriate to limit noise impacts during construction:

- Limit, to the extent possible, construction and associated heavy truck traffic between nine p.m. to seven a.m. This measure would reduce noise impacts during sensitive night-time hours.
- Locate stationary equipment as far away from sensitive receivers as possible.
- Select material transportation routes as far away from sensitive receivers as possible.
- Shut down noise-generating heavy equipment when it is not needed.
- Maintain noisy equipment per manufacturer's recommendations.
- Encourage construction personnel to operate equipment in the quietest manner practicable (for example, speed restrictions, retarder brake restrictions, engine speed restrictions, etc.).

These noise-reducing measures would be briefed to the contractor at the construction kick-off meeting. The ILARNG's on-site construction manager would be responsible to bring noise issues, if they arise, to the ILARNG for resolution. This information will be incorporated into construction contracts. For roadway improvement and maintenance projects conducted in-house, the ILARNG will ensure these BMPs are implemented during construction activities.

Training Use and Traffic: As a result of the Preferred Action Alternative, it is anticipated that site usage would increase from approximately 4,567 to 9,000 man-days per year on average, and total traffic of STA-related users could increase by 87% over current conditions. The use of simulators and non-live fire rifles and machine guns within the TAs is authorized and would likely increase with increased site usage. However, these activities are currently rare and occur throughout the STA, and they are not proposed to increase significantly under the Proposed Action. Therefore, while site usage would nearly double under the Preferred Action Alternative, noise impacts to sensitive receptors are anticipated to be less than significant given the relatively, rural, lightly trafficked area and the fact increased training site use and traffic would not be localized, but would occur throughout the STA.

Range Operations: Increased noise from proposed live-fire activities on the new 10-25m Zero Range was assessed by USAPHC (2014) using the Small Arms Range Noise Assessment Model (SARNUM)¹⁴. A copy of this noise assessment is included in **Appendix C**. Small caliber activity is based on peak noise levels for individual rounds. The USAPHC developed noise contours for peak noise levels for the proposed Zero Range using the SARNAM. As illustrated in **Figure 12**, the Zone III noise levels remain within the STA boundary. However, Zone II noise levels would extend up to 300 meters (1,000 feet) beyond the northwestern STA boundary and up to 620 meters (2,065 feet)

¹⁴ Standard US Army small caliber weapons (.50 caliber and below) noise simulation program

beyond the eastern boundary toward SR 4. While existing off-post land use within the Zone II noise contour is primarily agricultural, there are two residential structures. Per AR 200-1, noise sensitive land uses, such as housing, schools, and medical facilities, are not normally recommended for Noise Zone II (USAPHC 2014). Therefore, implementation of the Preferred Action Alternative could potentially result in *minor, long-term* noise impacts to those residences within the Zone II noise contour during range activities.

Under the Preferred Action Alternative, the existing M203 40mm TP Grenade Launcher Range would be reoriented to accommodate the proposed Zero Range. The existing M203 Range is 570 meters (1,899 feet) from the STA boundary and the proposed reorientation increases the distance from the boundary to 750 meters (2,498 feet). A 40mm TP round does not generate noise on impact. The complaint risk is based on peak noise level of the launch. Using a conservative approach based on best available scientific quantification, the complaint risk for M203 Range operations is low (USAPHC 2014).

Although there is a civilian firing range in the vicinity (i.e., IDNR World Shooting Complex), the existing ambient noise environment is relatively quiet. To minimize adverse noise impacts resulting from proposed 10-25m Zero Range operations, the ILARNG will notify the community before training commences. Further, the ILARNG will continue to implement the statewide ONMP (USAPHC 2013) and work with the City of Sparta and Randolph County zoning and planning department's to identify potential noise and land use incompatibilities and address possible noise issues, including restricting development of residences or other sensitive receptors along the STA boundaries.

4.4.2 No Action Alternative

Implementation of the No Action Alternative would have no effect on the current local noise environment. Training and operations at the STA would continue under current conditions at current locations and levels.

4.4.3 Mitigation

No mitigation measures will be necessary to reduce any adverse environmental impacts to below significant levels.

4.5 Geology, Topography, and Soils

4.5.1 Preferred Action Alternative

Under the Preferred Action Alternative, *short-term, less-than-significant adverse* effects would occur during land disturbing activities that would be reduced with the implementation of BMPs. *Long-term positive* impacts to soils are anticipated from the proposed roadway improvement projects. However, potential *significant adverse* impacts to soils from range operations could occur that would be reduced to *less-than-significant* levels with implementation of mitigation measures (see **Section 4.5.3**).

Implementation of the Preferred Action Alternative would require minimal cutting and filling, but major changes in topography and drainage patterns would not be expected. *No impacts* to geology

or bedrock (i.e., deep excavation) are proposed or anticipated. No geologic hazards are apparent in the project area and would not be expected to impact human health as a result of project implementation. Based on currently available data, no active significant faults are known at this time to extend through the project site subsurface geology. As such, no impacts associated with seismic hazards are identified. No significant impacts to mineral resources are anticipated, as none of the Preferred Action Alternative project components would involve the commercial extraction of mineral resources, or would affect mineral resources considered important on a local, state, national, or global basis.

Under the Preferred Action Alternative, no effect to prime farmland would occur as the subject property is exempt from the Farmland Protection Policy Act (FPPA; 7 USC 4208[b]) in accordance with Section 1547(b) of this Act. Therefore, no further coordination is required in accordance with the FPPA (I. Dozier, personal communication, 16 January 2015, see **Appendix A**).

During construction, *minor direct short-term adverse soil erosion and sedimentation impacts* would be possible as the proposed ranges, roads, trails, utility lines and other project components are constructed. Construction would remove vegetative cover, disturb the soil surface, and compact the soil. The soil would then be susceptible to erosion by wind and surface runoff. Exposure of the soils during construction has the minor potential to result in increased sedimentation in off-site surface waters. Surface water features occur along roadways and trails with proposed LWCs and culverts (see **Figures 9a and 9b**).

The ILARNG would have the contractor prepare a detailed, site-specific Erosion and Sedimentation (E&S) Control Plan to address all earth-disturbance aspects of the Proposed Action, including all project components. The E&S Control Plan would include BMPs such as specific guidelines and engineering controls to address anticipated erosion and resultant sedimentation impacts from establishing and operating the proposed facilities. The ILARNG will implement the following measures:

- Install and monitor erosion-prevention measures (BMPs) such as silt fences and water breaks, sedimentation basins, filter fences, sediment berms, interceptor ditches, straw bales, rip-rap, and/or other sediment control structures; re-spreading of stockpiled topsoil; and seeding/revegetation of areas temporarily cleared of vegetation.
- Retain existing trees to the maximum extent possible.
- Plant and maintain soil-stabilizing vegetation on disturbed areas other than bare earth training areas.
- Use native vegetation to revegetate disturbed soils.
- Comply with the STA SPCCP, ILARNG statewide P2 Plan and ensure all ILARNG field staff members are trained in STA spill response.

If measures in the E&S Control Plan are approved and correctly utilized for site development and operation, soil erosion and resulting sedimentation would be minimized to *less-than-significant levels*. Successful implementation of these measures would ensure that the Proposed Action is in

compliance with state and Federal water quality standards and minimizes both the short- and long-term potential for erosion and sedimentation.

The majority of proposed development projects occur on formerly strip-mined lands. Soils within these areas have various equipment and development limitations (e.g., erosion, subsidence) (see **Table 9**). ILARNG will take these limitations into consideration, as appropriate, during the design and construction phases to minimize potential adverse effects caused by these altered soils. With the exception of the SAROCA facilities (e.g., tower, classroom), no impervious surfaces are proposed. Under the Preferred Action Alternative, all proposed roadway improvements and parking areas would be developed and maintained with crushed stone to reduce impervious surfaces on-site. Given the limited amount of impervious surfaces proposed, coupled with the fact that the majority of the soils to be impacted are altered, the long-term adverse impacts to natural soils would be negligible under the Preferred Action Alternative.

Under the Preferred Action Alternative, *long-term positive* soil impacts are anticipated from the implementation of proposed roadway improvement projects. The development of new roads and trails would provide better overall training site access and would minimize the need for off-road vehicle use that could cause soil compaction, erosion and rutting of training lands. Regular maintenance of existing roads, trails, bridges, culverts and LWCs is necessary sustain military training lands. Threats to the military mission as a result of soil erosion and sedimentation include removal of and/or lack of accessibility to available training lands and other resources; undermining of or poorly maintained roads; increased vehicle wear and tear, topsoil loss, and impacts to streams and aquatic habitats.

Proposed range footprints are located in Lenzburg gravelly silt clay loams, which are found in upland surface-mined areas (Leeper 2004). The vast majority of the range SDZs, which represent the area where projectile fragments could land depending on the type of ammunition and weapon system used, also overlay Lenzburg soils. These soils are well to moderately-well drained and moderately slow permeability (Leeper 2004). Because the proposed 10-25m Zero Range would be the first live-fire range constructed on STA, a preliminary assessment of the environmental and hydrologic impact of building a small arms range with a berm on-site was conducted using REST v. 2.1 (ILARNG 2010b). This evaluation considers the type and mass of ammunition fired, corrosion of the ammunition, and three transport pathways (aerial, surface water and groundwater).

The ILARNG's (2010b) study examined two potential areas for a small arms range at STA. Because this study was preliminary and only limited data was available, conservative estimates were incorporated into the model. Results were similar for the two sites evaluated in the study. Similar to the proposed 10-25m Zero Range, the primary soil type for both study sites was primarily within Lenzburg gravelly silty clay loam. Results from this study indicated an overall low potential for metals migration with a score of 3.7. A score of 1 signifies no potential, while a score of 10 indicates the potential for significant migration. A score of 5 is intended to be a rough average for all ranges of a particular type (Fabian and Watts 2005). While the overall score indicated a low potential for migration, individual scores by transport category indicate a moderate potential for migration from corrosion and a high potential for migration from surface water and groundwater transport. The type of soil used in the berm and/or native to the area plays a considerable role in the corrosion of spent ammunition. Surface water transport is dependent on how close streams or other

waterbodies are to the ranges, storm related runoff velocities, soil type, and bullet fragment size, while soil type and depth to water play a large role in groundwater transport.

When lead or other metals come into contact with acidic water or soils, it can cause corrosion and break down into soluble compounds. Increased time of contact with acidic water generally results in a greater amount of dissolved lead in stormwater runoff. However, when pH levels are greater than 7.5, very little lead remains in solution (USEPA 2005). As discussed in **Section 3.5.1**, pH levels within the STA lakes have historically ranged from 8.0 to 9.0 (**see Chart 2**). In addition, the range footprints and the vast majority of the SDZ are situated on Lenzburg silty clay loams, which are known to have a high pH (Leeper 2004). Other soil types within the range SDZs include Swanwick silt loam, Birds silt loam and Wakeland silt loam. Swanwick soils are known for having a high pH, while Birds and Wakeland are not known to have either a high or low pH (Leeper 2014).

While there is a potential for migration based in ILARNG's (2010b) study, the high soil and surface water pH levels will minimize the potential for corrosion and water quality impacts. To further minimize the migration of lead or other constituents from ammunition spent on the proposed ranges from soil corrosion and other factors, the ILARNG will implement appropriate BMPs and mitigation measures from the Army Small Arms Training Range Environmental Manual to prevent or minimize lead or other contaminant migration off-site (Fabian and Watts 2005) (**see Section 4.5.3**). BMPs will include soil amendments, geosynthetic materials, storm water management, and vegetative solutions. Operational BMPs will also be implemented to minimize further transport, which include sustaining vegetative cover, implementing berm repair and maintenance measures, and implementing an inspection and maintenance program. All ranges will be periodically evaluated and monitored in accordance with the Army's Operational Range Assessment Program (ORAP). Implementation of these measures would reduce potential *adverse* effects to *less-than-significant* levels.

4.5.2 No Action Alternative

Implementation of the No Action Alternative would have *no effect* on the current geology, topography, and soils within STA. The proposed site would remain as described in **Section 3**. However, the *long-term positive* soil impacts from the proposed maintenance projects would not be recognized, and could lead to *adverse* impacts associated with soil erosion.

4.5.3 Mitigation

To minimize the migration of lead or other constituents from ammunition spent on the proposed ranges from soil corrosion and other factors, the ILARNG will implement the following mitigation measures from the Army Small Arms Training Range Environmental Manual to prevent or minimize lead or other contaminant migration off-site (Fabian and Watts 2005). Implementation of these measures would reduce potential *adverse* effects to *less-than-significant* levels. The ILARNG Construction Facilities Management Office (CFMO) and Environmental Branch and STA Training Site Manager will be responsible for ensuring these measures are implemented.

- A back and side berms will be constructed to reduce metals migration and projectiles from entering STA lakes.

- Lead-free ammunition (e.g., M855A1 EPR) will be utilized on the Zero Range, when feasible.
- Firing lanes on the Zero Range that have a lower likelihood of projectiles entering waterbodies will be used more regularly, when feasible, to further minimize lead and other constituents from entering waterbodies.
- All operational ranges at the Sparta must be periodically re-evaluated to determine if there is a release or substantial threat of release of munitions constituents of concern (MCOC) from an operational range to an off-range area in accordance with the STA ORAP. Ranges categorized as “unlikely” are to be re-evaluated at least every 5 years. Re-evaluation may occur sooner if significant changes (e.g., changes in range operations or site conditions, regulatory changes) occur that affect determinations made during the Phase I Assessment.

4.6 Water Resources

4.6.1 Preferred Action Alternative

Under the Preferred Action Alternative, *short-term, less-than-significant adverse* impacts to water quality are anticipated during project activities resulting in erosion and sedimentation, and to streams, wetlands, and floodplains could result from temporary and permanent disturbances (e.g., fill or dredging) during roadway improvement projects. Implementation of specific BMPs and adherence to regulatory requirements will be required to minimize these impacts. Potential *significant adverse* impacts could occur to surface water and groundwater quality from range operations. Potential *significant adverse* impacts will be reduced to *less-than-significant* levels through the implementation of mitigation measures (see **Section 4.6.3**).

Project activities, which include clearing, grading, excavation or other land disturbing activities that result in the disturbance of one or more acres of total land in the State of Illinois require an NPDES General Permit for Surface Water Discharge Associated with Construction Activities. The ILARNG would obtain the NPDES permit prior to commencing construction activities and would comply with the terms of the permit. The ILARNG would implement BMPs during construction, as discussed in **Section 4.5.1**. In addition, a site-specific Storm Water Pollution Prevention Plan (SWPPP) would be developed for construction activities. The plan must include all phases of construction and identify location and sizing of E&S controls. The plan must be maintained onsite during construction. Periodic visual inspections by the ILARNG would also be required to verify that the E&S Control Plan is being followed and is working. Successful implementation of BMPs would ensure that the Proposed Action is in compliance with State and Federal standards and limit both the short- and long-term potential for water resource impacts, including erosion and sedimentation.

Under the Preferred Action Alternative, an intermittent stream/ditch occurs north of the proposed M203 Range footprint. This surface water feature occurs outside of the proposed land disturbance area within a steep ravine. In general, proposed roads and trails occur within the upland areas of STA with the exception of the proposed culverts/LWCs (**Figures 9a and 9b**), and a portion of proposed Road 15 and the proposed trail segment south of Industrial Drive in TA 202 that crosses the FEMA 100-year floodplain of an unnamed tributary to Plum Creek (**Figures 2 and 9b**) and the proposed trail segment in the northwest corner that crosses Plum Creek (**Figure 9a**). Lakes L1, L2 and S12 and Plum Creek occur within the proposed range SDZs for the 10-25m Zero Range

(**Figure 9a**). The proposed power line corridor traverses a few ephemeral drainages and Plum Creek (**Figures 9a and 9b**).

No permanent loss of wetlands is anticipated to occur as a result of the proposed range construction, power line relocation, or roadway improvement projects. Further, no streams, floodplains or other waterbodies occur within the proposed range footprints or relocated power line footprint.

Minor, adverse impacts to streams and FEMA 100-year floodplains would occur as a result of the proposed Road 15 and trail segment in TA 202, the proposed trail in the northwest corner of the Plum Creek floodplain in TA 109, and the proposed LWCs and culverts (**Figures 2, 9a, and 9b**). Less than 0.1 acre of stream impact and/or less than 0.5 acre of floodplain impact is anticipated to occur for each of these projects with the majority of these impacts being temporary disturbances (e.g., fill or dredge). In addition, there is a potential for a minor wetland, stream, or floodplain disturbance to occur during long-term, roadway maintenance activities that occur within the vicinity of water resources. However, impacts to water resources resulting from maintenance activities are anticipated to be minor and temporary. LWC 12 would be constructed in the 100-year floodplain (see **Figure 9a**). To comply with EO 11988 (Floodplain Management) and EO 11990 (Protection of Wetlands), the ILARNG conducted an analysis of alternatives to request approval and a waiver from the ARNG Installation Division and the DA to construct LWC 12 in the 100-year floodplain. A copy of the waivers and supporting documentation can be found in **Appendix E**. Impacts to water resources would be reduced further through implementation of BMPs and permit conditions.

Because roadway projects will be implemented separately and over several years (see **Table 4 in Section 2.2.2**), the ILARNG CFMO and Environmental Branch will be responsible for coordinating annually on upcoming roadway improvement projects. The Environmental Branch will coordinate with the USACE St. Louis District to determine if permits are required prior to project implementation. The USACE is responsible for making the official jurisdictional determination as to whether a wetland or waterbody is considered a "Water of the US," and therefore regulated under CWA Sections 404 and 401. Projects with the potential to disturb (e.g., fill or dredge) regulated streams and wetlands on a permanent or temporary basis will require at a minimum a CWA Section 404 permit and Section 401 Water Quality Certification (WQC) from the USACE and IEPA, respectively. Most maintenance activities can be covered under a CWA Section 404 Nationwide Permit No. 3 (Maintenance); however, all activities that result in the addition of riprap to a regulated waterway require re-construction notification to the USACE prior to implementing the project. If impacts to the regulated FEMA floodway are deemed necessary during the final design phases, a Construction in a Floodway permit from the IDNR Office of Water Resources (OWR) would be required as well.

For projects requiring a CWA Section 404 permit, CWA Section 401 WQC and/or Construction in a Floodway permit, the ILARNG will follow the Illinois Joint Permit Application process. A copy of the Illinois Joint Permit Application and associated instructions is included in **Appendix E**. The application will be submitted to the USACE, IEPA and/or IDNR/OWR, as appropriate, for their review prior to conducting land disturbance in potential wetlands, streams and/or floodplains. The application package will include any wetland or waterbody delineations. Per the USACE St. Louis District correspondence on page 76-77 of **Appendix A**, a copy of the final EA must also be

submitted with this application. The ILARNG will be responsible for implementing all permit conditions by the agencies during the permitting process.

Regular maintenance of existing roads, trails, bridges, culverts and LWCs is necessary to sustain military training lands. While roadway maintenance projects have the potential to cause short-term adverse effects to water resources during maintenance activities, these projects provide a long-term beneficial effect by minimizing soil erosion and sedimentation and runoff from poorly functioning roads and water crossings that could lead to impacts to streams or aquatic habitats

Long-term surface water protection during operation of the ILARNG facilities would be accomplished by implementing stormwater BMPs, maintaining vegetative cover, the site-specific SPCCP Plan, and the ILARNG statewide P2 Plan. These measures will reduce potential *minor* adverse impacts associated with runoff.

Due to past site activities (e.g., surface mining), groundwater in the area is considered non-potable (Class IV) by IEPA (ILARNG 1998); therefore, no effect to potable groundwater are expected as a result of the Preferred Action Alternative.

As discussed in **Section 4.5.1**, a preliminary assessment of the environmental and hydrologic impact of building a small arms range with a berm on-site was conducted using REST v. 2.1 (ILARNG 2010b). While the study indicated a low potential for migration overall, individual scores by transport category indicated a moderate potential for migration from corrosion and a high potential for migration from surface water and groundwater transport. To minimize the migration of lead or other constituents from ammunition spent on the proposed ranges from surface water and groundwater transport, the ILARNG will implement the BMPs and mitigation measures described in **Sections 4.5.1 and 4.5.3**, respectively. As part of the ORAP, the ILARNG will evaluate and monitor for potential sources of surface water and groundwater contamination and implement corrective measures as appropriate. Implementation of these measures would reduce potential *adverse* effects to *less-than-significant* levels

4.6.2 No Action Alternative

Implementation of the No Action Alternative would have *no effect* on water resources within STA. The proposed site would remain as described in **Section 3**. However, the *long-term positive* impacts from the proposed roadway maintenance projects would not be recognized, and could lead to *minor adverse* impacts associated with increased soil erosion and sedimentation.

4.6.3 Mitigation

The ILARNG CFMO, Training Site and Environmental Branch will implement the mitigation measures outlined in **Section 4.5.3** to minimize adverse effects to surface water and groundwater quality from the migration of lead or other constituents from ammunition spent on the proposed ranges to *less-than-significant* levels.

4.7 Biological Resources

4.7.1 Preferred Action Alternative

Under the Preferred Action Alternative, *short-term, less-than-significant adverse* impacts to biological resources from construction noise and vegetation removal are anticipated. *Long-term, less-than-significant adverse* impacts due to the elimination of vegetation and wildlife habitat would occur, which would be minor on a regional and local scale. In addition, a potential *significant adverse* impact to federally listed and state-listed endangered and threatened species could occur from construction, increased training site use and range operations; these impacts would be reduced to *less-than-significant* levels with implementation of mitigation measures (see **Section 4.7.3**).

4.7.1.1 Vegetation

As shown in **Table 7**, the proposed construction footprints encompass approximately 73 acres of land comprised of 67.9 acres of grassland, 4.5 acres of unvegetated land (e.g., existing dirt trails), less than 0.5 acres of forested land, and less than 0.5 acre of open water (e.g., water crossings). Because vegetated land is primarily grassland, only minimal tree and brush clearing is anticipated under the Preferred Action Alternative. As discussed in **Section 4.2.1**, not all 73 acres within the construction footprints would be directly and/or permanently disturbed. The ILARNG would minimize clearing and earthwork to the maximum extent possible to minimize disturbance and associated construction costs. With the exception of the SAROCA facilities (e.g., tower, classroom), no impervious surfaces are proposed. Utility line connections would generally follow existing disturbed right-of-ways, and would not result in substantial additional disturbance. Given the limited amount of tree clearing and impervious surfaces proposed, coupled with the fact that nearly all of these areas have been previously disturbed during past strip-mining activities, the impact to vegetative communities at STA is anticipated to be minor under the Preferred Action Alternative.

Short-term impacts of the proposed projects would include temporary disturbances to adjacent vegetative communities. Adjacent vegetative communities and areas within the proposed range footprints and power line corridor that are not impacted by permanent structures would be re-vegetated and maintained as grassland. Native species will be used to the extent practicable when revegetating land disturbed by construction.

Long-term impacts to vegetation would include minor tree clearance within less than 0.5 acre of the proposed power line corridor and potentially in the area immediately around the one LWC proposed within the forested portion of STA (**Figure 3**), and the loss of grassland habitat from new road and trail construction and within proposed range footprints at the firing points, SAROCA facilities, access roads and parking areas. Approximately 11 acres of forest land and 371 acres of grassland would be preserved within the range SDZs during the operational life of the ranges because additional development within these areas would be limited. Overall, adverse impacts to on-site vegetative resources would be minor given the minimal tree clearance proposed and the abundance of resources still extant across the STA. The ILARNG would continue to manage vegetative communities at STA in accordance with existing ILARNG land management practices under the INRMP (ILARNG 2013).

4.7.1.2 Wildlife

Wildlife in the proposed project areas would sustain *less-than-significant (minor), direct and indirect, short- and long-term, adverse impacts*, associated with habitat conversion and construction activities. Wildlife would be expected to vacate the immediate areas during construction activities. Some individuals of the less mobile species (i.e., small mammals, reptiles, amphibians) could be lost during construction. The relatively small areas of disturbance and large areas of undeveloped land make expected impacts to wildlife *less than significant*. The increased human presence in the areas, elevated noise levels, and night lighting would affect some species more than others.

The ILARNG is responsible under the MBTA, 50 CFR 21, and EO 13186 (*Responsibilities of Federal Agencies to Protect Migratory Birds*) to promote and protect migratory birds. A list of migratory birds known to occur at STA are provided in **Section 3.7.1**. Incidental taking of migratory birds is regulated in 50 CFR 21, *Migratory Bird Permits*. Part 21.15, *Authorization of Take Incidental to Military Readiness Activities*, effective 28 February 2007, allows incidental take by DoD in the course of military readiness activities under certain conditions specified in Paragraph (a) *Take Authorization and Monitoring*:

- (1) Except to the extent authorization is withdrawn or suspended pursuant to paragraph (b) of this section, the Armed Forces may take migratory birds incidental to military readiness activities provided that, for those ongoing or proposed activities that the Armed Forces determine may result in a significant adverse effect on a population of a migratory bird species, the Armed Forces must confer and cooperate with the USFWS to develop and implement appropriate conservation measures to minimize or mitigate such significant adverse effects.
- (2) When conservation measures implemented under paragraph (a)(1) of this section require monitoring, the Armed Forces must retain records of any monitoring data for five years from the date the Armed Forces commence their action. The Armed Forces will also report to the USFWS migratory bird conservation measures implemented and the effectiveness of the conservation measures in avoiding, minimizing, or mitigating take of migratory birds.

Construction activities can have direct impacts on migratory birds and other ground nesting birds during the breeding season due to potential stressors, such as the use of heavy machinery, vegetation and land clearing, and increased noise. Breeding site fidelity is known in many species of birds (Jones et al. 2007, Roberts et al. 2005), so birds may still attempt to nest during construction. Other birds may not attempt to nest until after construction activities subside or at all during the breeding season, while others may nest in a different location. For birds that do decide to breed within the action area, nests with eggs or chicks could be unintentionally disturbed or destroyed, and potentially result in nest abandonment. It is not anticipated that any birds capable of flying will be injured or killed during such activities, but will simply leave the area during the disturbance.

Readiness activities, such as range use and maneuver training, at STA have the potential to injure or kill migratory birds, but the likelihood of birds being struck during operational activities is considered to be minimal. Nesting activity may decrease within the project areas due to increased

disturbance and noise. However, it is anticipated that birds will habituate to the military readiness activities over time, and that nesting will continue to occur within the area.

Indirect impacts on birds could also result from the permanent or temporary loss of habitat. The construction of the range projects and new roads and trails would occur within 67.9 acres of grassland, 4.5 acres unvegetated land (e.g., existing dirt trails), <0.5 acre of forest land, and <0.5 acres of open water (see **Table 7**). However, as discussed in **Section 4.2.1**, not all 73 acres within the construction footprints would be directly and/or permanently disturbed. Overall, the amount and type of habitat to be impacted as a result of the Proposed Action is negligible in comparison to the habitat within and in the immediate vicinity of the STA. Therefore, based on the geographical range of the migratory bird species subject to potential impacts from the Proposed Action, it is anticipated that these indirect impacts would be negligible.

To minimize impacts, management measures for migratory birds will be conducted in accordance with 50 CFR 21 and the STA INRMP (ILARNG 2013). The INRMP outlines several BMPs that benefit migratory birds at the STA. These include: invasive plant species control measures, the use of prescribed fire to maintain native grassland habitat, mowing guidelines, the protection and management of forested habitat, among others. In addition, when practicable, ground disturbing activities would be initiated prior to or after the nesting season (April through August) to prevent incidental take of ground nesting birds. In cases where this is impracticable, the ILARNG will focus on removing vegetation from the construction site before the nesting season to render the habitat unsuitable for nesting migratory birds, thereby reducing the potential for the unintentional take of birds.

Therefore, it is anticipated the Preferred Action Alternative would have minor to negligible direct and indirect impacts on migratory birds or other ground nesting birds given the size of the areas to be impacted, the fact that the habitat is not unique or of significant quality, the low likelihood of incidental take during readiness exercises, and the implementation of the proposed BMPs.

4.7.1.3 Endangered and Threatened Species

As discussed in **Section 3.7.2**, the endangered Indiana bat and threatened northern long-eared bat are the only federally listed species that have been documented at STA during past flora and fauna surveys (e.g., Pitts and Casebeer, Lambert and LaMontagne 2010). The northern long-eared bat was captured during a mist net survey by Carter (2002) in the northwestern corner of the Plum Creek floodplain on STA. However, this bat species was not documented during the most recent surveys (Hellgren et al. 2012, Carter et al. 2014). The Indiana bat was captured in the two most recent surveys and several maternity colonies were documented in the Plum Creek riparian corridor in 2014 (Hellgren et al. 2012, Carter et al. 2014).

Under the Preferred Action Alternative, loss of less than 0.5 acre of forested habitat could result in the southeastern corner of the proposed power line relocation project corridor (i.e., connected action with proposed Zero Range) and installation of LWC #12 (see **Figures 5** and **9a**). To avoid the potential for incidental take of the Indiana bat and minimize impacts to potential summer suitable habitat, no tree clearance will occur between April 1st and October 15th. In addition, the ILARNG will avoid clearing trees and limbs within these project areas to the extent possible to minimize disturbance to Indiana bat habitat. While the northern long-eared bat has not been

documented on STA since 2002, these mitigation measures would serve to minimize impacts to this species as well.

Increased light pollution, training, and elevated noise levels are anticipated as a result of the proposed 10-25m Zero Range. Increased light pollution is anticipated to be minimal. Some night lighting would be necessary within the proposed ranges and SAROCA. However, given the limited amount of lighting that will be added and the distance of the ranges (1 mile or more) from the Plum Creek forested area, this increase is expected to be negligible. To further minimize the effects of potential light pollution, the ILARNG will minimize artificial lighting as much as possible.

Since 2007 when the ILARNG began conducting training activities at STA, site usage has been rather limited with approximately 4,567 personnel trained on average. Site usage has ranged between 2,577 man-days (FY 2008) and 7,781 man-days (FY 2010) with peak site usage occurring typically within the summer months. Under the Preferred Action Alternative, site usage is projected to increase to approximately 9,000 man-days per year on average and would likely follow a similar trend with slightly higher numbers during the summer months due to IDT weekend training. Under the Preferred Action Alternative, proposed training site usage would primarily occur within the vicinity of the proposed ranges. However, an increase in other TAs throughout STA is likely due to the overall increase in site usage. The ILARNG would continue to restrict training activities to vehicle movement on existing roads within forested areas and to dismounted maneuvers in these areas. In addition, the use of smoke, CS gas, and pyrotechnics will be prohibited in the Plum Creek corridor between 1 April and 14 October to ensure adverse effects do not occur to the Indiana bat or its habitat.

A small portion of the proposed 10-25m Zero Range SDZ is located within the forested area along Plum Creek where Indiana bats are known to roost. During the operational life of the ranges, development and use of the land within the range SDZs would be limited. The SDZ is the area extending from a firing point to a distance downrange based on the projectiles fired and weapon system used. While projectiles could extend into this area based on the ricochet analysis discussed in **Section 2.2.1.1**, the majority of them will fall on or near the proposed range footprints. Given only a small portion of the SDZ falls within the forested area and the rarity of a projectile reaching this area, incidental take from a stray bullet is unlikely to occur.

While noise levels would increase slightly due to overall increased training, the primary cause for increased noise at STA under the Preferred Action Alternative would be operation of the proposed 10-25m Zero Range. As shown in **Figure 12**, Zone II levels (87-104 dBP) would occur within the eastern portion of the Plum Creek riparian area when the range is active. Although there is a civilian firing range just north of Plum Creek (i.e., IDNR World Shooting Complex), this would be the first live-fire range on STA. Thus, Indiana bats roosting in this area would experience increased noise during range use.

Indiana bats, including maternity colonies, are known to occur at other military installations, such as Camp Atterbury in Indiana, Fort Leonard Wood in Missouri, and Fort Drum in New York, and tolerate long-term noise from range use and other military training (USFWS 2010, USFWS 2009). For example, Camp Atterbury contains 28 ranges with 720 firing points along the perimeter of the Impact Area and 16 mortar and 62 artillery firing points, which fire into this same area. In addition,

a large air-to-ground range occurs in the southern half of the installation (Indiana National Guard 2009). Given the wide distribution of bats within Camp Atterbury, it has been assumed that sound intensity and duration do not adversely affect bats utilizing the installation. In addition, both standing and down roosting trees are known to occur within areas of high noise levels at Camp Atterbury (just north and east of the Impact Area) according to current roost tree information (Indiana National Guard 2009). However, this assumption has not been rigorously tested.

Furthermore, as summarized by USFWS (2010) relatively little research has been conducted on how Indiana bats respond to various forms and levels of military training exercises. A literature review was conducted by Shapiro and Hohmann (2005) to identify studies that evaluated the effects of military noise on Indiana bats. The few studies they found were conducted at Fort Leonard Wood and generally indicated noise and vibrations from military training activities did not pose any noticeable adverse impacts. For example, a Biological Assessment (BA) was conducted to assess the effects of training on Indiana and gray bats at Fort Leonard Wood, and one of its conclusions was sounds generated by training events (simulated artillery and small-arms fire) do not startle, frighten, or cause bats to flee the area (Harland Bartholomew and Assoc. 1997, USFWS 1998). Another BA for Fort Leonard Wood to assess the effects of its master plan on endangered species indicated that bats do not avoid active ranges or alter foraging behavior during nighttime training maneuvers (3D/I 1996).

While no obvious adverse effects at STA or other military installations have been documented from military training activities, there is relatively little research on the topic. Thus, it is unknown how Indiana bats at STA may respond to increased noise levels from range use. Therefore, per USFWS's recommendation in their ESA Section 7 determination letter dated 5 June 2015 (see Appendix A), the ILARNG will develop an Indiana Bat Monitoring Plan in close coordination with USFWS that will identify the frequency and type of surveys (i.e., acoustic and/or mist netting surveys) necessary to monitor the Indiana bat colony at STA and any potential effects from the proposed training and range.

In addition to noise from range operations, short-term temporary noise increases would occur during construction activities. Construction activities in the immediate area around roost tree could startle a bat and cause it to abandon its roost tree (see **Table 17**). For example, Callahan (1993) found Indiana bats to presumably abandon their primary roost site in Missouri after a bulldozer was used to clear brush under the tree. However, there are other examples of Indiana bats tolerating noise. During studies at the Fort Drum Connector, found a maternity colony along the Interstate unaffected by vehicles traveling back and forth (USFWS 2009). To avoid adverse effects to Indiana bats roosting at STA, the ILARNG will implement construction activities in and around the Plum Creek riparian corridor between October 16th and March 31st.

Bald eagles have not been previously observed at STA and no bald eagle nests are known in the immediate vicinity of STA. The ILARNG will implement the following mitigation measures to minimize the potential for incidental take of a bald eagle should this species be observed at STA or a nest be discovered on or in the vicinity of STA in the future. The ILARNG will initiate consultation with the USFWS in accordance with the MBTA and Bald and Golden Eagle Protection Act (BGEPA) if a nest is found on or near STA, and implement the *National Bald Eagle*

Management Guidelines (USFWS 2007). Furthermore, if a bald eagle is observed flying overhead and the proposed ranges are in use, a cease fire will occur until the bald eagle leaves the area.

Of the 30 state-listed species known to occur in Randolph County (Illinois Natural Heritage Database [INHD] 2014, USFWS 2014), 9 of these species have been observed during previous survey efforts at the STA, which include the Indiana bat, northern long-eared bat, shortleaf pine, smooth softshell turtle, Great Plains rat snake, chick-will's widow, northern harrier, loggerhead shrike, and ornate box turtle. No effect to shortleaf pine is anticipated to occur under the Preferred Action Alternative; no tree clearance is proposed in TA 201 where this species has been observed.

The smooth softshell turtle was observed in 2002 by Pitts and Casebeer (2003), but was not observed by Holland et al. (2013); however, numerous spiny softshell turtles were observed. The spiny softshell may be occupying the area previously inhabited by smooth softshell due to its high tolerance of disturbed areas (Mankowski 2010). The area is previously disturbed by strip-mining activities and continues to experience agricultural runoff and siltation. Under the Preferred Action Alternative, minor disturbance to waterways would occur during LWC and culvert installation or roadway development and maintenance projects; however, these projects would ultimately provide beneficial impacts by reducing sedimentation in STA waters over the long-term. To minimize the potential for adverse effects to this aquatic species, the BMPs identified in **Section 4.5.1** would be implemented to reduce water quality impacts associated with erosion and sedimentation.

The northern harrier is an uncommon winter resident at STA, while the chick-will's widow and loggerhead shrike are considered rare summer residents. These species are also protected under the MBTA. Protection measures discussed above for migratory birds would be implemented to minimize the potential for adverse impacts to these species.

The ornate box turtle was observed in the 2002 and 2012 fauna surveys and Great Plains rat snake was observed during the 2012 survey only (Pitts and Casebeer 2003, Holland et al. 2013). Only one ornate box turtle was documented by Holland et al. (2013); this species was observed in the northeast portion of TA 202 just south of Industrial Drive. Only one Great Plains rat snake was observed as well by Holland et al. (2013). Habitat for both species consists of prairie or open fields. Thus, habitat for these species does occur within the project areas. In particular, the ornate box turtle is likely to be found near the proposed roadway in TA 202 based on the 2012 survey.

The ornate box turtle burrows below ground from October to March. Ground disturbance (e.g., construction activities) during this time could harm this species if a burrow is present. While minimization of ground disturbing activities during this time period would protect this species, this protection measure is not feasible in all instances given ground disturbing activities during April through October have the potential to impact other sensitive species on STA. For example, implementing construction activities during the fall and winter months, minimizes impacts to the federally listed bats and state-listed and MBTA-protected ground nesting birds. A critical component of the Great Plains rat snake's habitat is a winter den, and is also found underground during the winter months. While the relatively flat areas of the STA offer low potential for suitable winter hibernacula, the spoil sides of the pit slopes may provide suitable habitat. The Proposed Action is unlikely to alter these areas, but the proposed roadway projects would occur along the tops of these slopes. This could cause the snakes to expose themselves when seeking food resources in the

interior portions of STA. Both the ornate box turtle and Great Plains rat snake use openings such as roads and road sides for basking, which renders them vulnerable to road-kill or harassment. The proposed roadway implementation projects in particular would increase the potential for death, injury, or unlawful collection of these animals.

The IDNR determined the Proposed Action is unlikely to result in significant alterations of suitable habitat. However, the proposed projects and increased training activities could result in incidental take of the ornate box turtle and Great Plains rat snake (see IDNR letter dated 18 June 2015 in **Appendix A**). To minimize impacts to these species to *less-than-significant* levels, the ILARNG will coordinate with IDNR on a case-by-case basis prior to implementing construction projects (since they will occur over several years) to identify the appropriate conservation measures to be implemented based on the species of priority concern in that given project location and obtain an Incidental Take Authorization pursuant to the Illinois Endangered Species Protection Act (520 ILCS 10/5.5). As a further protection measure, the ILARNG will develop educational materials with identification information, protection status, and notification and relocation protocols for all state-listed species. All personnel conducting construction activities at STA will be provided these materials. Should any of these species be observed (alive or dead) during construction activities, the ILARNG will notify IDNR immediately. Refer to **Section 4.7.3** for mitigation measures required under the Preferred Action Alternative to reduce adverse effects to federal and state listed endangered and threatened species to *less-than-significant* levels.

4.7.2 No Action Alternative

Under the No Action Alternative, no *short-term* or *long-term impacts* to biological resources would occur.

4.7.3 Mitigation

To avoid the potential for incidental take of a federal or state-listed species and ensure adverse effects are reduced to a *less-than-significant* level, the following mitigation measures will be implemented by the ILARNG:

- **Indiana Bat and Northern Long-Eared Bat:** During informal ESA Section 7 consultation with the USFWS (see 5 June 2015 USFWS determination letter in **Appendix A**), it was determined the Proposed Action is not likely to adversely affect the Indiana bat or the northern long-eared bat if the following mitigation measures are implemented: (1) tree clearance will be avoided and minimized to the extent possible, and will NOT occur between 1 April and 14 October; (2) artificial light on proposed ranges will be minimized to reduce the potential for light pollution; (3) training activities and vehicle movement will be restricted to existing roads within forested areas at STA; and (4) the use of smoke, CS gas, and pyrotechnics will be prohibited in the Plum Creek corridor between 1 April and 14 October; and (5) an Indiana Bat Monitoring Plan will be developed in close coordination with USFWS that will identify the frequency and type of surveys (i.e., acoustic and/or mist netting surveys) necessary to monitor the Indiana bat colony at STA and any potential effects from the proposed training and range. The ILARNG CFMO and Environmental Branch and STA Range Control will be responsible for implementing these measures.

- **Bald Eagle:** If a bald eagle is observed flying overhead of the proposed ranges, a cease fire will be implemented by STA Range Control until the bald eagle leaves the area. If a bald eagle nest is found on or near STA in the future, the ILARNG Environmental Branch will initiate consultation in accordance with the MBTA and BGEPA and implement the *National Bald Eagle Management Guidelines* (USFWS 2007).
- **State-Listed Species:** The ILARNG Environmental Branch will coordinate with IDNR on a case-by-case basis prior to implementing construction projects (since they will occur over several years) to identify the appropriate conservation measures to be implemented based on the species of priority concern in that given project location and obtain an Incidental Take Authorization pursuant to the Illinois Endangered Species Protection Act (520 ILCS 10/5.5) for projects with the potential to result in incidental take of a state-listed species. As a further protection measure, the ILARNG Environmental Branch will develop educational materials with identification information, protection status, and notification and relocation protocols for all state-listed species. All personnel conducting construction activities at STA will be provided these materials. Should any of these species be observed (alive or dead) during construction activities, the ILARNG Environmental Branch will notify IDNR immediately.

4.8 Cultural Resources

4.8.1 Preferred Action Alternative

The Preferred Action Alternative is anticipated to have *no effect* on historic structures, archaeological resources, or tribal resources.

No historic structures or archaeological sites have been identified in the Proposed Action area. On 15 January 2015, IHPA concurred that there would be no anticipated effects to historic, architectural, or archaeological resources as a result of the Preferred Action Alternative (see **Appendix A** for a copy of the IHPA concurrence letter).

Native American consultation for this EA was initiated by the ILARNG in accordance with NEPA, NHPA, and DoDI 4710.02 (*DoD Interactions with Federally Recognized Tribes*), which implements the *Annotated DoD American Indian and Alaska Native Policy* (dated 27 October 1999); EO 13175 (*Consultation and Coordination with Indian Tribal Governments*); and AR 200-1. There have been no sacred, religious, cultural or traditional resources identified by the Native American Indian tribes that will be affected by the Preferred Action Alternative. A list of tribes contacted, copies of correspondence letters, and a MFR are included in **Appendix A**.

The ILARNG will follow the BMPs established in Section 2, Part E of the Programmatic Interagency Agreement between DMAIL and IHPA. If, during an undertaking, archaeological resources are discovered, the DMAIL agrees that activities affecting the archaeological resource(s) shall be discontinued at the location of the archaeological resource(s) until consultation with the IHPA is completed pursuant to the Illinois State Agency Historic Resources Preservation Act (HRPA; 20 ILCS 3420/1 *et seq.*). Notification to the IHPA shall be made within 48 hours of discovery and shall be the responsibility of DMAIL.

1. DMAIL agrees to establish a system whereby DMAIL personnel supervising DMAIL undertakings on federal, state, or private property (such as military training operations) are made aware of the stipulations of this section of the Programmatic Interagency Agreement.
2. DMAIL supervisory personnel will brief all participants in DMAIL undertakings on their responsibilities in reporting any archaeological materials that may be encountered during such undertakings. Supervisors will be responsible for notifying the DMAIL cultural resource liaison at DMAIL as soon as possible should any archaeological material be discovered during an undertaking. Activities impacting newly discovered archaeological sites will be terminated or moved until consultation, evaluation and mitigation, if appropriate.

This Programmatic Interagency Agreement shall be a general permit to conduct archaeological and paleontological investigations on state lands owned, managed, and leased by DMAIL as required by the Illinois Archaeological and Paleontological Resources Protection Act (APRPA) in lieu of the issuance of individual permits when the project is being reviewed by the IHPA pursuant to the HSRPA. This does not constitute a general permit under the HSRPA. The DMAIL shall notify all archaeological contractors involved in archaeological investigations, and appropriate DMAIL personnel, on such projects that this permit is in effect. DMAIL shall ensure that all materials and records resulting from the archaeological investigations are curated at the ISM pursuant to APRPA and HSRPA.

4.8.2 No Action Alternative

No change in use or configuration of the installation would occur, and no impacts to cultural resources at STA would result.

4.8.3 Mitigation

No mitigation measures will be necessary to reduce any adverse environmental impacts to below significant levels.

4.9 Socioeconomics

4.9.1 Preferred Action Alternative

Under the Preferred Action Alternative, *short-term, positive* impacts to the socioeconomic environment are anticipated. Potential *significant adverse* impact to public safety and local airport business operations from range SDZs. Impacts would be reduced to *less-than-significant* levels with implementation of mitigation measures (see **Section 4.9.3**).

The STA is not open to the general public. Children are seldom present at the STA as visitors, and no children reside at the STA. The Preferred Action Alternative would not impact the recreational use at STA. The provisions set forth in the NGIL Regulation 200-13-001, *STA Hunting and Fishing Regulation* (2013) would not change. To ensure adverse effects do not occur to public health and safety or children on and off Post, the STA has several control measures in place to restrict access, which include installation fencing, signs and security patrols. Under the Preferred Action Alternative, signs would be placed throughout the STA within and along the perimeter to warn site users as well as unauthorized users of the designated range SDZs and the danger of entering

these areas without prior approval. Further, the ILARNG has established strict safety and security procedures which limit access to potentially hazardous areas to avoid public health or safety threat.

As discussed in **Section 2.2.1.1**, the ILARNG went through a rigorous siting process to get the range SDZs to remain on-Post. The proposed range layout and SDZs identified by ARDEC are shown in **Figure 4**. This layout would ensure a less than 1:1 million probability of a hazardous fragment escaping beyond the installation boundary (ARDEC 2013). While the SDZs remain within the confines of the STA boundary, they do extend near the northern property boundary (e.g., Plum Creek corridor) that is adjacent to the IDNR World Shooting Complex. During range use, access to the Plum Creek corridor along the STA and IDNR World Shoot Complex boundaries will be prohibited through established range safety procedures between ILARNG and IDNR to ensure impacts to public safety are *less-than-significant* during Zero Range operation. The IDNR will reemphasize the on-shore fishing restriction along the STA property boundary on IDNR's lake with maps and site rules and regulations. The ILARNG Environmental Branch, STA Range Control, and IDNR will be responsible for implementing ensuring the established range safety protocols are implemented during times of range use.

Because range SDZs have a vertical hazard associated with them as well, it is essential that mitigation measures be in place to alleviate hazards to aircraft approaching and departing the nearby Sparta Community Airport– Hunter Field (see **Figure 11**) and ensure public safety. Aviation transportation concerns are assessed in detail in **Section 4.11.1**, and mitigation measures to render potential adverse impacts to aviation and public safety to less-than-significant levels are provided in **Section 4.11.3**.

During the consultation effort to address aviation safety concerns, the Sparta Community Airport – Hunter Field notified the ILARNG of their opposition to the project in a letter dated 23 June 2015 (see **Appendix A**). The Airport states that while the proposed mitigation measures (**Section 4.11.3**) may satisfy the safety concerns, the establishment of a Small Arms Range Safety Area (SARSA) could result in detrimental economic impacts to the airport because customers would avoid the use of the airfield due to posted safety hazards (e.g., signage and radio communications). A follow up meeting between Airport Management and the ILARNG was conducted in early July 2015 to address the Sparta Community Airport – Hunter Field's concerns. A follow up meeting between Airport Management and the ILARNG was conducted in early July 2015 to address the Sparta Community Airport – Hunter Field's concerns. The conclusions of this meeting are documented in a letter dated 13 July 2015 from the Sparta Community Airport Manager and in an ILARNG memorandum dated 28 September 2015 to the Sparta Community Airport Authority Board (see **Appendix A**). Airport Management would prefer the range operate in a manner that does not impact airport business operations. To ensure adverse effects do not occur, they do not want additional signage, restrictions, alerts, or special use airspace to result due to proposed range operations as they could lead to false perceptions that the airport is not safe. Airport Management agrees that safety concerns can be mitigated through the proposed range procedures outlined in **Section 4.11.3**, and has requested no additional measures be put in place beyond those required in the approved SARSA. To minimize the potential for adverse economic impacts to the airport, the ILARNG will prepare a brochure for the Sparta Community Airport – Hunter Field to educate pilots and other concerned public. The brochure will outline the safety precautions that are being implemented and the associated benefits of the proposed range at the STA. Prior to distribution,

the ILARNG will provide the Sparta Community Airport – Hunter Field with the opportunity to review and approve the content of this brochure.

With the exception of the potential adverse effects to the local airport business operations identified above, the Preferred Action Alternative is anticipated to have a negligible impact on the overall *long-term* socioeconomic conditions of the region. Although annual site usage is expected to double as a result of the Proposed Action, usage historically has not been particularly high. Additional demand could be placed on police and fire protection services, as well as for medical services, should an accident occur during training activities. However, the installation, in conjunction with local service providers, would have the capacity to meet these demands and no impacts are anticipated.

Finally, a *minor, short-term beneficial* socioeconomic impacts associated with construction activities are anticipated for local employment and personal income under the Preferred Action Alternative. However, the roadway improvement projects would be conducted by in-house ILARNG personnel primarily and would occur over several years. Thus, only the range construction and power line relocation projects would likely use regional construction businesses, and provide a short-term socioeconomic benefit to the area. Further, due to the intermittent and finite nature of these construction projects, no *long-term* impacts to the civilian construction labor force are anticipated.

4.9.2 No Action Alternative

Implementation of the No Action Alternative would result in no attributable impact to socioeconomics. Increased local employment and personal income associated with construction activities would not be recognized. The ILARNG would continue to travel to out-of-state installations losing valuable training time for travel, and experience health and safety risks associated with excess travel.

4.9.3 Mitigation

Mitigation measures associated with range use and nearby aviation activities would ensure no adverse effect occurs to public and aviation safety as a result of the Preferred Action Alternative (see **Section 4.11.3** for more details). To minimize the potential for adverse economic impacts to the airport, the ILARNG will prepare a brochure for the Sparta Community Airport – Hunter Field to educate pilots and other concerned public. The brochure will outline the safety precautions that are being implemented and the associated benefits of the proposed range at the STA. Prior to distribution, the ILARNG will provide the Sparta Community Airport – Hunter Field with the opportunity to review and approve the content of this brochure.

4.10 Environmental Justice

The concept of environmental justice is based on the premise that no segment of the population should bear a disproportionate share of adverse human health or environmental effects of a proposed federal action. Historically, low-income and minority communities have, in some cases, been disproportionately affected by negative environmental effects, receiving few of the benefits of economic growth and development while absorbing much of the societal cost. In accordance with

EO 12898 and DoDI 4715.9, this section examines the demographic profile of the population around the STA.

4.10.1 Preferred Action Alternative

Under the Preferred Action Alternative, *no adverse environmental justice effects* are anticipated. *Short-term, positive* impacts may occur to environmental justice.

As discussed in **Section 3.10**, the City of Sparta's poverty level estimated at 20.3%, which meets the definition of a poverty area (20% or more). Based U.S. Census Bureau (2014) data by census tract, the area in the immediate vicinity of the proposed ILARNG site is not a poverty area. No neighborhoods would be affected or split by the Proposed Action. No specific concentrations of minority populations are located in the vicinity, and no local groups are known to principally rely on fish or wildlife for subsistence. Consequently, no significant adverse impacts to such disadvantaged segments of the population are anticipated as result of the Preferred Action Alternative.

Construction of the Preferred Action Alternative is anticipated to result in *minor, short-term positive* socioeconomic impacts. These positive impacts would result through project construction, which would be expected to provide additional opportunities and increases in local employment and personal income. Specifically, new short term jobs may be created in the local construction industry, subsequently providing potential opportunities for unemployed, low-income, or minority groups. As such, an *indirect, short-term positive* environmental justice impact may occur. However, the extent of this benefit would be dependent upon the degree to which minority or low-income persons are employed in these activities. No *long-term beneficial* environmental justice impacts are anticipated.

4.10.2 No Action Alternative

Implementation of the No Action Alternative would not affect environmental justice.

4.10.3 Mitigation

No mitigation measures will be necessary to reduce any adverse environmental impacts to below significant levels.

4.11 Infrastructure

4.11.1 Preferred Action Alternative

Under the Preferred Action Alternative, potential *less-than-significant adverse* impacts could occur to utility consumption from increased training site use, utility extensions, and the relocation of the high voltage power line. *Short-term and long-term, less-than-significant adverse* impacts are anticipated due to construction traffic and increased site usage. Impacts would be reduced with implementation of BMPs. Potential *significant adverse* impacts to local airport and aviation travel could result from operation of the proposed Zero Range. Adverse impacts would be reduced to *less-than-significant* levels with implementation of mitigation measures (see **Section 4.11.3**).

No significant impacts to utility services are anticipated. The proposed ranges would require minor utility extensions for electric, potable water, and telecommunications (e.g., cable, phones, and Internet). In addition, increased site usage of STA would in turn result in greater overall utility consumption. As discussed in **Section 3.11**, utility infrastructure improvements at the STA were

assessed and approved in the 2011 Final EA for the 2007 STA Master Plan. It was determined that current systems would have the adequate capacity to support the increase in demand. Since the 2011 Final EA, proposed utility improvements have not yet been installed with the exception of a few utility extensions to accommodate the new administration building, battalion maintenance shelter, and billeting building that were constructed west of the Sparta Armory and Fire Station. Further, no concerns by utility providers were identified during the scoping process for this EA (see **Appendix A**).

To avoid potential adverse impacts related to the safety and use of the existing aboveground power line that runs east-west through the center of the STA (see **Figure 2**), this line will be relocated as part of the proposed 10-25m Zero Range project. The proposed power line corridor would be located along existing right-of-ways and occur well outside of the proposed range SDZs. No disruptions in service are anticipated for the surrounding properties as result of the proposed power line relocation project. Therefore, no adverse effects associated with utility consumption or safety hazards are anticipated under the Preferred Action Alternative.

Traffic impacts to STA and regional roadways would be anticipated due to the forecasted increase in installation use induced by the Preferred Action Alternative. Based on current ILARNG projections, total traffic volumes of STA-related users may increase by 87% over current conditions in the vicinity of STA, and would occur during both daytime and nighttime hours. Approximately 20% of this traffic would be expected to occur during nighttime hours. Most vehicular traffic on STA occurs in the spring and summer months. Given the STA is in a relatively rural, lightly trafficked area with multiple roadways in the vicinity of the installation, including SR 4 and SR 154, the anticipated increases in traffic are not anticipated to produce a significant impact.

On-Post traffic impacts are anticipated to be beneficial due to the proposed roadway implementation projects. This project would increase site access through the addition of new roads and trails in TAs that are otherwise only accessible by foot or by off-road vehicle use. In addition, the long-term maintenance of existing roads, trails, bridges, culverts and LWCs will sustain military training lands.

As discussed in **Section 2.2.1.1**, the SDZs for the proposed 10-25m Zero Range have a vertical hazard of 490 meters or 1,608 feet amsl (ARDEC 2013). The Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern boundary of the STA and approximately 2.5 miles from the western boundary. The traffic pattern for runways 36 and 09 are directly over the proposed 10-25m Zero Range SDZs (see **Figure 11**). They extend from the surface (538 feet amsl) up to 1,500 feet amsl. In addition, aircraft flying in and out on either runway have the potential to fly over these SDZs during normal operations (S. Marquardt, Sparta Community Airport Manager, personal communication, 7 January 2015; see **Appendix A**).

Small Arms Range Safety Areas (SARSAs) are areas that are established in accordance with Section 2-5 of DA PAM 385-63, *Range Safety* (2014) to contain small arms range activities that could be hazardous to non-participating aircraft. An application for a SARSA was submitted to the Department of the Army (DAR) for the FAA Central Service Area on 28 October 2015 for the proposed Zero Range due to its vertical ricochet hazard. The SARSA was approved on 24 November 2015. The approved SARSA extends to a vertical hazard altitude of 4,000 feet amsl,

and has a minimum ceiling (cloud height) requirement of 4,500 feet amsl. The vertical hazard level for the SARSA provides an additional 2,392 feet of protection above the vertical ricochet hazard level identified by ARDEC (2013) for the proposed range. A copy of the application and approval from the DAR for the FAA Central Service Area is included in **Appendix D**.

To protect aircraft and ensure no adverse effects to public safety, the STA Range Control in coordination with the Sparta Community Airport– Hunter Field will implement several mitigation measures. Mitigation measures to address aviation safety concerns and hazards were developed in accordance with DA PAM 385-63, the approved STA SARSA, and through consultation with the DAR for the FAA Central Service Area, the ILARNG State Army Aviation Officer, Illinois DOT and the Sparta Community Airport– Hunter Field; these measures are summarized in **Section 4.11.3**. Refer to **Appendix A** for a copy of this correspondence.

4.11.2 No Action Alternative

The No Action Alternative would have no effect on area infrastructure or transportation. The *beneficial impacts* to the ILARNG and the overall military community identified in **Section 4.11.1** would not be recognized.

4.11.3 Mitigation

To ensure impacts to public safety and aircraft using the airspace above and within the vicinity of STA are reduced to a *less-than-significant* level, the following mitigation measures will be implemented by the STA Range Control in conjunction with Sparta Community Airport– Hunter Field and Indianapolis Air Route Traffic Control Center (ARTCC).

- The STA Range Control will adhere to the approved STA SARSA requirements (see **Appendix D**) which include: (1) the SARSA will be managed in accordance with DA PAM 385-63; (2) a red warning streamer will be posted during daylight hours and a red warning light during night fire; (3) Local Notices to Airmen (NOTAM) will be made prior to initiating live firing activities on the Zero Range by STA Range Control and Indianapolis ARTCC; (4) the Local NOTAM will include the location and description of activities to be conducted and the date and times of use; (5) firing will not be conducted when the ceiling (cloud height) is less than 1,000 feet above the vertical hazard of the caliber being utilized; (6) no projectile shall enter a cloud formation; and (7) STA Range Control will provide safety briefings to range operation that includes the proximity of the airport to STA and the Range Officer in Control's (OIC) responsibilities; and (8) the Range OIC will ensure skies are monitored for low flying aircraft in the vicinity of the range area and immediately initiate a "check fire" in the event an aircraft approaches the SARSA.
- The STA Range Control will integrate with the existing Sparta Community Airport– Hunter Field Automated Weather Observing System Series 3 (AWOS-3) and the Common Traffic Advisory Frequency (CTAF). The AWOS-3 will provide the STA Range Control with the specific information required by the SARSA. The STA Range Control will monitor the CTAF, which pilots use to coordinate their arrivals and departures safely by providing positioning reports and acknowledging other aircraft in the airfield pattern.
- The following eight physical structures would be constructed to accommodate the proposed Zero Range project: (1) range tower, (2) aerated vault latrine, (3) ammunition

breakdown building, (4) operations/storage building, (5) bleacher enclosure, (6) covered mess shelter, (7) back berm for the range, and (8) new power lines tower. Prior to constructing these structures, the ILARNG will submit an application to the FAA for an Obstruction Evaluation/Airport Airspace Analysis in accordance with 14 CFR 77.

4.12 Hazardous and Toxic Materials and Wastes

4.12.1 Preferred Action Alternative

Under the Preferred Action Alternative, short-term and long-term *less-than-significant* adverse impacts are anticipated due to construction activities and increased training site use. Adverse impacts would be controlled through BMPs and ongoing regulatory compliance.

The overall HTMW impacts associated with implementing the Preferred Action Alternative are expected to be minimal to moderate, and would be kept at *less-than-significant* levels through implementing and adhering to standard BMPs. Implementation of the Preferred Action Alternative would not substantially affect the installation's hazardous materials storage and handling procedures, hazardous waste disposal processes, or pesticide waste program.

Most potential adverse HTMW impacts would result from collective implementation of the Preferred Action Alternative, rather than from any one component. The net increase in construction (short-term) and training (long-term) at the STA under the Preferred Action Alternative would produce minor increases in handling, storage, use, transportation, and disposal of HTMW. The anticipated increases would include additional vehicle and equipment use; and construction of the proposed ranges, SAROCA facilities, and roadway improvements. These activities would result in minor increases in consumption of operating fluids, including fuel, and maintenance materials, such as paint. New facilities would be potential contamination sources for such products as diesel fuel, gasoline, oil, antifreeze, lubricants, and lead, among others. Releases over a long period of time could potentially lead to soil, surface water, and/or groundwater contamination, and thus require some form of remediation.

Equipment storage would be in buildings, and is expected to have no adverse impact. Roadways have the potential for fluid spills in transition from the facility location to training sites. The ILARNG will operate under existing requirements and BMPs outlined in the STA SPCCP, statewide P2 Plan and Installation Spill Contingency Plan. As discussed in **Section 4.5.1**, the ILARNG will follow appropriate BMPs from the Army Small Arms Training Range Environmental Manual to prevent or minimize lead or other contaminant migration off-site (Fabian and Watts, 2005). As such, a *minor, long-term adverse* impact is anticipated.

Facilities that manufacture, process, or otherwise use a toxic chemical in excess of applicable threshold quantities and that have 10 or more employees are subject to certain reporting and recordkeeping requirements per EO 13148 (Greening the Government through Leadership in Environmental Management), 40 CFR 372, Emergency Planning and Community Right-to-Know Act (EPCRA). For each toxic chemical exceeding threshold levels in a calendar year, a Toxic Chemical Release Form must be submitted to the appropriate authorities. The reportable quantity for lead is 100 pounds or an equivalent of approximately 22,000 rounds of M855 (5.56mm lead). In order to identify annual lead emissions associated with small arms training, STA will provide the

Environmental Branch with ammunition usage data each calendar year. The Environmental Branch will include this information in their annual Tier III report to the USEPA.

4.12.2 No Action Alternative

Implementation of the No Action Alternative would have no effects with respect to HTMW at the proposed site. The ILARNG P2 Plan, STA SPCCP, and Installation Spill Contingency Plan would continue to be implemented.

4.12.3 Mitigation

No mitigation measures will be necessary to reduce any adverse environmental impacts to below significant levels.

4.13 Best Management Practices and Mitigation Measures

Per established protocols, procedures, and requirements, the ILARNG will implement BMPs and will satisfy all applicable regulatory requirements in association with the proposed construction, renovation, conversion and demolition projects. These “BMPs” are included as components of the Preferred Action Alternative, and summarized in **Section 4.13.1** below. BMPs are regulatory compliance measures that the ILARNG regularly implements as part of their activities, as appropriate, across the State of Illinois. These are different from “mitigation measures,” which are defined as project-specific requirements, not routinely implemented by the ILARNG, necessary to reduce identified potentially significant adverse environmental impacts to *less-than-significant* levels. Project-specific mitigation measures are summarized in **Section 4.13.2** below. With implementation of the following routine BMPs and project-specific mitigation measures, the Preferred Action Alternative would not result in significant adverse impacts to the current environmental setting.

4.13.1 Best Management Practices

Land Use and Cover. The ILARNG will minimize clearing and earthwork to the maximum extent possible to minimize disturbance and associated construction costs. The ILARNG will work with the City of Sparta and Randolph County’s zoning and planning departments to prevent further encroachment and ensure zoning around the STA remains compatible with on-Post operations and land use to protect the long-term viability of the installation.

Air Quality. The ILARNG will ensure dust control is conducted in accordance with the NRCS (2002) Illinois Urban Manual. Available methods include application of water, soil stabilizers, or vegetation; use of enclosures, covers, silt fences, or wheel washers; and suspension of earth-movement activities during high wind conditions. To minimize dust generated by vehicles and equipment on unpaved surfaces, the ILARNG will maintain an appropriate speed. Electricity from established electrical power sources or other energy-efficient supplies will be used, whenever possible, instead of generators. Equipment will be shut down when it is not in use. Construction equipment will be repaired and serviced in accordance with the regular maintenance schedule recommended for each individual equipment type, and cleaned of excess soil before leaving the construction zone to prevent off-site transport. These dust-reducing measures will be briefed to the contractor at the kick-off meeting. This information will be incorporated into construction contracts.

The ILARNG will regularly monitor all construction and operational activities within the STA and particularly during extended periods of dry weather. The ILARNG will communicate regularly with the surrounding residents regarding construction schedules.

Noise. The following BMPs will be used by the ILARNG as appropriate to limit noise impacts during construction. The ILARNG will limit, to the extent possible, construction and associated heavy truck traffic between nine p.m. to seven a.m. Stationary equipment and material transportation routes will be located as far away from sensitive receivers as possible. Equipment will be operated per manufacturer's recommendations, and noise-generating heavy equipment will be shut down when not needed. Construction personnel will be directed to operate equipment in the quietest manner practicable (for example, speed restrictions, retarder brake restrictions, engine speed restrictions, etc.). These noise-reducing measures will be briefed to the contractor at the construction kick-off meeting. This information will be incorporated into construction contracts. For roadway improvement and maintenance projects conducted in-house, the ILARNG will ensure these BMPs are implemented during construction activities.

To minimize adverse noise impacts resulting from proposed 10-25m Zero Range operations, the ILARNG will notify the community before training commences. Further, the ILARNG will work with the City of Sparta and Randolph County zoning and planning department's to identify potential noise and land use incompatibilities and address possible noise issues, including restricting development of residences or other sensitive receptors along the STA boundaries.

Soils. The ILARNG would prepare a detailed, site-specific E&S Control Plan to address all earth-disturbance aspects of the Proposed Action, including all project components. The E&S Control Plan would include BMPs such as specific guidelines and engineering controls to address anticipated erosion and resultant sedimentation impacts from establishing and operating the proposed facilities. The ILARNG will implement the following measures: install and monitor erosion-prevention measures such as silt fences and water breaks, sedimentation basins, filter fences, sediment berms, interceptor ditches, straw bales, rip-rap, and/or other sediment control structures; re-spread stockpiled topsoil; seed/revegetate areas temporarily cleared of vegetation with native vegetation; retain existing trees to the maximum extent possible; and comply with the STA SPCCP, ILARNG statewide P2 Plan and ensure all ILARNG field staff members are trained in STA spill response.

To minimize the migration of lead or other constituents from ammunition spent on the proposed ranges, the ILARNG will implement appropriate BMPs into final range design from the Army Small Arms Training Range Environmental Manual to prevent or minimize lead or other contaminant migration off-site (Fabian and Watts 2005). The selected BMPs would be limited to the minimum required based on the type of range and ammunition used, site-specific conditions, and range design features, and will include applicable range maintenance procedures. Example BMPs to protect water quality include soil amendments, geosynthetic materials, berm design and structural enhancements, storm water management, and vegetative solutions. Operational BMPs will also be implemented to minimize further transport, which may include utilizing certain fire lanes to minimize the potential for firing into waterbodies, utilizing lead-free ammunition (e.g., M855A1 EPR), sustaining vegetative cover, implementing berm repair and maintenance measures, and

implementing an inspection and maintenance program for exiting BMPs. All ranges will be periodically evaluated and monitored in accordance with the Army's ORAP.

Water Resources. The ILARNG will obtain a NPDES General Permit for Surface Water Discharge Associated with Construction Activities for all land disturbing activities that result in the disturbance of one or more acres of total land. In addition, a site-specific SWPPP would be developed for construction activities. The ILARNG would implement the BMPs to protect water quality during construction and to minimize migration of lead or other constituents from range and ammunition use, as discussed above. As part of the ORAP, the ILARNG will evaluate and monitor for potential sources of surface water and groundwater contamination and implement corrective measures as appropriate.

To comply with EO 11988 (Floodplain Management) and EO 11990 (Protection of Wetlands), the ILARNG conducted an analysis of alternatives to request approval and a waiver from the ARNG Installation Division and the DA to construct LWC #12 in the 100-year floodplain. A copy of the waivers and supporting documentation can be found in **Appendix E**.

For the roadway improvement projects, the ILARNG CFMO and Environmental Branch will be responsible for coordinating annually on upcoming roadway improvement projects. The Environmental Branch will coordinate with the USACE to determine if permits are required prior to project implementation. The USACE is responsible for making the official jurisdictional determination as to whether a wetland or waterbody is considered a "Water of the US," and therefore regulated under CWA Sections 404 and 401. For projects requiring a CWA Section 404 permit, CWA Section 401 WQC and/or Construction in a Floodway permit, the ILARNG will follow the Illinois Joint Permit Application process. The application will be submitted to the USACE, IEPA and/or IDNR/OWR, as appropriate, for their review prior to conducting land disturbance in potential wetlands, streams and/or floodplains. A copy of the Illinois Joint Permit Application and associated instructions is included in **Appendix E**. The application package will include any wetland or waterbody delineations. Per the USACE St. Louis District correspondence on page 76-77 of **Appendix A**, a copy of the final EA must also be submitted with this application. The ILARNG will be responsible for implementing all permit conditions and any mitigation measures (if deemed necessary) by the agencies during the permitting process. Implementation of the above listed measures and working in cooperation with the pertinent regulatory agencies would reduce potential *minor adverse* effects to wetlands, streams and floodplains.

Biological Resources. The ILARNG will avoid tree removal within the construction footprints, and revegetate land disturbed by facility construction with native species to the extent practicable. To minimize impacts, management measures for migratory birds will be conducted in accordance with 50 CFR 21 and the STA INRMP (ILARNG 2013). The INRMP outlines several BMPs that benefit migratory birds at the STA. These include: invasive plant species control measures, the use of prescribed fire to maintain native grassland habitat, mowing guidelines, the protection and management of forested habitat, among others. In addition, when practicable, ground disturbing activities would be initiated prior to or after the nesting season (April through August) to prevent incidental take of ground nesting birds. In cases where this is impracticable, the ILARNG will focus on removing vegetation from the construction site before the nesting season to render the habitat unsuitable for nesting migratory birds, thereby reducing the potential for the unintentional take of birds. To minimize adverse effects to federal and state listed species, the ILARNG will implement

the conservation measures outlined in the STA INRMP (ILARNG 2013). In addition, the ILARNG will implement BMPs to minimize soil erosion and sedimentation during all ground disturbing activities

Cultural Resources. The ILARNG will follow the BMPs established in Section 2, Part E of the Programmatic Interagency Agreement between DMAIL and IHPA. If, during an undertaking, archaeological resources are discovered, the DMAIL agrees that activities affecting the archaeological resource(s) shall be discontinued at the location of the archaeological resource(s) until consultation with the IHPA is completed pursuant to the Illinois State Agency Historic Resources Preservation Act. Notification to the IHPA shall be made within 48 hours of discovery and shall be the responsibility of DMAIL.

Public Safety. During range use, access to the Plum Creek corridor along the STA and IDNR World Shoot Complex boundaries will be prohibited through established range safety procedures between ILARNG and IDNR to ensure impacts to public safety are *less-than-significant* during Zero Range operation. The IDNR will reemphasize the on-shore fishing restriction along the STA property boundary on IDNR's lake with maps and site rules and regulations. The ILARNG Environmental Branch, STA Range Control, and IDNR will be responsible for implementing ensuring the established range safety protocols are implemented during times of range use.

HTMW. All hazardous and toxic substances that would be used or generated will be handled and disposed of in compliance with the ILARNG P2 Plan, STA SPCCP and Installation Spill Contingency Plan. The Tier III report will be updated annually if the reportable quantity threshold is met for lead.

4.13.2 Mitigation Measures

Soils. To minimize the migration of lead or other constituents from ammunition spent on the proposed ranges from soil corrosion and other factors, the ILARNG will implement the following mitigation measures from the Army Small Arms Training Range Environmental Manual to prevent or minimize lead or other contaminant migration off-site (Fabian and Watts 2005). Implementation of these measures would reduce potential *adverse* effects to *less-than-significant* levels. The ILARNG CFMO and Environmental Branch and STA Training Site Manager will be responsible for ensuring these measures are implemented.

- A back and side berms will be constructed to reduce metals migration and projectiles from entering STA lakes.
- Lead-free ammunition (e.g., M855A1 EPR) will be utilized on the Zero Range, when feasible.
- Firing lanes on the Zero Range that have a lower likelihood of projectiles entering waterbodies will be used more regularly, when feasible, to further minimize lead and other constituents from entering waterbodies.
- All operational ranges at the Sparta must be periodically re-evaluated to determine if there is a release or substantial threat of release of MCOC from an operational range to an off-range area in accordance with the STA ORAP. Ranges categorized as “unlikely” are to be

re-evaluated at least every 5 years. Re-evaluation may occur sooner if significant changes (e.g., changes in range operations or site conditions, regulatory changes) occur that affect determinations made during the Phase I Assessment.

Water Resources. To minimize adverse effects to surface water and groundwater quality from the migration of lead or other constituents from ammunition spent on the proposed ranges, the ILARNG CFMO, Training Site and Environmental Branch will implement the mitigation measures outlined above under Soils.

Threatened and Endangered Species. To avoid the potential for incidental take of a federal or state-listed species and ensure adverse effects are reduced to a *less-than-significant* level, the following mitigation measures will be implemented by the ILARNG for the Indiana bat, northern long-eared bat, bald eagle and state-listed species.

- **Indiana Bat and Northern Long-Eared Bat:** During informal ESA Section 7 consultation with the USFWS (see 5 June 2015 USFWS determination letter in **Appendix A**), it was determined the Proposed Action is not likely to adversely affect the Indiana bat or the northern long-eared bat if the following mitigation measures are implemented: (1) tree clearance will be avoided and minimized to the extent possible, and will NOT occur between 1 April and 14 October; (2) artificial light on proposed ranges will be minimized to reduce the potential for light pollution; (3) training activities and vehicle movement will be restricted to existing roads within forested areas at STA; and (4) the use of smoke, CS gas, and pyrotechnics will be prohibited in the Plum Creek corridor between 1 April and 14 October; and (5) an Indiana Bat Monitoring Plan will be developed in close coordination with USFWS that will identify the frequency and type of surveys (i.e., acoustic and/or mist netting surveys) necessary to monitor the Indiana bat colony at STA and any potential effects from the proposed training and range. The ILARNG CFMO and Environmental Branch and STA Range Control will be responsible for implementing these measures.
- **Bald Eagle:** If a bald eagle is observed flying overhead of the proposed ranges, a cease fire will be implemented by STA Range Control until the bald eagle leaves the area. If a bald eagle nest is found on or near STA in the future, the ILARNG Environmental Branch will initiate consultation in accordance with the MBTA and BGEPA and implement the *National Bald Eagle Management Guidelines* (USFWS 2007).
- **State-Listed Species:** The ILARNG Environmental Branch will coordinate with IDNR on a case-by-case basis prior to implementing construction projects (since they will occur over several years) to identify the appropriate conservation measures to be implemented based on the species of priority concern in that given project location and obtain an Incidental Take Authorization pursuant to the Illinois Endangered Species Protection Act (520 ILCS 10/5.5) for projects with the potential to result in incidental take of a state-listed species. As a further protection measure, the ILARNG Environmental Branch will develop educational materials with identification information, protection status, and notification and relocation protocols for all state-listed species. All personnel conducting construction activities at STA will be provided these materials. Should any of these species be observed (alive or dead) during construction activities, the ILARNG Environmental Branch will notify IDNR immediately.

Public Safety and Aviation Traffic. To ensure impacts to public safety and aircraft using the airspace above and within the vicinity of STA are reduced to a *less-than-significant* level, the following mitigation measures will be implemented by the STA Range Control in conjunction with Sparta Community Airport– Hunter Field and Indianapolis Air Route Traffic Control Center (ARTCC).

- The STA Range Control will adhere to the approved STA SARSA requirements (see **Appendix D**) which include: (1) the SARSA will be managed in accordance with DA PAM 385-63; (2) a red warning streamer will be posted during daylight hours and a red warning light during night fire; (3) Local Notices to Airmen (NOTAM) will be made prior to initiating live firing activities on the Zero Range by STA Range Control and Indianapolis ARTCC; (4) the Local NOTAM will include the location and description of activities to be conducted and the date and times of use; (5) firing will not be conducted when the ceiling (cloud height) is less than 1,000 feet above the vertical hazard of the caliber being utilized; (6) no projectile shall enter a cloud formation; and (7) STA Range Control will provide safety briefings to range operation that includes the proximity of the airport to STA and the Range Officer in Control's (OIC) responsibilities; and (8) the Range OIC will ensure skies are monitored for low flying aircraft in the vicinity of the range area and immediately initiate a "check fire" in the event an aircraft approaches the SARSA.
- The STA Range Control will integrate with the existing Sparta Community Airport– Hunter Field AWOS-3 and the CTAF. The AWOS-3 will provide the STA Range Control with the specific information required by the SARSA. The STA Range Control will monitor the CTAF, which pilots use to coordinate their arrivals and departures safely by providing positioning reports and acknowledging other aircraft in the airfield pattern.
- Prior to constructing physical structures (e.g., range control tower), the ILARNG will submit an application to the FAA for an Obstruction Evaluation/Airport Airspace Analysis in accordance with 14 CFR 77.

Local Economy. To minimize the potential for adverse economic impacts to the airport, the ILARNG will prepare a brochure for the Sparta Community Airport – Hunter Field to educate pilots and other concerned public. The brochure will outline the safety precautions that are being implemented and the associated benefits of the proposed range at the STA. Prior to distribution, the ILARNG will provide the Sparta Community Airport – Hunter Field with the opportunity to review and approve the content of this brochure.

4.14 Cumulative Effects

As defined by CEQ regulations in 40 CFR Part 1508.7, cumulative impacts are those that "result from the incremental impact of the Proposed Action when added to other past, present and reasonably foreseeable future actions, without regard to the agency (federal or non-federal) or individual who undertakes such other actions." Cumulative impact analysis captures the effects that result from the Proposed Action(s) in combination with the effects of other actions in the Proposed Action's ROI.

Because of extensive influences both within the Proposed Action areas and outside the boundary, cumulative effects are the most difficult to analyze. NEPA requires analysis of cumulative environmental effects of a Proposed Action, or set of actions, on resources that may often be manifested only at the cumulative level, such as traffic congestion, air quality, noise, biological resources, cultural resources, socioeconomic conditions, utility system capacities, and others.

Proposed short-term and long-term development projects for the STA are addressed in the STA Master Plan (Leidos 2014) and the ILARNG's (2013) RCMP. These represent the scope of known, defined development activities currently planned for the STA over approximately the next 10 to 20 years. As such, these documents capture all reasonably foreseeable actions proposed at the installation. Some of the development projects addressed in these plans were recently constructed and/or will be the near future. NEPA analysis for these projects is addressed via the 2011 Final EA and/or a separate REC. Installation projects not addressed in this EA include the Tactical Training Base, Conditioning Course, Bayonet Course (relocation), and Leader Reaction Course.

The ILARNG consulted regional plans and contacted several local entities (see **Section 9**) to identify past, present and reasonably foreseeable future actions within the ROI. Regional plans included the *Comprehensive Plan for City of Sparta, Illinois* (PGVA 2008), and *Illinois DOT FY 2011-2016 Highway Improvement Program* (Illinois DOT 2011). Past, present, and reasonably foreseeable actions in the ROI that were identified within these plans and through consultation with local personnel are summarized below.

- ✓ IDNR World Shooting and Recreational Complex – opened in 2006
- ✓ Minor roadway improvements within Randolph County are planned between FY 2012-2016, including a bridge replacement project east of the City of Sparta and resurfacing projects along IL-3, IL-153 and IL-159 (Illinois DOT 2011).

4.14.1 Cumulative Effects within the Area

Randolph County was first established in 1795; however, the County's boundary has changed over the years. Chester, the county seat, and Sparta are the two largest towns in the County with a population of 8,586 and 4,302 individuals (US Census Bureau 2010). In the early 1800s, immigration occurred rapidly resulting in the land changing from wilderness to farming (Leeper 2004). By the 1900s, the population was approximately 29,000, and has remained fairly stable over the past century. Randolph County's population in 2010 was 34,432.

According to Leeper (2004), coal mining played a large role in the 1900s in the county bringing an influx of people into Sparta. Randolph County is the second leading coal producing county in Illinois. Presently, approximately 75% of the county is comprised of farms with soybeans, corn and wheat being the primary crops and hay, grain sorghum, timber, cattle and hogs being secondary. About 4% of the county is water and 11% is comprised of forestland that occurs mainly along the Mississippi and Kaskaskia Rivers. Transportation in the county is serviced by nine primary state highways and two railroads. Two of these state highways are located in the immediate vicinity of STA, which are SR 4 and SR 154.

As mentioned the population has remained fairly stable, but has consistently lost population since the 1980s. The population of Randolph County was 33,893 in 2000 and 33,476 in 2010 – a decrease of 1.2% (US Census Bureau 2010), while the State of Illinois had a population of 12,830,362 in 2010, an overall increase of 3.3% from 2000, much less than the overall 9.3% increase in US population over the same period (US Census Bureau 2010). During this same time, the City of Sparta's population decreased by 4.1% between 2000 (4,486) and 2010 (4,302). However, population projections predict that this trend will reverse in the next 20 years (see **Table 11**). However, growth in Randolph County is projected to grow at half the rate of the State of Illinois based on these projections (DCEO 2014a). Based on the relatively stable population levels and population projections, Sparta and Randolph County are not likely to experience a great deal of growth and development in the future.

4.14.2 Cumulative Effects of the Proposed Action

The Preferred Action Alternative would result in the impacts identified throughout **Section 4**. These include potential *less-than-significant adverse* impacts to land use and cover, air quality, the noise environment, soils, water resources, vegetation, wildlife, utilities, traffic, and HTMW. These impacts would be further reduced through implementation of standard ILARNG BMPs as identified in **Section 4.13.1**. Potential significant impacts to soils quality, water resources, threatened and endangered species, public safety and aviation are identified, but mitigated to *less-than-significant* levels; mitigation measures are summarized in **Section 4.13.2**. No adverse impacts to geographic setting or location, topography, geology, the socioeconomic environment, or environmental justice are anticipated as well as positive effects to on-Post land use and infrastructure and regional socioeconomics.

Implementation of the Preferred Action Alternative is not expected to cumulatively significantly adversely impact any technical area in this EA. Cumulative net positive impacts to infrastructure and the local socioeconomic environment would be realized. With the exception of some roadway improvement projects, no other major development was identified for the ROI with the exception of potential future development within the confines of STA. The Proposed Action would not noticeably contribute to a regional decline in natural resources as no significant resources would be affected given the majority of known future projects would occur on formerly strip-mined lands.

Planned projects identified in the 2014 STA Master Plan combined with the Proposed Action could lead to increased training site usage in the future, and in turn adverse cumulative effects to air, noise, and infrastructure. However, these cumulative effects would likely produce localized, less-than-significant adverse effects to the human environment through less-than-significant potential increases in local area traffic and utility consumption and less-than-significant increases in air quality emissions and noise in the immediate vicinity of the STA. Regional cumulative impacts are not as likely because these less-than significant impacts would be localized, and the traffic increase would be readily absorbed by existing road capacity within and around the STA. Further, because potential projects would occur over the next 10 to 20 years, these impacts would occur over a long period allowing these effects to be managed through proper community planning.

Under the No Action Alternative, ongoing operations at STA would continue. In turn, STA's full training potential would continue to be limited and the facilities necessary to accommodate the training mission and meet the goal of becoming a CTC would continue decline. Some of the projects

evaluated in the 2011 Final EA for the 2007 Master Plan that do not require additional evaluation may be implemented. However, because this EA is nearly 5 years old and an updated Master Plan for STA was prepared in 2014, it is unlikely any significant development would occur at STA.

4.14.3 Inter-relationship of Cumulative Effects

The region experienced significant cumulative impacts to the environment due to large scale development and population growth prior to the 1800s and some fluctuations during the 1990s from the coal mining industry. However, in general the population of Randolph County has remained relatively stable over the past century and has even declined in recent years. Thus, the region is not likely experiencing or going to experience a great deal of growth and development in the future. The environment surrounding the Preferred Action Alternative has experienced very little change with the exception of the IDNR World Shooting Complex, and no new development was identified with the exception of some minor road improvements within Randolph County and additional facility growth on STA in the next 10 to 20 years. Thus, all future growth is likely to occur on previously disturbed land from strip-mining, and is not anticipated to impact the environment outside of the STA.

Planned projects within the region would not facilitate further degradation or strain on existing infrastructure or the natural ecosystem, and would not add further demand on regional resources. Rather proposed regional projects are more likely to result in positive cumulative effects to regional roadway infrastructure.

No significant adverse cumulative impacts to the environment, induced by the changes under the Preferred Action Alternative, are anticipated within the region. Coordination between the ILARNG and regional planning and community representatives would serve to minimize any potential land use conflicts in the future. Implementation of land use and resource management plans would serve to control the extent of environmental impacts, and proper planning would ensure that future socioeconomic conditions maintain the quality of life for residents in the area. Implementation of effective environmental, cultural resources and natural resources management and programs would minimize or eliminate potential cumulative degradation of the natural ecosystem.

SECTION 5: COMPARISON OF ALTERNATIVES AND CONCLUSIONS

5.1 Comparison of the Environmental Consequences of the Alternatives

This EA has evaluated the potential environmental, socioeconomic, and cultural effects of constructing a Zero Range, relocating the existing M203 Grenade Launcher Range and implementing road improvements at the Sparta Training Area (STA) in Sparta, Randolph County, Illinois, as detailed in **Section 2.2** (Proposed Action). Two alternatives were evaluated: Preferred Action Alternative and No Action Alternative. A comparison of the environmental consequences of these alternatives is provided in **Table 18**.

Table 18. Alternative Comparison Matrix		
Technical Resource Area	No Action Alternative	Preferred Action Alternative
Land Use and Land Cover	No impact attributable to the ILARNG action. STA's full training potential would continue to be limited and the facilities necessary to accommodate the training mission and to become a CTC would not be available. The failure to provide the required training facilities would negatively impact the long-term viability of the STA as a training center, resulting in a <u>potentially significant long-term adverse</u> land use impact.	Long-term <u>positive</u> impact to land use and the STA mission is expected by improving the training use, capability, sustainability and value of these areas. No major effect to on-Post land use is expected as components of the Proposed Action were sited to maximize training value and use. No conflict with existing or proposed off-Post land use is anticipated at this time. However, the ILARNG will work with local zoning officials to ensure surrounding area land use remains compatible in the future. Short-term and long-term, <u>less-than-significant adverse</u> effects to land cover are anticipated. ILARNG would minimize clearing and earthwork to the maximum extent possible to minimize disturbance and associated construction costs.
Air Quality	No impact attributable to the ILARNG action. Ongoing operations' emissions would continue.	Short-term, <u>less-than-significant adverse</u> impact due to the potential for dust generation from construction activities and the proximity of sensitive receptors. Long-term <u>less-than-significant adverse</u> impact to local air quality due to increased training site use, weapons firing and vehicle traffic. Impacts would be reduced with implementation of BMPs.
Noise	No impact attributable to the ILARNG action. Ongoing noise associated with current training operations would continue.	Short-term, <u>less-than-significant adverse</u> impact due to the potential for noise generation from construction activities and the proximity of sensitive receptors. Long-term, <u>less-than-significant adverse</u> impacts due to increased noise levels associated with proposed firing ranges and training site usage and the proximity of sensitive receptors. Impacts would be reduced with implementation of BMPs.

Table 18. Alternative Comparison Matrix		
Technical Resource Area	No Action Alternative	Preferred Action Alternative
Topography, Geology, and Soils	No impact attributable to the ILARNG action. Long-term <u>positive</u> soil impacts from the proposed roadway maintenance projects would not be recognized, and could lead to <i>adverse</i> impacts associated with soil erosion.	Short-term, <u>less-than-significant adverse</u> impact during land disturbing activities within the Proposed Action area, respectively. Impacts would be reduced with implementation of BMPs. Long-term <u>positive</u> impacts due to roadway improvement projects. Potential <i>significant adverse</i> impact to soils from range operations. Impacts would be reduced to less-than-significant levels with implementation of mitigation measures.
Water Resources	No impact attributable to the ILARNG action. <i>Long-term positive</i> soil impacts from the proposed roadway maintenance projects would not be recognized, and could lead to <i>adverse</i> impacts associated with increased soil erosion and sedimentation.	Potential short-term, <u>less-than-significant adverse</u> impact to water quality during project activities resulting in erosion and sedimentation, and to streams, wetlands and floodplains from construction. Impacts would be reduced with implementation of BMPs. Potential <i>significant adverse</i> impacts to surface water and groundwater quality from range operations. Impacts will be reduced to less-than-significant levels with implementation of mitigation measures.
Biological Resources	No impact attributable to the ILARNG action.	Short-term, <u>less-than-significant adverse</u> impact to biological resources from construction noise and vegetation removal. Long-term, <u>less-than-significant adverse</u> impacts due to elimination of vegetation and wildlife habitat, which would be minor on a regional and local scale. Potential <i>significant adverse</i> impact to federally listed and state-listed species from construction, increased training site use and range operations. Impacts would be reduced to less-than-significant levels with implementation of mitigation measures.
Cultural Resources	No impact attributable to the ILARNG action.	No effect to cultural resources are anticipated as a result of the Proposed Action. If an inadvertent discovery of cultural resources is made during ground disturbing activities, impacts would be reduced to <u>less-than-significant</u> levels with implementation of BMPs.
Socioeconomics (including Environmental Justice and Protection of Children)	No impact attributable to the ILARNG action. Health and safety risks would continue due to excess out-of-state travel to meet training requirements.	Short-term, <u>positive</u> impacts to the socioeconomic environment, including environmental justice. Potential <i>significant adverse</i> impact to public safety from range SDZs. Impacts would be reduced to less-than-significant levels with implementation of mitigation measures.

Table 18. Alternative Comparison Matrix		
Technical Resource Area	No Action Alternative	Preferred Action Alternative
Infrastructure	No impact attributable to the ILARNG action. Utility usage would continue as under current conditions. Beneficial impacts to on-Post infrastructure would not be recognized.	Potential <u>less-than-significant adverse</u> impact to utility consumption from increased training site use, utility extensions, and the relocation of the high voltage power line. Short-term and long-term, <u>less-than-significant adverse</u> impacts due to construction traffic and increased site usage. Impacts would be reduced with implementation of BMPs. Potential <i>significant adverse</i> impact to local airport and aviation travel from operation of a small arms range. Impacts would be reduced to less-than-significant levels with implementation of mitigation measures.
Hazardous and Toxic Materials and Wastes	No impact attributable to the ILARNG action. The ILARNG P2 Plan, STA SPCCP, and Installation Spill Contingency Plan would continue to be implemented.	Short-term and long-term, <u>less-than-significant adverse</u> impacts due to construction activities and increased training site use. Impacts would be controlled through BMPs and ongoing regulatory compliance.

5.2 Conclusions

The evaluation performed within this EA concludes there would be *no significant adverse impact*, either individually or cumulatively, to the local environment or quality of life as a result of implementing the Preferred Action Alternative, provided all BMPs and mitigation measures specified in this EA are implemented through the design process. Further, management controls are in place and reviewed prior to execution, and ongoing BMPs are reviewed on an annual basis. This EA's analysis determines, therefore, an EIS is unnecessary for implementing the Proposed Action, and that a mitigated FNSI is appropriate. The Preferred Action Alternative was determined by the ILARNG to provide the best combination of land and resources to sustain quality military training and to maintain and improve the units' readiness postures. The No Action Alternative was not found to satisfy the purpose of and need for the project. This alternative would limit the capability of the ILARNG to carry out its assigned mission to provide adequate training facilities, and would jeopardize the proficiency and military readiness of the ILARNG. As such, this EA recommends implementation of the Preferred Action Alternative.

Because roadway improvement projects would be implemented over an extended period of time, the ILARNG will review this NEPA analysis, in consultation with ARNG-ILE, prior to project execution to ensure no substantial changes have occurred to environmental resources or regulatory requirements since the completion of this EA. If changes have occurred the ILARNG will prepare an updated NEPA analysis in the form of a Supplemental EA or tiered Categorical Exclusion. This original EA would be utilized as the foundation for the updated analysis and supplemental NEPA analyses would focus on those issues that have changed.

SECTION 6: REFERENCES

- 3D/I. 1996. Biological Assessment of the Master Plan and Ongoing Mission, United States Army Engineer Center and Fort Leonard Wood, Missouri. Montgomery Watson and 3D/International, Inc.: San Antonio, TX.
- AirNav. 2014. Sparta Community Airport-Hunter Field, Sparta, Illinois, USA. Federal Aviation Administrative Information effective 6 February 2014. Accessed 2 March 2014: <https://www.airnav.com/airport/KSAR>. AirNav, LLC: Atlanta, GA.
- ARDEC. 2013. Memorandum For Record – Surface Danger Zone Analysis for Zero Range at Illinois Army National Guard’s Sparta Training Area. Department of the Army, US Army Research, Development and Engineering Command Armament Research, Development and Engineering Center: Picatinny, NJ.
- ARNG. 2011a. The *ARNG NEPA Handbook, Guidance on Preparing Environmental Documentation for Army National Guard Actions in Compliance with the National Environmental Policy Act of 1969*. Army National Guard: Washington DC.
- ARNG. 2011b. The *ARNG’s Environmental Condition of Property (ECOP) Process Handbook*. Army National Guard: Washington DC.
- Callahan, E.V. 1993. Indiana bat summer habitat requirements. M.S. Thesis. University of Missouri: Columbia, MO.
- Carter, T. C. 2002. Sparta Training Area Bat Survey - Final Report. Three Rivers Assessments: DeSoto, IL.
- CDM. 2003. Sparta Training Site Wetland Delineation. Illinois Department of Military Affairs, Sparta, IL. Camp Dresser and McKee: St. Louis, MO.
- Cornell University. 2014. All About Birds: Bird Guide. Accessed 14 November 2014: <http://www.allaboutbirds.org/guide/>. The Cornell Lab of Ornithology: Ithaca, NY.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. Publ. No. FWS/OBS-79/31. Federal Register 11982, 1980. U.S. Fish and Wildlife Service, Office of Biological Services: Washington, DC.
- DA. 2004. Training Circular 25-1, Training Land, 15 March 2004. Department of the Army: Washington, DC.
- DA. 2006. Army Regulation 25-30 The Army Publishing Program. 27 March 2006. Department of the Army: Washington DC.
- DA. 2007. A Statement on the Posture of the US Army Prepared by the Honorable Frances J. Harvey and General Peter J. Schoomaker, February 2007. Department of the Army: Washington DC.
- DA. 2010. Training Circular 25-8, Training Ranges, 20 May 2010. Department of the Army: Washington, DC.
- DA. 2014. Department of the Army Pamphlet 385-63, *Range Safety*, 16 April 2014. Department of the Army Headquarters: Washington, DC.

- DCEO. 2014a. Population Projections. Accessed 5 March 2014: <https://data.illinois.gov/Economics/DCEO-County-Population-Projections/h3bx-hbbh>. Illinois Department of Commerce and Economic Opportunity: Springfield, IL.
- DCEO. 2014b. Community Profile: Sparta, Illinois. Accessed 11 November 2014: <http://www2.illinoisbiz.biz/communityprofiles/profiles/SPARTA.htm>. Illinois Department of Commerce and Economic Opportunity: Springfield, IL
- DMAIL. 2008. Regulation 350-12, Training at Sparta Training Area. Illinois Department of Military Affairs: Springfield, IL
- DoD. 2006. DoDI 4710.02 DoD Interactions with Federally-Recognized Tribes (14 September 2006). Department of Defense: Washington DC.
- DoD. 2008. DoD Directive 5105.77 National Guard Bureau (21 May 2008). Department of Defense: Washington DC.
- DoD. 2009. DoDI 1215.13 Reserve Component Member Participation Policy (11 May 2009). Department of Defense: Washington DC.
- DoD. 2015. Species of Concern Region 22. Accessed 20 May 2015: <http://www.dodpif.org/resources/bcrmap.php>. Department of Defense. Partners in Flight. Washington. DC.
- Fabian, G. and K. Watts. 2005. Army Small Arms Training Range Environmental Best Management Practices (BMPs) Manual. US Army Aberdeen Test Center: Aberdeen Proving Ground, MD.
- Fehmi, J. S., R. L. McLeese and J. L. Casebeer, Initial Assessment of the Soil and Vegetation of the Illinois National Guard Sparta Training Area, USACE - ERDC/CERL TR-0316, June 2003. Sparta, IL
- FEMA. 2008. Flood Insurance Rate Maps (FIRM) 17157C0090D, Randolph County Incorporated and Unincorporated Areas, effective 5 November 2008. Federal Emergency Management Agency. Washington, DC.
- FICUN. 1980. Guidelines for Considering Noise in Land Use Planning and Control. Federal Interagency Committee on Urban Noise: Washington, DC.
- Garvey, J. E., R. C. Heidinger, M. J. Lydy, and M. R. Whiles. 2005. Aquatic Environmental Assessment of the Sparta Illinois National Guard Training Facility. Southern Illinois University, Department of Zoology, Carbondale, IL.
- Harland Bartholomew and Associates. 1997. Biological Assessment: Relocation of U.S. Army Chemical School and U.S. Army Military Police School to Fort Leonard Wood, Missouri and Appendix IV, Ecological Risk Assessment: Effects of Selected Chemicals on Indiana Bats, Gray Bats, and Bald Eagles at Fort Leonard Wood, Missouri. United States Army Corps of Engineers Kansas City District.
- Hellgren, E.C., T. Carter, S.M. Bergeson. 2012. Final Report Re-Survey for Bats on Sparta Training Area. Cooperative Wildlife Research Laboratory, Southern Illinois University: Carbondale, IL
- HMG Engineers. 2012. City of Sparta Illinois Zoning District Map. HMG Engineers, Inc.: Carlyle, IL.
- Holland, W., E. Hellgren, C. Nielsen, and K. Horn. 2013. Survey for Hepetofauna on Sparta Training Area. Cooperative Wildlife Research Laboratory, Southern Illinois University: Carbondale, IL.

- IDES. 2014. Illinois County Unemployment Rate Rankings. Accessed 12 November 2014: <http://www.ides.illinois.gov/page.aspx?item=2515>. Illinois Department of Employment Services: Springfield, IL.
- IEPA. 2014. Illinois Integrated Water Quality Report and Section 303(d) List – 2014, Clean Water Act Sections 303(d), 305(b), and 314. Volume I: Surface Water. Illinois Environmental Protection Agency. Bureau of Water: Springfield, IL.
- ILARNG. 1998. Environmental Baseline Study, Phase 1, Environmental Assessment for Sparta Training Area. NGB-ARE-P (200-1a). Illinois Army National Guard: Sparta, IL.
- ILARNG. 2001. Land Use Requirements Study for Proposed Sparta Training Area, Sparta, Illinois, 1 August 2001. Illinois Army National Guard: Springfield, IL.
- ILARNG. 2005. Integrated Natural Resources Management Plan for Illinois Army National Guard's Sparta Training Area, Randolph County, IL. AMEC Earth & Environmental, Inc.: Columbus, OH.
- ILARNG. 2007. Master Plan for Sparta Training, Randolph County, Illinois. May 2007. Illinois Army National Guard: Springfield, IL.
- ILARNG. 2011a. Final Environmental Assessment for the Implementation of the 2007 Master Plan in Support of the Sparta Mission Operations at Sparta Training Area, Randolph County, Illinois. Illinois Army National Guard: Springfield, IL.
- ILARNG. 2011b. Sparta Training Area Hydrologic Analysis. Illinois Army National Guard: Springfield, IL.
- ILARNG. 2011c. Integrated Cultural Resources Management Plan 2011-2016. Illinois Army National Guard: Springfield, IL.
- ILARNG. 2013. Updated Integrated Natural Resources Management Plan for Illinois Army National Guard's Sparta Training Area, Randolph County, IL. AMEC Environment & Infrastructure, Inc.: Indianapolis, IN.
- ILARNG. 2014. Illinois National Guard Range Complex Master Plan. Illinois Army National Guard: Springfield, IL.
- Illinois DOT. 2011. Fiscal Years 2011-2016 Highway Improvement Program: District 8. Accessed 2 March 2014: <http://www.dot.il.gov/>. Illinois Department of Transportation: Collinsville, IL.
- Indiana National Guard. 2009. Programmatic Biological Assessment for the Effects on the Indiana Bat with Respect to Future Routine Training and Land Management Activities and Upcoming Development Projects at Camp Atterbury Joint Maneuver Training Center. Indiana National Guard. AMEC Environment & Infrastructure, Inc.: Indianapolis, IN.
- INHD. 2015. List of Endangered and Threatened Species in Illinois by County. (Revised 2015). Accessed 2 July 2015: <http://dnr.state.il.us/conservation/naturalheritage/inhd.htm>. Illinois Natural Heritage Database. Springfield, IL
- INHS. 2015. University of Illinois Urbana-Champaign – Illinois Animal and Plant Species Fact Sheets. Accessed 2 July 2015: http://www.inhs.illinois.edu/animals_plants/. Illinois Natural History Survey: Springfield, IL.

- ISGS. 2014. Physiographic Divisions of Illinois. Accessed 14 November 2014:
<https://www.isgs.illinois.edu/maps/statewide-maps>. Illinois State Geological Survey:
Champaign, IL.
- Lambert, L. and C. LaMontagne. 2010. Vegetation Survey at STA. U.S. Department of Agriculture –
Natural Resources Conservation Service: Viena, IL.
- Leeper, R.A. 2004. Soil Survey for Randolph County, IL. US Department of Agriculture, Natural
Resources Conservation: Washington, DC.
- Leidos. 2014. Master Plan for Illinois Army National Guard Sparta Training Area, Sparta, IL. Leidos
Engineering, LLC: St. Louis, MO.
- Lloyd, Jr., Orville B. and William L. Lyke. 1995. Groundwater Atlas of the United States: Illinois, Indiana,
Kentucky, Ohio, Tennessee. HA 730-K. U.S. Geological Survey: Reston, VA.
- Mankowski, A. 2010. Status and Distribution of Endangered and Threatened Species of Illinois: Volume
4 – 2009 and 2010 changes to the Illinois list of endangered and threatened. Illinois Endangered
Species Protection Board, Springfield, IL.
- NGB. 2007. National Guard Regulation 5-3, Management of Army National Guard Training Centers (08
May 2007). National Guard Bureau: Arlington, VA.
- NGB. 2011. National Guard Pamphlet 415-12 Army National Guard Facilities Allowances (01 June
2011). National Guard Bureau: Arlington, VA.
- NGIL. 2013. National Guard Illinois Regulation 200-13-001, STA Hunting and Fishing Regulation.
National Guard Illinois: Springfield, IL
- NRCS. 1996. National Food Security Act Manual 3rd Edition, 180-V-NFSAM, Third Ed., Amend. 2,
November 1996. US Department of Agriculture, Natural Resources Conservation Service:
Washington, DC.
- NRCS. 2002. Illinois Urban Manual: A Technical Manual Designed for Urban Ecosystem Protection and
Enhancement. United States Department of Agriculture, Natural Resources Conservation
Service: Champaign, IL.
- NRCS. 2014. National Hydric Soils List by State and County (last updated: March 2014). Accessed
March 2015 via <http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>. United States
Department of Agriculture Natural Resources Conservation Service: Washington, DC.
- NRCS. 2015. Web Soil Survey. Accessed 2 February 2015: [http://websoilsurvey.sc.egov.usda.gov/
App/WebSoilSurvey.aspx](http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx). US Department of Agriculture, Natural Resources Conservation
Service: Washington, DC.
- PGAV. 2008. City of Sparta 2008 Comprehensive Plan Update, Sparta, IL. PGAV Urban Consulting: St.
Louis, MO.
- Phelps, Q. E. and Dr. J. E. Garvey. 2009. Sparta, Illinois National Guard, Surface Coal Mine Lakes,
Fisheries Management Plan. Fisheries and Illinois Aquaculture Center, Department of Zoology,
Southern Illinois University Carbondale: Carbondale, IL
- Phillips, C.A., R.A. Brandon, and E.O. Moll. 1999. Field Guide to Amphibians and Reptiles of Illinois.
Illinois Department of Natural Resources, Illinois Natural History Survey: Springfield, IL.

- Pitts, D. and J. L. Casebeer. 2003. Wildlife Baseline Survey: ERDC/CERL TR-03-DRAFT, September 2003. Illinois National Guard, Sparta, IL.
- Shapiro, A. and M.G. Hohmann. 2005. Summary of threatened and endangered bat-related restrictions on military training, testing, and land management. Unpublished technical report. ERDC/CERL TR-05-13. U.S. Army Corps of Engineers, Engineer Research and Development Center, Construction Engineering Research Laboratory.
- Southwestern Illinois RC&D, Inc. 2002. Kaskaskia River Watershed: An ecosystem approach to issues and opportunities. Illinois Department of Natural Resources.
- Straight, C. A., and R. J. Cooper. 2000. Chuck-will's-widow (*Caprimulgus carolinensis*). In The Birds of North America, No. 499 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA
- Tipler, P.A. 1976. Physics. Worth Publishers. New York, NY.
- USACE. 1987. Wetland Delineation Manual. U.S. Army Corps of Engineers. U.S. Army Engineer Waterways Experiment Station. Vicksburg, Mississippi. Tech. Rpt. Y-87-1.
- USAPHC. 2013. ILARNG Statewide Operational Noise Management Plan (updated August 2013). US Army Public Health Command: Aberdeen Proving Ground, MD.
- USAPHC. 2014. Operational Noise Consultation No. WS.003070762-1-15: Operational Noise Assessment for Proposed Range Development, Sparta Training Area, Illinois. US Army Public Health Command: Aberdeen Proving Ground, MD.
- US Census Bureau. 2010. US Census 2010. Accessed 12 November 2014: <http://www.census.gov/2010census/>. US Census Bureau: Washington DC.
- US Census Bureau. 2014. 2008-2012 American Community Survey 5-Year Estimates. Accessed 10 March 2014: http://factfinder2.census.gov/faces/nav/jsf/pages/community_facts.xhtml#none. US Census Bureau: Washington DC.
- USEPA. 2005. Best Management Practices for Lead at Outdoor Shooting Ranges. EPA-902-B-01-001 (Revised June 2005). Accessed 9 June 2015: http://www.epa.gov/region2/waste/leadshot/epa_bmp.pdf. US Environmental Protection Agency: New York, NY.
- USEPA. 2014. *Green Book. Nonattainment status for each county by year in Illinois*. Updated 2 July 2014. Accessed on 14 November 2014: http://www.epa.gov/airquality/greenbook/anayo_il.html. US Environmental Protection Agency: Triangle Park, NC.
- USFWS. 1988. Endangered Species Act of 1973, as amended through the 100th congress. US Department of the Interior. Washington, D.C.
- USFWS. 1998. Biological Opinion on the Construction and Operation of the Multi-purpose Training Range (MPTR) at the Camp Atterbury Army National Guard Training Site. U.S. Fish and Wildlife Service Bloomington Field Office: Bloomington, Indiana.
- USFWS. 2007. National Bald Eagle Management Guidelines. US Fish and Wildlife Service, Division of Migratory Bird Management, Falls Church, VA.
- USFWS. 2009. Biological Opinion on the Effect of Proposed Activities on the Fort Drum Military Installation (2009-2011). US Fish and Wildlife Service, New York Field Office: Cortland, NY.

USFWS. 2010. Programmatic Biological Opinion on the Effects of Ongoing and Future Military and Land Management Activities at Camp Atterbury Joint Maneuver Training Center on the Federally Endangered Indiana Bat. US Fish and Wildlife, Bloomington Field Office: Bloomington, IN.

USFWS. 2014. Illinois County Distribution: Federally Endangered, Threatened, and Candidate Species. (Revised October 2013). Accessed 12 November 2014:
[http://www.fws.gov/midwest/endangered/
lists/illinois-cty.html](http://www.fws.gov/midwest/endangered/lists/illinois-cty.html). US Fish and Wildlife Service: Marion, IL.

SECTION 7: GLOSSARY

100-year Flood – A flood event of such magnitude that it occurs, on average, every 100 years; this equates to a one percent chance of its occurring in a given year.

Aesthetics – Pertaining to the quality of human perception of natural beauty.

Ambient - The environment as it exists around people, plants, and structures.

Ambient Air Quality Standards - Those standards established according to the CAA to protect health and welfare (AR 200-1).

Aquifer - An underground geological formation containing usable amounts of groundwater which can supply wells and springs.

Attainment Area - Region that meets the National Ambient Air Quality Standard (NAAQS) for a criteria pollutant under the CAA.

Berm – Earthen berm placed at the end of a firing range to stop the travel of fired projectiles.

Bedrock - the solid rock that underlies all soil, sand, clay, gravel and loose material on the earth's surface.

Best Management Practices (BMPs) - Methods, measures, or practices to prevent or reduce the contributions of pollutants to US waters. Best management practices may be imposed in addition to, or in the absence of, effluent limitations, standards, or prohibitions (AR 200-1).

Commercial land use – land use that includes private and public businesses (retail, wholesale, etc.), institutions (schools, churches, etc), health services (hospitals, clinics, etc.) and military buildings and installations.

Compaction - The packing of soil together into a firmer, denser mass, generally caused by the pressure of great weight.

Company - A military unit that is the next smaller unit of a battalion; the most basic administrative and tactical unit (approximately 50 to 200 persons, depending on the type of unit).

Contaminants - Any physical, chemical, biological or radiological substances that have an adverse effect on air, water or soil.

Council on Environmental Quality (CEQ) - An Executive Office of the President composed of three members appointed by the President, subject to approval by the Senate. Each member shall be exceptionally qualified to analyze and interpret environmental trends; to appraise programs and activities of the Federal Government. Members are to be conscious of and responsive to the scientific, economic, social, aesthetic, and cultural needs of the Nation; and to formulate and recommend national policies to promote the improvement of the quality of the environment.

Criteria Pollutants - The CAA of 1970 required the USEPA to set air quality standards for common and widespread pollutants in order to protect human health and welfare. There are six "criteria pollutants": ozone (O₃), carbon monoxide (CO), sulfur dioxide (SO₂), lead (Pb), nitrogen dioxide (NO₂), and particulate matter.

Cultural Resources - Cultural resources are historic properties as defined by the NHPA, cultural items as defined by the Native American Graves Protection and Repatriation Act (NAGPRA), archaeological resources as defined by the Archaeological Resources Protection Act (ARPA), sacred sites as defined by EO 13007 to which access is afforded under the American Indian Religious Freedom Act (AIRFA), and collections and associated records as defined by 36 CFR 79.

Culvert - Drainage that crosses beneath a road.

Cumulative Impact - The impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

dBA – “A-weighted” non-impulse noise measurement in decibels, weighted to match human hearing frequency response.

Decibel (dB) - A unit of measurement of sound pressure level.

Direct Impact - A direct impact is caused by a Proposed Action, and occurs at the same time and place.

Elevation - Raising a building and placing it on a higher foundation so the first or lowest floor is above flood levels.

Emission - A release of a pollutant.

Endangered Species - Any species which is in danger of extinction throughout all or a significant portion of its range.

Environmental Assessment (EA) - An EA is a publication that provides sufficient evidence and analysis to show whether a proposed system will adversely affect the environment or be environmentally controversial.

Erosion - The wearing away of the land surface by detachment and movement of soil and rock fragments through the action of moving water and other geological agents.

Farmland - Cropland, pastures, meadows, and planted woodland.

Fauna - Animal life, especially the animal characteristics of a region, period, or special environment.

Flora - Vegetation; plant life characteristic of a region, period, or special environment.

Floodplain - The relatively flat area or lowlands adjoining a river, stream, ocean, lake, or other body of water that is susceptible to being inundated by floodwaters.

FNSI - Finding of No Significant Impact, a NEPA document.

Fugitive Dust - Particles light enough to be suspended in air which are not caught in a capture or filtering system. For this document, this refers to particles put in the air by moving vehicles and air movement over disturbed soils at construction sites.

Geology - Science which deals with the physical history of the earth, the rocks of which it is composed, and physical changes in the earth.

Glacial Till - The mass of rocks and finely ground material carried by a glacier, then deposited when the ice melted. Creates an unstratified material of varying composition.

Groundwater - Water found below the ground

surface. Groundwater may be geologic in origin and as pristine as it was when it was entrapped by the surrounding rock or it may be subject to daily or seasonal effects depending on the local hydrologic cycle. Groundwater may be pumped from wells and used for drinking water, irrigation and other purposes. It is recharged by precipitation or irrigation water soaking into the ground. Thus, any contaminant in precipitation or irrigation water may be carried into groundwater.

Hazardous Substance - Hazardous materials are defined within several laws and regulations to have certain meanings. For this document, a hazardous material is any one of the following:

Any substance designated pursuant to section 311 (b)(2) (A) of the Clean Water Act.

Any element, compound, mixture, solution or substance designated pursuant to Section 102 of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Any hazardous as defined under the Resource Conservation and Recovery Act (RCRA).

Any toxic pollutant listed under TSCA.

Any hazardous air pollutant listed under Section 112 of CAA.

Any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to Subsection 7 of TSCA.

The term does not include: 1) Petroleum, including crude oil or any thereof, which is not otherwise specifically listed or designated as a hazardous substance in a above. 2) Natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). c. A list of hazardous substances is found in 40 CFR 302.4.

Hazardous Waste - A solid waste, which when improperly treated, stored, transported or disposed of poses a substantial hazard to human health or the environment. Hazardous wastes are identified in 40 CFR 261.3 or applicable foreign law, rule, or regulation (see also solid waste).

Hazardous Waste Storage - As defined in 40 CFR 260.10, ". . . the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere".

Hydric Soil - a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic (oxygen-lacking) conditions that favor the growth and regeneration of hydrophytic vegetation. A wetland indicator.

Inactive Duty Training - Authorized training performed by a member of a Reserve component not on active duty or active duty for training and consisting of regularly scheduled unit training assemblies, additional training assemblies, periods of appropriate duty or equivalent training, and any special additional duties authorized for Reserve component personnel by the Secretary concerned, and performed by them in connection with the prescribed activities of the organization in which they are assigned with or without pay. Does not include work or study associated with correspondence courses.

Indirect Impact - An indirect impact is caused by a Proposed Action, but occurs later in time or farther removed in distance, but is still reasonably foreseeable. Indirect impacts may include induced changes in the pattern of land use, population density or growth rate, and related effects on air, water, and other natural and social systems. For example, referring to the possible direct impacts described above, the clearing of trees for new development may have an indirect impact on area wildlife by decreasing available habitat.

Industrial Land Use – Land uses of a relatively higher intensity that are generally not compatible with residential development. Examples include light and heavy manufacturing, mining, and chemical refining.

Isolated Wetland – Areas that meet the wetland hydrology, vegetation, and hydric soil characteristics, but do not have a direct connection to the Waters of the US.

Jurisdictional wetland – Areas that meet the wetland hydrology, vegetation, and hydric soil characteristics, and have a direct connection to the Waters of the US. These wetlands are regulated by the USACE.

Listed Species - Any plant or animal designated as a State or Federal threatened, endangered, special concern, or candidate species.

Major Impact - An impact which would be particularly large in magnitude, considering both context and intensity.

Minor Impact - An impact which would be of a smaller scale or would be more readily mitigated than impacts categorized as major.

Mitigation - Measures taken to reduce adverse impacts on the environment.

Mobile Sources - Vehicles, aircraft, watercraft, construction equipment, and other equipment that use internal combustion engines for energy sources.

Monitoring – A process of inspecting and recording the progress of mitigation measures implemented.

National Ambient Air Quality Standards (NAAQS) - Nationwide standards set up by the USEPA for widespread air pollutants, as required by Section 109 of the Clean Air Act (CAA). Currently, six pollutants are regulated by primary and secondary NAAQS: carbon monoxide (CO), lead, (Pb), nitrogen dioxide (NO₂), ozone (O₃), particulate matter, and sulfur dioxide (SO₂).

National Environmental Policy Act (NEPA) - US statute that requires all Federal agencies to consider the potential effects of Proposed Actions on the human and natural environment.

Nonattainment Area - An area that has been designated by the EPA or the appropriate State air quality agency as exceeding one or more national or State ambient air quality standards.

Parcel - A plot of land, usually a division of a larger area.

Particulates or Particulate Matter - Fine liquid or solid particles such as dust, smoke, mist, fumes or smog found in air.

Physiographic Region - A portion of the Earth's surface with a basically common topography and common morphology.

Pollutant - A substance introduced into the environment that adversely affects the usefulness of a resource.

Potable Water - Water which is suitable for drinking.

Prime Farmland - A special category of highly productive cropland that is recognized and described by the US Department of Agriculture's Soil Conservation Service (now the Natural Resources Conservation Service [NRCS]) and receives special protection under the Surface Mining Law.

Real Property – A building, the land on which it sits, and any permanent improvements or fixtures made to the property (for example, addition of built-in bookshelves).

Remediation - A long-term action that reduces or eliminates a threat to the environment.

Riparian Areas - Areas adjacent to rivers and streams that have a high density, diversity and productivity of plant and animal species relative to nearby uplands.

River Basin - The land area drained by a river and its tributaries.

Sedimentation – Deposition of eroded material in an alternate location by dispersing agents such as water or wind.

Sensitive Receptors - Include, but are not limited to, asthmatics, children, and the elderly, as well as specific facilities, such as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, and childcare centers.

Short Term Impacts – Direct or indirect impacts resulting from an action in the near term. In this context, short-term does not refer to any rigid time period and is determined on a case-by-case basis in terms of the environmental consequences of the Proposed Action.

Significant Impact - According to 40 CFR 1508.27, "significance" as used in NEPA requires consideration of both context and intensity.

Context. The significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the Proposed Action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action.

Soil - The mixture of altered mineral and organic material at the earth's surface that supports plant life.

Solid Waste - Any discarded material that is not excluded by section 261.4(a) or that is not excluded by variance granted under sections 260.30 and 260.31.

Surficial aquifer - Comprises all the rocks and sediments from land surface downward to the top of the intermediate confining unit containing usable amounts of ground water which can supply wells and springs.

Threatened species - Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Topography - The relief features or surface configuration of an area.

Toxic Material/Waste - A harmful substance that includes elements, compounds, mixtures, and materials of complex composition.

Waters of the United States include the following: (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide. (2) All interstate waters including interstate wetlands. (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.

Watershed - The region draining into a particular stream, river, or entire river system.

Wetlands - Areas that are regularly saturated by surface or groundwater and, thus, are characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples include swamps, bogs, fens, marshes and estuaries.

Wildlife Habitat - Set of living communities in which a wildlife population lives.

SECTION 8: LIST OF PREPARERS

Illinois Army National Guard

Department of Military Affairs
 Camp Lincoln
 1301 North MacArthur Blvd
 Springfield, IL 62702

Mr. Anthony Janas, Main POC and STA Natural Resources Manager
 Mr. Jonathan Casebeer, Environmental Manager
 Mr. Kip Troeger, NEPA/Cultural Resources Manager
 CW4 Kenneth Barry, Chief Environmental Manager
 LTC Craig Holan, Construction, Facilities Management Officer
 MAJ Dave Helfrich, Chief Plans & Programming
 CW3 Tara Carmichael, STA Site Manager
 Mr. Jim Lund, Master Planner

Amec Foster Wheeler Environment & Infrastructure, Inc.

201 S. Capitol Ave, Suite 200
 Indianapolis, IN 46225

Name	Role	Degree	Years of Experience
Jennifer Warf	Project Manager, NEPA analysis and oversight, GIS	M.S. in Environmental Studies B.A. in Zoology	15
Marty Marchaterre	Technical Review, Quality Assurance/Quality Control (QA/QC) of the EA	J.D. and B.A. in History/Political Science	25
Kari Morehouse	Preparation of EA sections	M.S. in Biology B.S. in Biology	10
Dan Conn	Map Preparation, GIS	B.S. Geography and Environmental Analysis	7

SECTION 9: AGENCIES AND INDIVIDUALS CONSULTED

Copies of all correspondence, including sample data request letters and responses are included in **Appendix A**.

Federal Agencies

US Army Corps of Engineers

St. Louis District
1222 Spruce Street
St. Louis, MO 63103-2833
POC: Mike Peterson, Public Affairs Officer

US Department of Transportation Federal Aviation Administration

Great Lakes Region-Chicago
Airports District Office
2300 E. Devon Avenue
Des Plaines, IL 60018
POC: Barry Cooper, Regional Administrator and
Amy Hanson, Environmental Protection
Specialist

LTC Robert G. Wegner
DAR, FAA Central Service Area
ATTN: ASW-920
2601 Meacham Blvd
Ft Worth, TX 76137

MSG Alfredo Garza
DAR, FAA Central Service Area
ATTN: ASW-920
2601 Meacham Blvd
Ft Worth, TX 76137

SFC Richard Lowe
DAR, FAA Central Service Area
ATTN: ASW-920
2601 Meacham Blvd
Ft Worth, TX 76137

US Environmental Protection Agency Region 5

Federal Building
77 West Jackson Blvd
Chicago, IL 60604
POC: David Turpin

US Fish and Wildlife Service

Marion Illinois Sub-Office
8588 Route 148
Marion, Illinois 62959
POC: Matt Mangan, Biologist

USDA – Natural Resources Conservation Service

State Office
2118 West Park Court
Champaign, IL 61821
POC: Ivan Dozier, State Conservationist

USDA – Natural Resources Conservation Service

Sparta Field Office
313 W. Belmont Street
Sparta, IL 62286
POC: Andrew W. Schlichting, District
Conservationist

State Agencies

Illinois Department of Natural Resources

One Natural Resources Way, FL 001
Springfield, IL 62702-1271
POC: Connie Waggoner, Division Manager

One Natural Resources Way, FL 001
Springfield, IL 62702-1271
POC: Todd Rettig, Director Land Management

Illinois Department of Transportation

District 8
2300 South Dirksen Parkway
Springfield, IL 62764
POC: Jeffery Keirn, Regional Engineer

Illinois Department of Transportation

Division of Aeronautics
1 Langhorne Bond Drive
Springfield, IL 62707-8415
POC: Terrence L. Schaddel, Airport Planning
Engineer & Environmental Officer

**Illinois Environmental Protection Agency
(Headquarters)**

1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
POC: Lisa Bonnett, Director

Illinois Historic Preservation Agency

1 Old State Capitol Plaza
Springfield IL 62701-1507
POC: Anne Haaker, Deputy SHPO

Illinois Natural History Survey

1816 South Oak Street, MC 652
Champaign, IL 61820
POC: Brian Anderson, Director

Illinois State Geological Survey

Natural Resources Building
615 E. Peabody Drive
Champaign, IL 61820-6964
POC: Richard C. Berg, Interim Director

Illinois State Water Survey

Champaign/Urbana Office
2204 Griffith Dr
Champaign, IL 61820-7495
POC: Misganaw Demissie, Director

Local Government / Utilities**City of Sparta**

114 W. Jackson
Sparta, IL 62286
POC: Charles Kelley, Mayor

Randolph County Zoning

#1 Taylor St., Room 200
Chester, IL 62233

Sparta Community Airport – Hunter Field

1800 N. Market
Sparta, IL 62286
POC: Scott Marquardt, Manager

Sparta Fire Department

107 E. Jackson St.
Sparta, IL 62286
POC: B. Adams, Chief

**Association of Illinois Soil and Water
Districts**

Kaskaskia Water District
700 S Market St
New Athens, IL 62264
POC: Don Beisiegel - Lower Kaskaskia Land
Use Council

Ameren Illinois Power

300 Liberty St
Peoria, IL 61602

City of Sparta Water Treatment Plant

114 W. Jackson
Sparta, IL 62286
POC: Brian Adams, Superintendent

Egyptian Electric Cooperative Association

P.O. Box 38
1005 W. Broadway
Steeleville, IL 62288
POC: Shane Hermetz, Asst. MGR, MGR of
Engineering

Southern Illinois Power Cooperative

11543 Lake of Egypt Road
Marion, IL 62959
POC: Bill Hutchison, VP for Electrical Systems
Distribution

Native American Tribes**Peoria Tribes of Indians of Oklahoma**

P. O. Box 1527
Miami, Oklahoma 74355
POC: Chief John Froman

Delaware Nation, Oklahoma

PO Box 825
Anadarko, OK 73005
POC: Kerry Holton, President

FIGURES

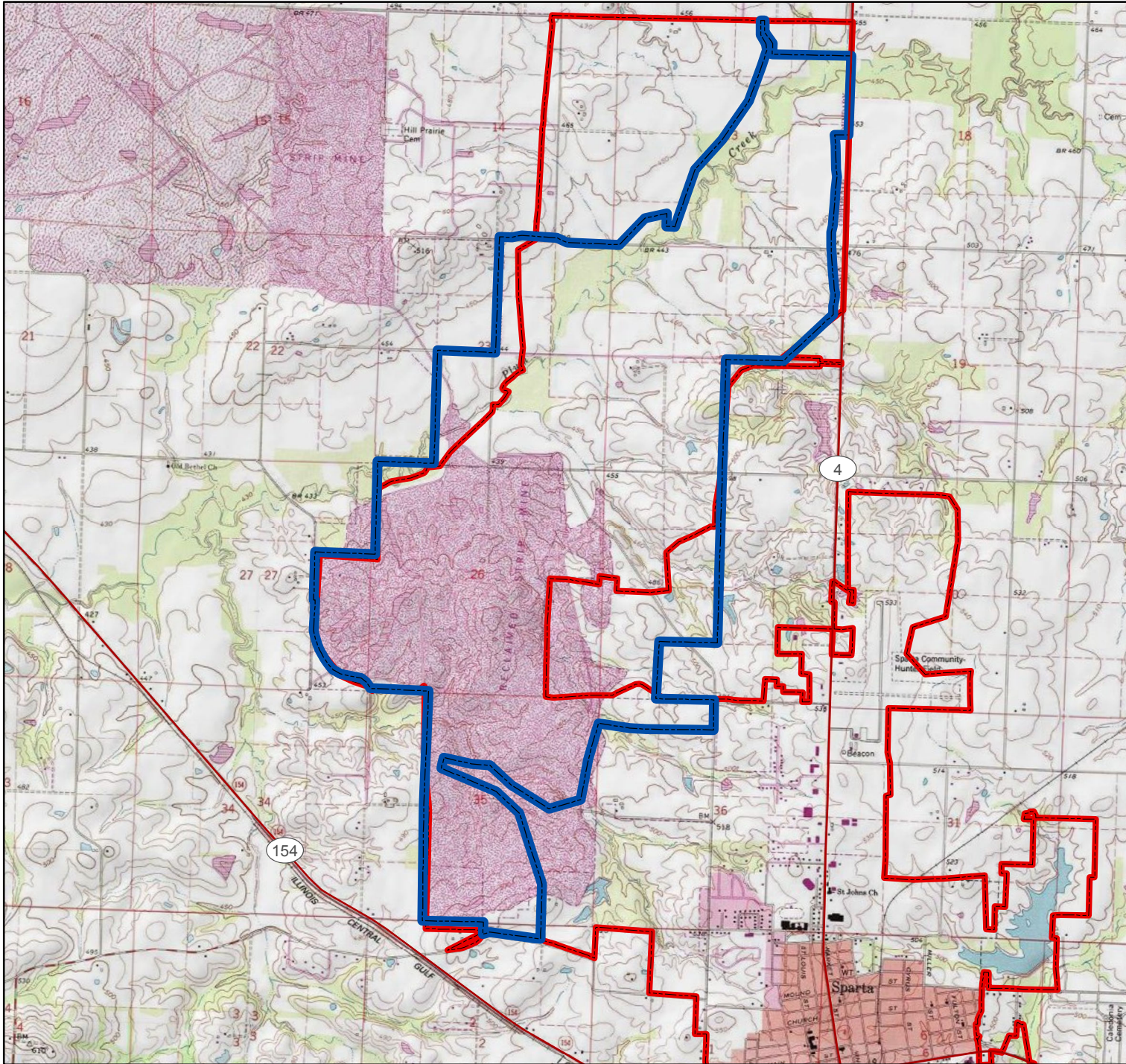
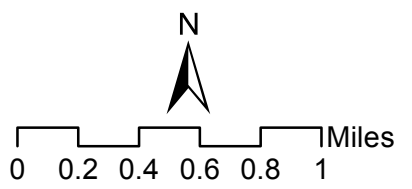


FIGURE 1 SITE LOCATION MAP

Illinois Army National Guard
Environmental Assessment
Sparta Training Area
Randolph County, Illinois

Legend

- Sparta Incorporated Boundary
- Sparta Training Area





















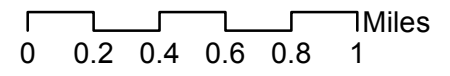
Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
Projection: NAD 1983 UTM Zone 16N (meters)
No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database.

FIGURE 2 STA FACILITY MAP

Illinois Army National Guard Environmental Assessment Sparta Training Area Randolph County, Illinois

Legend

-  Sparta Training Area
 -  Sparta Community Airport
 -  Aboveground Electric Line
 -  Training Areas
 -  Hand Grenade Course (Practice Grenade only)
 -  Bayonet Course
 -  M203 Range (Training/Practice Round only)
 -  Named Streams and Rivers
 -  Existing Infrastructure
 -  Sediment Basins
 -  Land Navigation Posts
 -  Gates
- ### Existing Roads/Trails/Crossings
-  Paved Roads
 -  Gravel Roads
 -  Dirt Trails
 -  Low Water Stream Crossing
 -  Bridge
 -  Culverts



Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
 Projection: NAD 1983 UTM Zone 16N (meters)
 "No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database."

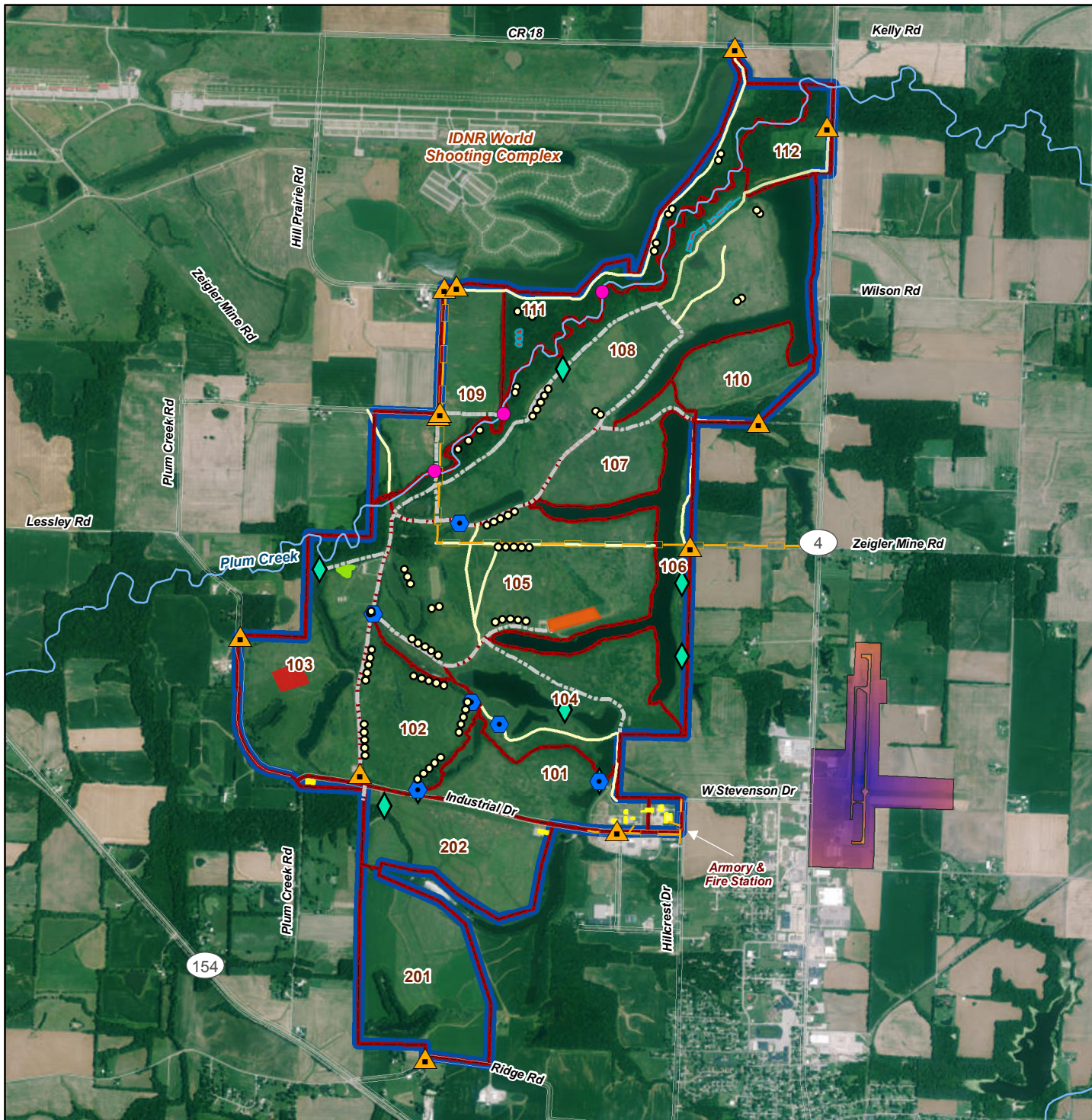
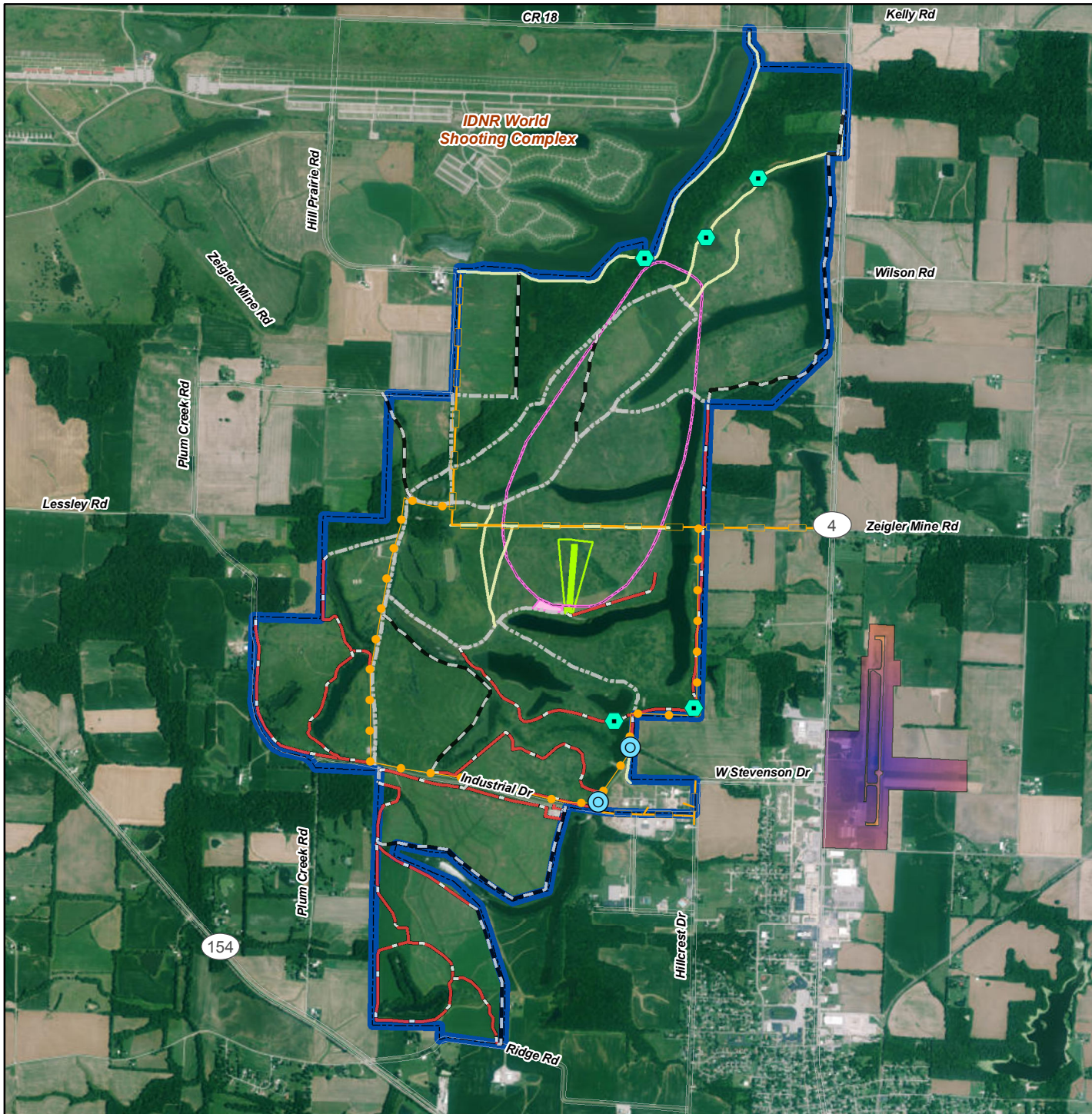


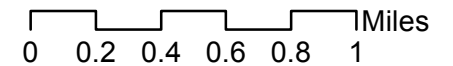
FIGURE 3 PROPOSED ACTION

Illinois Army National Guard Environmental Assessment Sparta Training Area Randolph County, Illinois



Legend

- Sparta Training Area
- Sparta Community Airport
- Existing Roads/Trails/Crossings**
 - Paved Roads
 - Gravel Roads
 - Dirt Trails
 - Aboveground Electric Line
- Proposed Range Projects**
 - M203 Range Footprint
 - 10-25 m Zero Range Footprint
 - Zero Range SDZ for M855A1 (with back berm)
 - M203 Range SDZ (training/practice round only)
 - Power Line Relocation (connected action)
- Proposed Roads/Trails/Crossings**
 - Gravel Roads
 - Dirt Trails
 - Culvert
 - Low Water Stream Crossing



Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
Projection: NAD 1983 UTM Zone 16N (meters)

"No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database. Note: For illustration purposes, the Zero Range SDZ layer depicts the outer boundary of all data points generated by the ricochet analysis for the proposed Zero Range conducted by US Army Aeroballistics Division at the Armament Research, Development and Engineering Center."



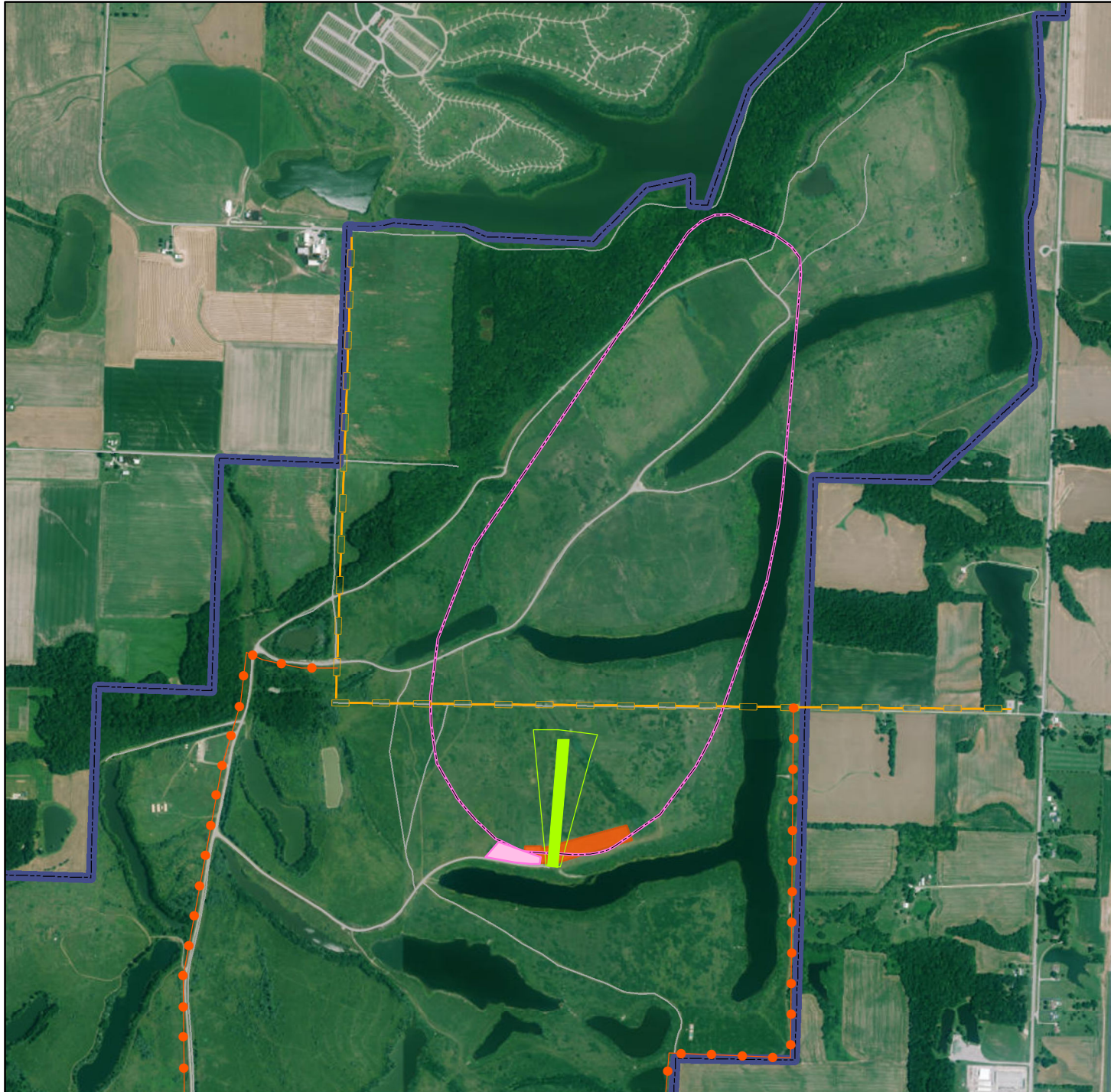
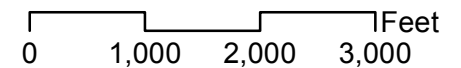


FIGURE 4 PROPOSED ZERO RANGE CONSTRUCTION AND M203 RANGE RELOCATION

**Illinois Army National Guard
Environmental Assessment
Sparta Training Area
Randolph County, Illinois**

Legend

- Sparta Training Area
 - Existing M203 Range Footprint
 - Existing Aboveground Electric Line
 - Existing Roads/Trails
- Proposed Range Projects**
- M203 Range Footprint
 - 10-25 m Zero Range Footprint
 - Zero Range SDZ for M855A1 (with back berm)
 - M203 Range SDZ (training/practice round only)
 - Power Line Relocation (connected action)



Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
 Projection: NAD 1983 UTM Zone 16N (meters)
 No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database. Note: For illustration purposes, the Zero Range SDZ layer depicts the outer boundary of all data points generated by the ricochet analysis for the proposed Zero Range conducted by US Army Aeroballistics Division at the Armament Research, Development and Engineering Center.

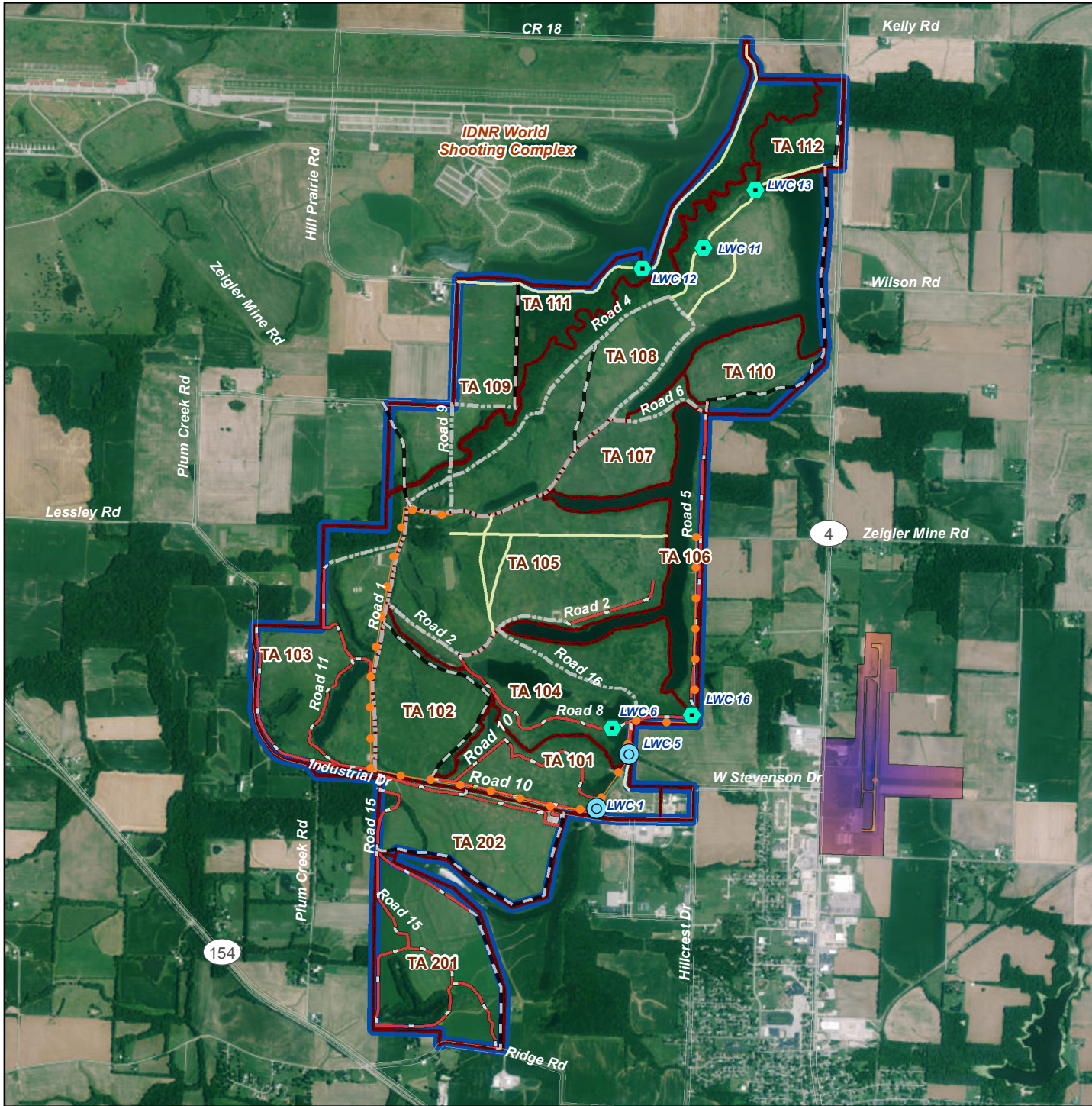
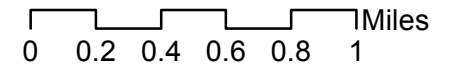


FIGURE 5 PROPOSED ROADWAY IMPROVEMENT PROJECTS

Illinois Army National Guard
Environmental Assessment
Sparta Training Area
Randolph County, Illinois

Legend

- Sparta Training Area
- Training Areas
- Sparta Community Airport
- Existing Roads/Trails/Crossings**
 - Paved Roads
 - Gravel Roads
 - Dirt Trails
 - Power Line Relocation (connected action)
- Proposed Roads/Trails/Crossings**
 - Gravel Roads
 - Dirt Trails
 - Culvert
 - Low Water Stream Crossing



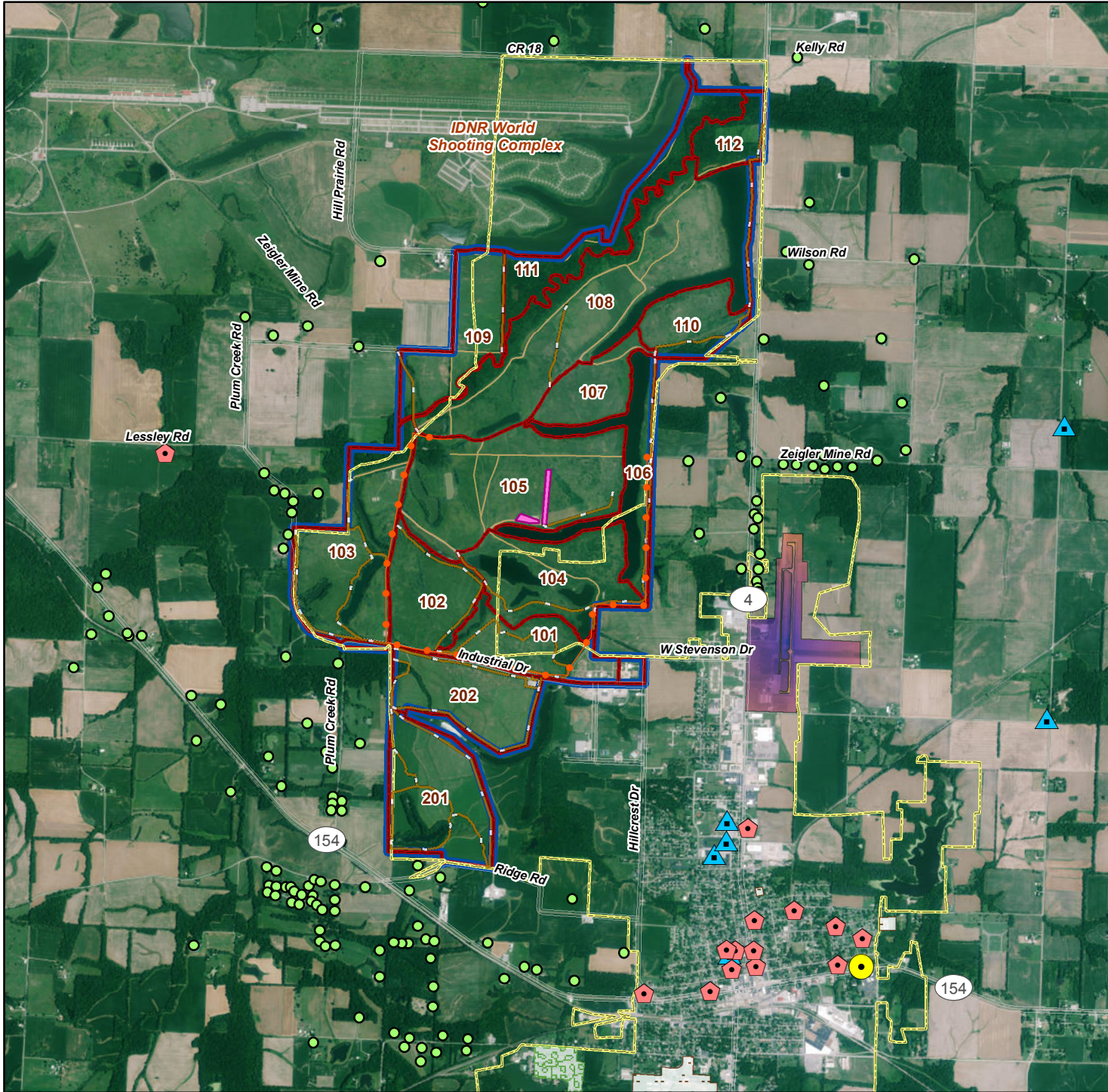
Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
Projection: NAD 1983 UTM Zone 16N (meters)

"No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database. Note: For illustration purposes, the Zero Range SDZ layer depicts the outer boundary of all data points generated by the ricochet analysis for the proposed Zero Range conducted by US Army Aeroballistics Division at the Armament Research, Development and Engineering Center."



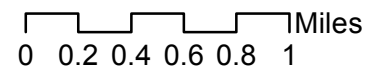
FIGURE 6 EXISTING ENVIRONMENT & SENSITIVE RECEPTORS

Illinois Army National Guard Environmental Assessment Sparta Training Area Randolph County, Illinois



Legend

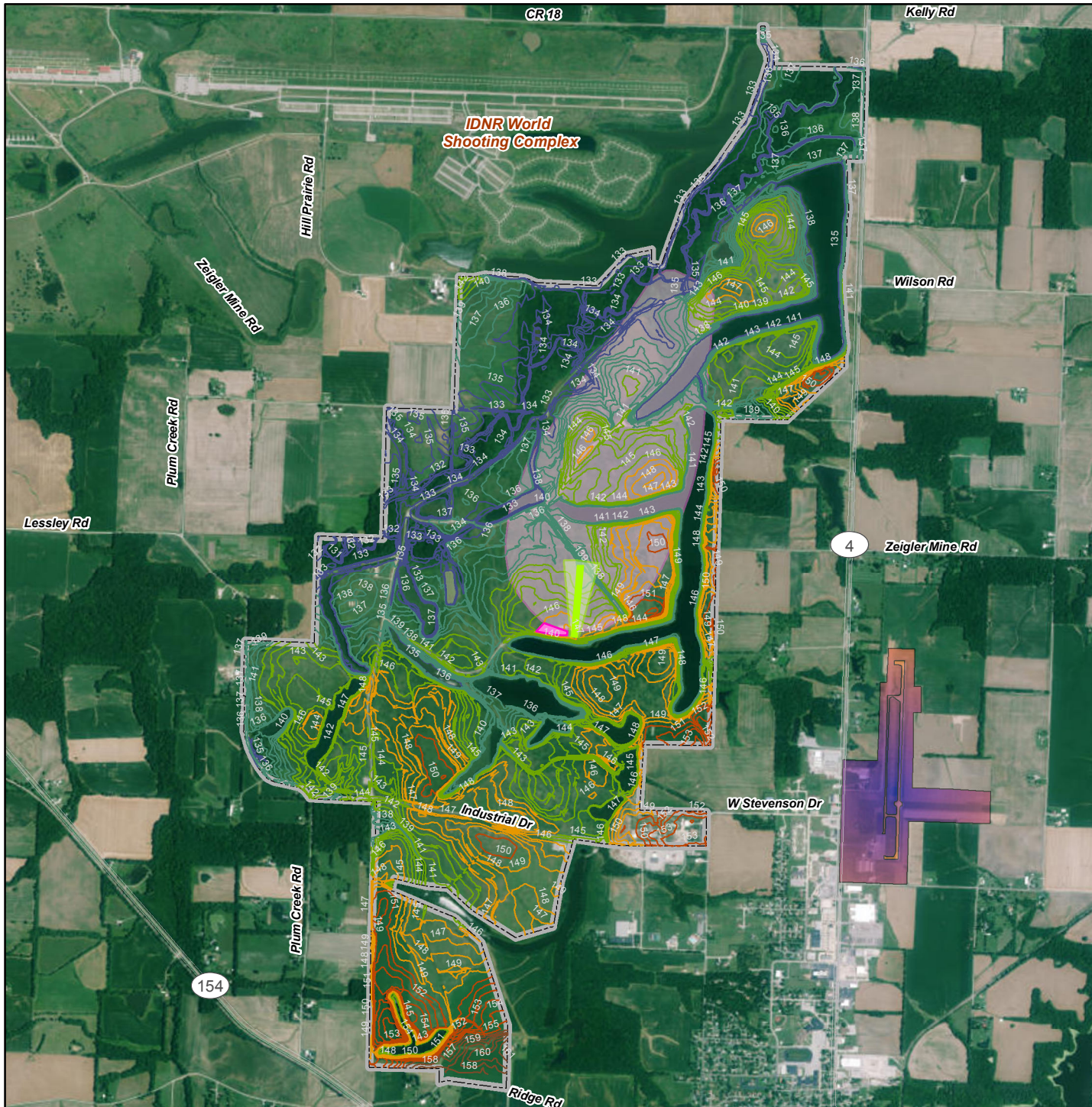
- Sparta Training Area
- Training Areas
- Sparta Community Airport
- Sparta Incorporated Boundary
- Paved Roads
- Roads & Trails
- Proposed Action**
- Proposed Ranges
- Power Line Relocation (connected action)
- Proposed Roads & Trails
- Sensitive Receptors**
- Brown-Stevenson City Park
- Sparta Country Club
- Rural Residences
- Sparta Community Hospital
- Churches
- Schools



Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
Projection: NAD 1983 UTM Zone 16N (meters)
No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database.



FIGURE 7
STA TOPOGRAPHY
 Illinois Army National Guard
 Environmental Assessment
 Sparta Training Area
 Randolph County, Illinois



Legend

Sparta Training Area

Sparta Community Airport

Proposed Range Projects

M203 Range Footprint

10-25 m Zero Range Footprint

Zero Range SDZ for M855A1 (with back berm)

M203 Range SDZ (training/practice round only)

Elevations (meters)

130 - 135

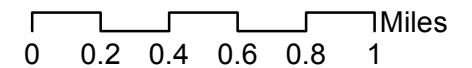
136 - 140

141 - 145

146 - 149

150 - 155

156 - 162



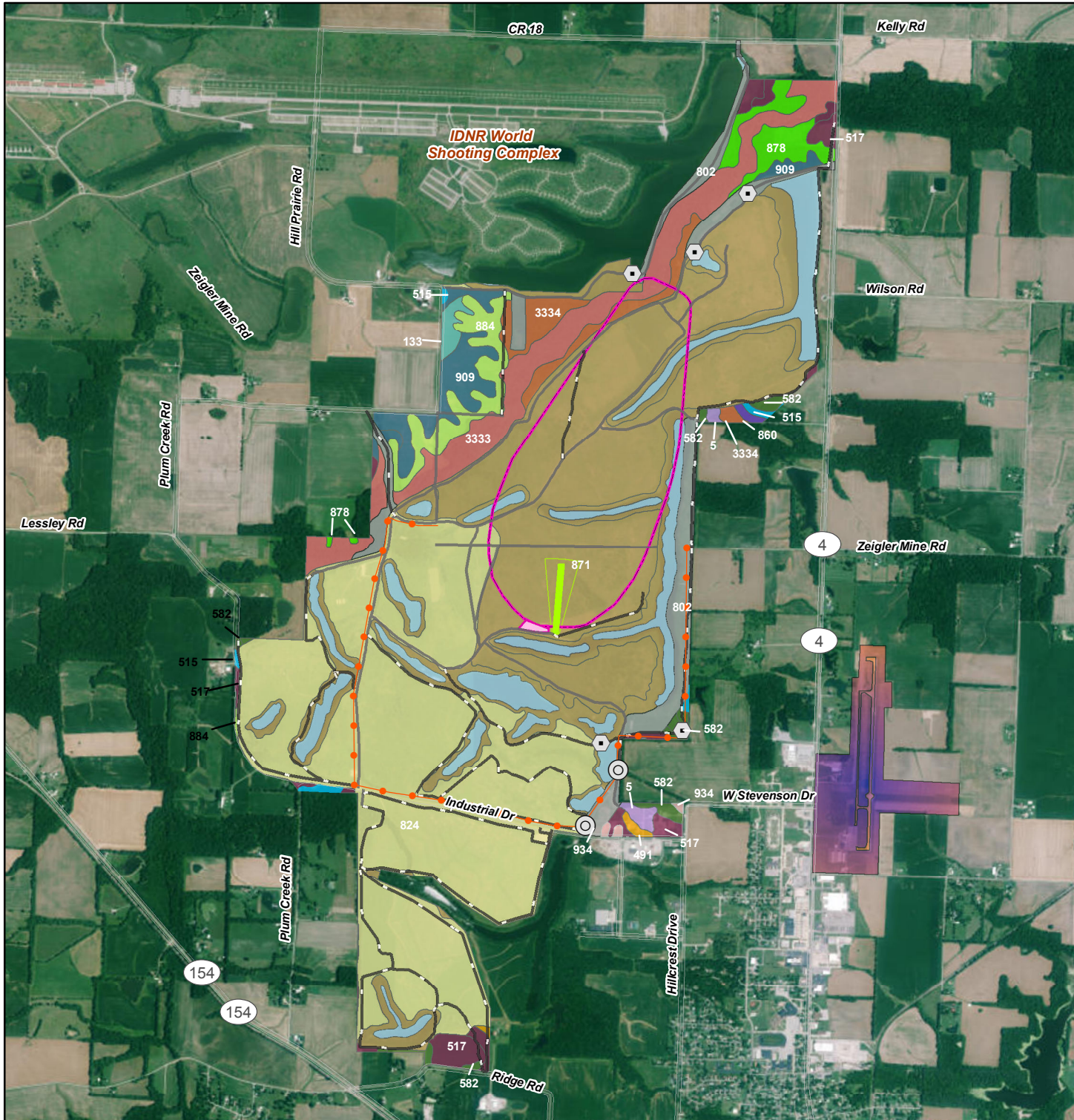
Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
 Projection: NAD 1983 UTM Zone 16N (meters)

"No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database. Note: For illustration purposes, the Zero Range SDZ layer depicts the outer boundary of all data points generated by the ricochet analysis for the proposed Zero Range conducted by US Army Aeroballistics Division at the Armament Research, Development and Engineering Center."



FIGURE 8 SOILS MAP

Illinois Army National Guard Environmental Assessment Sparta Training Area Randolph County, Illinois



Legend

Sparta Community Airport

Paved Roads

Roads & Trails

Proposed Action

M203 Range Footprint

10-25 m Zero Range Footprint

Zero Range SDZ for M855A1 (with back berm)

M203 Range SDZ (training/practice round only)

Power Line Relocation (connected action)

Proposed Roads & Trails

Culvert

Low Water Stream Crossing

Soil Types

Banlic silt loam (878)

Birds silt loam, wet (3334)

Blair silt loam (5)

Blair-Grantfork silt loam (934)

Bunkum silt loam (515)

Bunkum-Couterville silt loam (884)

Couterville-Oconee silt loam (909)

Homen silt loam (582)

Homen-Atlas silty clay loam (860)

Lenzburg gravelly silty clay loam (871)

Marine silt loam (517)

Oconee silt loam (113)

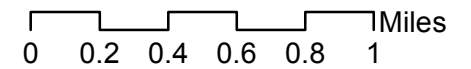
Orthents loamy, undulating & rolling (802)

Ruma silt loam (491)

Swanwick silt loam (824)

Wakeland silt loam (3333)

Water



Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
Projection: NAD 1983 UTM Zone 16N (meters)





















"No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database. Note: For illustration purposes, the Zero Range SDZ layer depicts the outer boundary of all data points generated by the ricochet analysis for the proposed Zero Range conducted by US Army Aeroballistics Division at the Armament Research, Development and Engineering Center."

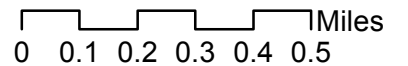


FIGURE 9a WATER RESOURCES

Illinois Army National Guard Environmental Assessment Sparta Training Area Randolph County, Illinois

Legend

-  Sparta Training Area
-  Sparta Community Airport
-  Streams and Drainage Ditches
-  Lakes
-  FEMA 100-year Floodplain
- Wetlands**
-  Forested
-  Scrub Shrub
-  Emergent
- Existing Roads/Trails/Crossings**
-  Paved Roads
-  Roads & Trails
-  Bridges, Culverts, LWCs
- Proposed Action**
-  M203 Range Footprint
-  10-25 m Zero Range Footprint
-  Zero Range SDZ for M855A1 (with back berm)
-  M203 Range SDZ (training/practice round only)
-  Power Line Relocation (connected action)
-  Gravel Roads
-  Dirt Trails
-  Low Water Stream Crossing
-  Culvert



Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
 Projection: NAD 1983 UTM Zone 16N (meters)
 "No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database. Note: For illustration purposes, the Zero Range SDZ layer depicts the outer boundary of all data points generated by the ricochet analysis for the proposed Zero Range conducted by US Army Aeroballistics Division at the Armament Research, Development and Engineering Center."

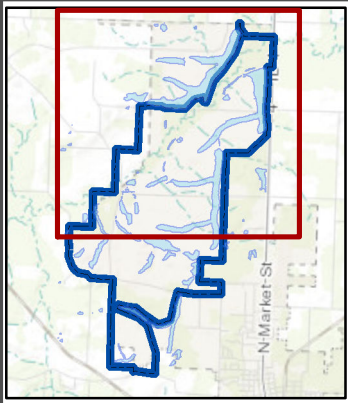
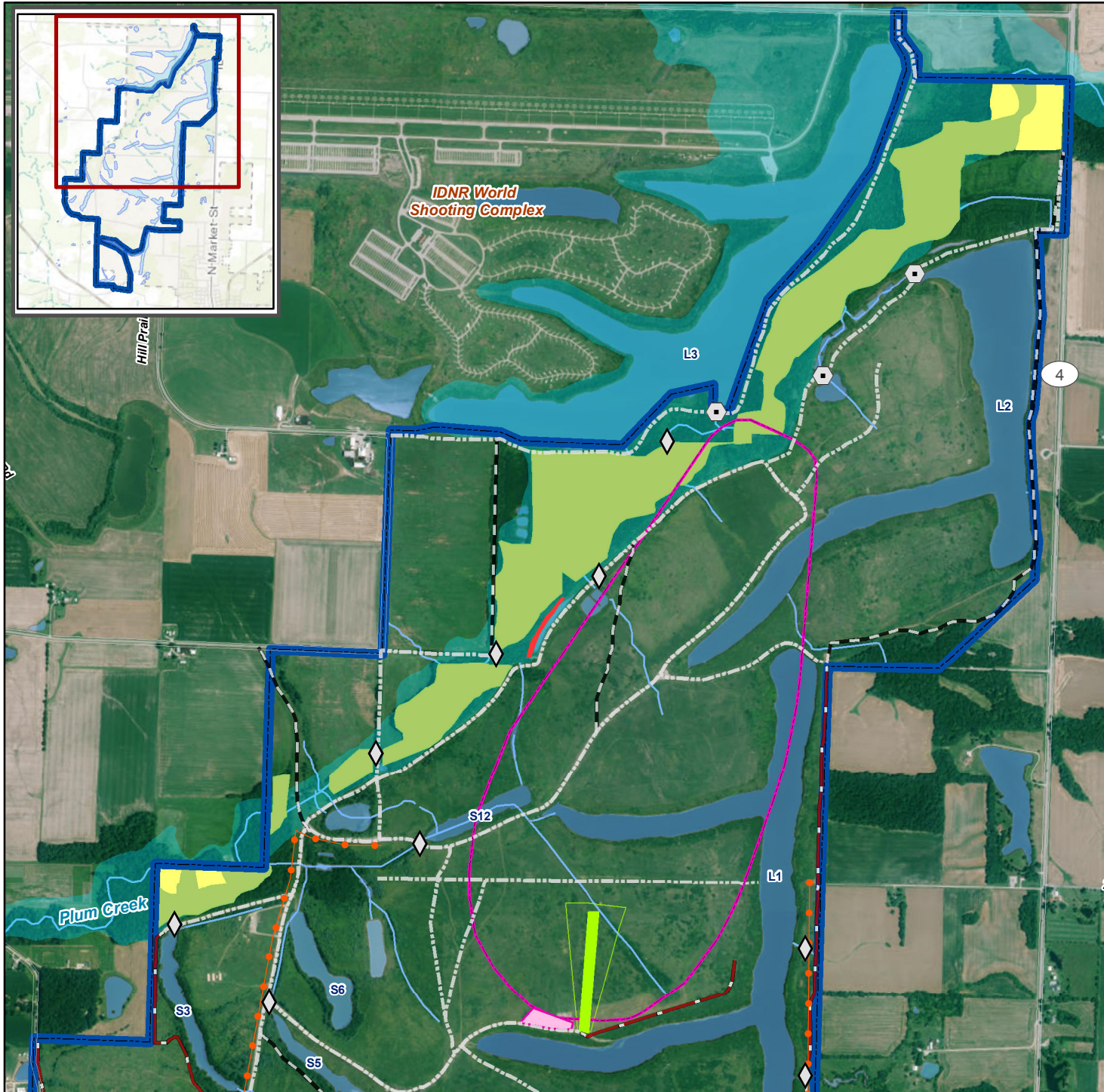
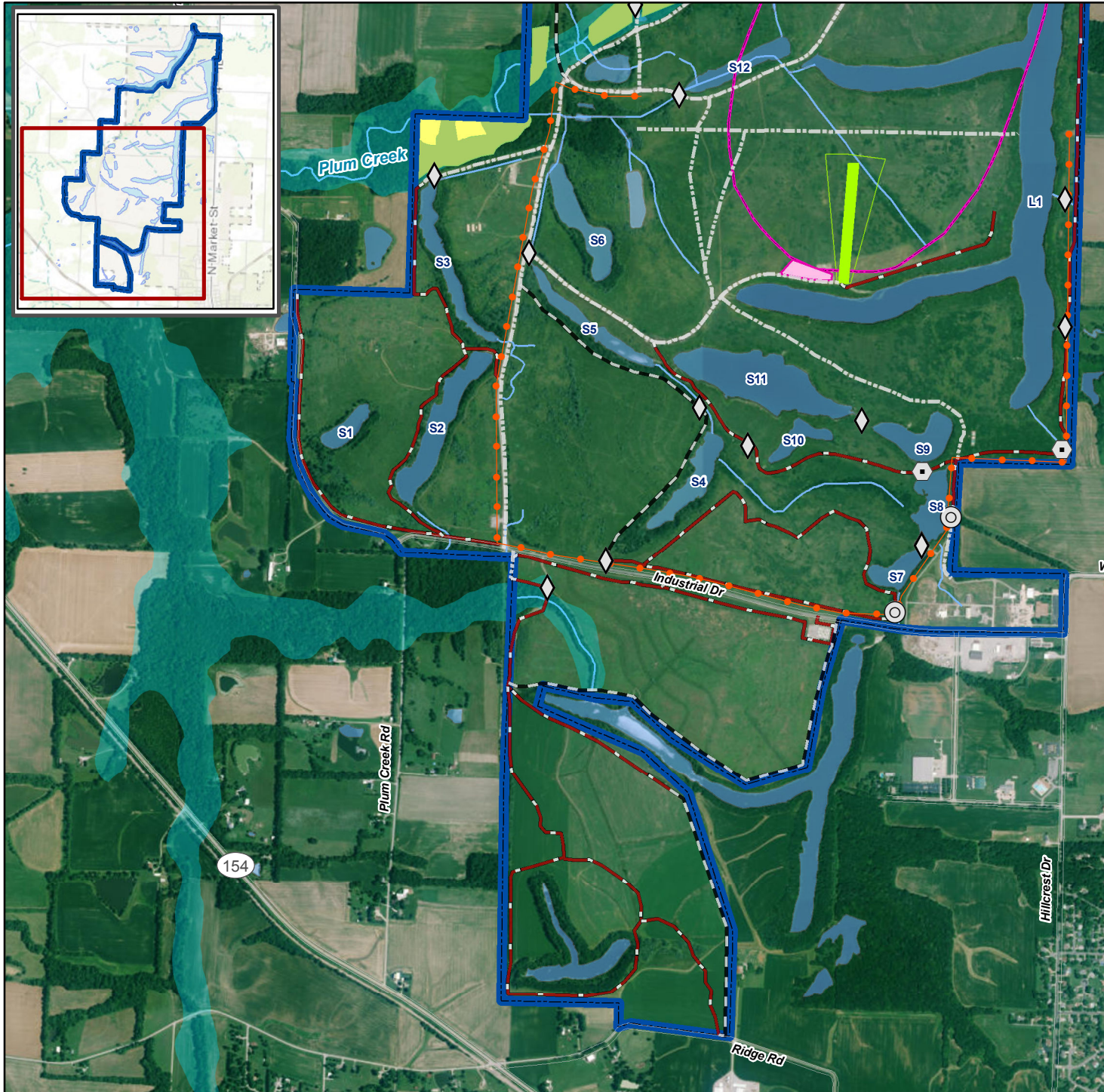


FIGURE 9b WATER RESOURCES

Illinois Army National Guard Environmental Assessment Sparta Training Area Randolph County, Illinois

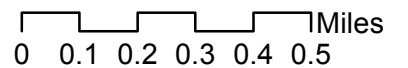


Legend

- Sparta Training Area
- Sparta Community Airport
- Streams and Drainage Ditches
- Lakes
- FEMA 100-year Floodplain
- Wetlands**
- Forested
- Scrub Shrub
- Emergent
- Existing Roads/Trails/Crossings**
- Paved Roads
- Roads & Trails
- Bridges, Culverts, LWCs

Proposed Action

- M203 Range Footprint
- 10-25 m Zero Range Footprint
- Zero Range SDZ for M855A1 (with back berm)
- M203 Range SDZ (training/practice round only)
- Power Line Relocation (connected action)
- Gravel Roads
- Dirt Trails
- Low Water Stream Crossing
- Culvert




















Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
 Projection: NAD 1983 UTM Zone 16N (meters)
 No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database. Note: For illustration purposes, the Zero Range SDZ layer depicts the outer boundary of all data points generated by the ricochet analysis for the proposed Zero Range conducted by US Army Aeroballistics Division at the Armament Research, Development and Engineering Center.

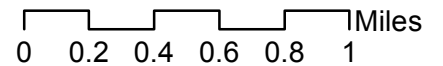


FIGURE 10 CENSUS TRACTS

Illinois Army National Guard Environmental Assessment Sparta Training Area Randolph County, Illinois

Legend

-  Sparta Training Area
-  Sparta Community Airport
- Census Tracts**
-  9505
-  9506
-  9507
- Existing Roads/Trails/Crossings**
-  Paved Roads
-  Gravel Roads
-  Dirt Trails
- Proposed Range Projects**
-  M203 Range Footprint
-  10-25 m Zero Range Footprint
-  Zero Range SDZ for M855A1 (with back berm)
-  M203 Range SDZ (training/practice round only)
-  Power Line Relocation (connected action)
- Proposed Roads/Trails/Crossings**
-  Gravel Roads
-  Dirt Trails
-  Culvert
-  Low Water Stream Crossing



Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
Projection: NAD 1983 UTM Zone 16N (meters)

"No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database. Note: For illustration purposes, the Zero Range SDZ layer depicts the outer boundary of all data points generated by the ricochet analysis for the proposed Zero Range conducted by US Army Aeroballistics Division at the Armament Research, Development and Engineering Center."

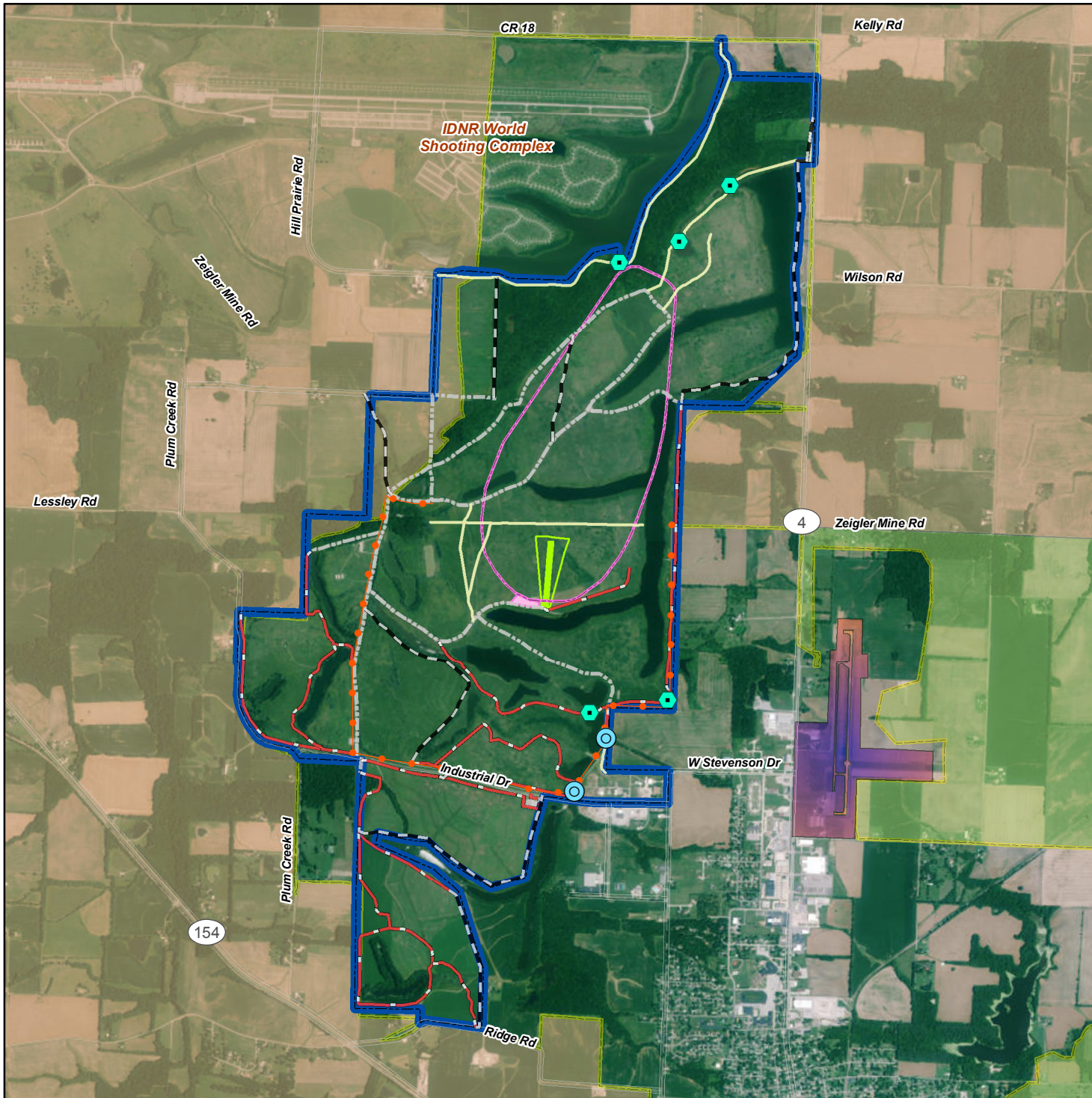
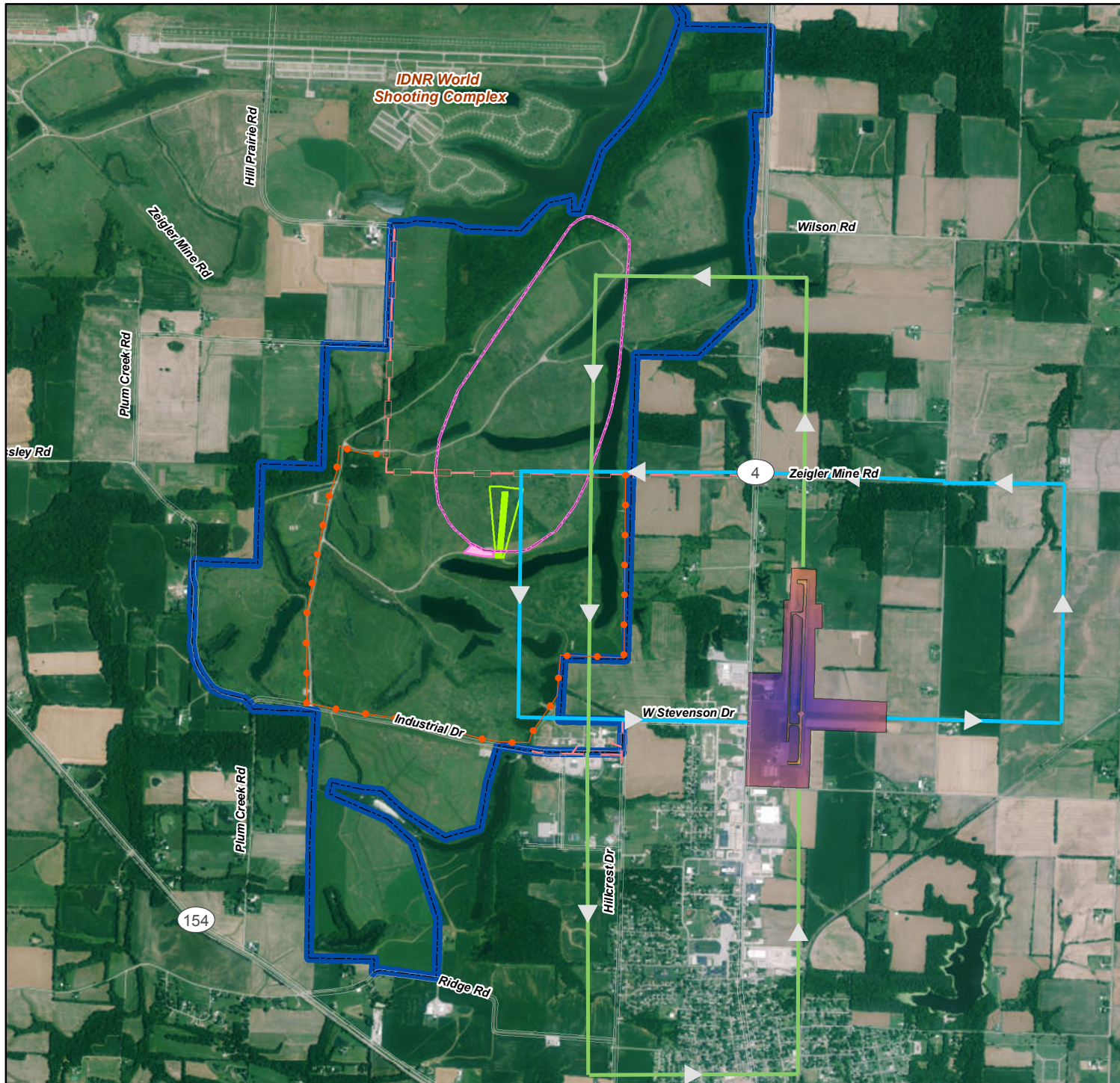


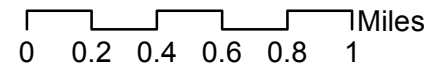
FIGURE 11 SPARTA COMMUNITY AIRPORT (KSAR) TRAFFIC PATTERNS

Illinois Army National Guard
Environmental Assessment
Sparta Training Area
Randolph County, Illinois



Legend

- Sparta Training Area
- Sparta Community Airport
- Runway 09
- Runway 36
- Existing Power Line
- Proposed Ranges**
- M203 Range Footprint
- 10-25 m Zero Range Footprint
- Zero Range SDZ for M855A1 (with back berm)
- M203 Range SDZ (training/practice round only)
- Power Line Relocation (connected action)















Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
Estimated traffic Patterns provided by S. Marquardt (Sparta Community Airport Manager) on 7 Jan 2015
Projection: NAD 1983 UTM Zone 16N (meters)

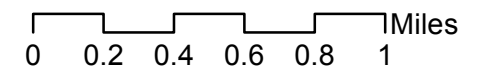
"No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database. Note: For illustration purposes, the Zero Range SDZ layer depicts the outer boundary of all data points generated by the ricochet analysis for the proposed Zero Range conducted by US Army Aeroballistics Division at the Armament Research, Development and Engineering Center."

FIGURE 12 PROPOSED NOISE ENVIRONMENT

Illinois Army National Guard Environmental Assessment Sparta Training Area Randolph County, Illinois

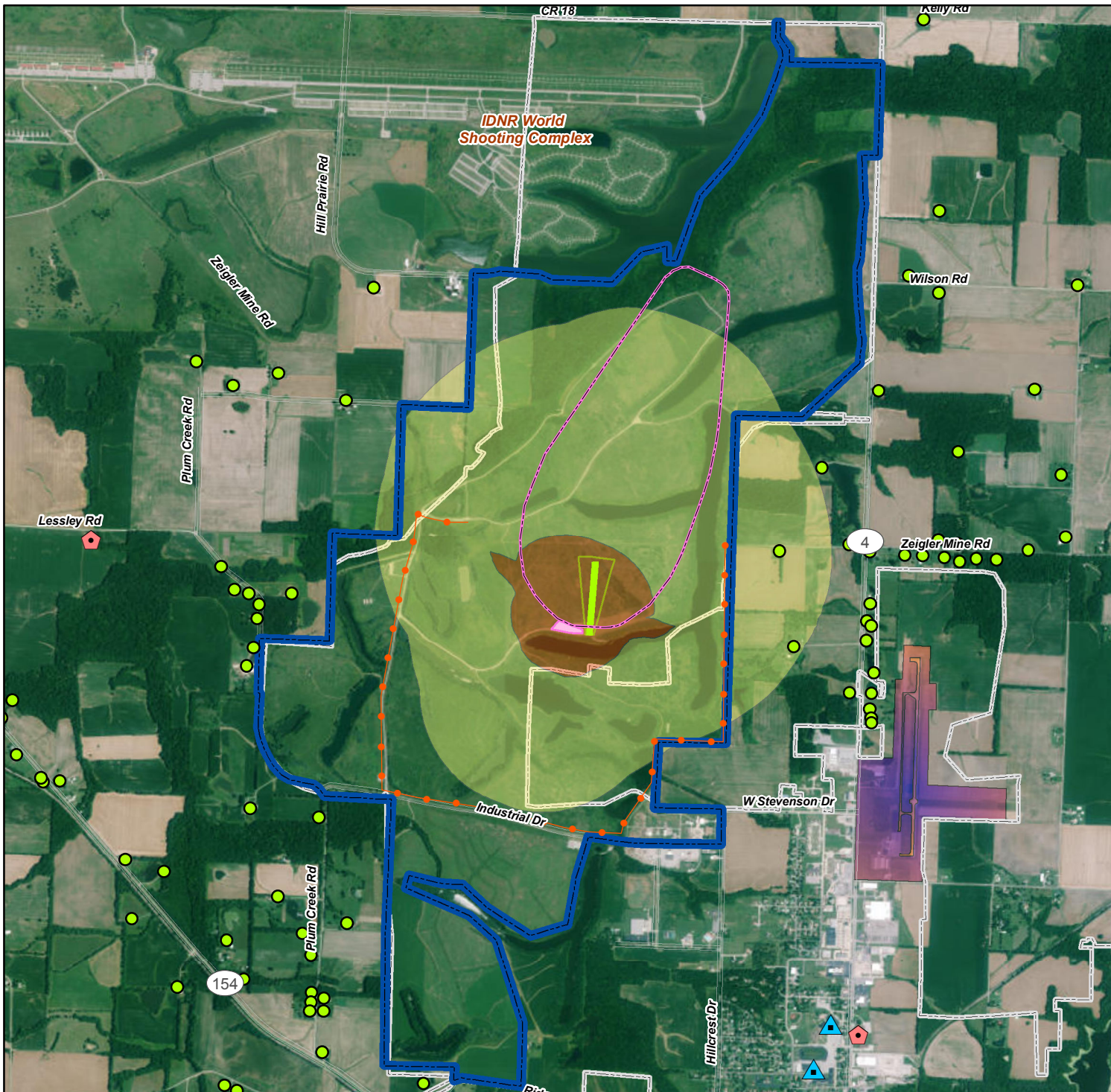
Legend

-  Sparta Incorporated Boundary
-  Sparta Training Area
-  Sparta Community Airport
- Proposed Range Projects**
-  M203 Range Footprint
-  10-25 m Zero Range Footprint
-  Zero Range SDZ for M855A1 (with back berm)
-  M203 Range SDZ (training/practice round only)
-  Power Line Relocation (connected action)
- Small Caliber Range Noise Zones**
-  Zone II (87 - 104 dB Peak)
-  Zone III (>104 dB Peak)
- Sensitive Receptors**
-  Rural Residences
-  Churches
-  Schools



Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
Projection: NAD 1983 UTM Zone 16N (meters)

"No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database. Note: For illustration purposes, the Zero Range SDZ layer depicts the outer boundary of all data points generated by the ricochet analysis for the proposed Zero Range conducted by US Army Aeroballistics Division at the Armament Research, Development and Engineering Center."



APPENDIX A

**Agency Coordination, Native American
Consultation and Public Participation**

This Page Has Intentionally Been Left Blank

CONTENTS

Agency Correspondence

Early Coordination Letters to Agencies from ILARNG (22 Dec 2014)	Page 1
Enclosures for Early Coordination Letters	Page 72
Illinois Environmental Protection Agency Response (7 Jan 2015)	Page 74
USDA Natural Resources Conservation Service Response (16 Jan 2015)	Page 75
US Army Corps of Engineers (USACE) St. Louis District Response (20 Jan 2015)	Page 76

National Historic Preservation Act Section 106 Consultation

Illinois Historic Preservation Agency Section 106 Clearance (15 Jan 2015)	Page 78
---	---------

Federal and State Threatened and Endangered Species Consultation

US Fish and Wildlife Service (USFWS) Section 7 Response (2 Feb 2015)	Page 79
DMAIL Response to USFWS (5 May 2015)	Page 81
USFWS Section 7 Determination Letter (5 June 2015)	Page 84
Illinois Department of Natural Resources (IDNR) Response (18 June 2015)	Page 86

Aviation Concerns – Sparta Community Airport, Federal Aviation Administration [FAA], Illinois Department of Transportation [IL DOT]

Sparta Community Airport Response (7 Jan 2015)	Page 89
DMAIL Response to Sparta Community Airport (13 Jan 2015)	Page 91
FAA Chicago District Response (8 Jan 2015)	Page 92
FAA Great Lakes Region Response (20 Jan 2015)	Page 94
FAA Obstruction Evaluation Study Termination Notification Email (29 Jan 2015)	Page 95
MFR for Meeting between DMAIL and IL DOT Division of Aeronautics (14 May 2015)	Page 97
MFR for Meeting between DMAIL, Sparta Airport, and IL DOT (15 June 2015)	Page 98
Sparta Community Airport Response (23 June 2015)	Page 99
MFR for STA & Sparta Hunter Airfield Air Traffic and Airspace Safety (29 June 2015)	Page 100
Sparta Community Airport and DMAIL Meeting Summary (13 July 2015)	Page 101
MFR for the Sparta Community Airport Authority Board from ILARNG (28 Sept 2015)	Page 102

Native American Consultation

Early Coordination Letters to Native Americans from ILARNG (15 Jan 2015)Page 103

Enclosures for Early Coordination LettersPage 107

Memorandum for Record (MFR)Page 109

Peoria Tribe of Indians of Oklahoma (28 Jan 2015)Page 110

The Delaware Nation (10 Feb 2015).....Page 111

Public Involvement

Affidavit of Publication in the *Southern Illinoisan* Newspaper.....Page 112

Affidavit of Publication in the *Randolph County Herald Tribune* Newspaper.....Page 114



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

B. Adams, Chief
Sparta Fire Department
107 E. Jackson St.
Sparta, IL 62286

Dear Chief Adams:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and

an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

The ILARNG has conducted a number of environmental, biological, and cultural resources surveys at the STA over the last several years and has extensive baseline information about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. For this EA, we are seeking from your agency/group any new or additional information, new environmental topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may

assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Brian Adams, Superintendent
City of Sparta Water Treatment Plant
114 W. Jackson
Sparta, IL 62286

Dear Superintendent Adams:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and

an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The proposed ranges would require utility extensions for electric, potable water, and telecommunications (e.g., cable, phones, and internet). The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

For this EA, we are seeking from your agency/group any information on your utility's operating capacity and current demand, updates on policies or regulations, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Don Beisiegel
Association of Illinois Soil and Water Districts
700 S. Market Street
New Athens, IL 62264

Dear Mr. Beisiegel:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and

an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

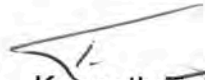
The ILARNG has conducted a number of environmental, biological, and cultural resources surveys at the STA over the last several years and has extensive baseline information about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. For this EA, we are seeking from your agency/group any new or additional information, new environmental topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may

assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Misganaw Demissie, Director
Illinois State Water Survey
2204 Griffith Dr.
Champaign, IL 61820-7495

Dear Director Demissie:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and

an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

The ILARNG has conducted a number of environmental, biological, and cultural resources surveys at the STA over the last several years and has extensive baseline information about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. For this EA, we are seeking from your agency/group any new or additional information, new environmental topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may

assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Barry Cooper, Regional Administrator
US Department Of Transportation- Federal Aviation Administration
Great Lakes Region- Chicago, Airports District Office
2300 E. Devon Avenue
Des Plaines, IL 60018

Dear Mr. Cooper:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The ILARNG began conducting training activities at STA in 2007. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The primary runway is 4,002 feet long and 75 feet wide with asphalt pavement. This runway is oriented in a north-south direction, or 18/36. The secondary runway is 2,646 feet long and 100 feet wide

and is a turf landing strip. This runway is oriented in an east-west direction, or 9/27. Runway elevations range from 518.4 feet and 537.6 feet above mean sea level (amsl). Aircraft based at this airport include single-engine airplanes, multi-engine airplanes and helicopters.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2). The ILARNG requested the US Army Aeroballistics Division at the Armament Research, Development and Engineering Center (ARDEC) to conduct a probability-based SDZ ricochet analysis for the 10-25m Zero Range. A probability-based SDZ analysis quantifies the risk associated with conducting training on the proposed range within the available real estate. As part of the ricochet analysis for the 10-25m Zero Range, the maximum altitudes for all trajectories were assessed. Based on these findings, the vertical hazard for the Zero Range would be 490 meters or 1,608 feet amsl with the back berm, and 445 meters or 1,476 feet amsl without the back berm.

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

For this EA, we are seeking from your agency/group any relevant information (e.g., issues of regional or location concern) associated with the proposed Zero Range vertical hazard and existing airport activities conducted at the Sparta Community Airport-Hunter Field. Any information or recommendations that your agency/group

thinks would be of value in conducting this NEPA analysis or would ensure aviation safety in the local area is welcome.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Mayor Charles Kelley
City of Sparta
114 W. Jackson
Sparta, IL 62286

Dear Mayor Kelley:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The ILARNG began conducting training activities at STA in 2007. Surrounding land use is agricultural with low-density rural development. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007. The IDNR's World

Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. Aircraft based at this airport include single-engine airplanes, multi-engine airplanes and helicopters.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2). The ILARNG requested the US Army Aeroballistics Division at the Armament Research, Development and Engineering Center (ARDEC) to conduct a probability-based SDZ ricochet analysis for the 10-25m Zero Range. A probability-based SDZ analysis quantifies the risk associated with conducting training on the proposed range within the available real estate. As part of the ricochet analysis for the 10-25m Zero Range, the maximum altitudes for all trajectories were assessed. Based on these findings, the vertical hazard for the Zero Range would be 490 meters or 1,608 feet amsl with the back berm, and 445 meters or 1,476 feet amsl without the back berm.

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

For this EA, we are seeking from your agency/group any relevant information (e.g., issues of regional or location concern) associated with the Proposed Action that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and

alternatives addressed in the EA. We are coordinating with a number of agencies/ groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Lisa Bonnett, Director
Illinois Environmental Protection Agency
1021 North Grand Avenue East, P.O. Box 19276
Springfield, IL 62794-9276

Dear Ms. Bonnett:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and

an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

The ILARNG has conducted a number of environmental, biological, and cultural resources surveys at the STA over the last several years and has extensive baseline information about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. For this EA, we are seeking from your agency/group any new or additional information, new environmental topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may

assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Bill Hutchison, VP for Electrical Systems Distribution
Southern Illinois Power Cooperative
11543 Lake of Egypt Road
Marion, IL 62959

Dear Vice President Hutchison:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and

an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The proposed ranges would require utility extensions for electric, potable water, and telecommunications (e.g., cable, phones, and internet). The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

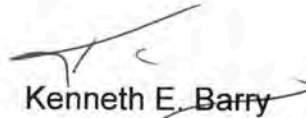
Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

For this EA, we are seeking from your agency/group any information on your utility's operating capacity and current demand, updates on policies or regulations, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Section 106 of NHPA Consultation - Environmental Assessment of the Construction and Operation of a Zero Range, Relocation of the Existing M203 Range, and Road Improvements for Illinois Army National Guard's Sparta Training Area, Randolph County, Illinois

Ms. Anne Haaker
Deputy State Historic Preservation Officer
Preservation Services Division
Illinois Historic Preservation Agency
1 Old State Capitol Plaza
Springfield, Illinois 62701

Dear Ms. Haaker:

The Illinois Army National Guard (ILARNG) is proposing to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

As you may recall, the 2,642-acre STA was strip-mined and reclaimed prior to the property being transferred to the ILARNG for training. Only approximately 250 acres along the Plum Creek riparian corridor were undisturbed. This area floods annually and shovel tests have indicated soil profiles typical of a wetland floodplain environment. The topography and stream conditions provide reason to expect that there are no prehistoric or significant historic remains present in this area. The IHPA agreed with these findings and concurred that no further work is necessary at STA (IHPA Log #002021804). Therefore, the ILARNG still believes that any further archaeological research within the STA is unnecessary.

For this EA, we wish to provide your agency with an opportunity to express any questions or concerns you may have regarding the Proposed Action, or to provide any information that your agency thinks would be of value in conducting this NEPA analysis. The ILARNG will continue to comply with the Illinois Archaeological and Paleontological Resources Protection Act and the Human Skeletal Remains Protection Act.

We look forward to and welcome your participation in this process. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have any questions concerning this request or an interest in reviewing the External Draft EA, please contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Diane Mudd
Randolph County Zoning
#1 Taylor St., Room 200
Chester, IL 62233

Dear Ms. Mudd:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The ILARNG began conducting training activities at STA in 2007. Surrounding land use is agricultural with low-density rural development. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007. The IDNR's World

Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. Aircraft based at this airport include single-engine airplanes, multi-engine airplanes and helicopters.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2). The ILARNG requested the US Army Aeroballistics Division at the Armament Research, Development and Engineering Center (ARDEC) to conduct a probability-based SDZ ricochet analysis for the 10-25m Zero Range. A probability-based SDZ analysis quantifies the risk associated with conducting training on the proposed range within the available real estate. As part of the ricochet analysis for the 10-25m Zero Range, the maximum altitudes for all trajectories were assessed. Based on these findings, the vertical hazard for the Zero Range would be 490 meters or 1,608 feet amsl with the back berm, and 445 meters or 1,476 feet amsl without the back berm.

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

For this EA, we are seeking from your agency/group any relevant information (e.g., issues of regional or location concern) associated with the Proposed Action that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and

alternatives addressed in the EA. We are coordinating with a number of agencies/ groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Representative
Ameren Illinois Power
300 Liberty St.
Peoria, IL 61602

Dear Representative:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and

an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The proposed ranges would require utility extensions for electric, potable water, and telecommunications (e.g., cable, phones, and internet). The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

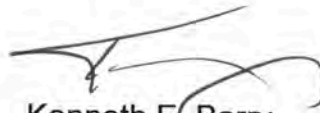
Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

For this EA, we are seeking from your agency/group any information on your utility's operating capacity and current demand, updates on policies or regulations, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kenneth E. Barry', with a stylized flourish extending from the end of the signature.

Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Jeffery Keirn, Regional Engineer
Illinois Department of Transportation- District 8
2300 South Dirksen Parkway
Springfield, IL 62764

Dear Mr. Keirn:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and

an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

The ILARNG has conducted a number of environmental, biological, and cultural resources surveys at the STA over the last several years and has extensive baseline information about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. For this EA, we are seeking from your agency/group any new or additional information, new environmental topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may

assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Scott Marquardt, Manager
Sparta Community Airport- Hunter Field
1800 N. Market
Sparta, IL 62286

Dear Mr. Marquardt:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The ILARNG began conducting training activities at STA in 2007. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The primary runway is 4,002 feet long and 75 feet wide with asphalt pavement. This runway is oriented in a north-south direction, or 18/36. The secondary runway is 2,646 feet long and 100 feet wide

and is a turf landing strip. This runway is oriented in an east-west direction, or 9/27. Runway elevations range from 518.4 feet and 537.6 feet above mean sea level (amsl). Aircraft based at this airport include single-engine airplanes, multi-engine airplanes and helicopters.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2). The ILARNG requested the US Army Aeroballistics Division at the Armament Research, Development and Engineering Center (ARDEC) to conduct a probability-based SDZ ricochet analysis for the 10-25m Zero Range. A probability-based SDZ analysis quantifies the risk associated with conducting training on the proposed range within the available real estate. As part of the ricochet analysis for the 10-25m Zero Range, the maximum altitudes for all trajectories were assessed. Based on these findings, the vertical hazard for the Zero Range would be 490 meters or 1,608 feet amsl with the back berm, and 445 meters or 1,476 feet amsl without the back berm.

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

For this EA, we are seeking from your agency/group any relevant information (e.g., issues of regional or location concern) associated with the proposed Zero Range vertical hazard and existing airport activities conducted at the Sparta Community Airport-Hunter Field. Any information or recommendations that your agency/group

thinks would be of value in conducting this NEPA analysis or would ensure aviation safety in the local area is welcome.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 23, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Barry Cooper, Regional Administrator
US Department Of Transportation- Federal Aviation Administration
Great Lakes Region- Chicago, Airports District Office
2300 E. Devon Avenue
Des Plaines, IL 60018

Dear Mr. Cooper:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The ILARNG began conducting training activities at STA in 2007. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The primary runway is 4,002 feet long and 75 feet wide with asphalt pavement. This runway is oriented in a north-south direction, or 18/36. The secondary runway is 2,646 feet long and 100 feet wide

and is a turf landing strip. This runway is oriented in an east-west direction, or 9/27. Runway elevations range from 518.4 feet and 537.6 feet above mean sea level (amsl). Aircraft based at this airport include single-engine airplanes, multi-engine airplanes and helicopters.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2). The ILARNG requested the US Army Aeroballistics Division at the Armament Research, Development and Engineering Center (ARDEC) to conduct a probability-based SDZ ricochet analysis for the 10-25m Zero Range. A probability-based SDZ analysis quantifies the risk associated with conducting training on the proposed range within the available real estate. As part of the ricochet analysis for the 10-25m Zero Range, the maximum altitudes for all trajectories were assessed. Based on these findings, the vertical hazard for the Zero Range would be 490 meters or 1,608 feet amsl with the back berm, and 445 meters or 1,476 feet amsl without the back berm.

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

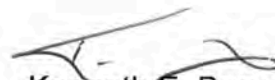
For this EA, we are seeking from your agency/group any relevant information (e.g., issues of regional or location concern) associated with the proposed Zero Range vertical hazard and existing airport activities conducted at the Sparta Community Airport-Hunter Field. Any information or recommendations that your agency/group

thinks would be of value in conducting this NEPA analysis or would ensure aviation safety in the local area is welcome.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures

Cc:

Amy Hanson
LTC Robert G. Wegner
MSG Alfredo Garza
SFC Richard Lowe



December 23, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Ivan Dozier, State Conservationist
USDA- Natural Resources Conservation Service
2118 West Park Court
Champaign, IL 61821

Dear Mr. Dozier:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and

an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

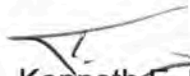
The ILARNG has conducted a number of environmental, biological, and cultural resources surveys at the STA over the last several years and has extensive baseline information about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. For this EA, we are seeking from your agency/group any new or additional information, new environmental topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may

assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 23, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Matt Mangan
USFWS- Marion Illinois Sub-Office
8588 Route 148
Marion, Illinois 62959

Dear Mr. Mangan:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and

an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

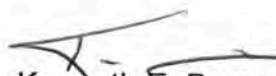
The ILARNG has conducted a number of environmental, biological, and cultural resources surveys at the STA over the last several years and has extensive baseline information about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. For this EA, we are seeking from your agency/group any new or additional information, new environmental topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may

assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Brian Anderson, Director
Illinois Natural History Survey
1816 South Oak Street
Champaign, IL 61820

Dear Mr. Anderson:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and

an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

The ILARNG has conducted a number of environmental, biological, and cultural resources surveys at the STA over the last several years and has extensive baseline information about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. For this EA, we are seeking from your agency/group any new or additional information, new environmental topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may

assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Richard C. Berg, Interim Director
Illinois State Geological Survey
615 E. Peabody Drive
Champaign, IL 61820-6964

Dear Mr. Berg:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and

an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

The ILARNG has conducted a number of environmental, biological, and cultural resources surveys at the STA over the last several years and has extensive baseline information about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. For this EA, we are seeking from your agency/group any new or additional information, new environmental topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may

assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Terrence L. Schaddel, Airport Planning Engineer & Environmental Officer
Illinois Department of Transportation- Division of Aeronautics
1 Langhorne Bond Drive
Springfield, IL 62707-8415

Dear Mr. Schaddel:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The ILARNG began conducting training activities at STA in 2007. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The primary runway is 4,002 feet long and 75 feet wide with asphalt pavement. This runway is oriented in a north-south direction, or 18/36. The secondary runway is 2,646 feet long and 100 feet wide

and is a turf landing strip. This runway is oriented in an east-west direction, or 9/27. Runway elevations range from 518.4 feet and 537.6 feet above mean sea level (amsl). Aircraft based at this airport include single-engine airplanes, multi-engine airplanes and helicopters.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2). The ILARNG requested the US Army Aeroballistics Division at the Armament Research, Development and Engineering Center (ARDEC) to conduct a probability-based SDZ ricochet analysis for the 10-25m Zero Range. A probability-based SDZ analysis quantifies the risk associated with conducting training on the proposed range within the available real estate. As part of the ricochet analysis for the 10-25m Zero Range, the maximum altitudes for all trajectories were assessed. Based on these findings, the vertical hazard for the Zero Range would be 490 meters or 1,608 feet amsl with the back berm, and 445 meters or 1,476 feet amsl without the back berm.

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

For this EA, we are seeking from your agency/group any relevant information (e.g., issues of regional or location concern) associated with the proposed Zero Range vertical hazard and existing airport activities conducted at the Sparta Community Airport-Hunter Field. Any information or recommendations that your agency/group

thinks would be of value in conducting this NEPA analysis or would ensure aviation safety in the local area is welcome.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Andrew W. Schlichting, District Conservationist
USDA- Natural Resources Conservation Service
313 W. Belmont Street
Sparta, IL 62286

Dear Mr. Schlichting:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining

Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

The ILARNG has conducted a number of environmental, biological, and cultural resources surveys at the STA over the last several years and has extensive baseline information about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. For this EA, we are seeking from your agency/group any new or additional information, new environmental topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,

A handwritten signature in black ink, appearing to read "K. Barry", is written over the typed name.

Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 22, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Mike Petersen, Public Affairs Officer
US Army Corps of Engineers, St. Louis District
1222 Spruce Street
St. Louis, MO 63103-2833

Dear Mr. Petersen:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and

an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

The ILARNG has conducted a number of environmental, biological, and cultural resources surveys at the STA over the last several years and has extensive baseline information about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. For this EA, we are seeking from your agency/group any new or additional information, new environmental topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may

assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



December 23, 2014

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

David Turpin
USEPA- Region 5
77 West Jackson Blvd
Chicago, IL 60604

Dear Mr. Turpin:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined land dedicated by Peabody Coal Company on October 31, 1986 for military training and

an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

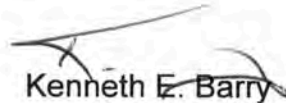
The ILARNG has conducted a number of environmental, biological, and cultural resources surveys at the STA over the last several years and has extensive baseline information about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. For this EA, we are seeking from your agency/group any new or additional information, new environmental topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may

assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



January 08, 2015

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Connie Waggoner
Division Manager
Illinois Department of Natural Resources
One Natural Resources Way, FL 001
Springfield, IL 62702-1271

Dear Ms. Waggoner:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined

land dedicated by Peabody Coal Company on October 31, 1986 for military training and an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

An Integrated Natural Resources Plan (INRMP) was updated for the STA in July, 2013. This INRMP integrates all aspects of natural resources management with the rest of the STA's mission, and therefore becomes the primary tool for managing the STA's ecosystem and habitat while ensuring the successful accomplishment of the military mission at the highest possible levels of efficiency. The ILARNG has conducted a number of environmental, biological, and cultural resources surveys at the STA over the last several years and has extensive baseline information about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. For this EA, we are seeking from your agency/group any new or additional information, new environmental topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/ groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.

Sincerely,



Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures



January 08, 2015

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero
Range, Relocation of the Existing M203 Range, and Road Improvements for
Illinois Army National Guard's Sparta Training Area, Randolph County,
Illinois

Todd Rettig
Director Land Management
Illinois Department of Natural Resources
One Natural Resources Way, FL 001
Springfield, IL 62702-1271

Dear Mr Rettig:

The purpose of this letter is to solicit comments regarding the Illinois Army National Guard's (ILARNG) intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figure 1). The purpose of Proposed Action is to provide the requisite range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) in the future. A CTC is designed to support individual and collective training up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ILARNG is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 651.

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri. The STA is comprised of 15 artificial lakes surrounded by upland cool and warm season grasses, and the Plum Creek watershed in the north. Surrounding land use is agricultural with low-density rural development. The IDNR's World Shooting Complex adjoins the northern portion of the property, and the Sparta Community Airport-Hunter Field is located less than 1 mile from the eastern STA boundary. The STA is composed of 2,245.5 acres of strip-mined

land dedicated by Peabody Coal Company on October 31, 1986 for military training and an additional 396.5 acres of land conveyed by the City of Sparta. Peabody Mining Company transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

Ranges consist of two primary components: (1) the physical range footprint, consisting of the firing positions, targetry, and support structures; and (2) the Surface Danger Zone (SDZ), the area where projectiles fired on the range will land based on the types of weapons and ammunition used. Range construction and relocation would include land clearing, road improvements, building earthen target berms and firing positions, small arms range operation and control area (SAROCA) facilities, fencing, relocation of the existing power line, and utility line extensions. The actual disturbance area associated with the development of the Zero Range and relocation of the M203 Range (to accommodate the Zero Range) is expected to be less than 10 acres. Land within the range SDZs would not be disturbed for range construction (see Figure 2).

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings (LWCs) and maintenance/rehabilitation activities over the next 5 years. No paved roads occur within the STA, and there are no plans to construct them. Approximately 29.6 miles of new gravel roads (24 feet wide) and 14.9 miles of dirt trails (18 feet wide) would be constructed that would result in approximately 44.4 acres of ground disturbance (see Figure 1). Six new LWCs and culverts would be installed along the roads/trails. Maintenance activities include resurfacing gravel roads (when needed), and the addition of gravel and riprap around the edges of existing LWCs. These improvements are needed to improve the efficiency of traffic flow on STA, accommodate increased vehicle traffic to the proposed ranges, and maintain roadway infrastructure over the long-term.

An Integrated Natural Resources Plan (INRMP) was updated for the STA in July, 2013. This INRMP integrates all aspects of natural resources management with the rest of the STA's mission, and therefore becomes the primary tool for managing the STA's ecosystem and habitat while ensuring the successful accomplishment of the military mission at the highest possible levels of efficiency. The ILARNG has conducted a number of environmental, biological, and cultural resources surveys at the STA over the last several years and has extensive baseline information about flora and fauna species, plant communities, wetlands, surface water quality, topography, and cultural resources. For this EA, we are seeking from your agency/group any new or additional information, new environmental topics or issues of concern, updates on policies or regulations, updates on rare flora and fauna listings, identification of issues of regional or local concern, or other new information that your agency/group thinks would be of value in conducting this NEPA analysis.

As part of the NEPA process, local citizens, groups, and agencies, among others, will have ample future opportunity to review and comment on the information and alternatives addressed in the EA. We are coordinating with a number of agencies/ groups (see enclosed Contact List). If you are aware of other individuals, groups, or resource agencies that may possess additional information or knowledge that may assist us in preparing this EA, please either contact us or forward this letter for their review, and include any applicable returned comments with your response.

We look forward to and welcome your participation in this process. Please respond within **30 days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. AMEC Environment & Infrastructure, Inc. (AMEC) has been contracted by the ILARNG to facilitate the EA preparation. If you have information relevant to the development of the EA or an interest in reviewing the External Draft EA, please send your correspondence directly to AMEC at the following physical or email address: AMEC Environment & Infrastructure, Inc., Attn: Ms. Jennifer Warf, 201 South Capitol Avenue, Suite 200, Indianapolis, IN 46225. If you have any questions concerning this request, please do not hesitate to contact Ms. Warf at (317) 224-5964 or jennifer.warf@amec.com.



















Sincerely,




Kenneth E. Barry
Acting Chief, Environmental Branch

Enclosures

FIGURE 1 PROPOSED ACTION Illinois Army National Guard Environmental Assessment Sparta Training Area Randolph County, Illinois

- Legend**
-  Sparta Training Area
 -  Sparta Community Airport
- Existing Roads/Trails/Crossings**
-  Paved Roads
 -  Gravel Roads
 -  Dirt Trails
 -  Bridge
 -  Culverts
 -  Low Water Stream Crossing
- Proposed Ranges**
-  M203 Range Footprint
 -  10-25 m Zero Range Footprint
 -  SDZ for M855A1 (with back berm)
 -  SDZ for M855A1 (without back berm)
 -  M203 Range SDZ
- Proposed Roads/Trails/Crossings**
-  Gravel Roads
 -  Dirt Trails
 -  Culvert
 -  Low Water Stream Crossing
 -  Proposed Power Line Relocation

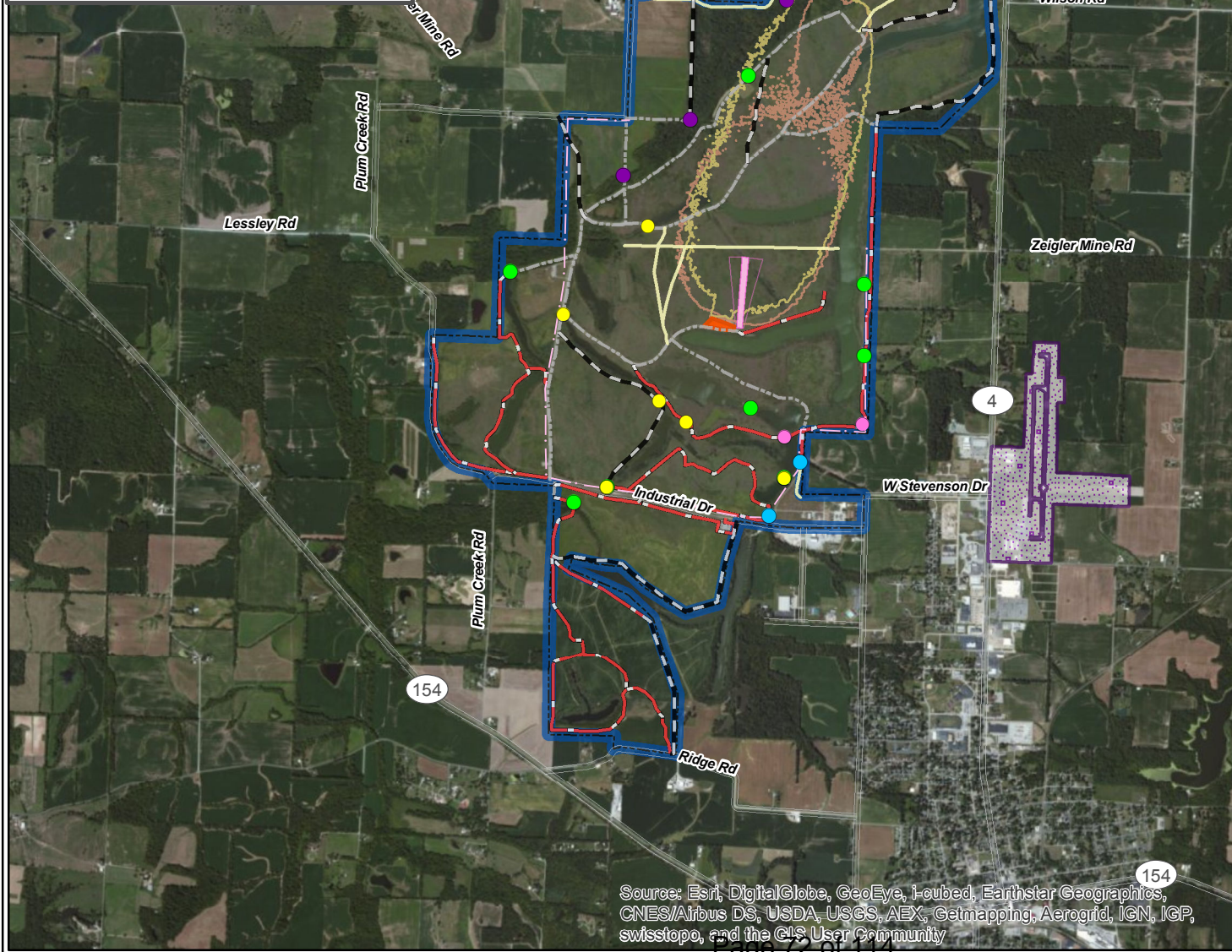
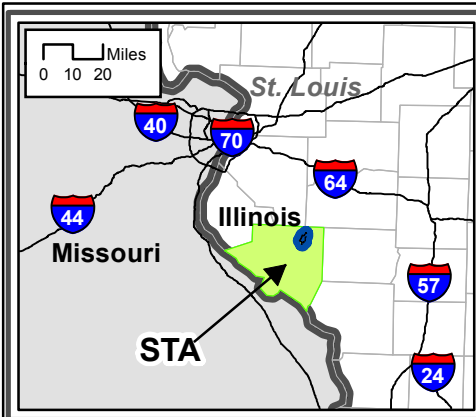
N



Miles
0 0.2 0.4 0.6 0.8 1

Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
Projection: NAD 1983 UTM Zone 16N (meters)

No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database.







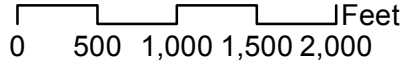
Source: Esri, DigitalGlobe, GeoEye, I-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

FIGURE 2 PROPOSED ZERO RANGE CONSTRUCTION AND M203 RANGE RELOCATION

Illinois Army National Guard
Environmental Assessment
Sparta Training Area
Randolph County, Illinois

Legend

-  Sparta Training Area
-  Existing Roads/Trails
-  Existing M203 Range Footprint
- Proposed Range Footprints**
-  M203 Range Footprint
-  10-25 m Zero Range Footprint
-  SDZ for M855A1 (with back berm)
-  SDZ for M855A1 (without back berm)
-  M203 Range SDZ



Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
Projection: NAD 1983 UTM Zone 16N (meters)
No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database.

Source: Esri, DigitalGlobe, GeoEye, I-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217)782-2829

PAT QUINN, GOVERNOR

LISA BONNETT, DIRECTOR

JAN 07 2015

AMEC Environment & Infrastructure, Inc.
Attn: Ms. Jennifer Warf
201 South Capitol Avenue, Suite 200
Indianapolis, IN 46225

RE: EA for construction, operation & relocation of firing range for IL Army National Guard/Sparta

Dear Ms. Warf:

The Agency has no objections to the project; however, a construction site activity stormwater NPDES permit is required for this project. You may contact Al Keller at 217-782-0610 with any questions.

In addition, solid and hazardous waste must be properly disposed of or recycled.

Sincerely,

A handwritten signature in cursive script that reads "Lisa Bonnett".

Lisa Bonnett
Director

RECEIVED JAN 12 2015



United States Department of Agriculture

January 16, 2015

AMEC Environment & Infrastructure, Inc.
Attn: Ms. Jennifer Warf
201 South Capitol Avenue, Suite 200
Indianapolis, IN 46225

Dear Ms. Warf:

We have received the request for comment and for information on the Intergovernmental and Interagency Environmental Planning Consultation Environmental Assessment of the Construction and Operation of a Zero Range, Relocation of the Existing M203 Range, and Road Improvements for Illinois Army National Guard's Sparta Training Area, Randolph County, Illinois.

The project is exempt from the Farmland Protection Policy Act by section 1547(b) of the Act, 7 U.S.C. 4208(b).

At this time I have no further comment or information concerning the project.

Sincerely,

IVAN N. DOZIER
State Conservationist

cc:

Kenneth E. Barry, Acting Chief, Environmental Branch, Department of Military Affairs, 1301 North MacArthur Boulevard, Springfield, Illinois 62702-2317
Ronald Ziehm, Assistant State Conservationist Area 1, USDA-NRCS, 502 Comfort Drive, Suite D, Marion, Illinois 62959
Kerry Goodrich, State Resource Conservationist, USDA-NRCS, 2118 West Park Court, Champaign, Illinois 61821

Natural Resources Conservation Service
2118 W. Park Court, Champaign, Illinois 61821
Voice (217) 353-6600 -- FAX2mail (855) 668-0602

Helping People Help The Land.

An Equal Opportunity Provider and Employer



**DEPARTMENT OF THE ARMY
ST. LOUIS DISTRICT CORPS OF ENGINEERS
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103-2833**

REPLY TO
ATTENTION OF:

January 20, 2015

Regulatory Branch
File Number: MVS-2015-43

Ms. Jennifer Warf
AMEC Environment & Infrastructure, Inc.
201 South Capitol Avenue, Suite 200
Indianapolis, Indiana 46225

Dear Ms. Warf:

We have reviewed your letter soliciting comments for the Illinois Army National Guard's intent to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area in Randolph County, Illinois. At this time the Corps' Regulatory Branch cannot determine if "Waters of the U.S." will be impacted by the project, requiring Section 404 of the Clean Water Act authorization. A Department of the Army permit application should be submitted to our office for review. The application should include the Environmental Assessment completed for the project, as well as, any wetland and water body delineations.

This determination is applicable only to the permit program administered by the Corps of Engineers Regulatory Branch. It does not eliminate the need to obtain other federal, state or local approvals before beginning work. At this time we have determined that the project may be subject to Section 404 and require subsequent authorization from this office.

The jurisdictional determination for this project is considered a Preliminary jurisdictional determination in accordance with Corps regulations at 33 CFR Part 331. A preliminary jurisdictional determination is not appealable. If you wish, you may request an Approved Jurisdictional Determination (which may be appealed) by contacting our office for further instruction.

If you have any questions, please contact me at (314) 331-8578. Please refer to file number **MVS-2015-43**. The St. Louis District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to go to our Customer Service Survey found on our web site at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey.

Sincerely,



Tyson Zobrist
Illinois Section
Regulatory Branch



FAX (217) 524-7525

Randolph County
Sparta

New Construction/Operation of 10-25 Meter Zero Range, Relocation of M203 Range and Road
Improvements at Sparta Training Area
1803 N. Hillcrest Dr.
IHPA Log #019122414

January 15, 2015

Kenneth Barry
Illinois Department of Military Affairs
1301 N. MacArthur Blvd.
Springfield, IL 62702-2317

Dear Mr. Barry:

We have reviewed the documentation submitted for the referenced project in accordance with 36 CFR Part 800.4. Based upon the information provided, no historic properties are affected. We, therefore, have no objection to the undertaking proceeding as planned.

Please retain this letter in your files as evidence of compliance with section 106 of the National Historic Preservation Act of 1966, as amended. This clearance remains in effect for two years from date of issuance. It does not pertain to any discovery during construction, nor is it a clearance for purposes of the Illinois Human Skeletal Remains Protection Act (20 ILCS 3440).

If you have any further questions, please contact me at 217/785-5031.

Sincerely,

Rachel Leibowitz, Ph.D.
Deputy State Historic
Preservation Officer



United States Department of the Interior



U.S. FISH AND WILDLIFE SERVICE
Marion Illinois Sub-Office (ES)
8588 Route 148
Marion, Illinois 62959
(618) 997-3344

February 2, 2015

Ms. Jennifer Warf
AMEC Earth & Environmental, Inc.
201 South Capitol Avenue, Suite 200
Indianapolis, IN 46225

Attn: Ms. Christine Spargur

Dear Ms. Warf,

This is in reference to a December 23, 2014, letter requesting new information to assist in preparing an Environmental Assessment (EA) on the Construction and Operation of a Zero Range, Relocation of the Existing M203 Range, and Road Improvements for the Illinois Army National Guard (ILARNG) Sparta Training Area (STA) in Randolph County, Illinois. These comments are provided under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*); the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*); the Migratory Bird Treaty Act (40 Stat. 755, as amended; 16 U.S.C. 703 *et seq.*) and, the National Environmental Policy Act (83 Stat. 852, as amended P.L. 91-190, 42 U.S.C. 4321 *et seq.*).

To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, Federal agencies are required to obtain from the Fish and Wildlife Service (Service) information concerning any species, listed or proposed to be listed, which may be present in the area of the proposed project. You can visit our Information, Planning, and Conservation System (IPaC) at the link below to determine whether any threatened and endangered species, designated critical habitat, or other natural resources of concern may be affected by your proposed project and to obtain a preliminary or official U.S. Fish and Wildlife species list.

<https://ecos.fws.gov/ipac/>

A mist net survey was conducted in the summer of 2012 and resulted in the capture of 14 Indiana bats on STA. A follow up survey was conducted in 2014 and documented the presence of an Indiana bat maternity colony at STA. The report for this survey effort has not yet been finalized so specific location information is not yet available. A concern is the potential impact to roosting bats and roosting habitat from the proposed projects. It appears that some work is proposed in the forested areas of STA (i.e. low water stream crossings) and that the Surface Danger Zones (SDZ's) extend into the forested area. The Service recommends that appropriate

measures be taken to avoid and minimize impacts to the forested habitat on STA and minimize any potential disturbance (i.e. noise disturbance).

Although the bald eagle has been removed from the threatened and endangered species list, it continues to be protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (BGEPA). The Service developed the National Bald Eagle Management (NBEM) Guidelines to provide landowners, land managers, and others with information and recommendations regarding how to minimize potential project impacts to bald eagles, particularly where such impacts may constitute “disturbance,” which is prohibited by the BGEPA. We recommend that the NBEM Guidelines be incorporated into the EA and implemented to minimize potential project impacts to bald eagles. A copy of the NBEM Guidelines is available at:

<http://www.fws.gov/midwest/eagle/pdf/NationalBaldEagleManagementGuidelines.pdf>

Thank you for the opportunity to provide information concerning threatened and endangered species. If you have any questions, please contact me at (618) 997-3344, ext. 345.

Sincerely,

/s/ Matthew T. Mangan

Matthew T. Mangan
Fish and Wildlife Biologist



May 5, 2015

Environmental Branch

Mr. Matt Mangan
U.S. Fish and Wildlife Service
8588 Route 148
Marion, Illinois 62959-4565

Dear Mr. Mangan:

We are requesting concurrence from the U.S. Fish and Wildlife Service that mitigation measures the Illinois Army National Guard (ILARNG) is incorporating in the Environmental Assessment (EA) for the proposed action of the Construction and Operation of a Zero Range, Relocation of the Existing M203 Range, and Road Improvements for the ILARNG Sparta Training Area (STA) in Randolph County, Illinois will have the result: "May Affect, Not Likely to Adversely Affect" any Federally listed threatened or endangered species or its critical habitat.

We carefully reviewed (April 29, 2015) your agency's Section 7 Consultation website for a list of species and critical habitat that "may be present" within the project area. Five species may be present:

- Indiana bat (*Myotis sodalists*) habitat: Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)
- Northern long-eared bat (*Myotis septentrionalis*) habitat: Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)
- Pallid sturgeon (*Scaphirynchus albus*) habitat: Large rivers
- Least tern (*Sterna antillarum*) habitat: Bare alluvial and dredged spoil islands
- Small whorled pogonia (*Isotria medeoloides*) habitat: Dry woodlands

Indiana bat and Northern long-eared bat: The ILARNG has conducted three USFWS sanctioned Indiana bat mist net surveys at STA. The first survey was conducted in the summer of 2002 throughout the Plum Creek corridor; habitat considered most likely to attract and support an Indiana bat population. The survey found no presence of the Indiana Bat; however, one Northern long-eared bat (NLEB) was captured. At that time, the survey also indicated the STA forested area was likely too small a foraging area to support a colony of any bat species. A mist net survey in

2012, again throughout the Plum Creek corridor, captured fourteen Indiana bats at STA; however, no NLEB's were captured. A mist net survey in combination with radio telemetry tracking was again conducted in the summer of 2014 in the same locations netted in 2012 as well as one additional location to increase chances of capturing female Indiana bats. Seventeen Indiana bats were captured; ten adult females were affixed with radio transmitters; no NLEB's were captured. Radio telemetry of the ten adult female Indiana bats lead to discovery of five maternal colonies within and one colony outside the property boundary of STA. No hibernacula exist on STA.

Pallid sturgeon: No river habitat present at STA.

Least tern: No bare alluvial and dredged spoil islands present at STA.

Small whorled pogonia: A vegetative survey was conducted at STA in 2003 and again in 2008/9 by the Natural Resource Conservation Service (NRCS). The survey found no presence of the small whorled pogonia. Most woodland habitat at STA is located in a flood plain.

The STA began military maneuver training operations in 2004. Since that time, there has been a steady increase in personnel trained and equipment used throughout the site. In addition, a wide range of noise producing training munitions have been used throughout the site. The past two Indiana bat surveys indicate that the increase in military training activity has had no adverse effect on the presence of Indiana bats on STA. Documented studies have shown military training activities have had little to no impact on the Indiana bat population at Camp Atterbury, Indiana also.

A response letter dated July 10, 2013 from the USFWS to the ILARNG's request for concurrence of the final draft of the 2013 STA INRMP provided recommendations for improving conditions for migratory birds and forest dependent bat species. Those recommendations included development of a forest management plan, mist netting and radio telemetry studies for bats at STA.

The ILARNG contracted with Ball State University, Dr. Tim Carter, in 2014 to conduct mist netting and radio telemetry. A copy of the survey report was provided to the USFWS on March 11, 2015. The ILARNG has contracted with Southern Illinois University Forestry Department to develop a forest management plan. Delivery of the plan is scheduled for December 31, 2015.

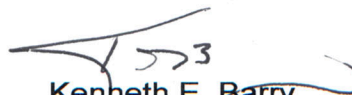
Based on STA bat survey data, recommendations from USFWS from the initial consultation response for this proposed action letter dated February 2, 2015 and continued implementation of the 2013 STA INRMP, the following measures will protect

and enhance the habitat for both bird and bat species and shall be included in the proposed action EA:

- No tree clearance will occur between April 1 and October 15.
- Implement proposed construction activities in or near the Plum Creek riparian area between October 16 and March 31.
- In areas with proposed tree clearance, avoid and minimize the clearance of trees to the extent possible to minimize indirect disturbance to Indiana bat habitat.
- Minimize artificial lighting on the proposed ranges and within the small arms range operation and control area to reduce the potential for light pollution impacts.
- Restrict training activities to vehicle movement on existing roads within forested areas and to dismounted maneuvers in these areas to ensure adverse effects do not occur to the Indiana bat or its habitat.
- Prohibit the use of prescribed fire at STA between April 1 and October 14 to prevent impacts to Indiana bats that may be using the area to roost.
- Prohibit use of smoke, CS gas, and pyrotechnics in the Plum Creek corridor between April 1 and October 14.
- Conduct bat surveys as required by USFWS to monitor the potential effects of increased training and range use at STA and submit reports to the USFWS documenting activities conducted at STA unless USFWS determines activities are not affecting the Indiana bat roosting at STA. If this species are found to be adversely affected at any time during this monitoring period, the ILARNG will initiate formal consultation with the USFWS.

With the implementation of the above measures, we conclude that the proposed action "May Affect, Not Likely to Adversely Affect" the listed species. We request your concurrence with our determinations and are prepared to meet with USFWS staff to answer any questions or provide additional information that may assist you in making a determination.

Sincerely,



Kenneth E. Barry
Chief Warrant Officer, National Guard
Acting Chief, Environmental Branch



United States Department of the Interior



U.S. FISH AND WILDLIFE SERVICE
Marion Illinois Sub-Office (ES)
8588 Route 148
Marion, Illinois 62959
(618) 997-3344

June 5, 2015

Mr. Kenneth E. Barry
Illinois Dept. of Military Affairs
Environmental Branch
1301 North MacArthur Boulevard
Springfield, Illinois 62702-2317

Dear Mr. Barry,

Thank you for your letter dated May 5, 2015, requesting review and concurrence on the Construction and Operation of a Zero Range, Relocation of the Existing M203 Range, and Road Improvements for the Illinois Army National Guard (ILARNG) Sparta Training Area (STA) in Randolph County, Illinois. These comments are provided under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.); the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.); the Migratory Bird Treaty Act (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.) and, the National Environmental Policy Act (83 Stat. 852, as amended P.L. 91-190, 42 U.S.C. 4321 et seq.).

Threatened and Endangered Species

To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, Federal agencies are required to obtain from the Fish and Wildlife Service (Service) information concerning any species, listed or proposed to be listed, which may be present in the area of the proposed action. In your letter you provided a list of species which may be present within the project area that was obtained from the Service's Section 7 technical assistance website on April 29, 2015. That list includes the endangered Indiana bat (*Myotis sodalis*), endangered pallid sturgeon (*Scaphirhynchus albus*), endangered least tern (*Sterna antillarum*), threatened northern long-eared bat (*Myotis septentrionalis*), and threatened small whorled pogonia (*Isotria medeoloides*). There is no designated critical habitat in the project area at this time.

Information in your letter states that no suitable habitat exists for both the pallid sturgeon and the least tern within the project area. In addition, vegetative surveys conducted over multiple years found no presence of the small whorled pogonia. Therefore, you have determined that the proposed project is not likely to adversely affect the pallid sturgeon, least tern, and small whorled pogonia. Based on this information, the Service concurs that the proposed project is not likely to adversely affect the pallid sturgeon, least tern, and small whorled pogonia.

Suitable habitat for the Indiana bat and northern long-eared bat exists within the project area and an Indiana bat maternity colony is known to occur on the STA. A concern is the potential impact to roosting bats and roosting habitat from the proposed project. Specifically, noise associated with the range and any tree clearing required for road improvements. Information in your letter indicates that a wide range of noise producing training munitions have been used throughout the site since 2004 and since the Indiana bat was first documented on STA (2012) and that studies from Camp Atterbury, Indiana, have shown military training activities have had little to no impact on the Indiana bat population. In order to minimize impacts to the Indiana bat training activities and vehicle movement will be restricted to existing roads within forested areas, artificial light on the proposed ranges will be minimized to reduce the potential for light pollution, and use of smoke, CS gas, and pyrotechnics will be prohibited in the Plum Creek corridor between April 1 and October 14. In addition, any proposed tree clearing will be avoided or minimized to the extent possible and will occur outside the April 1 to October 15 time period. Based on this information, the Service concurs that the proposed project is not likely to adversely affect the Indiana bat and northern long-eared bat. Should this project be modified or new information indicate listed or proposed species may be affected, consultation or additional coordination with this office, as appropriate, should be initiated.

The Service recommends that additional surveys be conducted to monitor the Indiana bat maternity colony at STA and any potential effects from the proposed training activities and range use. The Service is willing to help develop a monitoring plan that may include the use of acoustic detectors and additional mist netting.

Thank you for the opportunity to provide information concerning threatened and endangered species. If you have any questions, please contact me at (618) 997-3344, ext. 345.

Sincerely,

/s/ Matthew T. Mangan

Matthew T. Mangan
Fish and Wildlife Biologist



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

Bruce Rauner, Governor
Wayne A. Rosenthal, Director

June 18, 2015

Ms. Jennifer Warf
AMEC Environment & Infrastructure, Inc.
201 South Capitol Avenue, Suite 200
Indianapolis, IN 46225

**RE: Sparta Training Facility Environmental Assessment, Randolph County
Scoping Comments**

Dear Ms. Warf:

The Department offers the following comments to support the Environmental Assessment for the proposal to improve training facilities at the Sparta Training Center.

Biological surveys and assessments commissioned by the ILARNG have identified a number of animal species present within the Training Area which are afforded elevated legal protection pursuant to the *Illinois Endangered Species Protection Act* (IESPA) [520 ILCS 10].

In addition, the State of Illinois has adopted a new list of protected species, effective May 19, 2015. With one exception, to the Department's knowledge none of the newly-listed species are known to be present within the Sparta Training Area. However, it is possible that some of the newly-listed aquatic and avian species may be present in the Plum Creek Corridor. These consist of the **American Eel**, *Anguilla rostrata*, and the **Chick-Will's Widow**, *Caprimulgus carolinensis*. The EA should address the potential of the proposed actions to alter suitable habitats for these species.

On May 4, 2015, the **Northern Long-Eared Bat**, *Myotis septentrionalis*, was listed as "threatened" by the USFWS pursuant to the *Endangered Species Act*. This action also resulted in automatic listing by the State of Illinois. Prior survey activities by the ILARNG have identified this species as present along the Plum Creek Corridor, along with the endangered **Indiana Bat**, *Myotis sodalis*. The Department believes the proposed actions are unlikely to adversely modify essential habitats for these species.

Recent surveys commissioned by the ILARNG also reported observations of two State-listed species which may be adversely affected by the proposed actions. These are the **Great Plains Rat Snake**, *Pantherophis emoryi*, and the **Ornate Box Turtle**, *Terrapene ornata*. While these observations are disjunct from other known populations of these species and would not typically

be expected on reclaimed mining spoils, the biologists conducting the survey are confident their identifications were correct. Only one observation of each occurred, so no information is currently available on the size of any local populations.

While the proposed actions are unlikely to result in significant alterations of suitable habitats, the proposed improvements and elevated intensity of training activities may result in prohibited incidental taking of these species. Such taking may be authorized by this Department through acquiring an Incidental Take Authorization pursuant to 520 ILCS 10/5.5 and Part 1080 of the Department's Administrative Rules.

Reptiles thermo-regulate by seeking sunlight or shade, depending on their requirements through the day and season. Both snakes and box turtles often use openings such as roads and road shoulders for basking, which renders them vulnerable to road-kill or harassment. Box turtles often nest on roads and roadsides. The creation of an extensive trail and road system, none of which is paved, will considerably increase the potential for death, injury, or unlawful collection of these animals.

The Ornate Box Turtle is particularly noted for its fidelity to a home range which, depending on the availability of food resources, may consist of just a few acres. Home ranges often overlap. Depending on the distribution of the local population, construction of these improvements may alter or destroy the home ranges of one or more individuals. The Ornate Box Turtle spends considerable time underground and is difficult to observe due to its natural markings, unless in an exposed position. A visual encounter survey for this species, the most common method used, has only a 3% chance of detecting an animal which is on the surface and available for observation.

The observed snake believed to be a Great Plains Rat Snake was found during a cover-board survey, but evaded capture. This species has a varied diet, which includes small birds, and can spend nearly as much time in trees and shrubs as on the ground. A critical component of its habitat is a den in which to spend the winter. Individuals can range several miles from a winter den.

This area was mined using a shovel and dragline operation. While the relatively flat areas of the STA offer low potential for suitable winter hibernaculae for snakes, the spoil sides of the pit slopes may provide access to suitable openings and passages where rock slabs and boulders created voids when placed by mining equipment. The proposed actions are unlikely to alter slopes at the angle of repose and may not threaten any winter refuges which may exist, but the layout of the proposed roads and trails, which generally parallel the tops of such slopes, will require snakes to expose themselves in order to exploit food resources in the interior areas.

The Environmental Assessment should evaluate these potential effects to these species.

If further consultation with the Department is desired, please do not hesitate to contact us.

Sincerely,

A handwritten signature in black ink that reads "Keith M. Shank". The signature is written in a cursive style with a large initial "K" and "S".

Keith M. Shank
Division of Ecosystems and Environment
keith.shank@illinois.gov
(217) 785-5500

cc: John Casebeer, Illinois Department of Military Affairs

Sparta Community Airport
1800 N. Market St.
Sparta IL 62286
618-443-2002

January 7, 2015

AMEC Environment & Infrastructure, Inc.
Attn: Ms. Jennifer Warf
201 South Capitol Avenue, Suite 200
Indianapolis, IN 46225

Re: EA for proposed construction and Operation of 10-25 meter Zero Range & Relocation of existing M203 Range at the Sparta Training Area (STA) in Randolph County, IL

Ms. Warf:

As requested, I am submitting comments regarding the above proposed project at the Illinois Army National Guard training facility.

The Airport Authority & Management take great concern in the proposed project. The concern stems from the vertical hazard of the ricochet analysis for the ranges. This vertical hazard extends from the surface up to 1608' AMSL (with the back berm) and up to 1476' AMSL (without the back berm).

Our traffic pattern for runways 36 and 09 are directly over the Surface Danger Zone (SDZ) and extend from the surface (538' AMSL) up to 1500' AMSL. Concern is also present for ANY aviation traffic arriving or departing ANY runway, as that traffic could potentially fly over the SDZ for normal operations. Clearly, this presents a safety hazard to all of our aviation traffic, and we take exception to its currently proposed construction.

We are open to discussion for a resolution, and would like to continue to be involved in the environmental assessment. Please feel free to contact us anytime via the info below. Thank you for your consideration and cooperation.

Respectfully,

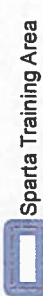


Scott Marquardt
Manager, Sparta Community Airport – KSAR
saraero@frontier.com
618-443-2002

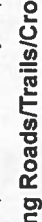
FIGURE 1 PROPOSED ACTION

Illinois Army National Guard Environmental Assessment Sparta Training Area Randolph County, Illinois

Legend



Sparta Training Area



Sparta Community Airport

Existing Roads/Trails/Crossings

- Paved Roads
- Gravel Roads
- Dirt Trails
- Bridge
- Culverts
- Low Water Stream Crossing

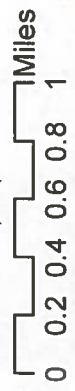
Proposed Ranges

- M203 Range Footprint
- 10-25 m Zero Range Footprint
- SDZ for M855A1 (with back berm)
- SDZ for M855A1 (without back berm)
- M203 Range SDZ

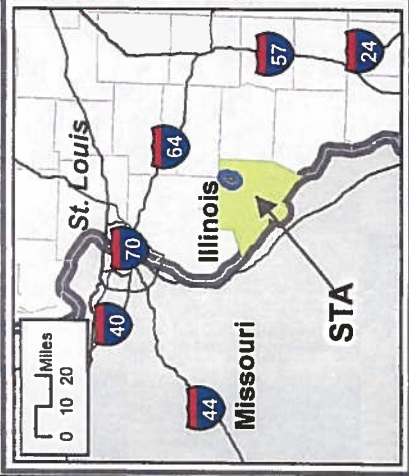
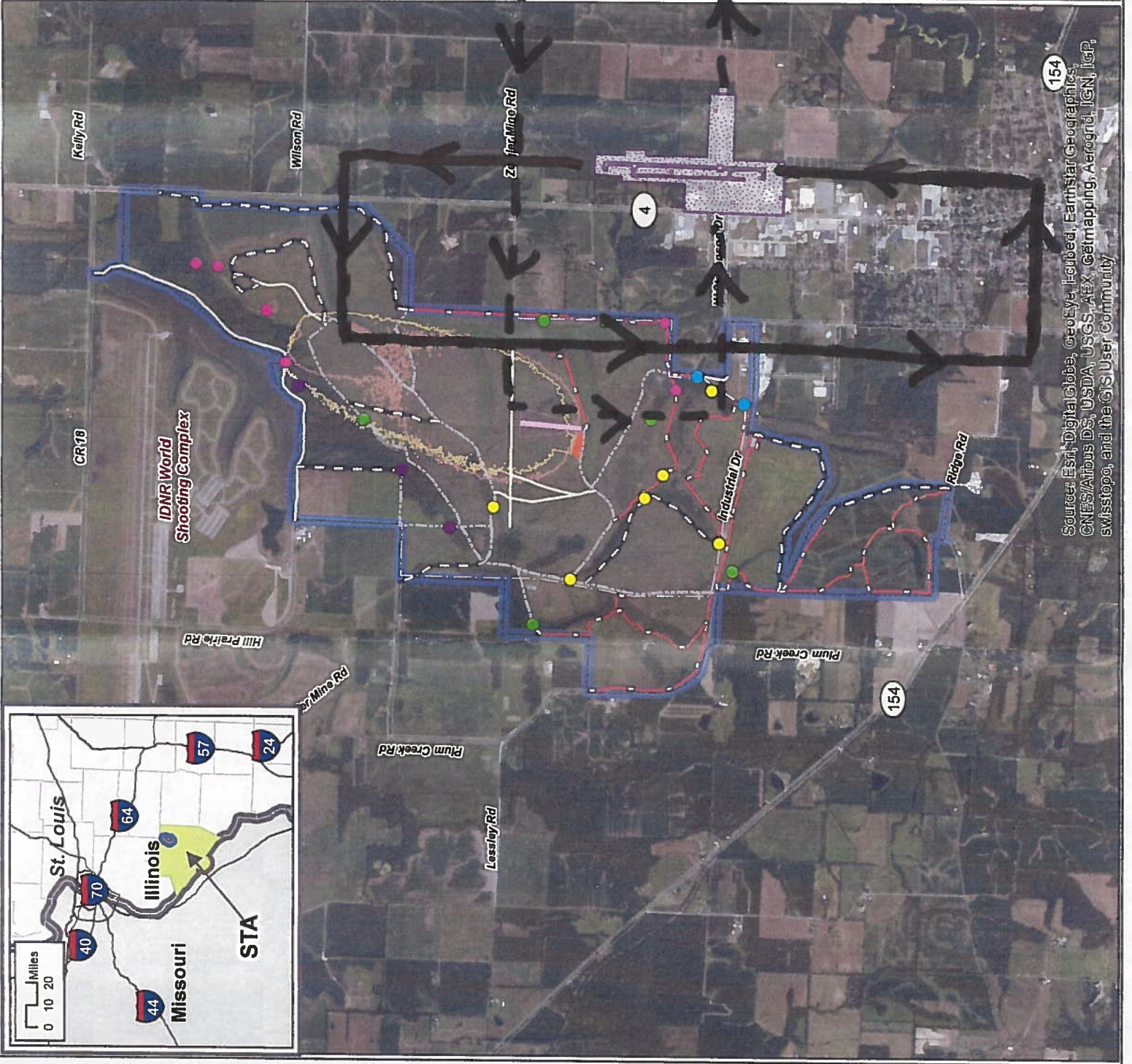
Proposed Roads/Trails/Crossings

- Gravel Roads
- Dirt Trails
- Culvert
- Low Water Stream Crossing
- Proposed Power Line Relocation

Rwy N 36 Traffic Pattern
Rwy A 09 Traffic Pattern



Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
Projection: NAD 1983 UTM Zone 16N (meters)
No warranty is made by the ILARNG/ARNG-LE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document" in that it is intended to change as new data become available and is incorporated into the Enterprises GIS database.



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community

154



January 13, 2015

SUBJECT: Environmental Assessment for the Proposed Construction and Operation of the 10-25 Meter Zero Range & the Relocation of the existing M203 Range at the Sparta Training Area (STA) in Randolph County, Illinois

Scott Marquardt, Manager
Sparta Community Airport- Hunter Field
1800 N. Market
Sparta, IL 62286

Dear Mr. Marquardt:

Thank you for your comments regarding the STA EA. We acknowledge your exception to this project as currently proposed and share in your concern for the safety of all aviation traffic.

We are currently in the process of filing the required Obstruction Evaluation/ Airport Airspace Analysis with the FAA as required by Title 14 of the Code of federal Regulations (14 CFR) Part 77. Once we receive comments from the FFA, we will be in a better position to meet with you and discuss the issues at hand.

If you have any further questions or concerns, please contact me directly at 217-761-3931 or kenneth.e.barry2.mil@mail.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "K. Barry", with a stylized flourish extending to the right.

Kenneth E. Barry
Acting Chief, Environmental Branch

Warf, Jennifer E

From: Amy.Hanson@faa.gov
Sent: Thursday, January 08, 2015 4:11 PM
To: Warf, Jennifer E
Cc: Terrence.Schaddel@illinois.gov; Gary.D.Wilson@faa.gov
Subject: Construction and Operation of a Zero Range, Relocation of the Existing M203 Range, and Road Improvements for Illinois Army National Guard's Sparta Training Area, Randolph County, Illinois

Jennifer,

Due to the distance of the proposed facility from the airport, the FAA has no environmental concerns, unless implementation could create a wildlife attractant. However, based on a preliminary airspace review, the IL Department of Military Affairs should file an Obstruction Evaluation case as soon as possible due to potential safety issues for aircraft operating at the airport.

Amy Hanson
Environmental Protect Specialist
Chicago Airports District Office
Federal Aviation Administration
Work: 847-294-7354
Cell: 847-571-3425

Warf, Jennifer E

From: Gary.D.Wilson@faa.gov
Sent: Thursday, January 08, 2015 4:58 PM
To: anthony.p.janas.nfg@mail.mil
Cc: Amy.Hanson@faa.gov; Terrence.Schaddel@illinois.gov; Warf, Jennifer E
Subject: Proposed IL National Guard Zero Range
Attachments: Sparta Training Area Notification 12222014.pdf

Categories: Important

Tony –

Per our conversation regarding the proposed IL National Guard Zero Range, please provide a point of contact to discuss in more detail.

There is a Federal requirement to file an obstruction evaluation.

<https://oeaaa.faa.gov/oeaaa/external/portal.jsp>

Thanks

Gary D. Wilson
Program Manager
FAA Chicago Airports District Office
2300 E. Devon Ave
Des Plaines IL 60018
(847) 294-7631
Gary.D.Wilson@faa.gov



U.S. Department
of Transportation
**Federal Aviation
Administration**

Great Lakes Region
2300 E. Devon Avenue
Des Plaines, Illinois 60018

JAN 20 2015

Ms. Jennifer Warf
AMEC Environment & Infrastructure, Inc
201 South Capitol Ave
Suite 200
Indianapolis, IN 46225

Re: Environmental Assessment for the Construction and
Operation of a Zero Range, Relocation of the Existing
M203 Range, and Road Improvements for Illinois Army
National Guard's Sparta Training Area, Randolph County,
Illinois

Dear Ms. Warf:

This letter is in response to a December 23, 2014, letter from Kenneth E. Barry requesting agency comments about the above referenced project.

I understand you are already working with the Chicago Airports District Office (ADO) of the Federal Aviation Administration (FAA). I was informed that the ADO has requested that an Obstruction Evaluation be filed with the FAA. Additionally, the ADO requested an opportunity to review the Draft Environmental Assessment when it is prepared. Please continue to work with the ADO.

Thank you again for providing the FAA Great Lakes Region with the opportunity to comment on the proposal. Should you have questions, please contact me or Jim Keefer, Chicago ADO Manager, at (847) 294-7335.

Sincerely,

Barry D. Cooper
Regional Administrator
Great Lakes Region

From: Lund, James R NFG NG ILANG (US)
Sent: Thursday, January 29, 2015 1:13 PM
To: 'Carole.Bernacchi@faa.gov'; Michael.Rizzo@faa.gov
Cc: Troeger, Kip A CPT USARMY (US); Barry, Kenneth E CW4 USARMY NG ILARNG (US)
Subject: RE: 2015-AGL-454-OE

Ms Bernacchi:

Who is "CSA Army Rep office"? Below is the request I received from the ILARNG Environmental Office to submit this request in order for a Master Plan Study at the Sparta Training Site be completed:

From Environmental Office...

After sending out the required consultation letters for the Sparta EA, the FAA has come back with the requirement that we must file an obstruction evaluation for the proposed STA Zero Range project. The website where this can be filed is <https://oeaaa.faa.gov/oeaaa/external/portal.jsp> It looks like forms 7460-1 and 7460-2 will need to be completed and filed electronically. I am not sure whose lane this is in but can one of you please ensure this gets completed? It looks like there is a 45 day review period and we are trying to get the EA finalized as soon as possible.

If this action is not required, then fine by me.

James R. Lund, PE, Lt Col, USAF (Ret)
Master Planner/ Civil Engineer
IL Dept of Military Affairs
Facilities Directorate
1301 N. MacArthur Blvd
Springfield, IL 62702
217-761-3801 (office)
217-725-8639 (cell)

-----Original Message-----

From: Carole.Bernacchi@faa.gov [<mailto:Carole.Bernacchi@faa.gov>]
Sent: Thursday, January 29, 2015 12:14 PM
To: Michael.Rizzo@faa.gov
Cc: Lund, James R NFG NG ILANG (US)
Subject: RE: 2015-AGL-454-OE

Mr. Rizzo:
Thank you, I will terminate the study

Carole Bernacchi
Airspace Technician
Federal Aviation Administration
Office (847)294-8084
Fax (847) 294-7457

From: Rizzo, Michael (FAA)
Sent: Thursday, January 29, 2015 11:46 AM
To: Bernacchi, Carole (FAA)
Subject: FW:

Ms Bernacchi,

The CSA Army Rep office has this request for action. No FAA input required. Thank you for bringing it to our attention.

Michael D. Rizzo
ATREP
FAA, ATO Central Service Center
Operations Support Group, AJV-C2
817-321-7733 (Work)
817-321-7744 (FAX)

Excellence in Support of ATO Service Area Success
Link to Central Service Website
<<http://servicearea.ato.faa.gov/index.cfm?s=C&m=400&sm=401>>
Feedback to Central Service Center: 9-ATO-CSC/ASW/FAA@FAA

From: Bernacchi, Carole (FAA)
Sent: Wednesday, January 28, 2015 10:50 AM
To: Rizzo, Michael (FAA)
Cc: Bernacchi, Carole (FAA)
Subject:

Mr. Rizzo:

I work in the Obstruction Evaluation Branch in Des Plaines, IL., and we received a request for an airspace study that I hope you can help direct me to the office that would handle it.

The IL Army National Guard, Jim Lund, 217-761-3801 submitted the study on 1/13/2015. This is a request for a Surface Danger Zone for a Military Range.

The information listed below is what they submitted for us to do an airspace review, however this is not something we deal with. I am hoping you can direct me to the proper office that would be able to assist this request for a review of a Military Range.

Construct a Basic 10m/25m Small Arms Firing Range. Includes Safety Danger Zone-The ground and airspace designated for vertical and lateral containment of projectiles and components resulting from firing of weapons systems to include explosives and demolitions.

Carole Bernacchi
Airspace Technician
Federal Aviation Administration
Office (847)294-8084

MEMORANDUM FOR RECORD

SUBJECT: Meeting Between Illinois Department of Military Affairs (DMAIL)- Environmental Branch and the Illinois Department of Transportation (IDOT)- Division of Aeronautics

1. On 07 May 2015, Jonathan Casebeer and Kip Troeger, representatives of DMAIL, met with Dennis Jarman and Terrence Schaddel, representatives of IDOT. The topic of discussion was the operation of a zero range at the Illinois Army National Guard (ILARNG) Sparta Training Area (STA). Also discussed was how to better understand and mitigate any negative impacts the proposed range operations may have for the un-manned Sparta Community Airport in Sparta, Illinois. IDOT does not have jurisdictional authority but provided vital information for further discussion.

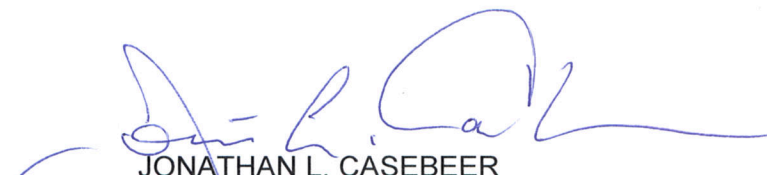
2. Mr. Jarman informed us of the current capabilities of the Sparta Community Airport. We then explored how the ILARNG STA Range Control may integrate with the existing Sparta Community Airport Automated Weather Observing System Series 3 (AWOS-3) and the Common Traffic Advisory frequency (CTAF) to potentially support safe range operations. AWOS would also provide STA range control the specific weather information as required by the Small Arms Range Safety Area (SARSA). The Sparta Community Airport manager could choose to add a live range advisory to the AWOS-3 which can be checked by inbound and outbound aircraft. ILARNG could listen to the CTAF frequency which pilots use to coordinate their arrivals and departures safely, giving position reports and acknowledging other aircraft in the airfield pattern.

3. Mr. Schaddel indicated that the STA range control would have to generate a Notice to Airmen (NOTAM) and coordinate with the appropriate Air Route Traffic Control Center (ARTCC) prior to a firing event. Doing this could show a box around a safety area. In addition, ILARNG range personnel would be required to visually monitor the surrounding airspace, provide signage at the airport to indicate range status and offer a community outreach by offering training to the local pilot community. Due to the high amount of ultra-light aircraft usage, special consideration would be needed to prevent issues with these "aircraft."

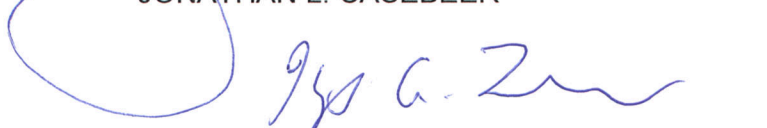
4. It was concluded that a meeting should be scheduled between DMAIL and the Sparta Community Airport Manager to discuss these mitigation measures. We recommend that Mr. Jarman and someone from the SAO office also attend.

3. POC is the undersigned at 216-761-3794 or 216-761-3735

FOR THE DIRECTOR
FACILITIES AND ENGINEERING:



JONATHAN L. CASEBEER




KIP A. TROEGER

MEMORANDUM FOR RECORD

SUBJECT: DMAIL and Sparta Hunter Field meeting on Environmental Assessment

1. On 11 June 2015, LTC Pulcher, CPT Sandona and CW3 Roberts from the State Aviation Safety Office along with CW4 Barry and Mr. Casebeer from the Construction and Facilities Management Office - Environmental Branch, met with Scott Marquardt, the Sparta, IL airport manager, Marvin Campbell, the retired airport manager and upon their request, Dennis Jarman (IDOT) at the Sparta Hunter Field to discuss mitigation measures for the construction of a small arms firing range at the Illinois Army National Guard Sparta Training Area.
2. Mr. Marquardt provided the position that he does not want his airport impacted by the ILARNG building a firing range. The conversation went with the SAO explaining their role in this process as well as the safety requirements spelled out in Army Regulation to include the SARSA. Mr. Marquardt indicated that he would not want to post any cautionary signs, NOTAMs, or place a message on the AWOS II as he believes his may discourage business at his airfield.
3. In addition to explaining established and future safety precautions, we showed Mr. Marquardt an alternative proposed right hand turn approach and departure, which would remove flight patterns from the range vicinity and eliminating most, if not all of the ricochet risk. Mr. Marquardt indicated that he was not open to a change in traffic pattern, due to risk issues and inconvenience to his customers.
4. Mr. Marquardt indicated that we need to change the design of our range to a baffled range similar to the one he personally practices at in High Ridge, Missouri. Mr. Marquardt stated anything other than a zero ricochet analysis producing range is unacceptable to both him and the board; therefore, they do not concur with the current draft EA.
5. POC is the undersigned at 216-761-3931.



KENNETH E. BARRY
CW4, ILARNG
Environmental Program Manager



1800 N. Market St.
Sparta, IL 62286
618-443-5321

Kenneth E. Barry
Environmental Branch - Dept of Military Affairs
1301 North MacArthur Blvd.
Springfield, IL 62702

July 13, 2015

Mr. Barry:

This letter outlines the concerns & discussion that took place at the recent meeting between the Sparta Community Airport Authority Board, Lt. Col Craig Holan, CW4 Ken Barry, and the Airport Management. This meeting was held in conjunction with the regularly scheduled Airport Board meeting on July 6th, 2015.

Discussion took place regarding the proposed zero range at the ILARNG facility here in Sparta, IL. Members of the Airport Board and Management expressed concerns about the safety of the air traffic as well as the economic impact resulting from the construction of the range. Those individuals believe that the safety concerns can be mitigated by the Illinois Army National Guard's (ILARNG) normal range procedures of the range master calling a 'cease-fire' when aircraft are spotted, and by monitoring the CTAF to listen for pilots that are using the frequency.

Regarding the economic impact to the airport as well as the businesses located on the field, the complications are a bit more concerning. Airport Board Members and Management have the opinion that the operations of the air traffic and businesses should NOT be negatively impacted by the construction of the proposed range or any future developments at the ILARNG site. The Board Members and Management would like the range to operate almost invisibly, without pilots having to concern themselves about the safety of their flight because of the proximity of the range(s). That responsibility should rest on the shoulders of the range operators.

In addition, the Board Members and Management at the airport would like to ensure that restrictions to our local airspace will remain non-existent due to the range(s). (No restricted, prohibited, alert, or other special use airspace.) A suggestion that may prove useful in terms of educating pilots or other public that may have concerns about the range would be a simple brochure that outlines the safety precautions that are being taken as well as the explanation of the benefits of having the range in the area. The Board Members and Management would like to approve the content of such literature before it is distributed.

The Board Members and Management thank you for your coordination in addressing our concerns, and seek a cooperative effort to exist in the same proximity while maintaining safety and economic growth.

A handwritten signature in black ink, appearing to read 'Scott Marquardt', is written over a light blue horizontal line.

Scott Marquardt
Manager, KSAR



DEPARTMENT OF THE ARMY
Illinois Army National Guard
1301 North MacArthur Boulevard
Springfield Illinois 62702-2317

NGIL-SAO-ZA

29 June 2015

MEMORANDUM FOR RECORD

SUBJECT: Air Traffic and Airspace Safety for Sparta Training Area (STA) and Sparta-Hunter Airfield (SAR)

1. As the Air Traffic and Airspace (AT&A) Officer appointed by The Adjutant General of Illinois, I have no safety concerns in regards to aviation traffic operating in/around SAR.
2. Illinois requested and has received concurrence from the regional Department of the Army Representative (DAR) on the establishment of a Small Arms Range Safety Area in the vicinity of SAR.
3. Strict adherence to AR 385-63 dated 16APR14, local SOPs and the stipulations of STAs SARSA should preclude any incidences of note.
4. I have full faith, that if strictly followed, the safety of any aircraft operating in/around SAR will not be in question. However, I am unable to speak intelligently on the airport manager's other main concern in regards to economic impact. In a conversation with the regional DAR, I confirmed the only requirement of notification of live fire activities to be that of a Notices to Airmen (NOTAM). This alone may not be enough to quell the concerns of the airport manager nor their board of representatives.
5. If you have any questions or seek clarification, please do not hesitate to contact the undersigned at (217) 761-3516 or clarence.d.pulcher.mil@mail.mil.


Digitally signed by
PULCHER,CLARENCE.DAVID.III.10
92309980
Date: 2015.06.29 14:19:03 -05'00'

CLARENCE D. PULCHER
LTC, AV, IL ARNG
State Army Aviation Officer



1800 N. Market St.
Sparta, IL 62286
618-443-5321

Kenneth E. Barry
Environmental Branch - Dept of Military Affairs
1301 North MacArthur Blvd.
Springfield, IL 62702

July 13, 2015

Mr. Barry:

This letter outlines the concerns & discussion that took place at the recent meeting between the Sparta Community Airport Authority Board, Lt. Col Craig Holan, CW4 Ken Barry, and the Airport Management. This meeting was held in conjunction with the regularly scheduled Airport Board meeting on July 6th, 2015.

Discussion took place regarding the proposed zero range at the ILARNG facility here in Sparta, IL. Members of the Airport Board and Management expressed concerns about the safety of the air traffic as well as the economic impact resulting from the construction of the range. Those individuals believe that the safety concerns can be mitigated by the Illinois Army National Guard's (ILARNG) normal range procedures of the range master calling a 'cease-fire' when aircraft are spotted, and by monitoring the CTAF to listen for pilots that are using the frequency.

Regarding the economic impact to the airport as well as the businesses located on the field, the complications are a bit more concerning. Airport Board Members and Management have the opinion that the operations of the air traffic and businesses should NOT be negatively impacted by the construction of the proposed range or any future developments at the ILARNG site. The Board Members and Management would like the range to operate almost invisibly, without pilots having to concern themselves about the safety of their flight because of the proximity of the range(s). That responsibility should rest on the shoulders of the range operators.

In addition, the Board Members and Management at the airport would like to ensure that restrictions to our local airspace will remain non-existent due to the range(s). (No restricted, prohibited, alert, or other special use airspace.) A suggestion that may prove useful in terms of educating pilots or other public that may have concerns about the range would be a simple brochure that outlines the safety precautions that are being taken as well as the explanation of the benefits of having the range in the area. The Board Members and Management would like to approve the content of such literature before it is distributed.

The Board Members and Management thank you for your coordination in addressing our concerns, and seek a cooperative effort to exist in the same proximity while maintaining safety and economic growth.

A handwritten signature in black ink, appearing to read 'Scott Marquardt', is written over a light blue horizontal line.

Scott Marquardt
Manager, KSAR



DEPARTMENT OF THE ARMY
ILLINOIS ARMY NATIONAL GUARD
1301 NORTH MACARTHUR BOULEVARD
SPRINGFIELD, ILLINOIS 62702-2317

NGIL-CFM-ZA

28 September 2015

MEMORANDUM FOR The Sparta Community Airport Authority Board, 1800 N. Market Street, Sparta, Illinois 62286-1068

SUBJECT: Sparta Training Area Course of Action Confirmation

1. This memorandum serves as reference for an understanding reached between the Sparta Community Airport Authority (SCAA) and the Department of Military Affairs, Illinois, concerning the proposed action of constructing a live fire zero range at the Illinois Army National Guard (ILARNG) Sparta Training Area.
2. The ILARNG will abide by all applicable Army Regulations, Standing Operating Procedures and Federal Aviation Authority guidelines during range operations. Procedures include cease fire calls for visual identification of aircraft and monitoring of the Common Traffic Advisory Frequency.
3. With respect to the Sparta Community Airport Authority's concern for publicity, the construction and operation of the range will not result in restrictions or prohibitions to airspace. The ILARNG is solely responsible for issuing notices to airmen, as applicable. Furthermore, once the range is designed, the ILARNG agrees to cooperatively design and produce an informational brochure for the SCAA to use for pilot/public education.
4. Point of contact for this action is CW4 Kenneth Barry at 217-761-3931 or kenneth.e.barry2.mil@mail.mil.

A handwritten signature in black ink, appearing to read "C. Holan".

CRAIG A. HOLAN
LTC (P), EN, ILARNG
CFMO

CF:
G3
PAO
SAO



DEPARTMENTS OF THE ARMY AND AIR FORCE
Illinois Army and Air National Guard
1301 North MacArthur Boulevard, Springfield, Illinois
62702-2317

January 15, 2015

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero Range,
Relocation of the Existing M203 Range, and Road Improvements for Illinois Army
National Guard's Sparta Training Area, Randolph County, Illinois

Kerry Holton, President
Deleware Nation, Oklahoma
P.O. Box 825
Anadarko, OK 73005

Dear President Holton:

The Illinois Army National Guard (ILARNG) proposes to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figures 1 and 2). The purpose of Proposed Action is to provide the essential range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) that trains up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ground disturbance area associated with the construction of the ranges and roadway improvements within the STA will be less than 55 acres.

The current Illinois Integrated Cultural Resources Management Plan identified your tribe as one with aboriginal title to the Sparta, Illinois area. The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri (see Figure 1). As you may recall, a letter from the Illinois Historic Preservation Agency, Letter Log #00202104, concurs that no further archaeological investigation is necessary at the STA.

The National Environmental Policy Act (NEPA) and 32 CFR Part 651, Environmental Analysis of Army Actions, require us to conduct an Environmental Assessment (EA) for this action. Prior to implementing this action, we wish to consult with federally recognized Indian Nations that may have ancestral ties to the area per NHPA regulations, Protection of Cultural and Historic Properties (36 CFR Part 800), EO 13175 (Consultation and Coordination with Indian Tribal Governments), and DoDI 4710.03 (DoD Interactions with Federally-Recognized Tribes). With your advice and assistance,

we hope to maintain an ongoing cooperative relationship between your nation and the ILARNG.

If you desire, the NEPA/Cultural Resources Manager, Mr. Kip Troeger, can meet personally with you or your designated representative to outline areas of concern and provide you with further information. He can be reached at (217) 761-3735 or by email at kip.a.troeger.mil@mail.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel M. Krumrei", written over a large, stylized loop.

DANIEL M. KRUMREI
Major General, ILARNG
The Adjutant General

Enclosures



DEPARTMENTS OF THE ARMY AND AIR FORCE
Illinois Army and Air National Guard
1301 North MacArthur Boulevard, Springfield, Illinois
62702-2317

January 15, 2015

SUBJECT: Intergovernmental and Interagency Environmental Planning Consultation
Environmental Assessment of the Construction and Operation of a Zero Range,
Relocation of the Existing M203 Range, and Road Improvements for Illinois Army
National Guard's Sparta Training Area, Randolph County, Illinois

John Froman, Chief
Peoria Tribes of Indians of Oklahoma
P.O. Box 1527
Miami, Oklahoma 74355

Dear Chief Froman:

The Illinois Army National Guard (ILARNG) proposes to construct and operate a 10-25 meter Zero Range, relocate the existing M203 Range, and implement road improvements at the Sparta Training Area (STA) in Randolph County, Illinois (see Figures 1 and 2). The purpose of Proposed Action is to provide the essential range and training facilities for in-state training at the STA for ILARNG units and to facilitate ILARNG's goal of the STA becoming a Collective Training Center (CTC) that trains up to battalion level as set forth in the National Guard Regulation (NGR) 5-3, *Management of Army National Guard Training Centers* (8 May 2007). The ground disturbance area associated with the construction of the ranges and roadway improvements within the STA will be less than 55 acres.

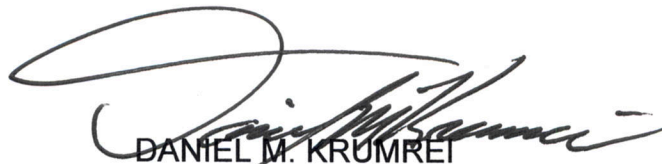
The current Illinois Integrated Cultural Resources Management Plan identified your tribe as one with aboriginal title to the Sparta, Illinois area. The 2,642-acre STA is located within the City of Sparta in southwestern Illinois approximately 45 miles southeast of St. Louis, Missouri (see Figure 1). As you may recall, a letter from the Illinois Historic Preservation Agency, Letter Log #00202104, concurs that no further archaeological investigation is necessary at the STA.

The National Environmental Policy Act (NEPA) and 32 CFR Part 651, Environmental Analysis of Army Actions, require us to conduct an Environmental Assessment (EA) for this action. Prior to implementing this action, we wish to consult with federally recognized Indian Nations that may have ancestral ties to the area per NHPA regulations, Protection of Cultural and Historic Properties (36 CFR Part 800), EO 13175 (Consultation and Coordination with Indian Tribal Governments), and DoDI 4710.03 (DoD Interactions with Federally-Recognized Tribes). With your advice and assistance,

we hope to maintain an ongoing cooperative relationship between your nation and the ILARNG.

If you desire, the NEPA/Cultural Resources Manager, Mr. Kip Troeger, can meet personally with you or your designated representative to outline areas of concern and provide you with further information. He can be reached at (217) 761-3735 or by email at kip.a.troeger.mil@mail.mil.

Sincerely,

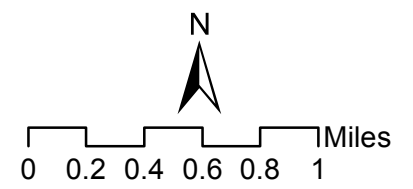
A handwritten signature in black ink, appearing to read 'Daniel M. Krumrei', written over a large, stylized loop.

DANIEL M. KRUMREI
Major General, ILARNG
The Adjutant General

Enclosures

FIGURE 1 PROPOSED ACTION Illinois Army National Guard Environmental Assessment Sparta Training Area Randolph County, Illinois

- Legend**
- Sparta Training Area
 - Sparta Community Airport
- Existing Roads/Trails/Crossings**
- Paved Roads
 - Gravel Roads
 - Dirt Trails
 - Bridge
 - Culverts
 - Low Water Stream Crossing
- Proposed Ranges**
- M203 Range Footprint
 - 10-25 m Zero Range Footprint
 - SDZ for M855A1 (with back berm)
 - SDZ for M855A1 (without back berm)
 - M203 Range SDZ
- Proposed Roads/Trails/Crossings**
- Gravel Roads
 - Dirt Trails
 - Culvert
 - Low Water Stream Crossing
 - Proposed Power Line Relocation



Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
 Projection: NAD 1983 UTM Zone 16N (meters)
 No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database.

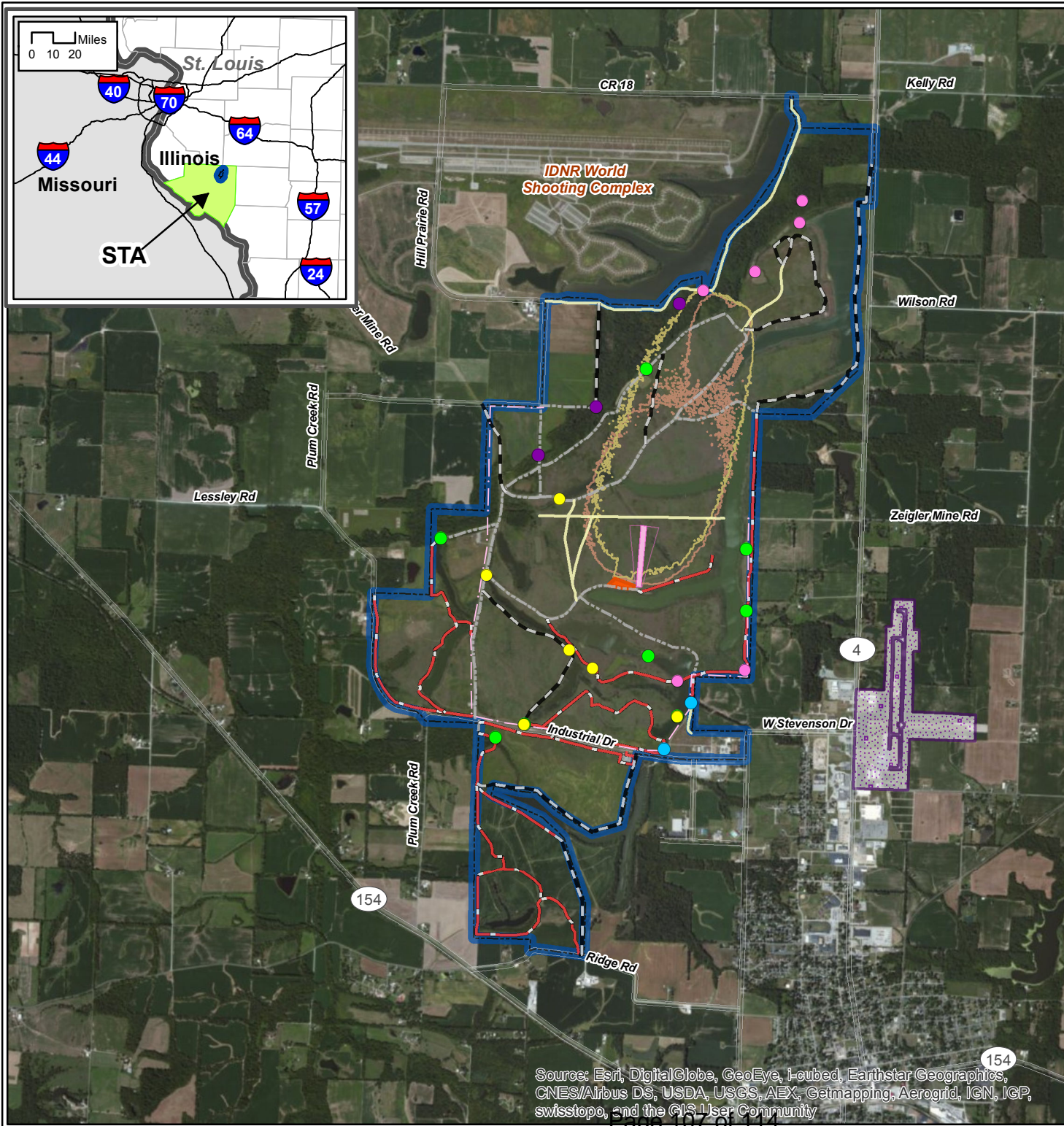








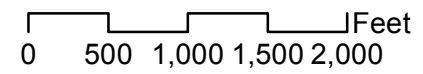


FIGURE 2 PROPOSED ZERO RANGE CONSTRUCTION AND M203 RANGE RELOCATION

Illinois Army National Guard
Environmental Assessment
Sparta Training Area
Randolph County, Illinois

Legend

-  Sparta Training Area
-  Existing Roads/Trails
-  Existing M203 Range Footprint
- Proposed Range Footprints**
-  M203 Range Footprint
-  10-25 m Zero Range Footprint
-  SDZ for M855A1 (with back berm)
-  SDZ for M855A1 (without back berm)
-  M203 Range SDZ



Source: Spatial Data courtesy of ILARNG, Illinois Geospatial Data Clearinghouse, & ArcGIS Imagery
Projection: NAD 1983 UTM Zone 16N (meters)
No warranty is made by the ILARNG/ARNG-ILE as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. This map is a "living document", in that it is intended to change as new data become available and is incorporated into the Enterprise GIS database.

Source: Esri, DigitalGlobe, GeoEye, I-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

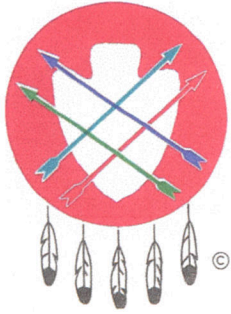
MEMORANDUM FOR RECORD

SUBJECT: Tribal Consultation for the *Environmental Assessment for Construction and Operations of a Zero Range, Relocation of the M203 Grenade Launcher Range, and Implementation of Roadway Improvements* at the Sparta Training Area, Sparta, Illinois

1. This Environmental Assessment (EA) evaluates the proposal of the Illinois Army National Guard (ILARNG) to construct and operate a 10-25 meter Zero Range, relocate the existing M203 40 millimeter (mm) Training Practice Grenade Launcher Range, and implement roadway improvements at the Sparta Training Area (STA) in Randolph County, Illinois. Implementation of the Proposed Action would provide the requisite range and infrastructure improvements at the STA for units of the ILARNG, neighboring states' National Guard members, and other active duty, reserve, or guard units.
2. The ILARNG consulted with federally recognized Native American tribes as required under DoDI 4710.02, *DoD Interactions with Federally Recognized Tribes* (2006), which implements the Annotated DoD American Indian and Alaska Native Policy (dated 27 October 1999); AR 200-1; NEPA; the National Historic Preservation Act (NHPA); and the Native American Graves and Protection and Repatriation Act (NAGPRA). Tribes were invited to participate in the EA and NHPA Section 106 processes as Sovereign Nations per EO 13175, *Consultation and Coordination with Indian Tribal Governments*, 6 November 2000.
3. Two tribes, Delaware Nation and Peoria Tribes of Indians of Oklahoma, were identified based on the ILARNG (2011-2016) Integrated Cultural Resources Management Plan (ICRMP), consultation, personal correspondence and research by the ILARNG Cultural Resources Manager. All correspondence was conducted by certified letters dated 15 January 2015. The ILARNG received replies from both tribes indicating no objections to the proposed actions and therefore does not see the need for further Section 106 consultation.
4. Direct any questions or concerns to my Cultural Resource Manager, Mr. Kip Troeger, at (217)761-3735 or kip.a.troeger.mil@mail.mil.



KENNETH E. BARRY
CW4, OD, ILARNG
Acting Chief, Environmental Branch



PEORIA TRIBE OF INDIANS OF OKLAHOMA

118 S. Eight Tribes Trail (918) 540-2535 FAX (918) 540-2538

P.O. Box 1527

MIAMI, OKLAHOMA 74355

CHIEF
John P. Froman

SECOND CHIEF
Jason Dollarhide

January 28, 2015

Daniel M. Krumrei
Major General, ILARNG
The Adjutant General
Departments of the Army and Air Force
Illinois Army and Air National Guard
1301 North MacArthur Boulevard
Springfield, IL 62702-2317

Re: Intergovernmental and Interagency Environmental Planning Consultation Environmental Assessment of the Construction and Operation of a Zero Range, Relocation of the Existing M203 Range, and Road Improvements for the Illinois Army National Guard's Sparta Training area, Randolph County, Illinois

Thank you for providing notice of the referenced project. The Peoria Tribe of Indians of Oklahoma is unaware of any documentation directly linking Indian Religious Sites to any specific site in Franklin County, Illinois. There appear to be no objects of cultural significance or artifacts linked to our tribe located within the Sparta Training Area.

The Peoria Tribe of Indians of Oklahoma is unaware of items covered under NAGPRA (Native American Graves Protection and Repatriation Act) to be associated with the proposed project area. These items include: funerary or sacred objects; objects of cultural patrimony; or ancestral human remains.

The Peoria Tribe has no objection at this time to the proposed project. If, however, at any time items are discovered which fall under the protection of NAGPRA, the Peoria Tribe requests immediate notification and consultation. In addition state, local and tribal authorities should be advised as to the findings and construction halted until consultation with all concerned parties has occurred. Only then does the Tribe wish to consult.

Thank you,

Cynthia Stacy
Special Projects Manager/NAGPRA

4 FEB '15 PM 12:11



The Delaware Nation
Cultural Preservation Office
P.O. Box 825 - 31064 State Highway 281- Anadarko, OK 73005
Phone: 405/247-2448 – Fax: 405/247-8905

NAGPRA ext. 1403
Section 106 ext. 1181
Museum ext. 1181
Library ext. 1196
Clerk ext. 1182

February 10, 2015

RE: Planning Consultation Environmental Assessment of the Construction and Operation of a Zero Range, Relocation of the Existing M203 Range, and Road Improvements for Illinois Army National Guard's Sparta Training Area, Randolph County, IL

Mr. Troeger,

The Delaware Nation Cultural Preservation Department received correspondence regarding the above referenced project. Our office is committed to protecting sites important to tribal heritage, culture and religion. Furthermore, the tribe is particularly concerned with archaeological sites that may contain human burials or remains, and associated funerary objects.

As described in your correspondence and upon research of our database(s) and files, we find that the Lenape people occupied this area either prehistorically or historically. However, the location of the project does not endanger cultural or religious sites of interest to the Delaware Nation. Please continue with the project as planned. However, should this project inadvertently uncover an archaeological site or object(s), we request that you halt all construction and ground disturbance activities and immediately contact the appropriate state agencies, as well as our office (within 24 hours).

Please Note the Delaware Nation, the Delaware Tribe of Indians, and the Stockbridge Munsee Band of Mohican Indians are the only Federally Recognized Delaware/Lenape entities in the United States and consultation must be made only with designated staff of these three tribes. We appreciate your cooperation in contacting the Delaware Nation Cultural Preservation Office to conduct proper Section 106 consultation. Should you have any questions regarding this email or future consultation feel free to contact our offices at 405-247-2448 or by email nalligood@delawarenation.com.

Sincerely,

Nekole Alligood
Director

COPY OF ADVERTISEMENT

Certificate of Publication

State of Illinois
ss.
Jackson County

The SOUTHERN ILLINOISAN is a secular newspaper of general circulation in the Counties of Jackson, Franklin, Johnson, Perry, Randolph, Saline, Union and Williamson, State of Illinois, published daily in the City of Carbondale, County of Jackson, and State of Illinois, and that said newspaper is a newspaper as defined in an Act to revise the law in relation to notices, approved February 13, 1974, as amended, that the advertisement or notice hereto annexed and made a part of this certificate has been published in said newspaper at least once each week.

for 1 time(s); that the first of such publications was in the newspaper published on Sunday the 24 day of January 2016, and such publication was continued at least once each week in said newspaper until the 24 day of January 2016, which was the last day of publication of said notice.

Dated this 24 day of January 2016.

Fee.....\$ _____

Received.....\$ _____

_____, 20____ SOUTHERN ILLINOISAN

By *Lisa Diampato* By _____

In the Matter of Notice Of Availibility Classified Display Ad _____

Solicitors or Attorneys _____

NOTICE OF AVAILABILITY

DRAFT ENVIRONMENTAL ASSESSMENT FOR THE CONSTRUCTION AND OPERATION OF A LIVE FIRE ZERO RANGE, RELOCATION OF THE TARGET PRACTICE M203 GRENADE LAUNCHER RANGE, AND IMPLEMENTATION OF ROADWAY IMPROVEMENTS AT THE SPARTA TRAINING AREA RANDOLPH COUNTY, ILLINOIS

DESCRIPTION: Interested parties are hereby notified that the Illinois Army National Guard (ILARNG) has prepared a draft Environmental Assessment (EA) regarding the proposed action described below.

STATUTORY AUTHORITY: This notice is being issued to all interested parties in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 United States Code [USC] 4321 et seq.), the Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR 651 (Environmental Analysis of Army Actions, Final Rule, 29 March 2002).

PROPOSED ACTION: Implementation of the Proposed Action would provide the requisite range and infrastructure improvements at the 2,642-acre Sparta Training Area (STA) for units of the ILARNG, neighboring states' National Guard members, and other active duty, reserve, or guard units. The Proposed Action includes three proposed projects: (1) construction and operation of a 10-25 meter (m) live fire Zero Range, (2) relocation of the existing non dud producing M203 40 millimeter (mm) Training Practice (TP) Grenade Launcher Range, and (3) implementation of roadway improvements throughout the installation. The Zero Range is used to train individual Soldiers on the skills necessary to align the sights and practice basic marksmanship techniques against stationary targets. The existing M203 Grenade Launcher Range would be relocated to accommodate the new Zero Range. Furthermore, in order to accommodate the proposed 10-25m Zero Range, the existing above ground high voltage power line that traverses through the center of STA is required to be relocated outside the proposed Zero Range surface danger zones. Total land disturbance for the two range projects would be up to approximately 30 acres.

Road improvements would include the installation of new gravel roads, dirt trails, culverts and low water crossings and maintenance/rehabilitation activities over the next 5 years. This project includes the establishment of approximately 10.2 miles of new gravel roads and 6.8 miles of new dirt trails to accommodate increased training site use at STA. Total land disturbance associated with road improvements is estimated to be approximately 45 acres. Implementation of the Proposed Action is anticipated to increase overall site usage from approximately 4,567 personnel trained per year on average to 9,000 personnel trained per year. Total traffic volumes of STA-related users may increase by 87% over current conditions in the vicinity of STA, with approximately 20% of traffic expected during the nighttime hours.

This EA evaluates the potential direct, indirect, and cumulative environmental, cultural, socioeconomic, and physical effects of two alternatives to implementing the Proposed Action: Preferred Action Alternative and No Action Alternative. The evaluation performed within this draft EA concludes there would be no significant adverse impact, either individually or cumulatively, to the local environment or quality of life as a result of implementing the Proposed Action, provided routine management measures and project-specific mitigation measures specified in this EA are implemented.

PUBLIC REVIEW: The draft EA will undergo a 30-day public comment period from January 25, 2016 through February 24, 2016 in accordance with 32 CFR Part 651.14, Environmental Analysis of Army Actions. During this period, the public is invited to review and comment on the draft EA. The draft EA can be accessed at the following locations:

- Sparta Public Library, 211 W Broadway St., Sparta, IL 62286; Phone: (618) 443-5014
- Sparta Army - Illinois Army National Guard, 1803 Hillcrest Drive, Sparta, IL 62286; Phone: (618) 443-3933
- Online navigate to <http://www.il.ngb.army.mil/MilitaryAffairs/STA/Default.aspx> and then click on the Environmental Assessment tab to download. Visit and learn more about the site while waiting for file to download.

COMMENTS: Comments on the draft EA should be submitted during the 30-day comment period via postal mail to: CW4 Kenneth Barry, Acting Chief Environmental Branch, Department of Military Affairs, 1301 North MacArthur Blvd., Springfield IL, 62702

Certificate of Publication

State of Illinois, Randolph County, ss

I, the undersigned, do hereby certify that I am an authorized representative of a corporation doing business under the firm name of GateHouse Media, Inc. publishers of the

Randolph County Herald Tribune Steeleville Ledger

that said newspaper is a public and secular newspaper of general circulation published weekly in the City of Chester, County of Randolph and State of Illinois, and that the same has been regularly published for at least one year prior to the date of the first publication of the notice hereinafter mentioned.

I further certify that a notice (or advertisement), of which the annexed is a true printed copy, has been regularly published in said paper 1 time(s), once in each week for 1 successive week(s), the first publication thereof having been made in the issue of the said paper on the 22 day of January, AD 2016, and the last publication thereof having been made in the issue of said newspaper published on 22 day of January, AD 2016.

Randolph County Herald Tribune Steeleville Ledger

Per Sherris Rahn
Sherris Rahn

Printer's Fee \$100

Received Payment 1/19/16 credit card payment
Publishers

Randolph County Herald Tribune
Steeleville Ledger
PO Box 269
Chester, IL 62233
618-826-2385

Notice of Availability

Draft Environmental Assessment for the construction and operation of a Zero Range, Relocation of the TARGET PRACTICE M203 Grenade Launcher Implementation of Roadway Improvements at the Sparta Training Area, Randolph County, Illinois

Description. Interested parties are hereby notified that the Illinois Army (ILARNG) has prepared a draft Environmental Assessment (EA) regarding the action described below.

Statutory Authority. This notice is being issued to all interested parties in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 United States Code section 4321), the Council on Environmental Quality (CEQ) Regulations Implementing the Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508) and Executive Order 11651 (Environmental Analysis of Army Actions, Final Rule, 29 March 2002).

Proposed Action. Implementation of the Proposed Action would provide the and infrastructure improvements at the 2,642-acre Sparta Training Area (STA) used to train individual Soldiers on the skills necessary to align the sights and marksmanship techniques against stationary targets. The existing M203 Grenade Launcher (GL) would be relocated to accommodate the new Zero Range. Further, to accommodate the proposed 10-25m Zero Range, the existing aboveground power line that traverses through the center of STA is required to be relocated to avoid the proposed Zero Range surface danger zones. Total land disturbance for the proposed action would be up to approximately 30 acres.

Road improvements would include the installation of new gravel roads, drainage and low water crossings and maintenance / rehabilitation activities over the STA. This project includes the establishment of approximately 10.2 miles of new dirt trails to accommodate increased training site use and the disturbance associated with road improvements is estimated to be approximately 6.8 miles.

Implementation of the Proposed Action is anticipated to increase overall personnel trained per year on average to 9,000 personnel per year. Total traffic volumes of STA-related users may increase by 87% over current levels in the vicinity of STA, with approximately 20% of traffic expected during the training season.

This EA evaluates the potential direct, indirect, and cumulative environmental, socioeconomic, and physical effects of two alternatives to implementing the Preferred Action Alternative and No Action Alternative. The evaluation in this draft EA concludes there would be no significant adverse impact, either individually or cumulatively, to the local environment or quality of life as a result of the Proposed Action, provided routine management measures and project-specific measures specified in this EA are implemented.

Public Review. The draft EA will undergo a 30-day public comment period from January 25, 2016 through February 24, 2016 in accordance with 32 CFR Part 651.1. Analysis of Army Actions. During this period, the public is invited to review the draft EA. The draft EA can be accessed at the following locations:

- Sparta Public Library, 211 W Broadway St., Sparta, IL 62286; Phone: (618) 443-3933
- Sparta Army - Illinois Army National Guard, 1803 Hillcrest Drive, Sparta, IL 62286; Phone: (618) 443-3933
- Online navigate to <http://www.il.ngb.army.mil/MilitaryAffairs/STA/Default.aspx> and click on the Environmental Assessment tab to download. Visit and leave comments on the site while waiting for file to download.

Comments. Comments on the draft EA should be submitted during the period via postal mail to: CW4 Kenneth Barry, Acting Chief Environmental Branch, Military Affairs, 1301 North MacArthur Blvd., Springfield IL, 62702

APPENDIX B

Regulatory Framework for NEPA Subject Areas

This Page Has Intentionally Been Left Blank

REGULATORY FRAMEWORK FOR NEPA SUBJECT AREAS

<u>CONTENTS</u>	<u>PAGE</u>
LAWS, REGULATIONS, AND EXECUTIVE ORDERS	1
Federal	1
State	4
DoD Regulations and Guidance	6
BACKGROUND INFORMATION ON RESOURCE AREAS	7
Air Quality	7
Conformity with State Implementation Plans	7
Noise	8
Construction Noise	9
Land Use Compatibility	10
Geology and Soils	11
Floodplains	11
Wetlands	12
Cultural Resources	12
Hazardous and Toxic Materials and Waste (HTMW)	13

This Page Has Intentionally Been Left Blank

LAWS, REGULATIONS, AND EXECUTIVE ORDERS

FEDERAL

American Indian Religious Freedom Act (42 United States Code [USC] §1196) – requires the U.S. to protect and preserve religious rights of the American Indian, Eskimo, Aleut, and Native Hawaiians, including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

Animal Damage Control Act (7 USC §426 et seq.) – provides broad authority for investigation, demonstrations and control of mammalian predators, rodents and birds.

American Antiquities Act of 1906 (16 USC §431-433) – provides for the protection of items of archeological significance, both historic and prehistoric.

Archeological and Historical Preservation Act of 1974 (16 U.S.C 469 et seq.) – provides for the preservation of historical and archeological data (including relics and specimens).

Archeological Resources Protection Act of 1979 (16 USC §470 et seq.) – prohibits the excavation or removal from Federal or Indian lands any archeological resources without a permit from the land manager.

Bald Eagle Protection Act (16 USC §668a-d) – prohibits taking or harming bald or golden eagles, their eggs, nests, or young without appropriate permit.

Clean Air Act, as amended (42 USC §7401 et seq.) – regulates air emissions from area, stationary, and mobile sources. This law authorizes the US Environmental Protection Agency (USEPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment.

Clean Water Act (CWA): Section 401 Water Quality Certification, 1986, 33 USC §1341 – requires state certification of federal permits that result in actions that discharge into navigable waters. Under Section 401, states have authority to review federal permits that may result in a discharge to wetlands or waterbodies under state jurisdiction.

CWA: Section 404, Permits for Dredged or Fill Material, 1977, 33 USC §1344 – establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g. certain farming and forestry activities).

Consultation and Coordination with Indian Tribal Governments (Executive Order [EO] 13175) – establishes requirement to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications.

Endangered Species Act of 1973, as amended (16 USC §1531 et seq.) – provides for the identification and protection of threatened and endangered plants and animals and their critical habitats. Requires federal agencies to conserve threatened and endangered (T/E) species and cooperate with State and local authorities to resolve water resources issues in concert with the conservation of T/E species.

Environmental Safeguard for Activities for Animal Damage Control on Federal Lands (EO 11870) – restricts the use of chemical toxicants for mammal and bird control.

Farmland Protection Policy Act (7 CFR 658). The FPPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that—to the extent possible—Federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

Federal Insecticide, Fungicide, and Rodenticide Act (7 USC §136) – governs the use and application of pesticides in natural resource management programs.

Federal Land Policy and Management Act (43 USC §1701) – establishes public land policy and guidelines for its administration and provides for the management, protection, development, and enhancement of the public lands.

Federal Noxious Weed Act of 1974 (7 USC §2801 et seq.) – establishes control and eradication of noxious weeds and regulates them in interstate and foreign commerce.

Federal Water Pollution Control Act as amended by the CWA of 1977 (33 USC §1251) – regulates dredging and filling of wetlands and waterbodies and establishes procedures for identifying and regulating non-point sources of pollutants, including turbidity, into waterways.

Federal Water Pollution Control Act: Section 404, as amended by the CWA of 1977 (33 USC §1251) – prohibits the discharge of dredged or filled materials into waters of the United States, including wetlands, without first obtaining a permit from US Army Corps of Engineers (USACE). Activities in wetlands that require federal permits include, but are not limited to: placement of fill material; ditching activities when the excavated material is sidecast, mechanized land clearing; land leveling; and most road construction.

Fish and Wildlife Conservation Act (16 USC §2901) – provides for the protection of non-game fish and wildlife.

Fish and Wildlife Coordination Act (16 USC §661 et seq.) – provides mechanism for wildlife conservation to receive equal consideration and be coordinated with water-resource development programs.

Floodplain Management (EO 11988) – requires agencies to assess the effects that their actions may have on floodplains and to consider alternatives to avoid adverse effects and incompatible development on floodplains.

Forest and Rangeland Renewable Resources Planning Act (16 USC §1601 et seq.) – requires and inventory of potential renewable resources and evaluation of opportunities for improving their yield on goods and services. Agencies must provide an opportunity for public involvement and consultation with other agencies in establishing policies for multiple use and sustained yield.

Greening the Government through Leadership in Environmental Management (EO 13148) – This EO (Section 207, Environmentally and Economically Beneficial Landscaping) states that “each agency shall strive to promote the sustainable management of federal facility lands through the implementation of cost-effective, environmentally sound landscaping practices, and programs to reduce adverse impacts to the natural environment.”

Hunting and Fishing on Federal Lands (10 USC §2671 et seq.) – establishes requirements for regulating hunting, fishing, and trapping on military lands.

Indian Sacred Sites (EO 13007) – provides for the protection of and access to Indian sacred sites.

Invasive Species (EO 13112) – requires federal agencies to: “prevent the introduction of invasive species”; “detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner”; “monitor invasive species populations accurately and reliably, provide for restoration of native species and habitat conditions in ecosystems that have been invaded”; “conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species”; and “promote public education on invasive species and the means to address them.”

Land and Water Conservation Act of 1965 (16 USC §4601 et seq.) – assists in preserving, developing, and assuring accessibility to outdoor recreation resources.

Legacy Resource Protection Program Act (P.L. 101-511) – established a program for the stewardship of biological, geophysical, cultural and historic resources on DoD lands.

Migratory Bird Conservation Act (16 USC §715 et seq.) – establishes a Migratory Bird Conservation Commission to approve areas recommended by the Secretary of the Interior for acquisition with Migratory Bird Conservation Funds.

Migratory Bird Treaty Act, as amended (16 USC §703-712) – prohibits the taking or harming of a migratory bird, its eggs, nests, or young without the appropriate permit.

National Aquatic Invasive Species Act of 2003 (NAISA) – federal legislation to combat invasive aquatic species introduced.

National Environmental Policy Act of 1969, as amended (42 USC §4321) – provides a national charter for protection of the environment and requires federal agencies to prepare a statement of environmental impact in advance of each major action that may significantly affect the quality of the human environment.

Native American Graves Protection and Repatriation Act (NAGPRA) – NAGPRA and its implementing regulations (43 Code of Federal Regulations [CFR] Part 10) protect Native American human remains, burials, and associated burial goods.

National Historic Preservation Act of 1966 (16 USC §470 et seq.) – provides for the preservation of historic properties throughout the US.

Non-indigenous Aquatic Nuisance Prevention and Control Act of 1990, as amended (16 USC 4701 et seq.) – established a program to prevent the introduction of and to control the spread of introduced aquatic nuisance species and the brown tree snake.

Off-Road Vehicles on Public Lands (EO 11989) – limits the use of off-road vehicles on federal lands when soil, water, or natural resources could be adversely affected.

Oil Pollution Prevention Act of 1990, Public Law 101-380 – redefines the requirements of the National Contingency Plan to include planning for, rescue of, minimization of injury to, and assessment of damages for injury to fish and wildlife resources.

Outleasing for Grazing and Agriculture on Military Lands (10 USC §2667) – provides for the outleasing of public lands.

Protection and Enhancement of Environmental Quality (EO 11514) – provides for environmental protection of federal lands and enforces requirements of NEPA.

Protection and Enhancement of the Cultural Environment (EO 11593) – supports previous laws and provides for additional protection of cultural resources.

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

Recreational Fisheries (EO 12962) – requires federal agencies, to the extent practicable and where permitted by law, "to improve the quantity, function, sustainable productivity, and distribution of US aquatic resources for increased recreational fishing opportunities".

Sale of Certain Interests in Land, Logs (10 USC §2665) – authorizes the sale of forest products and the reimbursement of the costs of managing forest resources for timber production.

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

Soil Conservation Act (16 USC §590a et seq.) – provides for soil conservation practices on federal lands.

STATE

Illinois Water Quality Standards (35 IAC 302). Water quality standards applicable to lakes and streams.

- Subpart A: General water quality provisions
- Subpart B: General use water quality standards
- Subpart C: Public and food processing water supply
- Subpart D: Secondary contact and indigenous aquatic life standards
- Subpart E: Lake Michigan Basin water quality standards
- Subpart F: Procedures for determining water quality criteria

Environmental Protection Act (415 ILCS 5/). The purpose of this act is "to establish a unified, state-wide program supplemented by private remedies, to restore, protect and enhance the quality of the environment, and to assure that adverse effects upon the environment are fully considered and borne by those who cause them."

Fish and Aquatic Life Code (515 ILCS 5/) provides protection for all fish, reptiles, amphibians, crayfish, and mussels

Flood Control Act of 1945 (615 ILCS 15/). This act recognizes the destructive nature of floods on industry, agriculture, and life in general. It gives the Department of Natural Resources authorization to examine, prepare plans, construct, and supervise construction, maintenance, and all operations concerning the control of floods.

Illinois Conservation Enhancement Act (505 ILCS 35/). This act created both the Save Illinois Topsoil Program and the Illinois Natural Resource Enhancement Program. "It is the purpose of this Act that certain marginal agricultural land be kept or taken out of crop production or pasture to protect soil and water quality and to protect and support fish and wildlife habitat."

Illinois Endangered Species Protection Act (520 ILCS 10/) requires the protection of animals and plants listed by the Endangered Species Protection Board as endangered or threatened

Illinois Exotic Weed Act (525 ILCS 10/). This law prohibits the distribution of seeds or plant parts from plants not native to North America without a permit issued by the Department of Natural Resources. Species designated in Section 3 of this Act include: Japanese honeysuckle (*Lonicera japonica*), multiflora

rose (*Rosa multiflora*), purple loosestrife (*Lythrum salicaria*), common buckthorn (*Rhamnus cathartica*), glossy buckthorn (*Rhamnus frangula*), saw-toothed buckthorn (*Rhamnus arguta*), dahurian buckthorn (*Rhamnus davurica*), Japanese buckthorn (*Rhamnus japonica*), Chinese buckthorn (*Rhamnus utilis*), and kudzu (*Pueraria lobata*) are hereby designated exotic weeds.

Illinois Forestry Development Act (525 ILCS 15/) establishes policy for acceptable forestry management practices that can include site preparation, planting, weed and pest control, fire control, and all other practices deemed by the Department of Natural Resources.

The Illinois Interagency Wetlands Policy Act of 1989. This act established the IDNR as the direct regulatory authority over wetlands in Illinois. Peripheral authority is provided in the Rivers, Lakes, and Streams Act which provides the Department with regulatory authority over activities in floodplains.

Illinois Lake Management Program Act (525 ILCS 25/) requires the state to develop lake management strategies that address all potential causes of lake degradation.

Illinois Natural Areas Preservation Act (525 ILCS 30/17). This act requires the State of Illinois to preserve natural lands and waters and the plants and animals living in these natural communities for both present and future generations.

Insect Pest and Plant Disease Act (505 ILCS 90/). This act prevents the “introduction into and the dissemination within this State of insect pests and plant diseases and to provide for their repression and control.”

Illinois Pesticide Act (415 ILCS 60). This act deals with licensing, record keeping, permits, application, and registration of pesticides in Illinois.

Illinois Pollution Prevention Act (415 ILCS 115/). “It is the purpose of this Act (i) to reduce the disposal and release of toxic or hazardous materials, (ii) to promote pollution prevention as the preferred means for achieving compliance with environmental laws and regulations, (iii) to establish State programs that provide high-level attention to pollution prevention policy initiatives, (iv) to integrate existing regulatory programs to promote pollution prevention, and (v) to stimulate pollution prevention strategies by industry.”

Illinois Open Burning. Pursuant to 415 ILCS 5/9(c), the Illinois Pollution Control Board (Board) and the Illinois Environmental Protection Agency (Illinois EPA or Agency) regulate open burning.

Illinois Prescribed Burning Act (525 ILCS 37). Allows for the prescribed burning of certain land under specified circumstances when approved by a certified prescribed burn manager. Provides that no property owner or his agent, conducting a prescribed burn pursuant to the requirements of the Act, shall be liable for damage or injury caused by fire or resulting smoke, unless gross negligence is proven or unless conducted without the approval of a prescribed burn manager. Provides that the Department of Natural Resources, in consultation with the Office of the State Fire Marshall, shall promulgate rules to implement the Act. Provides that nothing in the Act shall be construed as requiring certification as a prescribed burn manager to conduct prescribed burning on one’s own property or on the lands of another with the landowner’s permission.

Illinois Seed Law (505 ILCS 110/). This act regulates “the labeling, sale, offering, exposing or transporting for sale of agricultural, vegetable and other seeds; to prevent misrepresentation.”

Rivers, Lakes, and Streams Act (615 ILCS 5/). This act gives the Department of Natural Resources jurisdiction and supervision over all rivers and lakes within the State of Illinois.

Soil and Water Conservation Districts Act (70 ILCS 405/). “Declaration of policy. The General Assembly declares it to be in the public interest to provide (a) for the conservation of the soil, soil resources, water and water resources of this State, (b) for the control and prevention of soil erosion, (c) for the prevention of air and water pollution, and (d) for the prevention of erosion, floodwater and sediment damages, and thereby to conserve natural resources, control floods, prevent impairment of dams and reservoirs, assist in maintaining the navigability of rivers and harbors, conserve wild life and forests, protect the tax base, protect public lands, and protect and promote the health, safety and general welfare of the people of this State.”

Water Pollutant Discharge Act (415 ILCS 25/). “It is hereby declared that it is the public policy of the State of Illinois that there should be no discharges of oil or other pollutants into or upon any waters which are or may be used for the purposes of providing a water supply for any city, town or village, or for purposes of recreation or navigation and that those persons responsible for such discharges shall bear the costs of removal.”

Watershed Improvement Act (505 ILCS 140/) provides policy for the protection of Illinois watersheds and authorizes the Department of Agriculture to enter into any agreements with all federal, state, and local organizations in order to maintain and improve any approved watershed in the State.

Water Use Act of 1983 (525 ILCS 45/). The policy of this act is to better conserve and manage water.

Wildlife Code (520 ILCS 5/) governs the conservation, distribution, introduction and restoration of birds and mammals in the State of Illinois.

DOD REGULATIONS AND GUIDANCE

32 CFR 651 – Environmental Effects of Army Actions

32 CFR 190 – Appendix-Integrated Natural Resources Management

Army Regulation (AR) 200-1 – Environmental Protection and Enhancement

AR 210-9 – Use of Off-Road Vehicles on Army Lands

AR 315-19 – The Army Sustainable Range Program

AR 405-80 – Granting Use of Real Estate

AR 415-15 – Army Military Construction and Non-appropriated Funded Construction Program Development and Execution

AR 420-40 – Historic Preservation

AR 420-40 – Fire and Emergency Services

Department of the Army Pamphlet (DA Pam) 200-4 – Cultural Resources Management

DA Pam 385-63 – Range Safety

DA Pam 415-12 – Army National Guard Facilities

Department of Defense Instruction (DoDI) 4710.02 – DoD Interactions with Federally Recognized Tribes

DoDI 4715.03 – Environmental Conservation Program

DoDI 6055.6 – DoD Fire and Emergency Service Program

National Guard Regulation (NGR) 5-3 – *Management of Army National Guard Training Centers*

Training Circular (TC) 25-1 – Training Land

Unified Facilities Criteria (UFC) 4-010-01 – DoD Minimum Antiterrorism Standards for Buildings

BACKGROUND INFORMATION ON RESOURCE AREAS

AIR QUALITY

The ambient air quality in an area can be characterized in terms of whether or not it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS). The Clean Air Act (CAA) requires the USEPA to set NAAQS for pollutants considered harmful to public health and the environment. NAAQS are provided for six principal pollutants, called “criteria pollutants” (as listed under Section 108 of the CAA):

- Carbon monoxide (CO)
- Lead (Pb)
- Nitrogen oxides (NO_x)
- Ozone (O₃)
- Particulate matter (PM), divided into two size classes:
 - Aerodynamic size less than or equal to 10 micrometers (PM10)
 - Aerodynamic size less than or equal to 2.5 micrometers (PM2.5)
- Sulfur dioxide (SO₂)

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

The CAA regulates criteria pollutants as well as 188 specifically listed hazardous air pollutants (HAPs). The Title V Operating Permit Program under 40 CFR 70 requires sources that meet the definition of a “major source” of criteria pollutants or HAPs to apply for and obtain a Title V operating permit. A major source of HAPs is a source that has the potential to emit more than 10 tons per year (tpy) of any individual HAP or 25 tpy of any combination of HAPs. The definition of major source for criteria pollutants is dependent on the air quality attainment status of the region where the source is located (i.e., areas that are in attainment or non-attainment with the NAAQS). Major sources are those with the potential to emit more than 100 tpy of any criteria pollutant in an attainment area or lower levels in various classifications of non-attainment (marginal, moderate, serious, severe, and extreme).

CONFORMITY WITH STATE IMPLEMENTATION PLANS

The General Conformity Provision of the CAA of 1970 (42 USC 7401 *et. seq.*; 40 CFR Parts 50-87) Section 176(c), including the USEPA’s implementation mechanism, the General Conformity Rule (40 CFR Part 51, Subpart W), prohibits the Federal Government from conducting, supporting or approving any actions that do not conform to an USEPA-approved SIP. A SIP is a State’s self-authored blueprint for achieving and maintaining compliance with the goals of the CAA. Federal agencies prepare written Conformity Determinations for federal actions in or affecting NAAQS non-attainment areas or maintenance areas when the total direct and indirect emissions of non-attainment pollutants (or their precursors) exceed specified thresholds. Conformity with the SIP is demonstrated if project emissions fall below threshold values.

Military actions in non-attainment areas that typically require a conformity review and the air emissions of concern include the following:

- Construction or modification of an air emission source that is not covered under other specified permit review programs (evaluate pollutants emitted directly from the source)
- Construction, renovation or demolition of buildings or facilities (evaluate dust or other pollutants from land clearing activities, air emissions from stationary construction equipment, motor vehicle emissions from construction vehicles)

- Increase or relocation of government personnel who did not previously work at the base (evaluate motor vehicle emissions for new traffic on the base and emissions associated with support services to accommodate increased population [i.e., potable/wastewater treatment, heating/cooling demands])

NOISE

Federal and local governments have established noise guidelines and regulations for the purpose of protecting citizens from potential hearing damage and from various other adverse physiological, psychological, and social effects associated with noise. Chapter 14 of AR 200-1 implements all federal laws concerning environmental noise from DA activities.

Noise is any sound that interferes with communications, is intense enough to damage hearing, or is otherwise annoying. One of the metrics used by the DA to quantify the noise environment at DA installations is the Average Day-Night Sound Level (DNL). The DNL represents sound levels measured by totaling and averaging levels during a 24-hour period. Because background sound levels tend to be lower at night, people are usually more sensitive to sounds. A "penalty" added to sound levels occurring at night hours takes this into account. This 10 decibel (dB) penalty is added to sound levels occurring between the hours of 2200 and 0700, thus one nighttime sound event is equivalent to 10 daytime events of the same level.

Although DNL does provide a single measure of overall noise impact, it does not provide specific information on the number of noise events or specific individual sound levels that occur. For example, a DNL of 65 dB could result from a small number of very loud events or from a large number of quieter events. Although it does not represent the sound level heard at any one particular time, it does represent total sound exposure.

Scientific studies and social surveys have found DNL to be the best measure for assessing levels of annoyance associated with all types of environmental noise. Therefore, the scientific community and governmental agencies, such as USEPA, Federal Aviation Administration (FAA), the Federal Interagency Committee on Urban Noise (FICUN), and the Federal Interagency Committee on Noise (FICON), endorse its use.

Low-frequency sounds are heard as "rumbles," and high-frequency sounds are heard as "screeches." "Weighting" further refines sound measurement. The normal human ear can detect sounds that range in frequency from about 20 cycles per second (Hz) to 15,000 Hz. However, all sounds throughout this range are not heard equally well. Therefore, some sound meters are calibrated to emphasize frequencies in the 1,000- to 4,000-Hz range. The human ear is most sensitive to frequencies in this range, and sounds measured with these instruments are termed "A-weighted". C-weighting has higher amplitude than A-weighting but at a lower frequency; further, C-weighting measures the low-frequency component of noise, which can cause buildings and windows to shake and rattle.

The DNL is a useful descriptor for noise because: (1) it averages continuous noise, such as a busy highway, and (2) it measures total sound energy over a 24-hour period. Thus, DNL effectively identifies a "noise dose" for a day. Fixed- and rotary-winged aircraft, vehicles, and small arms noise are assessed using A-weighted dB (dBA), while large caliber weapons and demolition noise are quantified using C-weighted dB (dBC). The other metric used in defining noise zones is Peak sound level (dBP), which is the maximum instantaneous sound level of an event. The dBP is neither weighted or time integrated and is used to further define noise zones.

CONSTRUCTION NOISE

Construction activities generate noise by their very nature and are highly variable, depending on the type, number, and operating schedules of equipment. Construction projects are usually executed in stages, each having its own combination of equipment and noise characteristics and magnitudes. Construction activities of the proposed project are expected to be typical of other similar construction projects and will include mobilization, site preparation, excavation, placing foundations, utility development, heavy equipment movement, and paving roadways and parking areas. The most prevalent noise source at construction sites is the internal combustion engine. General construction equipment using engines includes but is not limited to: heavy, medium, and light equipment such as excavators; roller compactors; front-end loaders; bulldozers; graders; backhoes; dump trucks; water trucks; concrete trucks; pump trucks; utility trucks; cranes; sheet pile drivers; man lifts; forklifts; and lube, oil, and fuel trucks.

Actual peak noise levels vary at a given location based on line of sight, topography, vegetation, and atmospheric conditions. Relatively high peak noise levels in the range of 93-108 dBA would occur on the active construction site, decreasing with distance from the construction areas.

Construction workers would follow standard Federal Occupational Safety and Health Administration (OSHA) requirements to prevent hearing damage. Peak noise levels that could be expected from a range of construction equipment during proposed construction activities are presented in the table below.

PEAK NOISE LEVELS EXPECTED FROM TYPICAL CONSTRUCTION EQUIPMENT								
Source	Peak Noise Level (dBA, attenuated)							
	Distance from Source (feet)							
	0	50	100	200	400	1,000	1,700	2,500
Heavy Truck	95	84-89	78-93	72-77	66-71	58-63	54-59	50-55
Dump Truck	108	88	82	76	70	62	58	54
Concrete Mixer	108	85	79	73	67	59	55	51
Jack-hammer	108	88	82	76	70	62	58	54
Scraper	93	80-89	74-82	68-77	60-71	54-63	50-59	46-55
Bulldozer	107	87-102	81-96	75-90	69-84	61-76	57-72	53-68
Generator	96	76	70	64	58	50	46	42
Crane	104	75-88	69-82	63-76	55-70	49-62	45-48	41-54
Loader	104	73-86	67-80	61-74	55-68	47-60	43-56	39-52
Grader	108	88-91	82-85	76-79	70-73	62-65	58-61	54-57
Pile driver	105	95	89	83	77	69	65	61
Forklift	100	95	89	83	77	69	65	61
Worst-Case Combined Peak Noise Level (Bulldozer, Jackhammer, Scraper)								
Combined Peak Noise Level	Distance from Source (feet)							
	50	100	200	¼ Mile	½ Mile			
	103	97	91	74	68			
Source: Tipler 1976								

Generally speaking, peak noise levels within 50 feet of active construction areas and material transportation routes would most likely be considered “striking” or “very loud”, comparable to peak crowd noise at an indoor sports arena. At approximately 200 feet, peak noise levels would be loud, approximately comparable to a garbage disposal or vacuum cleaner at ten feet. At ¼ mile, construction noise levels would generally

be quiet enough so as to be considered insignificant, although transient noise levels may be noticeable at times.

Combined peak noise levels, or worst-case noise levels are when several loud pieces of equipment are used in a small area at the same time. Under these circumstances, peak noise levels could exceed 90 dBA within 200 feet of the construction area, depending on equipment being used.

The intermittent nature of peak construction noise levels would not create the steady noise level conditions for an extended duration that could lead to hearing damage. In addition, indoor noise levels would be expected to be 15-25 decibels lower than outdoor levels. In evaluating the potential for hearing damage (either Temporary Threshold Shift [TSS] or Noise-Induced Permanent Threshold Shift [NIPTS]), the noise level and duration of exposure are considered. For example, NIPTS would be produced by unprotected exposures of eight hours per day for several years to noise above 105 dBA. Similarly, TSS would be based on exposure to a steady noise level of 80 to 130 dBA, increasing with duration of exposure (Canter 1977).

References:

Canter, L. W. (1977) *Environmental Impact Assessment*. McGraw-Hill: New York. 331 pp
Tipler, Paul A. 1976. *Physics*. Worth Publishers. New York, New York.

LAND USE COMPATIBILITY

The primary tool used for construction of and utilization of military operations is compatible land use planning. The Operational Noise Management Plan (ONMP) is designed to protect the installation's mission from encroachment by off-post noise-sensitive land uses. The IONMP requires quantification of the existing and future noise environment; coordination with state, regional, and local planning and zoning agencies; and exploration of possible measures to reduce noise impacts. The United States Army Public Health Command (USAPHC) is planning to prepare a statewide ONMP for ILARNG facilities.

The USAPHC uses mathematical noise modeling and computer simulation to assess and predict noise arising from their activities in the form of "noise zone" maps. The noise zones provide guidance on whether noise-sensitive land uses, such as residential housing, schools, hospitals, and churches, would be "compatible" or "incompatible" land uses in those areas. They also provide general guidance on what proportion of the existing population in that zone might be "highly annoyed" by the noise generated.

Chapter 14 of AR 200-1 defines land use compatibility concerning environmental noise for DA activities. The following provides a description of each noise zone as set forth in AR 200-1.

Noise Zone I – All areas around a noise source where the DNL is less than 65 dBA or 62 dBC, and peak sound level is less than 87 dBP. Residential and other noise sensitive land uses are considered "compatible" with the noise environment in this zone. Typically, less than 15 percent of the population is expected to be "highly annoyed" by the noise in this zone.

Noise Zone II – An area where the DNL is between 65 and 75 dBA, between 62 and 70 dBC, or the peak sound level is between 87 and 104 dBP. Development within this noise zone should be normally limited to activities such as industrial, manufacturing, transportation, and resource production. Residential and other noise-sensitive land uses are considered "normally incompatible" with the noise environment in this zone and between 15 percent and 39 percent of the affected population is typically expected to be "highly annoyed."

Noise Zone III – An area around a noise source where the DNL is greater than 75 dBA or 70 dBC, or the peak sound level is greater than 104 dBP. Residential and other noise-sensitive land uses are deemed "incompatible" with the noise environment in Noise Zone III, and that noise-sensitive activities should therefore not be conducted therein. Typically, more than 39 percent of the population in this zone is expected to be "highly annoyed" by the noise.

NOISE LIMITS FOR LAND USE COMPATIBILITY					
Noise Zone	Population Highly Annoyed	Acceptability for Noise Sensitive Land Use	Small Arms and Transportation ADNL	Large Arms CDNL	Small Arms Peak
Zone I	<15%	Acceptable	<65 dBA	<62 dBC	<87 dBP
Zone II	15%-39%	Normally Unacceptable	65-75 dBA	63-70 dBC	87-104 dBP
Zone III	>39%	Unacceptable	>75 dBA	>70 dBC	>104 dBP
LUPZ	9%-15%	N/A	60-65 dBA	57-62 dBC	N/A

GEOLOGY AND SOILS

Geologic resources of an area typically consist of surface and subsurface materials and their inherent properties. Geologic factors influencing the ability to support structural development are seismic properties (for example, potential for subsurface shifting, faulting or crustal disturbance), soil stability, and topography. Soils are unconsolidated materials overlying bedrock or other parent material. Soils play a critical role in both the natural and human environment. Soil structure, elasticity, strength, shrink-swell potential and erodibility determine the ground's ability to support man-made conservation practices, structures and facilities. Soils are typically described in terms of complex type, slope, physical characteristics and relative compatibility or constraining properties with regard to types of land use and/or construction activities.

Prime farmlands are monitored by the NRCS to ensure preservation of agricultural lands that are of statewide or local importance. Soils designated as prime farmland are capable of producing high yields of various crops when managed using modern farming methods. Designation of such lands is based on soil type present.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register 1995). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

FLOODPLAINS

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

EO 11988 (Floodplain Management) requires agencies to assess the effects that their actions may have on floodplains and to consider alternatives to avoid adverse effects and incompatible development on floodplains.

WETLANDS

The USACE and the USEPA define wetlands as:

“Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

Both federal and state laws and regulations protect waters of the state, which includes wetlands. The CWA is the primary law protecting US waters. Section 404 of the CWA (33 USC 1344) prevents the discharge of dredged or fill material into waters of the U.S. without a permit from the USACE. Generally, whenever a Section 404 permit is required, a Section 401 Water Quality Certification (WQC) issued by the State of Illinois is also required.

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

CULTURAL RESOURCES

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

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

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

The ILARNG implemented a statewide Integrated Cultural Resources Management Plan (ICRMP) in 2002. An ICRMP is a five-year plan required by AR 200-1 for compliance with applicable federal laws and regulations concerning cultural resources. The ICRMP is a component of the installation master plan and functions as a decision document for cultural resources management actions and specific compliance procedures. The plan's purpose is to integrate cultural resources requirements with ongoing mission activities so that the availability of mission-essential properties and acreage is maintained and compliance with requirements is achieved.

HAZARDOUS AND TOXIC MATERIALS AND WASTE (HTMW)

Hazardous materials are defined within several laws and regulations to have certain meanings. For this document, a hazardous material is any one of the following:

- any substance designated pursuant to Section 311(b)(2) 9A0 of the CWA
- any element, compound, mixture, solution, or substance designated pursuant to Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- any hazardous waste under the Resource Conservation and Recovery Act (RCRA) as defined below
- any toxic pollutant listed under the Toxic Substances Control Act (TSCA); any hazardous air pollutant listed under Section 122 of the CAA Amendments
- any imminently hazardous chemical substance or mixture with respect to which the USEPA Administrator has taken action pursuant to Subsection 7 of TSCA

Hazardous wastes are defined as any solid, liquid, contained gaseous or semi-solid waste, or any combination of wastes, which pose either a substantial present or potential hazard to human health or the environment, as determined by ignitable, corrosive, reactive, or toxic characteristics as defined in RCRA or are specifically listed in the law as an "F", "K", "P", or "U" listed waste.

APPENDIX C

**US Army Public Health Command
Operational Noise Consultation
Sparta Training Area, Illinois
23 October 2014**



DEPARTMENT OF THE ARMY
US ARMY INSTITUTE OF PUBLIC HEALTH
5158 BLACKHAWK ROAD
ABERDEEN PROVING GROUND, MD 21010-5403

MCHB-IP-EON

NOV 05 2014

MEMORANDUM FOR Illinois Army National Guard (NGIL-CFM-EV/1LT Kip Troeger)
Camp Lincoln, 1301 N. MacArthur Blvd., Springfield, Illinois 62702

SUBJECT: Operational Noise Consultation, No. WS.0030762-a-15, Operational
Noise Assessment for Proposed Range Development, Sparta Training Area, Illinois,
23 October 2014

1. We are enclosing a copy of the consultation.
2. Please contact us if we can be of any further assistance.
3. The point of contact is Ms. Kristy Broska, Environmental Protection Specialist or Ms. Catherine Stewart, Program Manager, Operational Noise, Army Institute of Public Health, at DSN 584-3829, Commercial (410) 436-3829, or email: kristy.a.broska.civ@mail.mil or catherine.m.stewart20.civ@mail.mil.

FOR THE DIRECTOR:

Encl

Gayle E. McCowin
GAYLE E. MCCOWIN
LTC, MS
Portfolio Director, Environmental Health
Engineering

CF:
NGB-ILE-T
PHCR-North (MCHB-RN-EH)



U.S. ARMY PUBLIC HEALTH COMMAND

5158 Blackhawk Road, Aberdeen Proving Ground, Maryland 21010-5403

OPERATIONAL NOISE CONSULTATION
No. WS.0030762-a-15
OPERATIONAL NOISE ASSESSMENT
PROPOSED RANGE DEVELOPMENT
SPARTA TRAINING AREA, ILLINOIS
23 OCTOBER 2014

PHC FORM 433-E (MCHB-CS-IP), NOV 12

Distribution authorized to U.S. Government agencies only; protection of privileged information evaluating another command; October 2014. Other requests for this document shall be referred to Illinois Army National Guard (NGIL-CFM-EV/1LT Kip Troeger) Camp Lincoln, 1301 N. MacArthur Blvd., Springfield, Illinois 62702

Preventive Medicine Surveys: 40-5f1



DEPARTMENT OF THE ARMY
US ARMY INSTITUTE OF PUBLIC HEALTH
5158 BLACKHAWK ROAD
ABERDEEN PROVING GROUND, MD 21010-5403

MCHB-IP-EON

EXECUTIVE SUMMARY
OPERATIONAL NOISE CONSULTATION
No. WS.0030762-a-15
OPERATIONAL NOISE ASSESSMENT
PROPOSED RANGE DEVELOPMENT
SPARTA TRAINING AREA, ILLINOIS
23 OCTOBER 2014

1. PURPOSE. To provide the Illinois Army National Guard (ILARNG) a noise assessment for proposed range development at Sparta Training Area (STA).

2. GENERAL.

a. Sparta Training Area is within the incorporated limits of the City of Sparta. The City center is located approximately 2 miles southeast of the STA boundary. The remaining area surrounding STA is primarily agricultural land with scattered residential properties. Along the northwest corner lies the World Shooting and Recreational Complex; an Illinois Department of Natural Resources facility. The facility consists of rifle, pistol, skeet, and clay ranges as well as 1,000 recreational vehicle campsites.

b. Currently, the primary noise-generating activity at STA is firing at the M203 40mm Target Practice (TP) Grenade Launcher Range. Simulators and non-live fire of rifles and machine guns are authorized within the Training Areas, although these activities rarely occur.

c. The proposed range actions are reorientation of the existing M203 40mm TP range and construction of a 10-25 meter Zero Range.

3. FINDINGS.

a. The proposed Zero Range generates a Zone II (87-104 dB Peak) that extends beyond the northwestern and eastern boundaries. To the east, the off-post Zone II area is primarily agricultural with two residential properties. To the northwest, the off-post Zone II area encompasses agricultural land. Zone III (> 104 dB Peak) remains within the STA boundary.

- b. The risk of receiving noise complaints from the 40mm TP grenade firing is low.

4. RECOMMENDATIONS.

- a. Include the consultation information in proposed action environmental analysis documentation.

- b. Although there are civilian firing ranges in the vicinity, the proposed Zero Range would be the first live-fire facility at STA. Furthermore, due to the quiet ambient environment, small caliber weapon firing may be audible to nearby residents. For these reasons, community notification before training commences may be advisable.

- c. Insert a copy of this consultation in the ILARNG Statewide Operational Noise Management Plan as an Appendix.

TABLE OF CONTENTS

Paragraph	Page
1. REFERENCES.....	1
2. PURPOSE.....	1
3. GENERAL.....	1
4. LAND USE GUIDELINES.....	1
5. NOISE CONTOURING PROCEDURES	3
6. SMALL CALIBER NOISE ASSESSMENT.....	4
7. GRENADE LAUNCHER NOISE ASSESSMENT	7
8. FINDINGS	8
9. RECOMMENDATIONS	8
Appendices	
A – References	A-1
B – Glossary of Terms, Acronyms and Abbreviations	B-1

List of Figures

Figure 1 – STA Vicinity and Range Footprints2
Figure 2 – STA Projected Conditions Small Caliber Noise Zones.....5

List of Tables

Table 1 – Noise Limits.....3
Table 2 – Proposed Small Caliber Range Activity4
Table 3 – Predicted Peak for 5.56mm Blank Round.....6
Table 4 – Predicted Peak for 7.62mm Blank Round.....6
Table 5 – Predicted Peak for .50 caliber Plastic Round7
Table 6 – Complaint Risk to the Side of the 40mm Grenade Launcher, Inert* Round....7
Table 7 – Complaint Risk to the Rear of the 40mm Grenade Launcher, Inert* Round....8

OPERATIONAL NOISE CONSULTATION
NO. WS.0030762-a-15
OPERATIONAL NOISE ASSESSMENT
PROPOSED RANGE DEVELOPMENT
SPARTA TRAINING AREA, ILLINOIS
23 OCTOBER 2014

1. REFERENCES. Appendix A contains references used in this consultation. A glossary of terms and abbreviations used are in Appendix B.

2. PURPOSE. To provide the Illinois Army National Guard (ILARNG) a noise assessment for proposed range development at Sparta Training Area (STA).

3. GENERAL.

a. Sparta Training Area is within the incorporated limits of the City of Sparta. The City center is located approximately 2 miles southeast of the STA boundary. The remaining area surrounding STA is primarily agricultural land with scattered residential properties. Along the northwest corner lies the World Shooting and Recreational Complex; an Illinois Department of Natural Resources facility. The facility consists of rifle, pistol, skeet, and clay ranges as well as 1,000 recreational vehicle campsites.

b. Currently, the primary noise-generating activity at STA is firing the M203 40mm Target Practice (TP) Grenade Launcher Range. Simulators and non-live fire of rifles and machine guns are authorized with the Training Areas (TA), although these activities rarely occur.

c. The proposed actions are reorientation of the existing M203 40mm TP range and construction of a 10-25 meter Zero Range.

d. Figure 1 depicts the STA vicinity and the existing and proposed range footprints.

4. LAND USE GUIDELINES.

a. Through Army Regulation (AR) 200-1, noise exposure on communities is translated into Noise Zones (see Table 1) (U.S. Army 2007). Regulation guidelines state that for land use planning purposes, noise-sensitive land uses range from acceptable to not compatible within the Noise Zones. Examples of noise-sensitive land uses are housing, schools, and medical facilities. The intent is to offer land use recommendations, which if adopted both on and off the installation, would facilitate future development that is unaffected by military noise.



FIGURE 1. STA VICINITY AND RANGE FOOTPRINTS

TABLE 1. NOISE LIMITS (AR-2001)

Noise Zone	Small Caliber Activity dB Peak
I	< 87
II	87 – 104
III	> 104

Notes:

dB = decibel

b. Per the guidelines:

- Zone III - Noise-sensitive land uses are not recommended (incompatible).
- Zone II - Although local conditions such as availability of developable land or cost may require noise-sensitive land uses in Zone II, this type of land use is generally not compatible and is strongly discouraged on the installation and in surrounding communities. All viable alternatives should be considered to limit development in Zone II to non-sensitive activities such as industry, manufacturing, transportation and agriculture.
- Zone I - Noise-sensitive land uses are generally acceptable within the Zone I. However, although an area may only receive Zone I levels, military operations may be loud enough to be heard. Zone I is not one of the contours shown on the map; rather it is the entire area outside of the Zone II contour.

5. NOISE CONTOURING PROCEDURES.

a. Small Caliber Activity.

(1) The Small Arms Range Noise Assessment Model (SARNAM) is the standard U.S. Army small caliber weapons (.50 caliber and below) noise simulation program (U.S. Army 2003). The SARNAM program requires operational data concerning types of weapons, quantity of ammunition, and range layout. The SARNAM calculation algorithms assume weather conditions or wind direction that favors sound propagation.

(2) The small caliber activity is addressed via peak noise levels for individual rounds (U.S. Army 2007). Peak noise levels depict areas where small caliber activity could be heard. Since peak levels are not a cumulative or average metric, the contour size will not change if the number of rounds fired increases or decreases.

b. 40mm Grenade Launcher. A 40mm TP round does not generate noise on impact. Therefore, the complaint risk is only based on the peak level of the launch noise.

6. SMALL CALIBER NOISE ASSESSMENT.

a. General. Small arms noise is addressed based on the type of range facility:

- Live-fire Ranges (a delineated range with fixed firing points and/or targets).
- Non-fixed Firing (an area or range with non-fixed firing points and/or targets). Activity may include live-fire and/or non-live fire.

b. Live-fire Ranges. Figure 2 depicts the Noise Zones for the proposed activity (Table 2). Zone III (> 104 dB Peak) does not extend beyond the STA boundary. Zone II (87-104 dB Peak) extends up to 300 meters beyond the northwestern boundary encompassing agricultural land. Along the eastern boundary, Zone II extends less than 620 meters towards State Route 4. To the east, the area within Zone II is primarily agricultural with two residential structures.

TABLE 2. PROPOSED SMALL CALIBER RANGE ACTIVITY

RANGE	AMMUNITION
Zero Range	9mm ball
	.45 caliber
	5.56mm ball
	7.62mm SRTA
	.50 caliber SRTA
	12 gauge

Note: SRTA = short range training ammunition

c. Non-fixed Firing.

(1) Within the TAs, 5.56mm blank and .50 caliber plastic firing is authorized. This type of activity does not have set firing point or target point locations; firing can occur at multiple locations and in multiple directions of fire.

(2) To generate noise contours using SARNAM, specific firing point and target point locations must be entered into the program. Therefore, noise contours for “non-fixed” firing points cannot be modeled using SARNAM. However, by looking at the predicted peak levels, we can see where noise approaching Zone II levels (87 dB Peak) would extend.

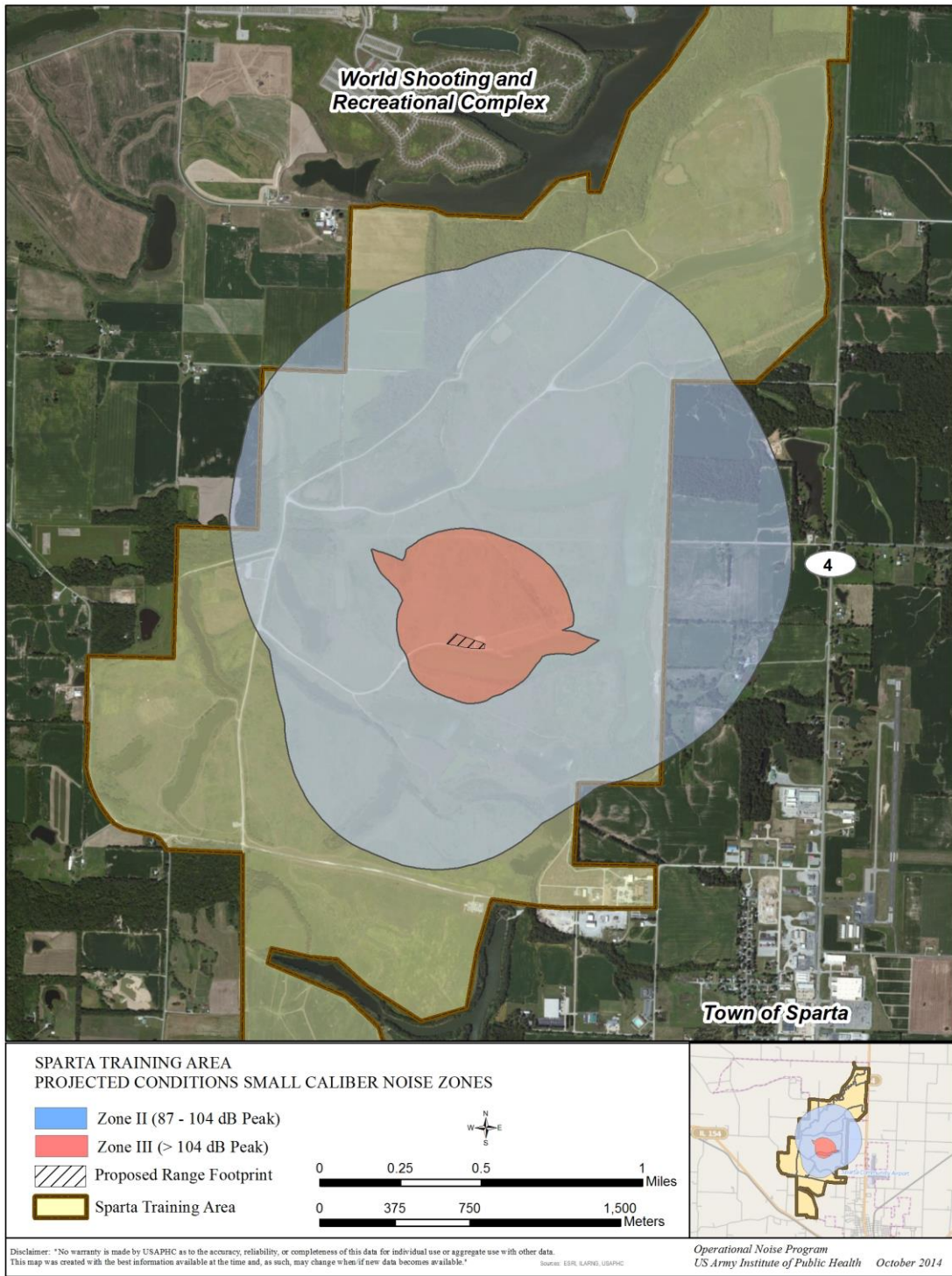


FIGURE 2. STA PROJECTED CONDITIONS SMALL CALIBER NOISE ZONES

(3) For each specific round, peak levels depend on two variables - weather condition and azimuth angle. Tables 3 through 5 indicate the predicted peak levels. In each column, the upper limit levels would occur under weather conditions that enhance sound propagation (unfavorable), such as the wind blowing toward the receiver. The lower limit levels occur under favorable weather conditions, such as the wind blowing away from the receiver.

(4) When combining these two variables, the highest peak levels typically occur when rounds are fired in the direction of the receiver (0 degree azimuth) and under unfavorable weather conditions. For example, Table 3 indicates that under unfavorable weather conditions, the blue highlighted cells indicate Zone II levels (87 dB Peak) extend approximately 200 meters for 5.56 blank rounds. A 200-meter buffer around the firing location of the 5.56mm blank would indicate areas exposed to Zone II levels under these adverse conditions. Tables 4 and 5 indicate the Zone II levels would extend approximately 800 meters for the 7.62mm blank round and .50 caliber plastic round under adverse conditions.

TABLE 3. PREDICTED PEAK FOR 5.56mm BLANK ROUND

Distance, meters	Predicted Level, dB Peak Azimuth		
	0°	90°	180°
100	87-97	86-96	87-97
200	80-90	79-89	80-90
300	72-82	71-81	72-82

Note: the 0° is directly in front of the weapon and the 180° azimuth is directly behind the weapon. Blue cells indicate where levels approach Zone II criteria.

TABLE 4. PREDICTED PEAK FOR 7.62mm BLANK ROUND

Distance, meters	Predicted Level, dBP Azimuth		
	0°	90°	180°
100	109-119	106-116	101-111
200	103-113	100-110	94-104
400	92-102	89-99	85-95
800	84-94	81-91	77-87
900	82-92	79-89	76-86

Note: the 0° is directly in front of the weapon and the 180° azimuth is directly behind the weapon. Blue cells indicate where levels approach Zone II criteria.

TABLE 5. PREDICTED PEAK FOR .50 caliber PLASTIC ROUND

Distance, meters	Predicted Level, dBP Azimuth		
	0°	90°	180°
100	115-125	110-120	101-111
200	108-118	103-113	94-104
400	97-107	91-101	83-93
800	88-98	83-93	75-85
1600	80-90	74-84	67-77

Note: the 0° is directly in front of the weapon and the 180° azimuth is directly behind the weapon. Blue cells indicate where levels approach Zone II criteria.

7. GRENADE LAUNCHER NOISE ASSESSMENT.

a. Tables 6 and 7 contain the complaint risk criterion for the launch noise of the 40mm grenade launchers. The distances and levels listed represent a conservative approach and were calculated based upon hearing conservation criteria (U.S. Army 1999) and a known measurement (U.S. Army 1984). This data represents the best available scientific quantification for assessing the complaint risk for the launch noise of the 40mm grenade launcher.

TABLE 6. COMPLAINT RISK TO THE SIDE OF THE 40MM GRENADE LAUNCHER, INERT^{*} ROUND

Risk of Complaints	Distance from Grenade Launcher	Noise Level
Low	> 300 meters [^]	< 115 dB Peak
Moderate	65 - 300 meters [^]	115 dB Peak
High	< 65 meters [^]	>130 dB Peak
Risk of hearing damage for unprotected ears	< 19 meters ⁺	>140 dB Peak

^{*} -- Inert is defined as any round that does not make noise upon impact, such as smoke, illum, TP

[^] – Calculated value

⁺ – Known value, hearing conservation criteria.

TABLE 7. COMPLAINT RISK TO THE REAR OF THE 40MM GRENADE LAUNCHER, INERT* ROUND

Risk of Complaints	Distance from Grenade Launcher	Noise Level
Low	> 110 meters [^]	< 115 dB Peak
Moderate	25 - 110 meters [^]	115 dB Peak
High	< 25 meters [^]	>130 dB Peak
Risk of hearing damage for unprotected ears	< 7 meters ⁺	>140 dB Peak

* -- Inert is defined as any round that does not make noise upon impact, such as smoke, illum, TP

[^] – Calculated value

⁺ – Known value, hearing conservation criteria.

b. The existing M203 range is 570 meters from the boundary and the proposed reorientation increases the distance from the boundary to 750 meters. Due to the range location, the risk of complaints from the 40mm grenade launcher is low.

8. FINDINGS.

a. The proposed Zero Range generates a Zone II that extends beyond the northwestern and eastern boundaries containing primarily agricultural with the exception of two residential properties. Zone III remains within the STA boundary.

b. The risk of receiving noise complaints from the 40mm TP grenade firing is low.

9. RECOMMENDATIONS.

a. Include the consultation information in proposed action environmental analysis documentation.

b. Although there are civilian firing ranges in the vicinity, the proposed Zero Range would be the first live-fire facility at STA. Furthermore, due to the quiet ambient environment, small caliber weapon firing may be audible to nearby residents. For these reasons, community notification before training commences may be advisable.

c. Insert a copy of this consultation in the ILARNG Statewide Operational Noise Management Plan as an Appendix.



KRISTY BROSKA
Environmental Protection Specialist
Operational Noise

APPROVED:



CATHERINE STEWART
Program Manager
Operational Noise

APPENDIX A

REFERENCES

1. U.S. Army, 1984, Army Environmental Hygiene Agency, Environmental Noise Assessment No. 52-34-0442-84, Noise Measurement Study, Camp Bullis, Texas, 27 February – 2 March 1984.
2. U.S. Army, 1999, Center for Health Promotion and Preventive Medicine, Health Hazard Assessment Report on the 40mm XM1001 Canister Cartridge for the MK-19 Mod 3 Grenade Machine Gun, No. 69-37-2735-00, November 1999.
3. U.S. Army, 2003, Army Construction Engineering Research Laboratories, SARNAM Computer Model, Version 2.6.2003-06-06.
4. U.S. Army, 2007, Army Regulation 200-1, Environmental Protection and Enhancement, Chapter 14 Operational Noise.

APPENDIX B

GLOSSARY OF TERMS, ACRONYMS & ABBREVIATIONS

B-1. GLOSSARY OF TERMS.

Decibels (dB) – a logarithmic sound pressure unit of measure.

Noise – any sound without value.

B-2. GLOSSARY OF ACRONYMS AND ABBREVIATIONS.

AR	Army Regulation
dB	Decibels
ILARNG	Illinois Army National Guard
SARNAM	Small Arms Range Noise Assessment Model
SRTA	Short Range Training Ammunition
STA	Sparta Training Area
TA	Training Areas
TP	Target Practice

APPENDIX D

**Small Arms Range Safety Area (SARSA)
Request and Approval**

This Page Has Intentionally Been Left Blank



DEPARTMENT OF THE ARMY
DAR, FAA CENTRAL SERVICE AREA
10101 HILLWOOD PKWY, ROOM 2N-380
FORT WORTH, TX 76177

ATAS-AS-CS

24 Nov 2015

MEMORANDUM FOR ILLINOIS ARMY NATIONAL GUARD 1301 NORTH MACARTHUR
BOULEVARD SPRINGFIELD, ILLINOS 62702-2399.

SUBJECT: Sparta Training Area, Illinois Small Arms Range Safety Area (SARSA)

1. IAW DA PAM 385-63, the Central Service Area Department of the Army Representative Office has conducted a review of the Small Arms Range Safety Area for Sparta Training Area, Illinois.
2. The intent is to establish a SARSA for Sparta Training Area, Illinois. The SARSA will be used for direct fire up to 9mm caliber to include the 5.56mm Enhanced Performance Round (M855A1). All coordination such as a Local NOTAM will be done between the Using agency, Sparta Training Area Range Control and the Controlling agency, Indianapolis ARTCC.
3. The Central Service Area DAR is in concurrence with all the SARSA details in this request.
4. Point of contact for further information is the undersigned or MSG Alfredo Garza at DSN 477-2924/2921 or COMM (817) 222-5924/5920. Emails: alfredo.garza@faa.gov or Robert.wegner@faa.gov.

WEGNER.ROBERT.G
LENN.1141221830

Digitally signed by
WEGNER.ROBERT.GLENN.1141221830
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,
ou=USA, cn=WEGNER.ROBERT.GLENN.1141221830
Date: 2015.11.24 12:19:31 -06'00'

Robert Wegner
LTC, AV
DAR, FAA Central Service Area

Encl:
SARSA Request Memo
SARSA Map



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
SPARTA TRAINING AREA
715 INDUSTRIAL AVENUE
SPARTA, ILLINOIS 62286

NGIL-OPS-MTS

28 October 2015

MEMORANDUM THRU MACOM AT&A Officer

FOR Department of the Army Representative, FAA Central Service Area, ATTN: ASW-920
Room161, 2601 Meacham Blvd., Fort Worth, Texas 76193-0902

SUBJECT: Application for a Small Arms Range Safety Area (SARSA)

1. Purpose. The purpose of this memorandum is to request the designation of a Small Arms Range Safety Area (SARSA) over the small arms maneuver training area at Sparta Training Area (STA).

2. Location. The geographic coordinates (datum WGS-84) of the SARSA lateral boundaries are as follows:

a. Beginning at:

	Latitude	Longitude
SE Corner	N 38d 9'5.008"	W 89d 43'16.06"
SW Corner	N 38d 9'38.509"	W 89d 44'10.132"
NW Corner	N 38d 11'19.062"	W 89d 42'46.47"
NE Corner	N 38d 10'59.919"	W 89d 41'54.547"
Approx Center	N 38d 10'14.4457"	W 89d 43'2.9593"

b. Vertical Hazard Altitude: Surface to 4,000ft AGL

c. Ceiling Minimum: Surface to 4,500ft AGL

3. Use. By NOTAM, days and times of use.

4. Ranges within the SARSA will be used for direct fire weapons up to 9mm caliber to include the 5.56mm Enhanced Performance Round (M855A1).

5. Controlling agency: ARTCC ZAU

6. Using agency: Illinois Army National Guard, Sparta Training Area

NGIL-OPS-MTS


SUBJECT: Application for a Small Arms Range Safety Area (SARSA)

7. Safety Precautions.

- a. The SARSA will be established and managed IAW DA Pam 385-63.
- b. A red warning streamer will be posted during daylight hours and a red warning light during night fire.
- c. STA Range Control will provide safety briefings prior to range occupation that includes the proximity of Hunter Field-Sparta Community Airport and OIC responsibilities regarding air traffic. OIC's are responsible to ensure skies are monitored for low flying aircraft in the vicinity of the range area and immediately initiate a "check fire" in the event that aircraft approach the SARSA.
- d. Firing will not be conducted when the ceiling is less than 1,000ft above the vertical hazard of the caliber being utilized.
- e. No projectile shall enter a cloud formation.
- f. When requesting a NOTAM, the following information will be provided:
 - 1) Location and description
 - 2) Date and times of use
 - 3) Activities to be conducted

8. POC for this request is CW3 Tara L Carmichael and may be reached at (618) 443-9618 or email at tara.l.carmichael.mil@mail.mil.

Encl
SARSA Map


TARA L. CARMICHAEL
CW3, ILARNG
STA Site Manager

Sparta SARSA

4230

4230

29

29

28

28

27

27

26

26

4225

4225

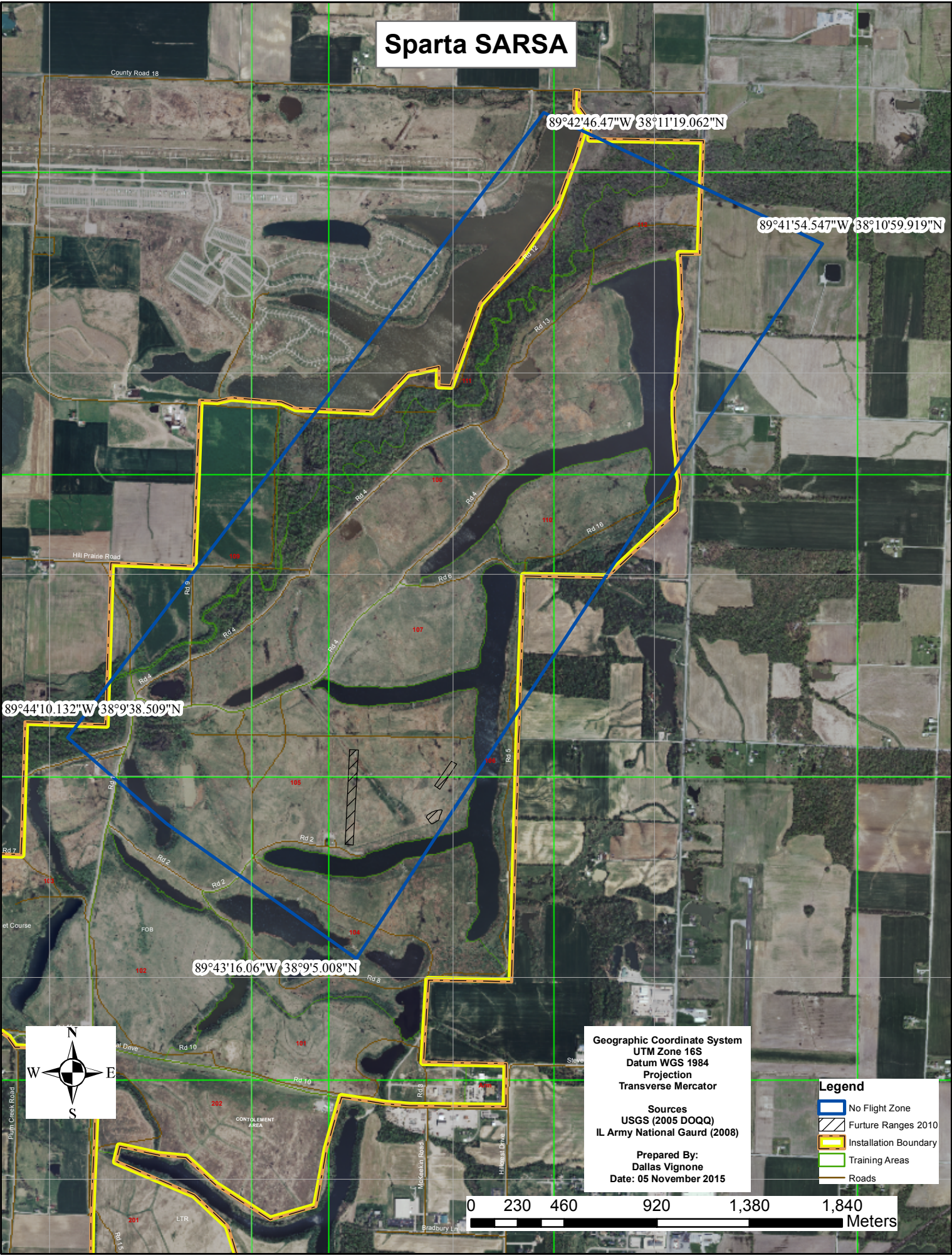
60

61

62

63

64



89°42'46.47"W 38°11'19.062"N

89°41'54.547"W 38°10'59.919"N

89°44'10.132"W 38°9'38.509"N

89°43'16.06"W 38°9'5.008"N

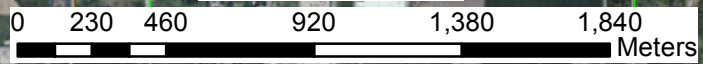
Geographic Coordinate System
 UTM Zone 16S
 Datum WGS 1984
 Projection
 Transverse Mercator

Sources
 USGS (2005 DOQQ)
 IL Army National Guard (2008)

Prepared By:
 Dallas Vignone
 Date: 05 November 2015

Legend

- No Flight Zone
- Future Ranges 2010
- Installation Boundary
- Training Areas
- Roads



APPENDIX E

**Illinois Joint Permit Application
and Floodplain Waiver**

This Page Has Intentionally Been Left Blank

CONTENTS

Illinois Joint Permit Application Instructions	Page 1
Illinois Joint Permit Application Form	Page 10
Department of the Army (DA) Floodplain Waiver Approval (17 Nov 2015)	Page 15
ARNG-ILE Floodplain Waiver Request to the DA (3 Nov 2015).....	Page 18
Supporting Documentation for Floodplain Waiver Request provided by ILARNG.....	Page 20

This Page Has Intentionally Been Left Blank

PERMIT REQUIREMENTS FOR THE STATE OF ILLINOIS

JOINT APPLICATION PROCESS

Construction projects in Illinois waterways, floodplains and wetlands often require both State and Federal authorization. This application packet is designed to simplify the approval process for the applicant seeking project authorizations from the U.S. Army Corps of Engineers (USCOE), The Illinois Department of Natural Resources/Office of Water Resources (IDNR/OWR) and the Illinois Environmental Protection Agency (IEPA). Please refer to the map on page 11 for agency addresses and telephone numbers. Each of these agency's authorities and requirements are briefly explained in the following paragraphs. Application forms are available from any of the listed agencies.

Anyone proposing to construct, operate or maintain any dam, dock, pier, wharf, sluice, levee, dike, building, utility and road crossings, piling, wall, fence or other structure in; or dredge, fill or otherwise alter the bed or banks of any stream, lake, wetland, floodplain or floodway subject to State or Federal regulatory jurisdiction should apply for agency approvals. The appropriate copy of the **joint application form, drawings, and copy of any additional support information** should be sent to each of the regulatory agencies. Approvals may be required by any or all of the agencies. Applications filed simultaneously with the USCOE, IDNR/OWR, and IEPA will be processed concurrently in an independent manner, and should result in expedited receipt of all agency determinations. If a permit is not required by one or more of the agencies, they will inform the applicant and the other agencies.

Coordination with the regulatory and other review agencies is recommended as early as possible during the project planning stage. This allows revisions or other measures necessary to meet agency requirements to be made before project plans are finalized.

AGENCY AUTHORITIES AND REQUIREMENTS

1. The basis for the **U.S. Army Corps of Engineers** regulatory function over public waterways was formed in 1899 when Congress passed the Rivers and Harbors Act of 3 March 1899. Until 1968, the Rivers and Harbors Act of 1899 was administered to protect only navigation and navigable capacity of this nation's waters. In 1968, in response to a growing national concern for environmental values, the policy for review of permit applications with respect to Sections 9 and 10 of the Rivers and Harbors Act was revised to include additional factors (fish and wildlife conservation, pollution, aesthetics, ecology, and general Welfare) besides navigation. This new type of review was identified as a "public interest review."

The Corps of Engineers regulatory function was expanded when Congress passed the Federal Water Pollution Control Act Amendments of 1972 and the Clean Water Act Amendments in 1977. The purpose of the Clean Water Pollution Act was to restore and maintain the chemical, physical, and biological integrity of this nation's waters. The "waters of the United States" regulated by the Corps of Engineers under Section 404 of the Clean Water Act includes wetlands.

The Corps of Engineers is responsible for determining the jurisdictional limits of wetlands and other Waters of the United States. Applicants may, however, elect to have a qualified representative conduct the appropriate preliminary wetland delineation for submittal with the permit application. All such determinations are subject to verification and confirmation by the Corps of Engineers. Although applicants are not required to provide a wetland delineation, these can assist in reducing delays associated with normal permit processing. Contact the appropriate Corps District Office for additional information.

**WITH YOUR HELP ILLINOIS WATERS CAN BE PROTECTED FOR
FUTURE GENERATIONS**

2. **The Illinois Department of Natural Resources/Office of Water Resources** regulatory authority is the Rivers, Lakes and Streams Act (615 ILCS, 1994). Under this authority, permits are required for dams, for any construction within a public body of water; and for construction within floodways. Generally, floodway projects also require local authorization. In addition, floodway map revision approvals may be required by IDNR/OWR and by the Federal Emergency Management Agency (FEMA) for major projects. Information and specific project requirements may be obtained as follows:

For Lake Michigan – All projects in or along Lake Michigan are subject to the Regulation of Public Waters rules (17 Illinois Administrative Code, Part 3704). Joint permits are required for any work in Lake Michigan from IDNR/OWR and IEPA. Contact the Illinois Department of Natural Resources/Office of Water Resources, Lake Michigan Management Section, 160 N. LaSalle Street, Suite S-700, Chicago, Illinois 60603, (312) 793-3123, or on the web www.dnr.state.il.us/owr/resman/permitprogs.htm.

For Cook, Lake, McHenry, DuPage, Kane and Will Counties – All projects within designated floodways are subject to the Floodway Construction in Northeastern Illinois Rules (17 Illinois Administrative Code Part 3708). Dams are subject to the Rules for Construction and Maintenance of Dams (17 Illinois Administrative Code, Part 3702). All projects in public waters are subject to the Regulation of Public Waters Rules (17 Illinois Administrative Code, Part 3704). All other Floodway construction projects are subject to the Construction in Floodways of Rivers, Lakes and Streams rules (17 Illinois Administrative Code, Part 3700). Contact the Illinois Department of Natural Resources/Office of Water Resources, Northeastern Illinois Regulatory Programs Section, 2050 West Stearns Road, Bartlett, Illinois 60103, (847) 648-3100 ext 2025 or on the web www.dnr.state.il.us/owr/resman/permitprogs.htm.

For the remainder of the State – Dams are subject to the Rules for Construction and Maintenance of Dams (17 Illinois Administrative Code, Part 3702). All projects in public waters are subject to the Regulation of Public Waters rules (17 Illinois Administrative Code, Part 3704). All other Floodway construction projects are subject to the Construction in Floodways of Rivers, Lakes and Streams rules (17 Illinois Administrative Code, Part 3700). Contact the Illinois Department of Natural Resources/Office of Water Resources, Downstate Regulatory Programs Section, One Natural Resources Way, Springfield, Illinois 62702-1271, (217) 782-3863, or on the web www.dnr.state.il.us/owr/resman/permitprogs.htm.

The **Illinois Department of Natural Resources** is also responsible under Illinois Statutes for conserving and preserving the State's natural resources.

Under the provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661-664) the Department is given permit review responsibilities relative to Corps of Engineers permit applications.

Under the Illinois Endangered Species Protection Act and the Illinois Natural Areas Preservation Act, the Department is responsible for reviewing actions that are authorized, funded or performed by units of state and local government, if the action will change environmental conditions. Questions pertaining to natural resource reviews should be addressed to the Illinois Department of Natural Resources, Division of Ecosystems & Environment, Impact Assessment, One Natural Resources Way, Springfield, Illinois 62702-1271, (217) 785-5500. To submit a request for consultation on-line, go to <http://www.dnrecocat.state.il.us/ecopublic/>.

3. **The Illinois Environmental Protection Agency** provides water quality certification pursuant to Section 401 of the Clean Water Act. This certification is mandatory for all projects requiring a Section 404 Permit from the Corps of Engineers. In addition to determining that the proposed work will not violate the applicable water quality standards, the IEPA also makes a determination of additional permit and regulatory requirements pursuant to the Illinois Pollution Control Board rules and regulations. Additional permits may be required for activities such as the construction of sanitary sewers, water mains, sewage and water treatment plants, landfill and mining activities, special waste hauling and disposal (of dredged material). Separate applications are necessary for these other permits.

Individual 401 Water Quality Certification

If it is determined that your project is not covered by an Illinois EPA certified Section 404 nationwide or regional permit issued by the Corps of Engineers and an individual 401 water quality certification is required for your project, you must submit the information specified below and in blocks 9 through 12 in the instructions for dredge and/or fill material to be discharged. In accordance with 35 Ill. Adm. Code Part 302.105, applicants for an individual 401 water quality certification shall provide the Illinois EPA with an anti-degradation report discussing the items listed below, including supporting documentation. In regards to the anti-degradation requirements, it is recommended that you contact the Illinois EPA Water Quality Standards Unit at 217-558-2012 or on the web at epa.401.docs@illinois.gov prior to submittal of your application.

- An assessment of the alternatives to the proposed project that will result in a reduced pollutant load to the water body, no load increase or minimal environmental degradation. Alternatives that result in no discharge to the water body and changes in the location of the activity must be addressed in the submittal. Further, the assessment of alternatives must consider all technically and economically reasonable measures to avoid or minimize the pollutant loading;
- If a pollutant load increase or environmental degradation cannot be avoided (e.g. wetlands are filled), a complete mitigation plan must be provided or reasons provided why mitigation is not proposed;
- Identification and characterization (e.g., the current physical, biological and chemical conditions) of the water body affected by the proposed project and the water body's existing uses, including a wetland delineation report and drainage area (in acres) of the impacted water bodies at the downstream limits of the project area;
- Consideration of the fate and effects of parameters that are proposed to increase the pollutant loading;
- The quantity of the pollutant load increase to the water body. Increases in pollutant loading must be protective of all existing uses of the impacted water body;
- The potential impacts of the proposed project on the water body. The proposed activity must be conducted in a manner that water quality standards are not violated;
- The purpose and anticipated benefits of the proposed project. Benefits for the applicant as well as benefits to the community at large must be discussed.

If an individual 401 Water Quality Certification is required, it is recommended that you contact the Illinois EPA, Bureau of Water, Division of Water Pollution Control, Facility Evaluation Unit, 1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276, (217) 782-3362, or on the web at epa.401.docs@illinois.gov regarding application and anti-degradation assessment requirements.

4. If the project involves the construction of a power plant, utility pipelines, electric transmission or distribution lines, Illinois Commerce Commission approval may be required.

5. Also, depending on the location and type of work to be performed, there may be additional local government approvals required.

INSTRUCTIONS

General

Provide a complete and accurate application (form, drawings, and support information) concerning your project. If the application is incomplete or unacceptable, it will be returned. This usually results in delaying the evaluation of your application.

Four copies of the application form and drawing sheets are required. Submit one copy of the completed application form and drawings to each agency specified on the bottom of each form. The mailing address and telephone number of each agency is provided beginning on Page 8. The copy labeled "Applicant's Copy" is for the applicant's records. Send one copy to the appropriate Corps of Engineers office, one copy to the Illinois EPA and one copy to the appropriate Illinois DNR office. In addition, if available, sending an electronic copy of your application, plans, drawings, etc. to each agency would be appreciated. The application form may be photocopied.

IF YOU NEED ASSISTANCE IN FILLING OUT THE APPLICATION FORM, PLEASE CALL ANY AGENCY OFFICE LISTED.

Additional information may be required by any or all of the agencies before further processing of your application may proceed. The applicant will, however, be notified of such needs by the agencies.

Specific instructions on completing the form and the information to be provided on the drawings are provided below.

DISCLOSURE STATEMENT

Information in the application is a matter of public record. Disclosure of the information is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

18 United States Code, Section 1001, provides that who ever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or disguises a material fact or makes any false, fictitious, or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than 5 years or both.

**APPLICANTS MUST OBTAIN ALL APPROVALS BEFORE WORK CAN BE STARTED.
PROCEEDING WITHOUT THE REQUIRED PERMITS IS AGAINST STATE AND FEDERAL LAWS
AND MAY RESULT IN LEGAL PROCEEDINGS AND FINES.**

SPECIAL INSTRUCTIONS FOR COMPLETING THE JOINT APPLICATION FORM

Blocks 1 and 2 For Agency Use. To be completed by Corps of Engineers and/or Illinois Department of Natural Resources and/or Illinois Environmental Protection Agency.

Block 3(a and b) Applicant(s). The applicant(s) shall be the person(s), firm(s), corporation(s), etc who have or will have the responsibility for the property on which the project will be located by reason of ownership, easement, or other agreement. If the property is not presently owned by the applicant, attach an explanation of any easements or rights-of-way which have been or will be obtained or how such land will be acquired. If a project is being proposed by a lessee, the lessee and lessor should be joint applicants. In some instances, agency staff may request additional information on all parties having a legal or equitable interest in the involved land.

Applicant's Name. Enter the name of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the application, please attach a sheet with the necessary information marked Block 5.

Address of Applicant. Please provide the full mailing address of the party or parties responsible for the application.

Email Address of Applicant. Please provide the email address of the party or parties responsible for the application.

Applicant Telephone Number(s). Please provide the number where you can usually be reached during normal business hours. Include a fax number if available.

List all applicants. Space has been provided for the listing of two applicants. Attach an additional sheet (marked Block 3) if more space is needed.

Block 4 – Authorized Agent. If the applicant designates an authorized agent for the purpose of obtaining the permits, list the name, address, email address, phone and fax numbers of the authorized agent in Block 4. During the permit process, all correspondence, such as requests for additional information, will be sent to the authorized agent.

Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, or any other person or organization. Note: An agent is not required.

Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone and fax numbers where he / she can be reached during normal business hours.

Statement of Authorization. To be completed by applicant, if an agent is to be employed.

Block 5. Names and Mailing Addresses of Adjoining Property Owners, Lessees, etc., Whose Property Adjoins the Project Site. List complete names and full mailing addresses of the adjacent property owners (public and private) lessees, etc., whose property adjoins the water body or aquatic site or whose property is in visual reach where the work is being proposed so that they may be notified of the proposed activity (usually by public notice). If more space is needed, attach an extra sheet of paper marked Block 5.

Information regarding adjacent landowners is usually available through the office of the tax assessor in the county or counties where the project is to be developed.

Block 6. Proposed Project Name or Title. Please provide name identifying the proposed project, e.g., Landmark Plaza, Rolling Hills Subdivision, or Edsall Commercial Center.

Block 7. Project Location.

Latitude and Longitude. Enter the latitude and longitude of where the proposed project is located.

UTMs Northing and Easting. Enter the Northing and Easting coordinates of where the proposed project is located. Include coordinate system information.

Proposed Project Street Address. If the proposed project is located at a site having a street address (not a box number), please enter it here.

Other Location Descriptions. Please provide the Section, Township, and Range of the site, and / or local Municipality that the site is located in or near, as well as the County, State and Zip code.

Name of Waterway. Please provide the name of any stream, lake, marsh, or other waterway to be directly impacted by the activity. If it is an unnamed stream, identify the waterway the tributary stream enters. If a large river or stream, include the river mile of the proposed project site if known.

Directions to the Site. On a separate sheet, please provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide description of the proposed project location, such as lot numbers, tract numbers, or you may choose to locate the proposed project site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream is within the vicinity of the project, include the river mile of the proposed project site, if known.

Block 8. Project Description. Describe the overall activity or project. Give appropriate dimensions of structures such as wing walls, dikes (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Indicate whether discharge of dredged or fill material is involved. Also, identify any structure to be constructed on a fill, piles, or float-supported platforms. The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 7.

Block 9. Project Purpose and Need. Describe the purpose and need for the proposed project. What will it be used for and why? Also include a brief description of any related activities to be developed as the result of the proposed project. Give the approximate dates you plan to both begin and complete all work. If additional space is needed, attach an extra sheet of paper marked Block 8.

COMPLETE THE FOLLOWING FOUR BLOCKS IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED. If the project requires an individual 401 water quality certification from Illinois EPA, provide Illinois EPA with the anti-degradation assessment report, material analysis data, mitigation plan and other information identified in item 3 under Agency Authorities and Requirements of these instructions.

Block 10. Reasons for Discharge. If the activity involves the discharge of dredged and/or fill material into a wetland or other water body, including the temporary placement of material, explain the specific purpose of the placement of the material (such as erosion control).

Block 11. Types of Material Being Discharged and the Amount of Each Type in Cubic Yards and Acres. Describe the material to be discharged and amount of each material to be discharged within Corps jurisdiction. Please be sure this description agrees with your illustrations. Discharge material includes: soil, rock, sand, clay, concrete, etc.

Block 12. Surface Areas of Wetlands or Other Waters Filled. Describe the area to be filled at each location. Specifically identify the surface areas, or part thereof, to be filled. Also include the means by which the discharge is to be done (backhoe, dragline, etc.). If dredged material is to be discharged on an upland site, identify the site and the steps to be taken (if necessary) to prevent runoff from the dredged material back into a water body. If more space is needed, attach an extra sheet of paper marked Block 11.

Block 13. Description of Avoidance, Minimization, and Compensation. Provide a brief explanation describing how impacts to waters of the United States are being avoided and minimized on the project site. Also provide a brief description of how impacts to waters of the United States will be compensated for, if mitigation is required. If additional space is needed, attach an extra sheet of paper marked Block 12.

Note: You will need to submit additional information for evaluation of the permit application, including a wetland delineation report; avoidance, minimization and alternatives analysis report; and mitigation plan. This information must be submitted to Illinois EPA, prior to completion of review and public notice of an anti-degradation assessment for the individual 401 water quality certification. This information will also be required by the Corps of Engineers prior to issuance of the Section 404 permit.

Block 14. Date activity is proposed to commence and completed. Please provide the date (if known) that you intend to start work, as well as the date work should be completed.

Block 15. Is Any Portion of the Work Already Complete? Provide all background information on those portions of the proposed project already completed. Describe the area already developed, structures completed, any dredged or fill material already discharged, the type of material, volume in cubic yards, and acres or square feet filled if discharge occurred in a wetland or other water body. If the work was done under an existing Corps permit, identify the authorization, if possible.

Block 16. Information about Approvals or Denials by Other Agencies. You may need the approval of other federal, state, or local agencies for your project. Identify any applications you have submitted and the status, if any (approved or denied) of each application. You need not have obtained all other permits before applying for a Corps permit.

Block 17. Consent to enter property listed in Block 7.

Block 18. Application Verification. The signature shall be an affirmation that the party applying for the permit possesses the requisite property rights to undertake the activity applied for (including compliance with special conditions, mitigation, etc.). The application must be signed by each applicant. However, the application may be signed by a duly authorized agent (Name in Block 4) if this form is accompanied by a statement by the applicant(s) designating the agent.

NOTE:

- a. If the applicant is a corporation, the president or other authorized officer shall sign the application form.
- b. If the applicant is a county, city or other political subdivision, the application form shall be assigned by an appropriate authorized officer.
- c. If the applicant is a partnership, each partner shall sign the application form.
- d. If the applicant is a trust, the trust officer shall sign the name of the trustee by him (or her) as trust officer. A disclosure affidavit must be filed with the application, identifying each beneficiary of the trust by name and address and defining the respective interest therein.

DRAWINGS AND ILLUSTRATIONS

General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity/Location Map, a Plan View and a Typical Cross-Section Map. Please submit one original, or good quality copy, of all drawings on 8½ x11 inch plain white paper (electronic media may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross-section).

While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.

Certified engineering plans may be submitted in lieu of the drawing sheets if the magnitude of the project warrants.

- (1) A vicinity/location map which shows:
 - a. project site;
 - b. name of waterway;
 - c. name of and distance to local town, community or other identifying location such as roads; and
 - d. north arrow.
- (2) A plan (overhead) view of the project showing:
 - a. existing wetland boundary and shoreline of all waterways, including the normal water surface elevation (if mean sea level datum is not used, adjustment should be indicated);
 - b. adjacent property lines and ownership as listed in the application form;

- c. principal dimensions of the structure or work and extent of encroachment into the waterway (as measured from a fixed structure or object);
- d. floodway/floodplain lines if established and if known;
- e. north arrow; and
- f. graphic or numerical scale.

- (3) A cross-sectional view of the project showing:
- a. wetland boundary and/or shoreline, elevations, extent of encroachment, principal dimensions of the work as shown in plan view; and
 - b. graphic or numerical scales (horizontal and vertical).

AGENCY MAILING ADDRESSES

Send appropriate copies of the completed application to each agency listed below. (Agencies are specified at the bottom of each sheet in the packet.)

For U.S. Army Corps of Engineers (refer to the IL Regulatory Jurisdictional Boundary Map for your District office):

U.S. Army Corps of Engineers, Rock Island
ATTN: Regulatory Branch
Clock Tower Building
Post Office Box 2004
Rock Island, IL 61204-2004

U.S. Army Corps of Engineers, Chicago District
ATTN: Regulatory Branch
111 North Canal, Suite 600
Chicago, IL 60606-7206

US Army Corps of Engineers, St. Louis District
ATTN: Regulatory Branch
1222 Spruce St.
St. Louis, MO 63103-2833

U.S. Army Corps of Engineers, Louisville District
ATTN: Regulatory Branch
P.O. BOX 59
Louisville, KY 40201-0059

U.S. Army Corps of Engineers, Memphis District
ATTN: Regulatory Branch
167 North Main, B-202
Memphis, TN 38103-1894

Your application to the Illinois Environmental Protection Agency should request Section 401 water quality certification.

Illinois Environmental Protection Agency
Bureau of Water
Division of Water Pollution Control
Facility Evaluation Unit
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276

For the Illinois Department of Natural Resources

For the majority of the state:

Illinois Department of Natural Resources
Office of Water Resources
Downstate Regulatory Programs Section
One Natural Resources Way
Springfield, IL 62702-1271

For Cook, Lake, McHenry, DuPage, Kane and Will Counties (including all of Chicago District):

Illinois Department of Natural Resources
Office of Water Resources
Northeastern Illinois Regulatory Programs Section
2050 West Stearns Road
Bartlett, IL 60103

For Lake Michigan: Illinois Department of Natural Resources
Office of Water Resources
Lake Michigan Management Section
160 N. LaSalle Street
Suite S-700
Chicago, IL 60601

In addition, you should complete and submit the attached certification sheet to the Illinois State agencies (the Illinois Department of Natural Resources and the Illinois Environmental Protection Agency) along with your application. The Corps of Engineers does not require this certification.

IMPORTANT:

Mitigation for wetland or stream impacts resulting from your proposed actions may be a permit requirement. Prior to completing your application, it is recommended that you read through the Wetland Mitigation information available on the Web at: <http://www2.mvr.usace.army.mil/Regulatory/> . (Click on Wetland Mitigation to open the link to the documents.) This may help you avoid or minimize wetland and stream impacts, thus reducing or eliminating the requirement for mitigation.

Illinois State Permit Applicants

Illinois State Law requires individuals to certify that they are not delinquent in the payment of child support before State agencies can accept applications for State permits, certifications, etc. You must complete the following statement and include it with copies of the joint permit applications you send to the Illinois Department of Natural Resources and the Illinois Environmental Protection Agency. The Corps of Engineers does not require a copy of this statement.

WARNING: Failure to fully complete one of the following certifications will result in rejection of this application. Making a false statement may subject you to contempt of court.

I hereby certify, under penalty of perjury, that I am not more than 30 days' delinquent in complying with a child support order [5 ILCS 100/10-65(c)].

Applicant's Signature

Applicant's Social Security Number

OR

I hereby certify, under penalty of perjury, that the permit applicant is a governmental or business entity and, therefore, not subject to child support payment requirements.

Applicant's Name

Applicant's Representative Signature and Title

JOINT APPLICATION FORM FOR ILLINOIS

ITEMS 1 AND 2 FOR AGENCY USE

1. Application Number	2. Date Received
-----------------------	------------------

3. and 4. (SEE SPECIAL INSTRUCTIONS) NAME, MAILING ADDRESS AND TELEPHONE NUMBERS

3a. Applicant's Name Company Name (if any) Address Email Address	3b. Co-Applicant/Property Owner Name (if needed or if different from applicant) Company Name (if any) Address Email Address	4. Authorized Agent (an agent is not required) Company Name (if any) Address Email Address
---	---	---

Applicant's Phone Nos. w/area code Business: Residence: Cell: Fax:	Applicant's Phone Nos. w/area code Business: Residence: Cell: Fax:	Agent's Phone Nos. w/area code Business: Residence: Cell: Fax:
--	--	--

STATEMENT OF AUTHORIZATION

I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

 Applicant's Signature Date

5. ADJOINING PROPERTY OWNERS (Upstream and Downstream of the water body and within Visual Reach of Project)

Name	Mailing Address	Phone No. w/area code
a.		
b.		
c.		
d.		

6. PROJECT TITLE:

7. PROJECT LOCATION

LATITUDE:	UTMs				
LONGITUDE:	Northing:				
	Easting:				
STREET, ROAD, OR OTHER DESCRIPTIVE LOCATION	LEGAL DESCRIPT	QUARTER	SECTION	TOWNSHIP NO.	RANGE
<input type="checkbox"/> IN OR <input type="checkbox"/> NEAR CITY OF TOWN (check appropriate box) Municipality Name	WATERWAY			RIVER MILE (if applicable)	
COUNTY	STATE	ZIP CODE			

8. PROJECT DESCRIPTION (Include all features):

9. PURPOSE AND NEED OF PROJECT:

COMPLETE THE FOLLOWING FOUR BLOCKS IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

10. REASON(S) FOR DISCHARGE:

11. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS FOR WATERWAYS:
 TYPE:
 AMOUNT IN CUBIC YARDS:

12. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED (See Instructions)

13. DESCRIPTION OF AVOIDANCE, MINIMIZATION AND COMPENSATION (See instructions)

14. Date activity is proposed to commence _____ Date activity is expected to be completed _____

15. Is any portion of the activity for which authorization is sought now complete? Yes No NOTE: If answer is "YES" give reasons in the Project Description and Remarks section. Indicate the existing work on drawings.
 Month and Year the activity was completed _____

16. List all approvals or certification and denials received from other Federal, interstate, state, or local agencies for structures, construction, discharges or other activities described in this application.

<u>Issuing Agency</u>	<u>Type of Approval</u>	<u>Identification No.</u>	<u>Date of Application</u>	<u>Date of Approval</u>	<u>Date of Denial</u>

17. CONSENT TO ENTER PROPERTY LISTED IN PART 7 ABOVE IS HEREBY GRANTED. Yes _____ No _____

18. APPLICATION VERIFICATION (SEE SPECIAL INSTRUCTIONS)
 Application is hereby made for the activities described herein. I certify that I am familiar with the information contained in the application, and that to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities.

 Signature of Applicant or Authorized Agent

 Date

 Signature of Applicant or Authorized Agent

 Date

 Signature of Applicant or Authorized Agent

 Date

Corps of Engineers Revised 2011 IL Dept of Natural Resources IL Environmental Protection Agency Applicant's Copy

LOCATION MAP

Revised 2011

Corps of Engineers

IL Dept of Natural Resources

IL Environmental Protection Agency

Applicant's Copy

PLAN VIEW

FOR AGENCY USE ONLY

Revised 2011

Corps of Engineers

IL Dept of Natural Resources

IL Environmental Protection
Agency

Applicant's Copy
Agency




DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
INSTALLATIONS, ENERGY AND ENVIRONMENT
110 ARMY PENTAGON
WASHINGTON, DC 20310-0110

NOV 17 2015

MEMORANDUM FOR Army National Guard, (ARNG-ILI, LTC Erik T. Gordon), 111 S. George Mason Drive, Arlington, VA 22204

SUBJECT: Authority under Executive Order to Execute Military Construction within a Known Flood Plain at Sparta, Illinois

1. Reference: ARNG-ILI memorandum, Request For Authority Under Executive Order 11988 to Execute Military Construction Within Known Flood Plain, 3 November 2015.
2. The referenced request for authority to construct the Low Water Crossing (LWC) 12 at Sparta, Illinois is approved contingent upon the Federal Government not assuming any abnormal costs associated with siting this LWC in a floodplain.
3. This LWC construction efforts shall include mitigation measures that would minimize any impacts, potential damages and to restore / preserve the surrounding terrain.
4. The point of contact for this action is LTC J. Kevin Dyer, 703-6967-4659 or jon.k.dyer2.mil@mail.mil.


Paul D. Cramer
Deputy Assistant Secretary of the Army
Installations, Housing, and Partnerships

ARMY STAFFING FORM For use of this form, see DA Memo 25-52; the proponent agency is AASA.		1. TRACKING NUMBER	2. TODAY'S DATE (YYYYMMDD) 20151104	3. SUSPENSE DATE (YYYYMMDD) 20151116
4. LEAD STAFF AGENCY ASA (IEE)		5. SUBJECT Request for Authority Under Executive Order 11988 to Execute Military Construction Within a Known Flood Plain		
6. ROUTING: (ECC USE ONLY) Initial Date		ECC POC (Initial)	ECC (Rank, Name, Phone No.)	DIR, ECC (Initial)
<input type="checkbox"/> SA		COMMENTS:		
<input type="checkbox"/> CSA				
<input type="checkbox"/> USA				
<input type="checkbox"/> VCSA				
<input type="checkbox"/> AASA				
<input type="checkbox"/> DAS				
<input type="checkbox"/> SMA				
<input type="checkbox"/> DUSA				
<input type="checkbox"/> VDAS				
7. Origin: Requirement from - <input type="checkbox"/> SA <input type="checkbox"/> CSA <input type="checkbox"/> USA <input type="checkbox"/> VCSA <input type="checkbox"/> Staff Initiated Meeting/Forum/Other: <input type="checkbox"/> OSD <input type="checkbox"/> Congress <input type="checkbox"/> CJCS/JS <input checked="" type="checkbox"/> Other <u>ARNG-ILI</u>				
8. What is in this packet? TAB A: ARNG-ILI memorandum requesting flood plain waiver (TAB A1 - Documentation of compliance w/11988) TAB B: DASA IHP draft memo approving ARNG-ILI request for flood plain waiver TAB C:				
9. Action seeks senior leader <input checked="" type="checkbox"/> Signature <input type="checkbox"/> Approval <input type="checkbox"/> Guidance <input type="checkbox"/> Information Only <input type="checkbox"/> Other _____ Recommendation <u>Approve request and sign memo at TAB B</u> to senior leader:				
10. Key areas impacted: <input type="checkbox"/> Funding <input type="checkbox"/> Equipment <input type="checkbox"/> Personnel <input type="checkbox"/> Training <input type="checkbox"/> Strategy <input type="checkbox"/> Policy <input type="checkbox"/> Congressional <input type="checkbox"/> Legal <input type="checkbox"/> Other _____				
11. Key point(s) the senior leaders should get from this action: ■ Waiver request is for Low Water Crossing (LWC) only, not for range project ■				
12. Additional information:				
13. Senior Leader/Decision/Comments: APPROVED <u> <i>lu</i> </u> DISAPPROVED _____ NOTED _____ SEE ME _____ COMMENT _____				

(UNCLASSIFIED)

14. LEAD AGENCY STAFF COORDINATION		LEAD STAFF AGENCY: ASA (IEE)	TRACKING NO.:
TITLE	INITIAL	TYPE OR PRINT NAME	DATE (YYYYMMDD)
PRINCIPAL ONLY	<i>[Signature]</i>	Paul Cramer, DASA IH&P	20151117
ACTION OFFICER (Signature) (Name/Title/Phone No./Email/Office Symbol)	<i>[Signature]</i>	LTC J. K. Dyer Dyer, J. Kevin, LTC, 703-697-4659, jon.k.dyer2.mil@mail.mil	16 Nov 15
SACO (Signature) (Name/Title/Phone No./Email)			

RECOMMENDATION FOR STAFF PRINCIPAL:

Approve request for flood plain waiver to construct one (1) Low Water Crossing .

15. STAFF COORDINATION						
CONCUR	NON-CONCUR	AGENCY	NAME (TITLE, LAST NAME)	PHONE (XXX) XXX-XXXX	DATE (YYYYMMDD)	REMARKS
		OGC	Mr. Creighton Wilson	(703) 693-3665		NLO/concur with Kim edits
		OTJAG				
<input type="checkbox"/>	<input type="checkbox"/>	DASA IHP	Mr. Robert Uhrich	(703) 693-5210		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	DASA IHP	Mr. Jae Kim	(703) 693-9919		Edits to memo provided
<input checked="" type="checkbox"/>	<input type="checkbox"/>	DASA IHP	Mr. Paul Stewart	(703) 695-0867		no comments
<input checked="" type="checkbox"/>	<input type="checkbox"/>	DASA IHP	Ms. Erica Ellis	(703) 695-5705		
<input type="checkbox"/>	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>					
<input type="checkbox"/>	<input type="checkbox"/>					

16. REMARKS BY ECC:



NATIONAL GUARD BUREAU
111 SOUTH GEORGE MASON DRIVE
ARLINGTON, VA 22204-1373

ARNG-ILI

3 NOV 2015

MEMORANDUM FOR Deputy Assistant Secretary of the Army (Installations, Housing and Partnerships)

SUBJECT: Request For Authority Under Executive Order 11988 to Execute Military Construction Within Known Flood Plain

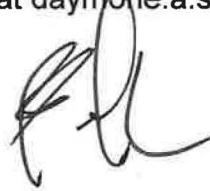
1. Purpose: To obtain the necessary approval under Executive Order 11988, 24 May 77, to construct Low Water Stream Crossing (LWC) on existing unimproved trails located within the 100-year floodplain. The LWC will provide access to Sparta Training Area (STA), Sparta, IL, where a Basic 10M-25M Firing Range (Zero), Project Number 171001 is to be constructed as a component of FY16 Military Construction, Army National Guard (MCRNG) program.
2. Discussion: The Illinois Adjutant General has requested authority to construct the Range to support the ILARNG at Sparta Training Area, Sparta, Illinois. The only such range is located at Marseilles Training Area in Northern Illinois. The proposed facility will support the individual weapons qualifications requirements of ILARNG personnel within the southern half of the State. A copy of Documentation of Compliance with Executive Order 11988 dated September 2015 prepared by ILARNG Environmental is enclosed.
3. The design of this LWC has been reviewed by local government agencies. The public review and public notice for compliance with EO 11988 for the proposed action is in the process of being completed as part of the public notice requirements for the environmental assessment under national environmental policy act.
4. The LWC (LWC 12, Figure 1) is sited within the 100-year floodplain. The existing crossing constructed of riprap continues to erode during high flow events, and has led to scouring, widening and deepening of the outflow area, thus impeding foot and vehicular traffic along the trail. Proposed use of cabled concrete mats, currently being used with success at STA, can be emplaced during drill or annual training by collocated 631st Engineer Support Company. Such LWC is stable under heavy vehicular traffic and loads in all weather conditions, and does not impede passage activity of aquatic life or flood water flow.
5. In accordance with National Guard Pamphlet 415-5, para 6-5f (1), alternate sites were examined for the location of the LWC. Due to mission requirements, location, economic feasibility, and the potential for significant environmental impact, there are no practical alternatives to locating the proposed action outside the 100-year floodplain.

ARNG-ILI

SUBJECT: Request For Authority Under Executive Order 11988 to Execute Military Construction Within Known Flood Plain

6. Recommendation: That under Sections 2 and 3, Executive Order 11988, the authority for construction LWC in a known flood plain for the Range project, Sparta Training Area, Sparta, Illinois, be granted under Major Construction provisions of the Army National Guard program.

7. The point of contact is LTC Daymone A. Simmons, Construction Branch Chief, Installations Division, National Guard Bureau at daymone.a.simmons.mil@mail.mil or 703-607-7941.



ERIK T. GORDON
LTC, IN
Chief, Installations Division

Encl
as

Illinois Army National Guard (ILARNG)

Sparta Training Area

Documentation of Compliance with EO 11988 (Floodplain Management) and EO 11990
(Protection of Wetlands)

Proposed Action: Low Water Stream Crossing

September 2015

Prepared by Anthony Janas & Jonathan Casebeer
Illinois Department of Military Affairs, Environmental

TABLE OF CONTENTS

A. INTRODUCTION..... 1

 1. Purpose..... 1

 2. Background..... 1

 3. Executive Order 11988 and 11990..... 1

B. PROPOSED ACTION..... 2

C. COMPLIANCE..... 3

D. CONCLUSION..... 5

E. LIST OF FIGURES

 Figure 1: Project Location Map..... 6

 Figure 2: Flood Insurance Rate Map (FIRM) 7

F. LIST OF APPENDICIES

Appendix A: NRCS Low Water Crossing 12 Design Plan

Appendix B: Sparta Training Site Wetland Delineation

Appendix C: Certificate of Compliance for EO 11988/11990

Appendix D: Executive Order 11988, Floodplain Management

Appendix E: Executive Order 11990, Protection of Wetlands

A. INTRODUCTION

A.1 PURPOSE

The purpose of this report is to document compliance with Executive Order (EO) 11988, Floodplain Management, and EO 11990, Protection of Wetlands for the proposed construction of low water stream crossings on existing unimproved trails at the Sparta Training Area (STA) in the City of Sparta, Illinois (Figure 1). The intent of this documentation is to provide information for the National Guard Bureau (NGB) to request review and approval by the Assistant Secretary of the Army, Installations, Energy & Environmental – Installations, Housing & Partnerships (ASAIEE IH&P) under EO 11988 and EO 11990 to execute the construction project which is located in a known 100-year floodplain. This documentation was prepared concurrently as a corresponding Environmental Assessment (EA) is being completed for the project in accordance with the National Environmental Policy Act (NEPA) and implementing regulations issued by the Council on Environmental Quality (CEQ) and 32 Code of Federal Regulations (CFR) Part 651.

A.2 BACKGROUND

The 2,642-acre STA is located within the City of Sparta in southwestern Illinois and is approximately 45 miles southeast of St. Louis, Missouri (Figure 1). The STA is composed of 2,245.5 acres of partially strip-mined land dedicated by Peabody Coal Company (PCC) on 31 October 1986 for military training and an additional 396.5 acres strip-mined land conveyed by the City of Sparta. The land dedicated by PCC was certified reclaimed by Illinois Department of Natural Resources (IDNR) Office of Mines and Minerals (OMM) Industrial/Commercial Standard. The OMM released the reclamation bond in 2001 and the National Pollutant Discharge Elimination System (NPDES) permits were closed by Illinois Environmental Protection Agency (IEPA) in January 2004. PCC transferred the title to the State of Illinois in 2004. The ILARNG began conducting training activities at STA in Fiscal Year (FY) 2007.

The STA was acquired to reduce the shortfall of maneuver training area for ILARNG units identified in the ILARNG's Land Use Requirements Study (LURS) (ILARNG 2001). The LURS estimated that only about 2% of the maneuver training area required for tactical missions was available in 2001. Acquisition of the STA doubled available training areas and reduced the shortfall in critical platoon mission essential training maneuver areas.

In the 2005 STA Integrated Natural Resource Plan (INRMP) low water stream crossings (LWC) were identified as a method to maintain water quality and soil conservation and are ongoing projects in the current 2013 STA INRMP. Subsequently the LWC were designed by the Natural Resource Conservation Service with the United States Fish and Wildlife Service (USFWS) comments in mind.

A.3 EXECUTIVE ORDER 11988, Floodplain Management and EXECUTIVE ORDER 11990, Protection of Wetlands

EO 11988 (see Appendix E), enacted on May 24, 1977, requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development

wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities." The guidelines address an eight-step process that agencies should carry out as part of their decision-making on projects that have potential impacts to or within the floodplain. The eight steps, which are summarized below, reflect the decision-making process required in Section 2(a) of the Order.

1. Determine if a proposed action is in the base floodplain (that area which has a one percent or greater chance of flooding in any given year).
2. Conduct early public review, including public notice.
3. Identify and evaluate practicable alternatives to locating in the base floodplain, including alternative sites outside of the floodplain.
4. Identify impacts of the proposed action.
5. If impacts cannot be avoided, develop measures to minimize the impacts and restore and preserve the floodplain, as appropriate.
6. Reevaluate alternatives.
7. Present the findings and a public explanation.
8. Implement the action.

The purpose of Executive Order (EO) 11990 is to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands". To meet these objectives, the Order requires federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. The evaluation process follows the same 8 steps as for EO 11988, Floodplain Management.

B. PROPOSED ACTION

Construction of low water stream crossing LWC 12 on an unimproved trail within the 100 year floodplain located within the Sparta Training Area. The LWC will stabilize intermittent stream drainages by focusing foot and vehicle traffic onto a hardened crossing point. LWC 12 will replace the existing structure and provide for long-term maintenance, and stabilization of the failing riprap outflow structure of Lake L3. The existing structure was constructed during the mine reclamation. The originally constructed riprap structure continues to erode during high flow events and has led to scouring, widening and deepening of the original lake outflow area impeding foot and vehicle movement along the trail. The Natural Resource Conservation Service was contracted to design the LWC (Appendix A). The use of cabled concrete mats prove to be a durable low maintenance material. This structure can be emplaced during drill or annual training by the collocated 631st Engineer Support Company. Cabled concrete LWC's already installed at STA have proven stable under heavy vehicle traffic and heavy loads in all weather conditions. Per USFWS recommendations made during the INRMP review process the design of the LWC should not result in a reduction of passage opportunity for fish and other aquatic organisms. The contours of the emplaced structure will not impede the conveyance of flood water.

C. COMPLIANCE

Executive Order 11988 (Floodplain Management) requires Federal agencies “to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of the floodplains and to avoid direct or indirect support of the floodplains wherever there is a practicable alternative.” This section addresses the Eight Step Decision Making Process from compliance with EO 11988 and EO 11990. Listed below is a detailed evaluation of the decision making process for the Proposed Action.

C1. Determine if a proposed action is in the base floodplain (that area which has a one percent or greater chance of flooding in any given year).

Construction of LWC 12 will occur in the 100-year floodplain (Zone A) based upon review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) map number 17157C0090D, dated November 5, 2008 a portion of the Proposed Action is located within the 100-year floodplain (Zone A). The proposed Action is not located within the Floodway. The floodplain boundary is illustrated on Figure 1. The (Zone A) designation is an area subject to inundation by the one percent annual flood (100-year flood), also known as the base flood. This is the flood that has the one percent chance of being equaled in any given year. The flood area results from the Plum creek water shed. The proposed project falls on the fringe of the wetland as determined with the NRCS soil survey and vegetative survey conducted in 2003. These surveys were evaluated by CDM Sparta Training Site Wetland Delineation January 2004 (Appendix B). All construction disturbance will be in a previously disturbed mine reclaimed area.

C2. Conduct early public review, including public notice.

EO 11988 requires a public notice and information necessary to determine if the project may adversely affect the floodplain or if the project will result in continuing the vulnerability to damage by flooding. Notification will occur as part of the Construction and Operation of a Zero Range, Relocation of the M203 Grenade Launcher Range, and Implementation of Roadway Improvements at the Sparta Training Area (STA), Illinois Army National Guard (ILARNG) current NEPA Environmental Assessment (EA) public notice. The advertisement for the public notice will be published in the official state and local newspapers.

C3. Identify and evaluate practicable alternatives to locating in the base floodplain, including alternative sites outside of the floodplain.

During evaluation of alternatives it was determined that LWC 14 and the associated trail could be relocated outside the 100 year floodplain and wetland. The relocation of the trail and LWC 14 is illustrated on Figure 1. The relocated LWC will require a new design plan to be contracted as funding becomes available. The No Action Alternative to construct LWC 12 would result in a negative impact to the floodplain and wetland by not maintaining and allowing the continued degradation of the existing structure.

C4. Identify impacts of the proposed action.

The existing riprap structure was constructed during mine reclamation and continues to be the current drainage way for the adjoining Lake L3. This project is required to replace and maintain the drainage of the adjoining lake. The construction of LWC 12 will impact 2200 sq. ft. or 5% of an acre. It will remove approximately 160 cubic yards of material from the floodplain to emplace the required subbase and cabled concrete mats without changing the elevation thus no restriction of channel flow. Construction of LWC12 will have the following beneficial impacts:

- Replace degraded riprap open culvert constructed during strip-mine reclamation with a hardened cabled concrete structure.
- Allow unrestricted flow of debris and aquatic organisms from Lake L3 into Plum Creek corridor.
- Stabilize and reduce soil erosion from current degraded structure into the floodplain, wetland and Plum Creek.
- Allow for the aquatic organisms to move from the Plum Creek into Lake L3.

No adverse impacts to the floodplain or wetland are anticipated due to replacement of existing structure.

C5. If impacts cannot be avoided, develop measures to minimize the impacts and restore and preserve the floodplain, as appropriate.

The construction will be in accordance with design plan for LWC 12 prepared by the NRCS. The impact of this LWC 12 project will be short-term in nature and will overall be positive to the waters of the state.

C6. Reevaluate alternatives.

The ILARNG has determined that LWC 14 could be eliminated by re-routing the trail outside of the floodplain and wetland. No alternatives were discovered for LWC 12. There is no practical alternative available for the construction of LWC 12. The No Action Alternative to construct LWC 12 would result in no impact to the floodplain and wetland but would provide no improvement to the continuing erosion into the floodplain and wetland during heavy outflow periods of the lake.

C7. Present the findings and a public explanation.

An Environmental Assessment (EA) is in the process of being completed. The NEPA document review will require two 30-day public notice. Therefore, the public opinion will be solicited through this process. Included in the NEPA document review will be a draft Finding of No Significant Impact (FNSI). The above information will meet the requirements of EO 11988 and 11990, and will be valuable in providing to local officials or the public if there are concerns that the proposed action might adversely impact buildings, property, or roadways in the area.

C8. Implement the action.

The construction of the proposed action will be implemented with inspection and oversight entities in place to ensure that the Proposed Action is compliant with Federal, State, and local requirements.

D. CONCLUSION

The proposed action being evaluated under the eight-step decision making process identified in 44 CFR Part 9 for compliance with EO 11988 and EO 11990 have been presented in this report. The documentation presented in this report indicates that the proposed action is in compliance with EO 11988 and EO 11990 and provides justification for NGB to authorize the ILARNG to construct LWC 12 within the known 100-year floodplain and have no impact on wetlands.

Sparta Training Area Low Water Crossings

Site: 17C80- Sparta

Version 1

County: Randolph

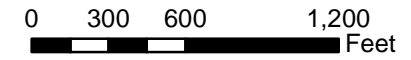
State: IL

Address: 715 Industrial Drive

Zipcode: 62286

Scale 1:9,000

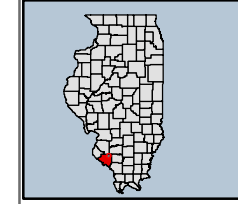
1 inch = 750 feet



Legend

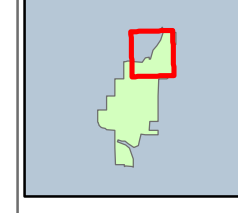
- Low Water Crossing
- Options A
- Unpaved trails
- Unpaved: Gravel Road
- Paved Road
- Wetlands
- 100_YEAR
- Installation Boundary

Randolph County, IL



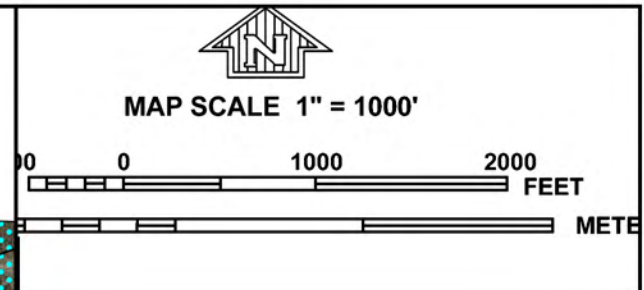
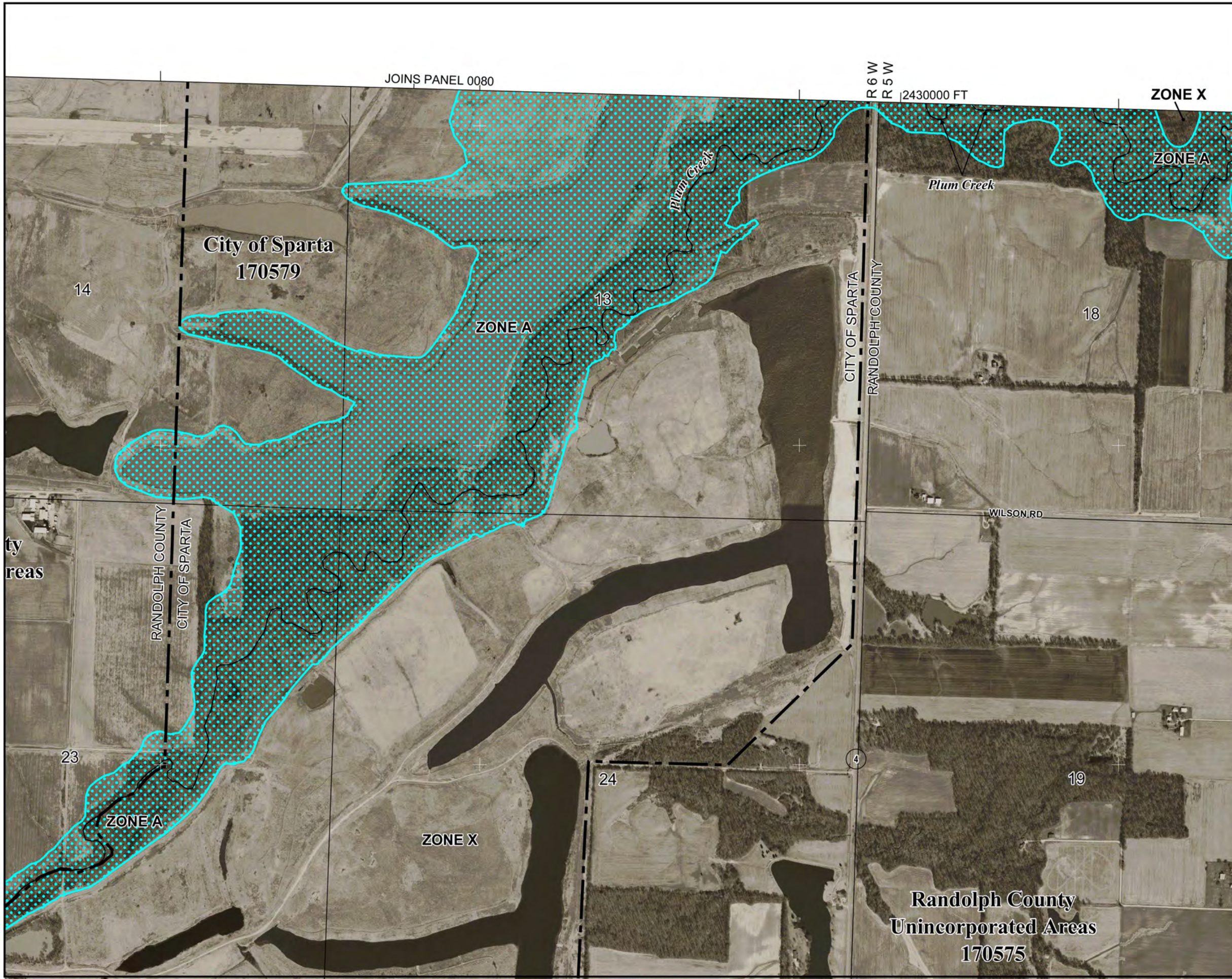
Date Published: 9/25/2015
Image Date: 2011
Coordinate System:
NAD83 UTM16

Installation Boundary



This illustrative conceptual plan is not intended as a design document.

FIGURE 1



PANEL 0090D

FIRM
FLOOD INSURANCE RATE MAP
RANDOLPH COUNTY,
ILLINOIS
AND INCORPORATED AREAS

PANEL 90 OF 475
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
RANDOLPH COUNTY	170575	0090	D
SPARTA, CITY OF	170579	0090	D

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
17157C0090D
EFFECTIVE DATE
NOVEMBER 5, 2008

Federal Emergency Management Agency

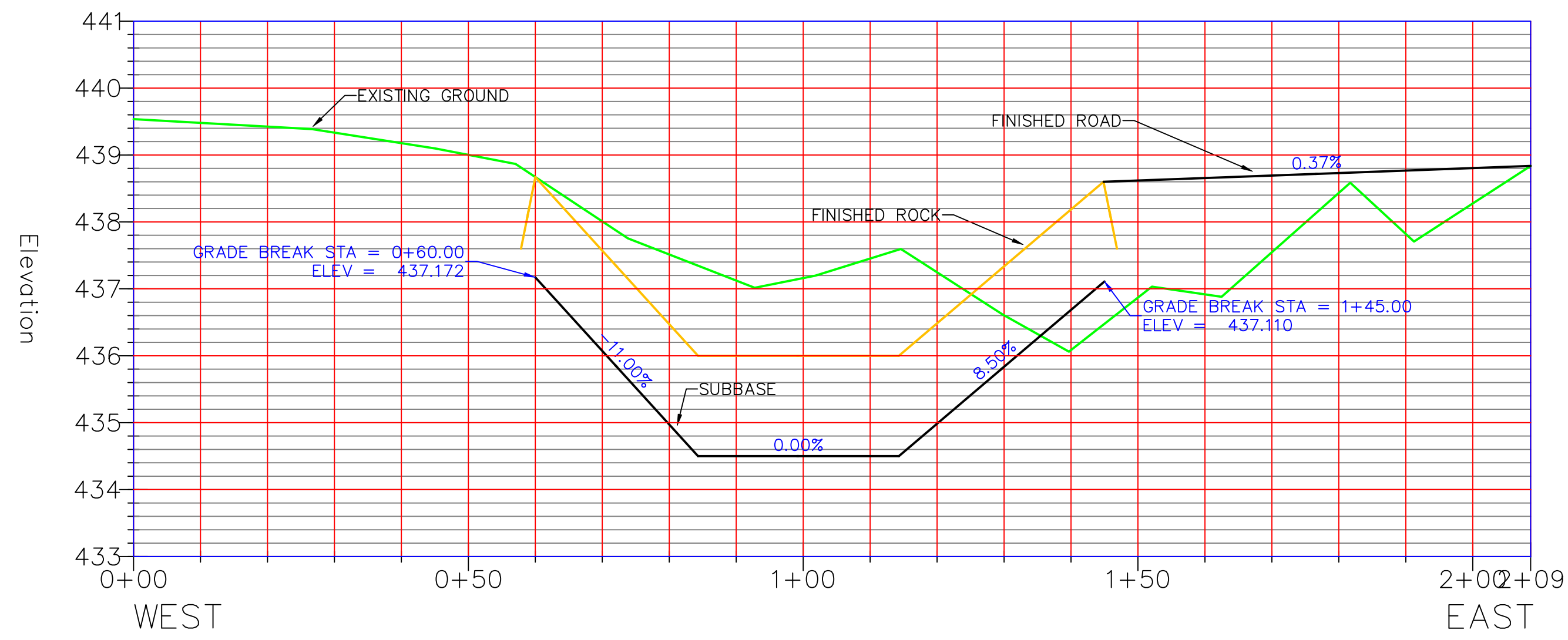
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

FIGURE 2

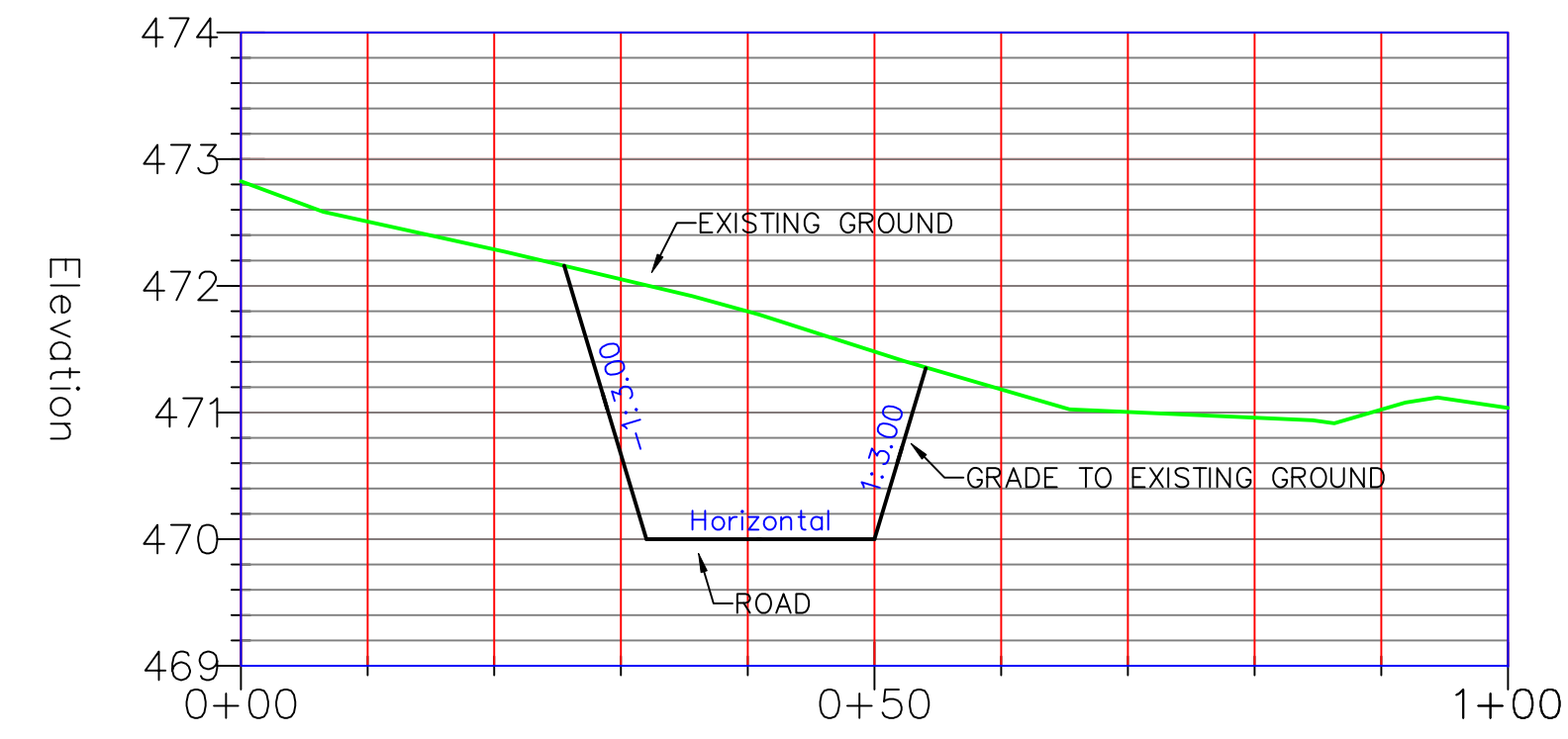
APPENDIX A

NRCS Low Water Crossing 12 Design Plan

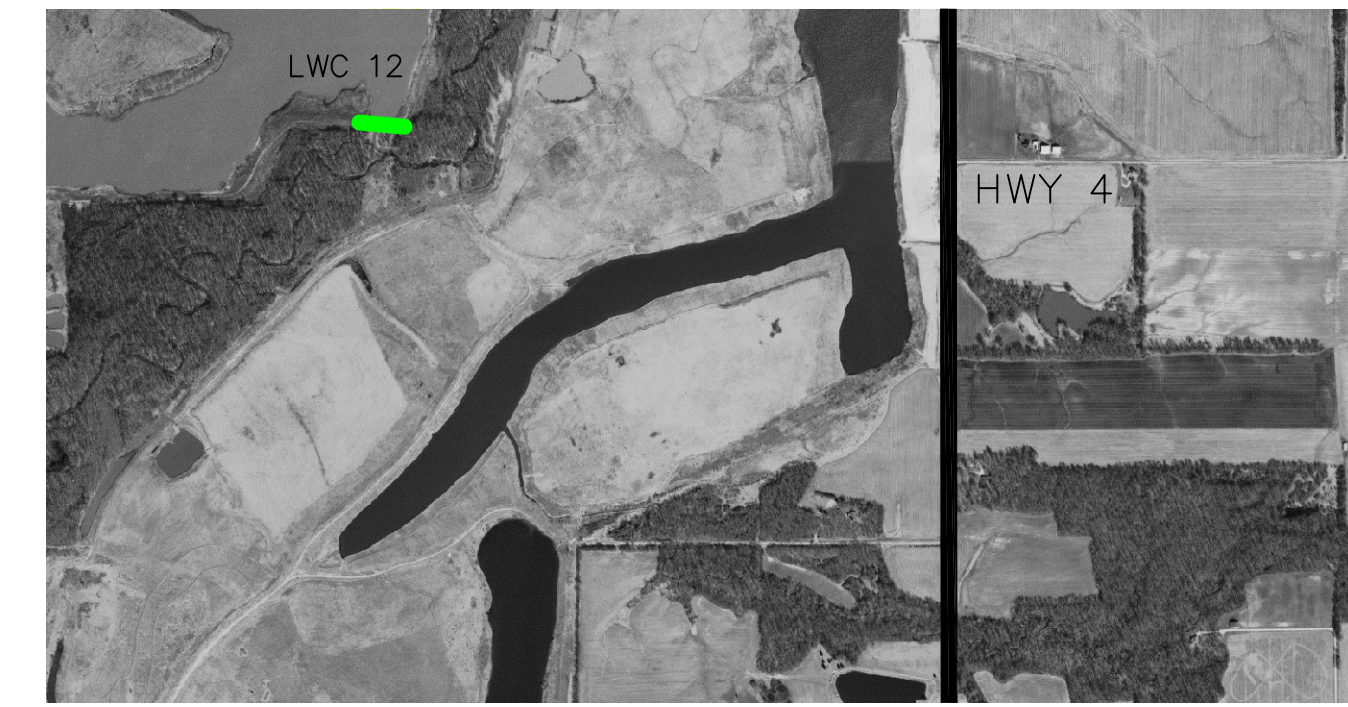
LWC 12 ROAD CL PROFILE



ROADSIDE GRADING PROFILE

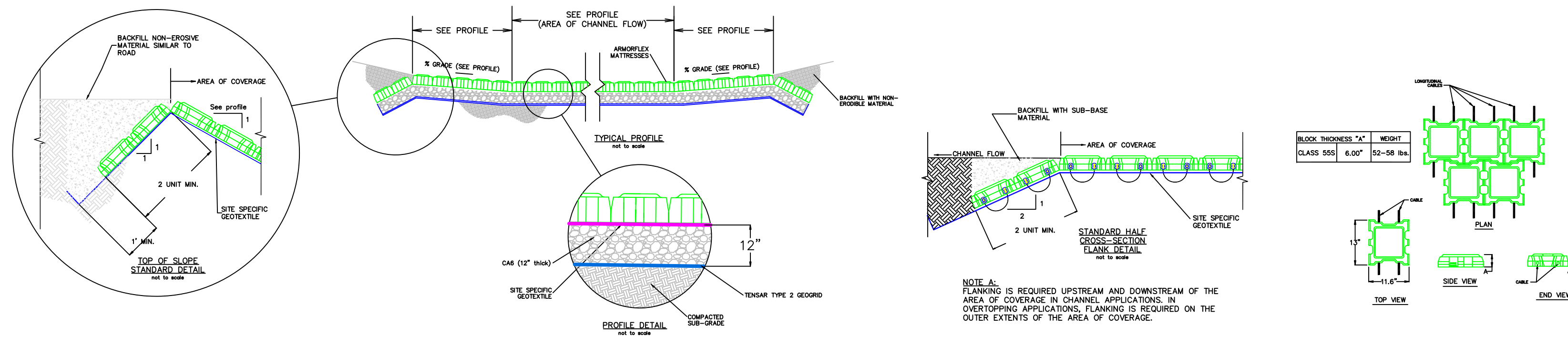


Plan View

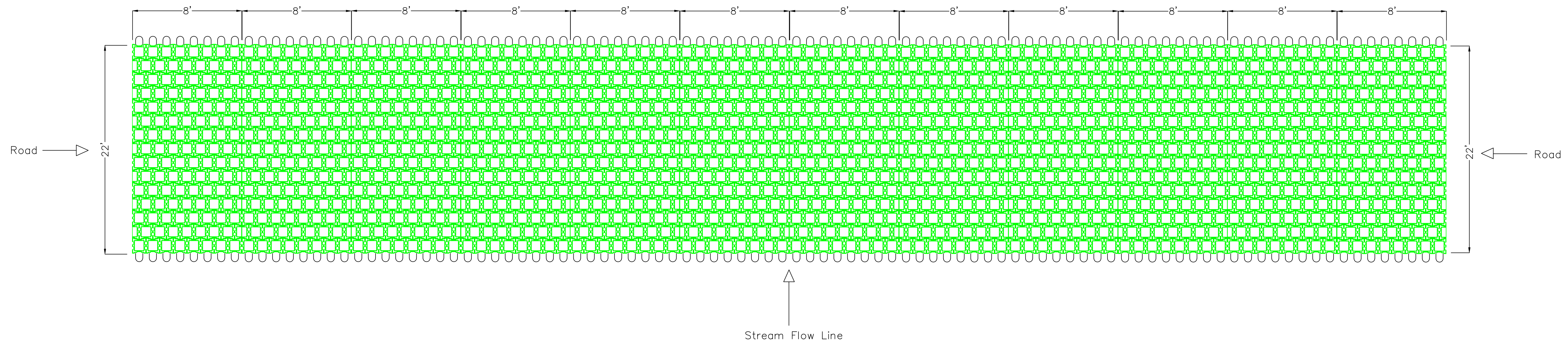


QUANTITIES		CUT SHEET	
MATERIAL	AMOUNTS	STATION	CUT
EXCAVATION	160 CUBIC YARDS	0+60	1.5
CA-6 ROCK	156 TONS	0+75	2.2
GEOGRID (TENSAR TYPE II)	182 SQ. YARDS	0+84.3	2.8
		0+90	2.6
GEOTEXTILE FABRIC	234 SQ. YARDS	1+05	2.8
		1+14.3	3.1
CABLED CONCRETE	12 MATS (8'x22')	1+20	2.2
		1+35	0.0
		1+45	-0.7
		1+50	-1.8
		1+65	-1.6
		1+80	-0.3
		1+95	-0.9
		2+09	0.0

- CONSTRUCTION NOTES:**
 THE CABLED CONCRETE MATS SHALL BE INSTALLED ACCORDING TO MANUFACTURER RECOMMENDATIONS
- ALL WATER SHALL BE TEMPORARY DIVERTED AROUND OR DIKED AND PUMPED AROUND CONSTRUCTION AREA TO PREVENT EXCESS WATER FROM ENTERING EXCAVATED AREA
 - THE GRADES SHALL BE CUT TO A SMOOTH PLANE SURFACE TO ENSURE INTIMATE CONTACT BETWEEN THE SLOPE FACE AND THE GEOTEXTILE FABRIC
 - CUT ARE FROM EXISTING SURFACE TO BOTTOM OF SUB-BASE WHICH PROJECT THE PLANNED GRADE MUST BE REMOVED AND BACKFILLED ACCORDING TO THE ENGINEER
 - ONCE PROPER EXCAVATION HAS BEEN COMPLETE A LAYER OF TENSAR TYPE 2 GEOGRID SHALL BE PLACED ON TOP OF SUB-SOIL PRIOR TO ANY SUB-BASE MATERIAL IS PLACED
 - GROOVES, TEETH MARKS OR DEPRESSIONS GREATER THAN 0.5 INCHES IN DEPTH PER 12 INCHES IS NOT PERMITTED IN THE SUB-BASE
 - THE SUB-BASE SHALL BE INSTALLED IN LIFTS OF NO GREATER THAN 4 INCHES BETWEEN COMPACTION BY ROLLER
 - PRIOR TO INSTALLATION OF CABLED CONCRETE BLOCKS A LAYER OF GEOTEXTILE FABRIC SHALL BE INSTALLED
 - THE BLOCKS SHALL BE INSTALLED WITH PROPER EQUIPMENT AND IN THE MANNER SHOWN IN DETAILS
 - GEOTEXTILE FABRIC SPECIFICATIONS
 - GRAB TENSILE STRENGTH - 200 LBS OR GREATER
 - BREAKING ELONGATION - 50% MAX
 - BURST STRENGTH - 400 P.S.I.
 - PUNCTURE STRENGTH - 115 LBS
 - A.O.S., US STD. SIEVE - MAX 40 SIEVE



Cabled Concrete Layout - 12 mats



Date	Designed	Drawn	Checked	Approved
11/10	J. BAKER	J. BAKER	S. ANDERSON	D. WEBBER
11/10				
11/10				
12/10				

Sparta National Guard Training Facility, Randolph Cty, IL
 MPR #M1PR8MDAAT1075
 Low Water Crossing #12 - Construction Plans



File Name
Drawing Name
11/10
Sheet 1 of 1

APPENDIX B

Sparta Training Site Wetland Delineation

Illinois Department of Military Affairs

Sparta Training Site Wetland Delineation

January 2004



*Wetland
Delineation Report*

Contents

Introduction and Background

1.1	Introduction	1-1
1.2	Background.....	1-1
1.3	Tasks	1-1

Wetland Delineation Methodology

2.1	Methodology.....	2-1
2.1.1	Hydrology.....	2-2
2.1.2	Soils.....	2-2
2.1.3	Vegetation.....	2-3
2.2	Field Methods.....	2-4

Wetland Delineation Results

3.1	Introduction	3-1
3.2	Field Observations	3-1
3.3	Hydrology	3-1
3.4	Soils	3-2
3.5	Vegetations.....	3-2
3.6	Summary	3-4

Wetland Delineation Summary..... 4-1

References 5-1

Appendices

Appendix A Field Logbooks

Figures

1.1	Illinois National Guard Training Site Sparta, Illinois Location Map.....	1-3
3.1	Illinois National Guard Training Site Sparta, Illinois Original NWI Map.....	3-5
3.2	NRCS Soil Vegetations Survey at Illinois National Guard Training Site in Sparta, Illinois (2002)	3-6
3.3	USDA-SCS Soil Survey of Plum Creek Vicinity at Illinois National Guard Training Site in Sparta, Illinois (1982)	3-7
3.4	Illinois National Guard Training Site Sparta, Illinois Revised NWI Map	3-8

Tables

2.1	Plant Species Indicator Category Definitions	2-3
3.1	List of Soils Within the Plum Creek Wetlands Delineated by CDM	3-2
3.2	Area of Wetlands Within the Plum Creek Study Area.....	3-3
3.3	List of Vegetation Observed Along the Plum Creek Study Area by NRCS Survey (2002)	3-3

Section 1

Introduction and Background

1.1 Introduction

The Illinois Department of Natural Resources (IDNR) is the state regulatory agency that administers the protection of wetlands through standards and regulations. The United States Department of Agriculture Natural Resources Conservation Service (USDA/NRCS) is the national organization that establishes standards and rules to protect wetlands on agricultural land through regulations. CDM was contracted by IDMA to conduct a wetland delineation for purposes of defining wetland boundaries within the Plum Creek floodplain, located within Illinois Department of Military Affairs (IDMA) property, which was formerly owned by Peabody Coal Company. **Figure 1.1** presents the location in which the wetland delineation was conducted.

1.2 Background

The IDMA property, containing the Sparta Training Site for the Illinois National Guard on approximately 2,700 acres, is located in Randolph County, Illinois. The parcel was partially strip-mined by Peabody Coal Company beginning in 1977 and reclamation of the site began in 1993 (PMCL, 1998). Reclamation performance bonds are held by the Illinois Department of Mines and Minerals, and National Pollutant Discharge Elimination System (NPDES) permits are also still active on the site and are held by the Illinois Environmental Protection Agency (IEPA) (PMCL, 1998).



Field at Northeast Corner of Sparta Training Site

The subject property contains mainly agricultural fields, several man-made lakes, and a portion of Plum Creek and its associated riparian corridor. Access to the property can be obtained by Illinois Highway 4, which runs along the northern portion of the eastern border, or by County Highway 18, which borders the north side of the property. Additional access can be obtained west of the National Guard Armory Building.

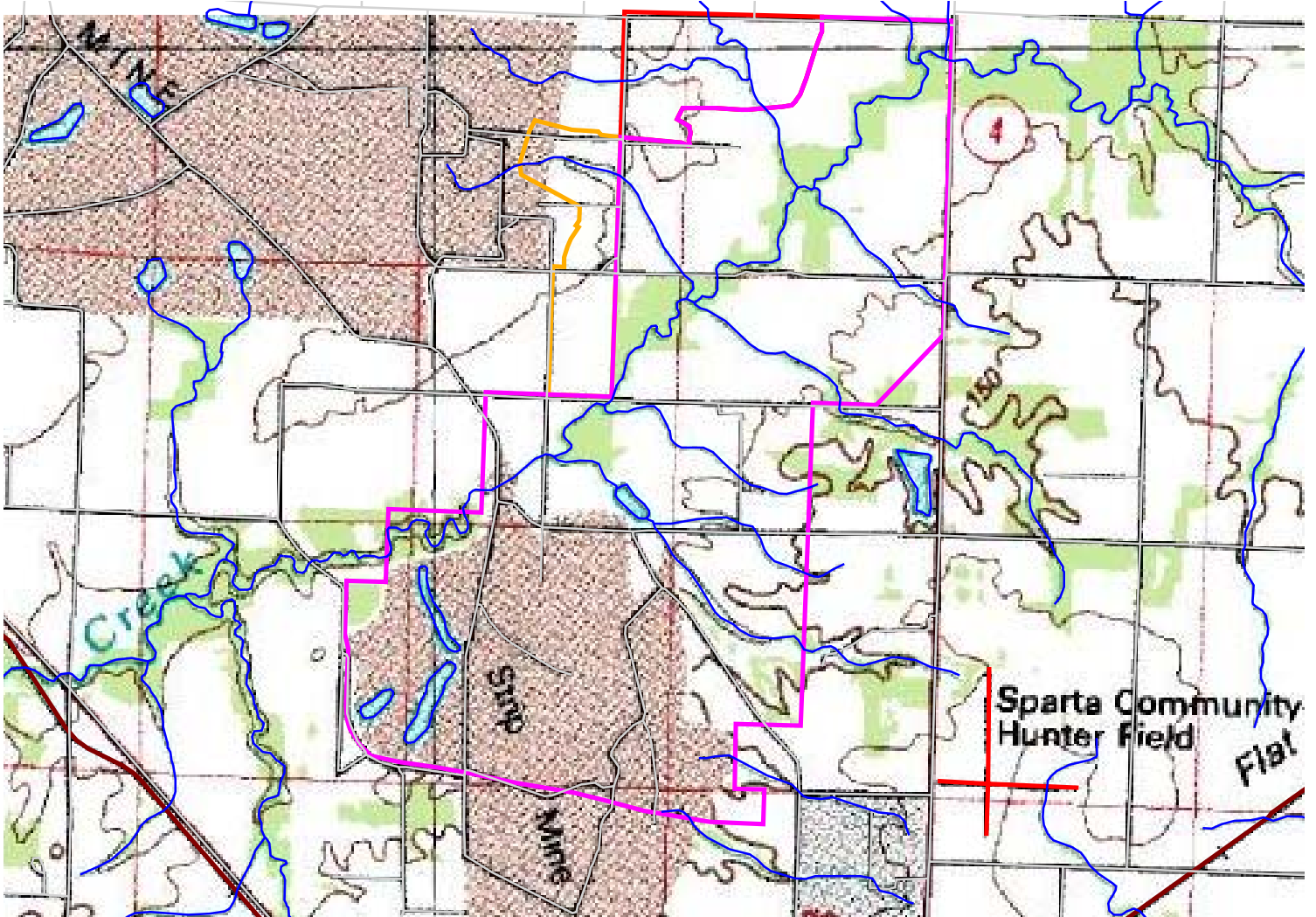
1.3 Tasks








Tasks for this wetland study include:

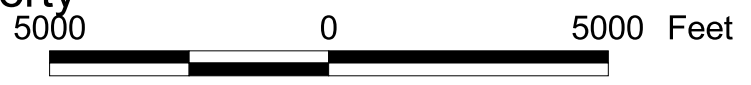
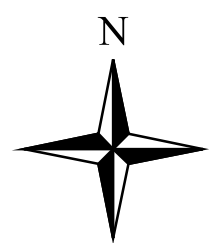
- Review existing data including database provided by IDMA, including National Wetland Inventory (NWI maps), revised soils maps, topographic maps, reports, and other documents, prior to conducting field surveys.
- Conduct field surveys to confirm the approximate wetland boundary along Plum Creek and to verify recent hydric soils and hydrophytic vegetation analysis for the subject area.

- Prepare a wetland study report which includes wetland delineation maps. Existing NWI maps will be reviewed to ascertain the accuracy of the delineation and modify where necessary based upon site-specific data.

Figure 1.1
 Illinois National Guard Training Site Sparta, Illinois
 Location Map



-  Streams
-  Roads
-  Airports
-  Railroads
- National Guard Property Boundary
-  168 acres added property
-  190 acres subtracted property
-  2529 acres no change



Section 2

Wetland Delineation Methodology

2.1 Methodology

Illinois' wetland statute, Appendix A, Chapter 20, of the Illinois Interagency Wetlands Policy Act of 1989, defines a wetland as " Land that has a predominance of hydric soils (soils which are usually wet and where there is little or no free oxygen) and that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of hydrophytic vegetation (plants typically found in wet habitats) typically adapted for life in saturated soil conditions." Identification of wetlands primarily involves the determination of two characteristics: 1) evidence of hydrology and, 2) the predominance of wetland vegetation or aquatic life. In the absence of visual signs of hydrology at the ground surface or under abnormal circumstances, including drought conditions or recent human disturbance, wetland hydrology can be documented by the presence of hydric soils.

The methods to identify and delineate wetlands were performed in accordance with the U.S. Army Corps of Engineers (USACE) techniques outlined in the USACE *1987 Wetland Delineation Manual* and the *National Food Security Act Manual (NFSAM) 3rd Edition, Amendment 2* (Nov. 1996). These manuals provide field methods for identifying and evaluating site characteristics necessary for concluding whether or not a particular area of land is wetland as defined in Part 514, Making Wetland Determinations on Agricultural Land, of the National Food Security Act Manual, 3rd Edition, Amendment 2, 1996 PA 514.21. In addition, the type of wetland (i.e. emergent, palustrine) was identified according to the classifications published by the U.S. Fish and Wildlife Service (USFWS)(Cowardin et al., 1979). The NFSAM guidance document was used to conduct on-site wetland delineations on agricultural land, while the USACE manual was used to conduct wetland delineations on non-agricultural land.

A Memorandum of Agreement (MOA) has been developed by the USDA, USACE, U. S. Fish & Wildlife Service (USFWS), and the USEPA that defines agricultural lands and non-agricultural lands, and which agency has the lead for wetland determinations. The MOA defines agricultural lands as those "that are intensively used and managed for food or fiber production to the extent that the natural vegetation have been removed and cannot be used to determine whether the area meets applicable hydrophytic vegetation criteria in making a wetland delineation."

According to the 1987 USACE manual, wetlands are lands transitional between terrestrial and aquatic systems that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (Federal Register 11982, 1980).

The 1987 USACE manual specifies that characteristics and indicators of wetland hydrology, hydric soils and hydrophytic vegetation must all be present for an area to be considered a jurisdictional wetland. Typically, the presence of these three parameters is mandatory for the designation of jurisdictional wetlands. However, if an area has been disturbed resulting in the obliteration of one or more of the wetland parameters, the presence of wetland hydrology and either hydric soils or hydrophytic vegetation usually is sufficient to identify jurisdictional wetlands (USACE, 1987).

Technical criteria for the three parameters described by the USACE manual are summarized in the sections that follow.

IDMA provided CDM with a GIS database containing information on hydric soils and hydrophytic vegetation that was based upon surveys by the USDA/NRCS. This information was used in conjunction with the on-site field evaluation to determine wetland boundaries in the Plum Creek floodplain.

2.1.1 Hydrology

The term “wetland hydrology” encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season (USACE 1987).

Indicators of wetland hydrology may include, but are not limited to: drainage patterns, drift lines, sediment deposition, water marks, stream gage data, visual observation of saturated soils and visual observation of inundation. For saturation to impact vegetation, it must occur within a major portion of the root zone (usually within 12 inches of the surface) of the dominant vegetation.

Part of the study was to determine the extent of wetlands that occur within the Plum Creek floodplain. The extent of the flood plain was based on the interpolation of topographic surveys and aerial photographs, in conjunction with wetland maps retrieved from the United Fish and Wildlife Service, National Wetlands Inventory web site (www.nwi.fws.gov). From this information all wetland communities identified between the existing water’s edge of the creek or the river and the flood plain were identified and measured using GIS based maps to determine the wetland acreage.

2.1.2 Soils

A hydric soil is a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (U.S. Department of Agriculture (USDA) Soil Conservation Service (SCS) 1985). The SCS has been renamed as the Natural Resource Conservation Service (NRCS).

Indicators used to determine whether hydric soils are present on a site are listed below. Any one of the following indicates that hydric soils are present (listed in order of decreasing reliability):

- Organic soils (Histisols)
- Histic epipedons
- Sulfidic material
- Aquic or peraquic moisture regimes
- Reducing soil conditions
- Soil colors (polychromatic hues and value)

Soil appears on a hydric soils list (developed by the National Technical Committee for Hydric Soils (National Technical Committee for Hydric Soils) For the USDA SCS (1986).

Characteristics of soils evaluated in the field were compared to the descriptions of hydric soils to determine if the soils at the sampling point were hydric. General soil associations and soil complexes in Randolph County are described in the county soil survey (USDA-SCS, 1982) and updates (1999). Additionally, soil information was reviewed based on the USDA/NRCS dataset.

2.1.3 Vegetation

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present (USACE, 1987).

In addition, the definition of wetlands includes the phrase “prevalence of vegetation”. Prevalent vegetation is characterized by the dominant species comprising the plant community. The definition of wetlands also includes the phrase “typically adapted”.

Typically adapted refers to a species being normally or commonly suited to a given set of environmental conditions, due to some morphological, physiological, or reproductive adaptation.

Several indicators may be used to determine whether hydrophytic vegetation is present on a site. The most reliable indicator is whether more than 50 percent of the dominant species are obligate wetland (OBL) plants, facultative wetland (FACW) plants, or facultative (FAC) plants. **Table 2-1** lists the definitions for the various plant species indicator categories used.

Category	Definition
Obligate Wetland (OBL):	Plants that almost always occur in wetlands (estimated probability >99%).
Facultative Wetland (FACW):	Plants that usually occur in wetlands (estimated probability 67 to 99%), but are occasionally found in non-wetlands areas.
Facultative (FAC):	Plants that is equally likely to occur in wetlands or non-wetlands (estimated probability 35 to 67%).
Facultative Upland (FACU):	Plants that usually occur in non-wetlands (estimated probability 67 to 99%).
Obligate Upland (UPL):	Plants that almost always occur in non-wetlands (estimated probability > 99%) under natural conditions.

Source: Environmental Laboratory 1987

The indicator status for plant identification in the field was obtained from the National List of Plant Species that Occur in Wetlands Region 3 – North-central (National Ecology Research Center, U.S. Fish and Wildlife Service, St. Petersburg, Florida, 1988). CDM also reviewed the USDA/NRCS hydrophytic plant dataset that was provided by IDMA.

Other indicators of hydrophytic vegetation include buttressed tree trunks, hypertrophied lenticels, adventitious roots, shallow root systems, and floating leaves.

2.2 Field Methods

CDM was requested by IDMA to complete a ground survey to delineate the extent of riparian wetlands under current conditions in the Plum Creek floodplain, and verify the accuracy of previous wetland studies of the area.

Sources of site-related information obtained and reviewed for use in the field included:

- The National Wetlands Inventory (NWI) maps for Randolph County (1996), overlaid on black and white aerial photographs (April 2, 1988) for the area to be surveyed,
- Randolph County Soil Survey aerial maps (1982) and classifications,
- USGS topographic maps for the Tilden NW and Tilden SW quadrangles (July 1, 1982),
- List of existing wetland plant indicator species; and
- USDA/NRCS soil and vegetation survey of the project site (2002), provided by IDMA.

A field survey of the riparian area along Plum Creek was conducted August 12, 2003. A wetlands scientist and field crew conducted field surveys of Plum Creek and its associated floodplain within the study area. The team traversed by foot around and through existing wetland communities on both sides of the creek. All wetlands encountered were compared to the 1996 NWI maps and the USDA/NRCS data. If field observations and assessments confirmed the information on these maps, no further information was gathered, and the team continued to survey along the river. If field observations of the wetland boundary did not concur with these maps (i.e., surveyors located a



Plum Creek

wetland that was not designated as such on the NWI map or a wetland mapped on the 1996 NWI map was determined not to be a wetland now), then a delineation of the new parcel was conducted according to the NFSAM or USACE methodology. All information collected at these points were recorded on field maps and in field logbooks (**Appendix A**).

Any changes in the wetland boundary from these maps are noted in the results section of this report. Wetland maps were prepared identifying wetland community types along Plum Creek.

Section 3

Wetland Delineation Results

3.1 Introduction

The wetland delineation performed along the Plum Creek floodplain in the IDMA Sparta National Guard site, confirmed that specific wetland areas varied from the original 1996 NWI map designation. The three-parameter wetland delineation methodology was used to compare



Plum Creek

NWI maps with confirmed field conditions and the USDA/NRCS dataset. Field observations, hydrology, soil, and vegetation assessments made in the floodplain areas and riparian habitat along Plum Creek study area are discussed below. This review includes a description of existing conditions, changes in wetland boundaries, and wetland status.

Appendix A presents written Log Book activity, logistics, and wetland site locations that took place during the wetland study.

3.2 Field Observations

Figure 1.1 presents the IDMA property boundaries. Most of the site consists of farmlands and man-made lakes. The floodplain of Plum Creek consists mainly of palustrine forested wetlands. There is a narrow band of emergent vegetation near the west-central portion of the site, along the east bank of Plum Creek. There is additionally an area of scrub-shrub plant community at the northeast corner of the site that borders Illinois Hwy 4. Plum Creek is represented as an area of unconsolidated bottom.

Figure 3.1 presents the NWI map data over the aerial photograph. **Figure 3.2** presents the 2002 NRCS soil/vegetation map used to compare existing conditions with the map designations.

3.3 Hydrology

The main drainage pattern for Plum Creek is confined to a shallow winding channel within the wetland delineation area. The riparian habitat and flood plain at the north end of the site showed evidence of drainage patterns and saturated soil conditions along the bank. Other indicators include crawfish chimneys in the fields and forested areas adjacent to the banks.

The hydrological pattern along Plum Creek has been modified or changed as a result of agricultural and mining activities. Many of the open waterbodies within the IDMA Sparta property have been created as a result of coal mining activities and follow reclamation. Agricultural activities have drained small pocket areas along Plum Creek and those sites no longer retain standing water for sufficient periods to support hydrophytic vegetation.

3.4 Soils

Hydric soils characteristics are present within the floodplain of Plum Creek as shown in **Figure 3.3**. The soil classification of Birds and Wakeland consists of very poorly drained soils and are listed as hydric soils. **Figure 3.3** presents the soil/vegetation survey map of the Plum Creek site (USDA-SCS, 1982). At the time of the field inspection soils were dry to moist.



Plum Creek Riparian Corridor

Table 3-1 presents the list of natural hydric soils that are known to occur along the Plum Creek study area (USDA-SCS, 1982).

Figure 3.2 presents the 2002 NRCS soil/vegetation map used to compare existing conditions with the map designations. However, the following three areas, located outside the Plum Creek floodplain, were surveyed with possible hydric soil conditions but field observations confirmed these areas do not contain hydric soils. These areas are circled and number in **Figure 3.2**.

1. A field located in the northeast corner of the site;
2. A cornfield located on the western border of the site's center; and,
3. An area of grassland or pasture located south of the Plum Creek floodplain, in the west-central portion of the site.

Table 3-1 List of Soils Within the Plum Creek Wetlands Delineated by CDM		
Map Symbol	Soil Map Unit	Is Soil Hydric?
334	Birds silt loam	Yes
333	Wakeland silt loam	Yes
787A	Banlic silt loam, 0 to 3 percent slopes	No

Source: USDA-SCS (NRCS) 1982.

3.5 Vegetation

The wetland communities identified in the Plum Creek area are classified as palustrine shrub-scrub (PSS), palustrine emergent (PEM), palustrine forested (PFO) and unconsolidated bottom. **Table 3-2** presents the wetland acreage by wetland classification determined for the study area. **Table 3-3** presents a list of vegetation observed at the site by the NRCS (2002).

Table 3-2 Area of Wetlands Within the Plum Creek Study Area

Wetland Type	Wetland Area (Acres)
Emergent	0.6
Forested	180.8
Scrub-Shrub	17.8
Unconsolidated Bottom	15.6

The dominant emergent plant community at the study area consists of **180.8** acres of PFO. Other plant communities present at the site include 17.8 acres of PSS, 15.6 acres of unconsolidated bottom and 0.6 acres of PEM.

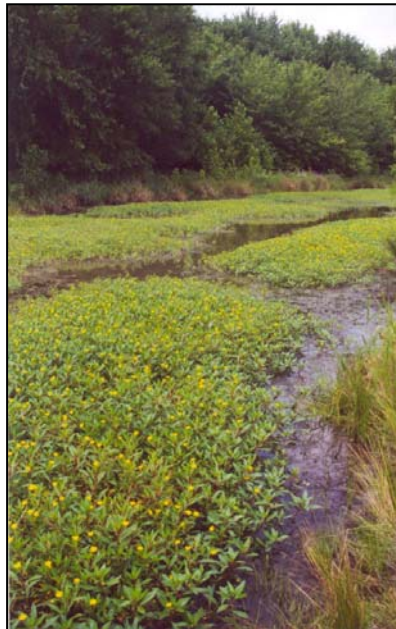
Table 3-3 List of Vegetation Observed Along the Plum Creek Study Area by NRCS Survey (2002)

Scientific Name	Common Name	Regional Indicator	Scientific Name	Common Name	Regional Indicator
Herbaceous			Herbaceous		
<i>Galium sp.</i>	Bedstraw		<i>Cardamine pensylvanica</i>	Pennsylvania Bittercress	FACW+
<i>Sanicula marilandica</i>	Black Snakeroot	NI	<i>Phlox sp.</i>	Phlox	
<i>Collinsia verna</i>	Blue-Eyed Mary	FACU	<i>Rhus radicans</i>	Poison Ivy	
<i>Ranunculus sp.</i>	Buttercup		<i>Rubus sp.</i>	Prickly Brambles	
<i>Elymus cnandensis</i>	Canada Wild Rye	FAC-	<i>Trillium erectum</i>	Red Trillium	UPL
<i>Smilax sp.</i>	Catbrier		<i>Juncus sp.</i>	Rush	
<i>Stellaria sp.</i>	Chickweed		<i>Carex sp.</i>	Sedge	
<i>Galium aparine</i>	Cleavers	FACU	<i>Sericea lespedeza</i>	Sericea	
<i>Ambrosia artemisiifolia</i>	Common Ragweed	FACU	<i>Polygonum pensylvanicum</i>	Smartweed	FACW+
<i>Symphoricarpos orbiculatus</i>	Coralberry	FACU	<i>Smilacina sp.</i>	Solomon's Seal	
<i>Rumex crispus</i>	Curled Dock	FAC+	<i>Claytonia virginica</i>	Spring Beauty	FACU
<i>Festuca arundinacea</i>	Fescue	FACU+	<i>Urtica dioica</i>	Stinging Nettle	FAC+
<i>Carex vulpinoidea</i>	Fox Sedge	OBL	<i>Cinna arundinacea</i>	Stout Woodreed	FACW
<i>Solidago sp.</i>	Goldenrod		<i>Quercus bicolor</i>	Swamp White Oak	FACW+
<i>Vitis sp.</i>	Grapevine		<i>Osmorhiza longistylis</i>	Sweet Cicely	FACU-
<i>Lamium amplexicaule</i>	Henbit		<i>Phlox maculata</i>	Sweet William	FACW+
<i>Cryptotaenia canadensis</i>	Honewort	FAC	<i>Erythronium americanum</i>	Trout Lily	
<i>Lonicera japonica</i>	Japanese Honeysuckle	FACU	<i>Campsis radicans</i>	Trumpet Creeper	FAC*
<i>Impatiens capensis</i>	Jewelweed	FACW	<i>Sisymbrium altissimum</i>	Tumble mustard	FACU
<i>Podophyllum peltatum</i>	May Apple	FACU	<i>Mertensia virginica</i>	Virginia Bluebell	FACW
<i>Lysimachia nummularia</i>	Moneywort	FACW+	<i>Parthenosensis quinifolia</i>	Virginia Creeper	FAC-
<i>Rosa multiflora</i>	Multiflora Rose	FACU	<i>Elymus virginicus</i>	Virginia Wild Rye	FACW-
			<i>Viola pensylvanica</i>	Yellow Violet	FACW-

Table 3-3 List of Vegetation Observed Along the Plum Creek Study Area by NRCS Survey (2002)

Trees			Trees		
<i>Ulmus americana</i>	American Elm	FACW-	<i>Morus sp.</i>	Mulberry	
<i>Fraxinus sp.</i>	Ash		<i>Maclura pomifera</i>	Osage Orange	FACU
<i>Carya cordiformis</i>	Bitternut Hickory	FAC	<i>Quercus palustris</i>	Pin Oak	FACW
<i>Juglans nigra</i>	Black Walnut	FACU	<i>Ulmus rubra</i>	Red Elm	FAC
<i>Acer negundo</i>	Box Elder	FACW-	<i>Betula nigra</i>	River Birch	FACW
<i>Ulmus sp.</i>	Elm		<i>Carya laciniosa</i>	Shellbark Hickory	FACW
<i>Fraxinus pennsylvanica</i>	Green Ash	FACW	<i>Ulmus pumila</i>	Siberian Elm	
<i>Celtis occidentalis</i>	Hackberry	FAC-	<i>Acer saccharinum</i>	Silver Maple	FACW
<i>Crataegus sp.</i>	Hawthorn		<i>Celtis laevigata</i>	Sugarberry	FACW
<i>Gleditsia triacanthos</i>	Honey Locust	FAC	<i>Platanus occidentalis</i>	Sycamore	FACW

3.6 Summary



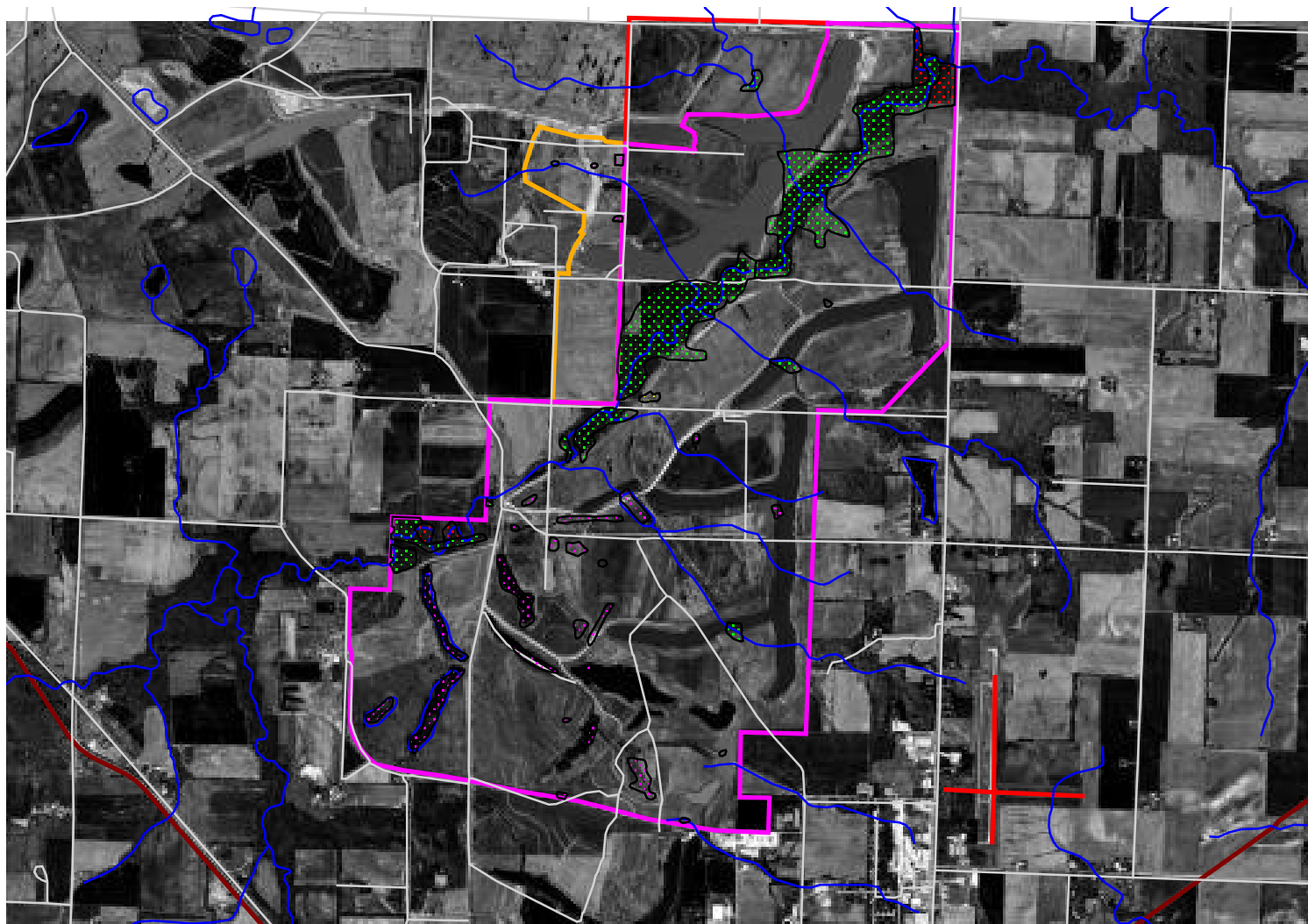
Emergent Wetland

The Plum Creek study area was surveyed to determine the approximate wetland boundary and to confirm the 1996 NWI wetland maps. Twelve areas along the banks of Plum Creek were modified from the NWI wetland maps because the survey identified these areas either confirmed wetland characteristics or were void of wetland characteristics. In addition, several areas identified as wetlands on the NWI map, but were located outside of the Plum Creek floodplain, were removed. These changes were incorporated into the revised wetland NWI maps and are represented if **Figure 3.4**.





Figure 3.1

Illinois National Guard Training Site Sparta, Illinois

Original NWI Map



NWI Wetlands

-  Emergent
-  Forested
-  Scrub Shrub
-  Unconsolidated Bottom




 Streams

 Roads

 Airports

 Railroads

National Guard Property Boundary

-  168 acres added property
-  190 acres subtracted property
-  2529 acres no change

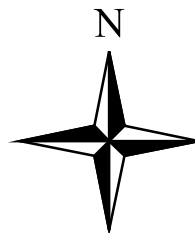
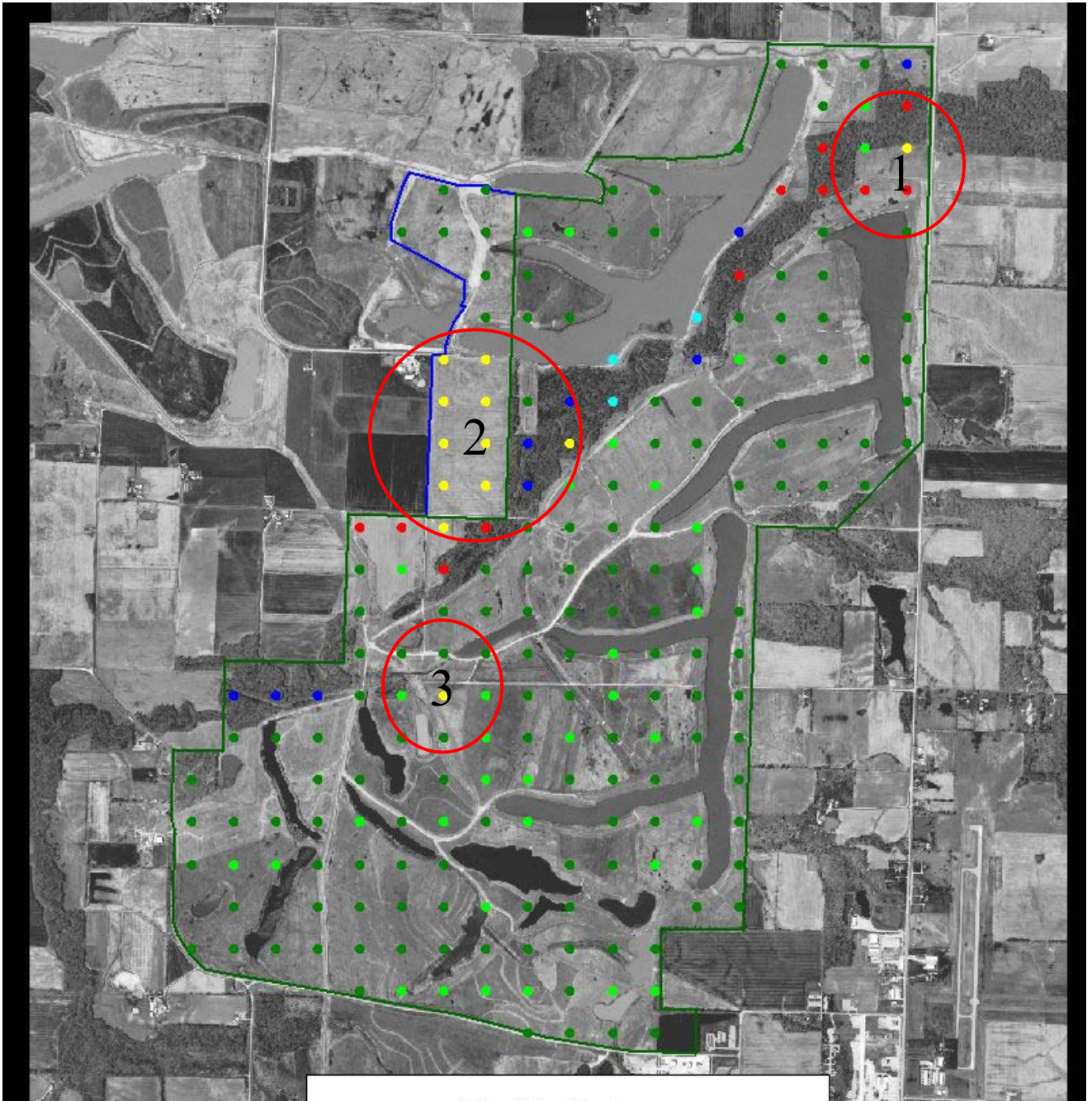


Figure 3.2
NRCS Soil/Vegetation Survey at
Illinois National Guard Training Site in Sparta, Illinois (2002)

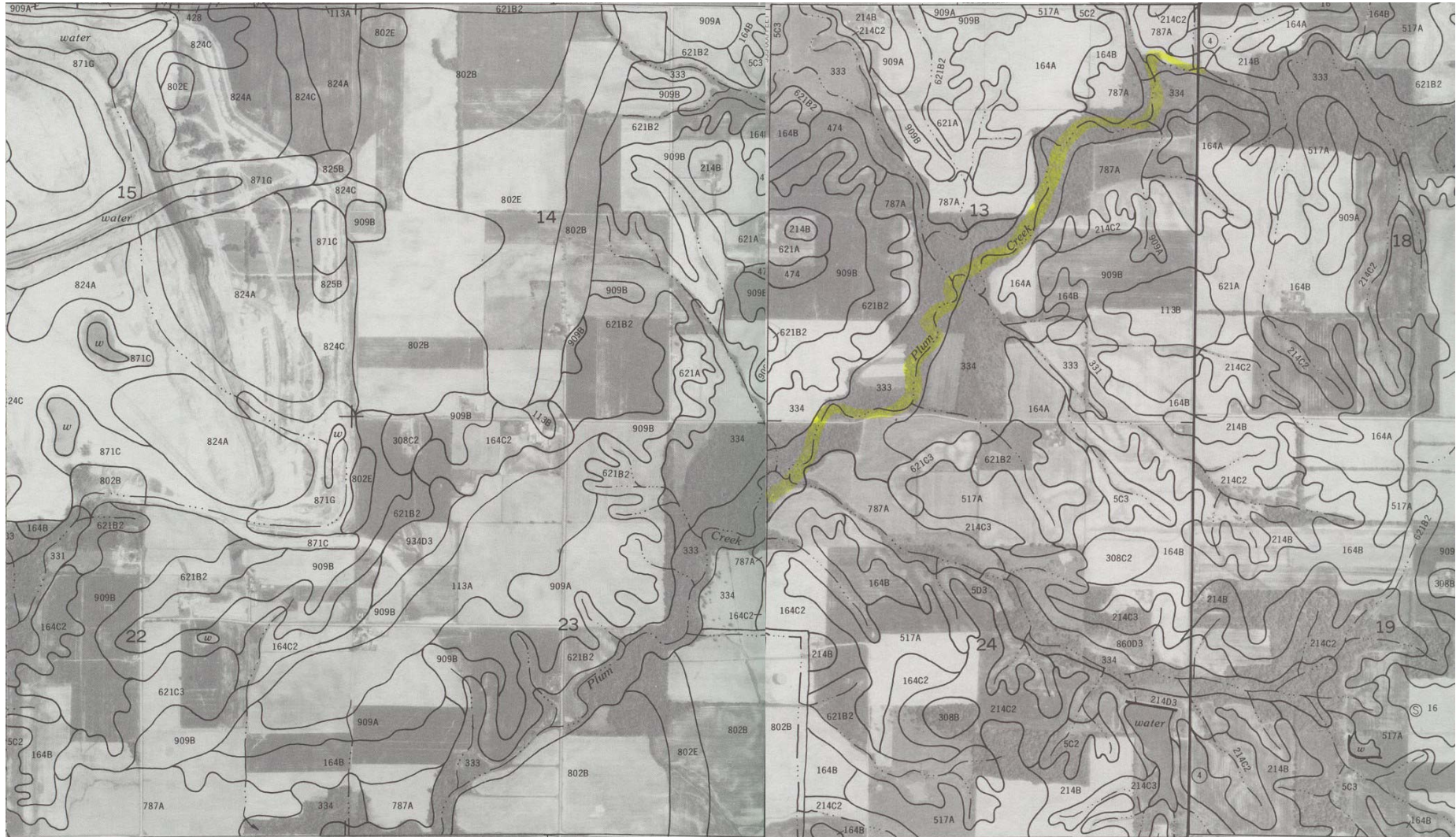


Hydric Data

- Possible Hydric Soils but Non Hydrophytic Veg
- Possible Hydric Soils and Hydrophytic Veg
- Non Hydric Soils and Non Hydrophytic Veg
- Non Hydric Soils but Hydrophytic Veg
- Hydric Soils but Non Hydrophytic Veg
- Hydric Soils and Hydrophytic Veg

Figure 3.3

USDA-SCS Soil Survey of Plum Creek Vicinity at Illinois National Guard Training Site in Sparta, Illinois (1982)

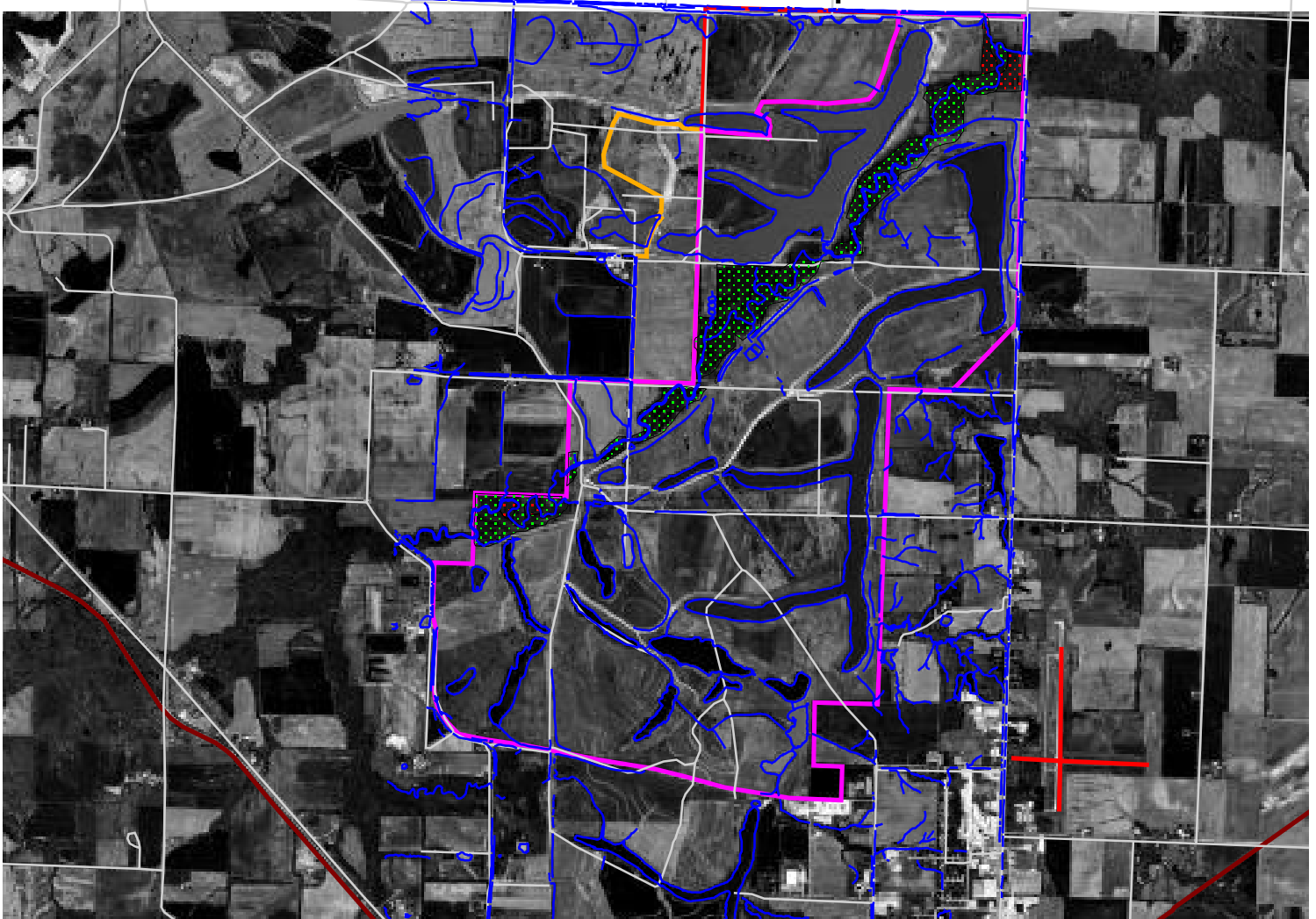


Legend for soils within Plum Creek Floodplain: 333 - Wakeland silt loam; 334 - Birds silt loam; 787A - Banlic silt loam, 0 to 3 percent slopes

Figure 3.4





Illinois National Guard Training Site Sparta, Illinois





Revised NWI Map






Legend

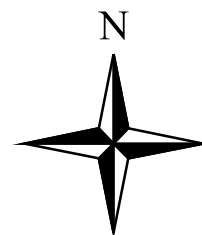
Revised NWI Wetlands

-  Emergent (0.6 Acres)
-  Forested (180.8 Acres)
-  Scrub Shrub (17.8 Acres)
-  Unconsolidated Bottom (15.6 Acres)

-  Streams
-  Roads
-  Airports
-  Railroads

National Guard Property Boundary

-  168 acres added property
-  190 acres subtracted property
-  2529 acres no change



Section 4

Wetland Delineation Summary

Illinois Department of Military Affairs contracted with Camp Dresser & McKee to conduct a wetland delineation study at the Illinois National Guard Training Site in Sparta, Illinois. The results of this study will assist the agency in designing operations at the Site.

Plum Creek as it flows through the site was surveyed to determine the approximate wetland boundary and to confirm the 1996 NWI wetland maps. The area was delineated using either the USACE or NFSAM wetland delineation methodology.

The dominant wetland communities include: emergent wetlands, shrub-scrub wetlands, unconsolidated bottom wetlands and forested wetlands. Existing NWI maps were modified when the ground-truthing of these wetlands were not consistent with the NWI maps. Twelve areas along the banks of Plum Creek were modified from the NWI wetland maps because the survey identified these areas either confirmed wetland characteristics or were void of wetland characteristics. In addition, several areas identified as wetlands on the NWI map, but were located outside of the Plum Creek floodplain, were removed. These changes were incorporated into the revised wetland NWI maps.

Section 5

References

Cowardin, L.M, V.Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, Office of Biological Services, Washington, D.C. Publ. No. FWS/OBS-79/31.107 pp. Federal Register 11982, 1980

Environmental Laboratory. 1987. Corps of Engineers Wetland Delineation Manual. U.S. Army Engineers Waterways Experiment station, Vicksburg, MS. Tech. Rpt. Y-87-1. 100 pp, plus appendices.

National Ecology Research Center., U.S. Fish and Wildlife Service. 1988. National List of Plant Species That Occur in Wetlands. St. Petersburg, Florida.

National Food Security Act Manual (NFSAM) 3rd Edition, Amendment 2 (Nov. 1996).

Planning and Management Consultants, Ltd. (PMCL). Environmental Baseline Study Phase I Environmental Assessment Sparta Training Area. Carbondale, IL. January 1998.

U.S. Army Corps of Engineers.(USACE) 1987. Corps of Engineers Wetlands Delineation Manual. Environmental Laboratory Waterways Experiment Station, Corps of Engineers. Vicksburg, Mississippi. Washington D.C.

U.S. Department of Agriculture. National Resource Conservation Service 2002. Soil and Vegetation Survey of Illinois National Guard Training Site in Sparta, Illinois.

U.S. Department of Agriculture. Soil Conservation Service (SCS) 1982. Soil Survey of Randolph County, Illinois. Washington D.C.

U.S. Department of Agriculture, Soil Conservation Service. 1991. Hydric Soils of the United States. Soil Conservation Service. In cooperation with the National Technical Committee for Hydric Soils, Washington D.C.

U.S. Fish and Wildlife Service, 1996. National Wetland Inventory. Washington D.C., for Randolph County, Illinois.

United States Geological Survey-USGS, 1982. Tilden, Illinois Quadrangle - 7.5 Minute Series Topographic.

APPENDIX C

Certificate of Compliance for EO 11988/11990



DEPARTMENT OF THE ARMY
ILLINOIS ARMY NATIONAL GUARD
1301 NORTH MACARTHUR BOULEVARD
SPRINGFIELD, ILLINOIS 62702-2317

NGIL-CFM-ZA

28 September 2015

MEMORANDUM FOR National Guard Bureau (ARNG-ILI), ATTN: LTC Erik Gordon,
ARNG Readiness Center, 11 South George Mason Drive, Arlington, Virginia
22204-1382

SUBJECT: Certificate of Compliance with Executive Order 11988 and 11990

1. Reference. Executive Order 11988 and 11990, 24 May 1977.
2. The proposed construction site of low water crossing (LWC) 12 at Sparta Training Area, Sparta, Illinois, is located in a FEMA floodplain. The LWC is designed and sited to minimize possible environmental impacts to the floodplain and wetland. No practical alternatives exist to the structure as proposed and sited.
3. With respect to this project, all provisions of Executive Order 11988 and 11990 have been, or are being complied with.
4. Point of contact for this action is CW4 Kenneth Barry at 217-761-3931 or kenneth.e.barry2.mil@mail.mil.

A handwritten signature in black ink, appearing to read "C. Holan".

CRAIG A. HOLAN
LTC (P), EN, ILARNG
CFMO

APPENDIX D

Executive Order 11988, Floodplain Management

Codification of Presidential Proclamations and Executive Orders

Executive Order 11988—Floodplain management

SOURCE: The provisions of Executive Order 11988 of May 24, 1977, appear at 42 FR 26951, 3 CFR, 1977 Comp., p. 117, unless otherwise noted.

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in furtherance of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 *et seq.*), the National Flood Insurance Act of 1968, as amended (42 U.S.C. 4001 *et seq.*), and the Flood Disaster Protection Act of 1973 (Public Law 93-234, 87 Stat. 975), in order to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative, it is hereby ordered as follows:

SECTION 1. Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for (1) acquiring, managing, and disposing of Federal lands, and facilities; (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

SEC. 2. In carrying out the activities described in Section 1 of this Order, each agency has a responsibility to evaluate the potential effects of any actions it may take in a floodplain; to ensure that its planning programs and budget request reflect consideration of flood hazards and floodplain management; and to prescribe procedures to implement the policies and requirements of this Order, as follows:

(a) (1) Before taking an action, each agency shall determine whether the proposed action will occur in a floodplain—for major Federal actions significantly affecting the quality of the human environment, the evaluation required below will be included in any statement prepared under Section 102(2) (C) of the National Environmental Policy Act. This Determination shall be made according to a Department of Housing and Urban Development (HUD) floodplain map or a more detailed map of an area, if available. If such maps are not available, the agency shall make a determination of the location of the floodplain based on the best available information. The Water Resources Council shall issue guidance on this information not later than October 1, 1977.

(2) If an agency has determined to, or proposes to, conduct, support, or allow an action to be located in a floodplain, the agency shall consider alternatives to avoid adverse effects and incompatible develop-

Chapter 40—Protection of Environment

ment in the floodplains. If the head of the agency finds that the only practicable alternative consistent with the law and with the policy set forth in this Order requires siting in a floodplain, the agency shall, prior to taking action, (i) design or modify its action in order to minimize potential harm to or within the floodplain, consistent with regulations issued in accord with Section 2(d) of this Order, and (ii) prepare and circulate a notice containing an explanation of why the action is proposed to be located in the floodplain.

(3) For programs subject to the Office of Management and Budget Circular A-95, the agency shall send the notice, not to exceed three pages in length including a location map, to the state and areawide A-95 clearinghouses for the geographic areas affected. The notice shall include: (i) the reasons why the action is proposed to be located in a floodplain; (ii) a statement indicating whether the action conforms to applicable state or local floodplain protection standards and (iii) a list of the alternatives considered. Agencies shall endeavor to allow a brief comment period prior to taking any action.

(4) each agency shall also provide opportunity for early public review of any plans or proposals for actions in floodplains, in accordance with Section 2(b) of Executive Order No. 11514, as amended, including the development of procedures to accomplish this objective for Federal actions whose impact is not significant enough to require the preparation of an environmental impact statement under section 102(2)(C) of the National Environmental Policy Act of 1969, as amended.

(b) Any requests for new authorizations or appropriations transmitted to the Office of Management and Budget shall indicate, if an action to be proposed will be located in a floodplain, whether the proposed action is in accord with this Order.

(c) Each agency shall take floodplain management into account when formulating or evaluating any water and land use plans and shall require land and water resources use appropriate to the degree of hazard involved. Agencies shall include adequate provision for the evaluation and consideration of flood hazards in the regulations and operating procedures for the licenses, permits, loan or grants-in-aid programs that they administer. Agencies shall also encourage and provide appropriate guidance to applicants to evaluate the effects of their proposals in floodplains prior to submitting applications for Federal licenses, permits, loans or grants.

(d) As allowed by law, each agency shall issue or amend existing regulations and procedures within one year to comply with this Order. These procedures shall incorporate the Unified National Program for Floodplain Management of the Water Resources Council,¹ and shall explain the means that the agency will employ to pursue the nonhazardous use of riverine, coastal and other floodplains in connection with the activities under its authority. To the extent possible, existing processes, such as those of the Council on Environmental Quality and the Water Resources Council, shall be utilized to fulfill the requirements of this Order. Agencies shall prepare their procedures in consultation with the Water Resources Council, the Director of the Federal Emergency

¹ EDITORIAL NOTE: Inactive as of Oct. 1, 1982.

Codification of Presidential Proclamations and Executive Orders

Management Agency, and the Council on Environmental Quality, and shall update such procedures as necessary.

[Sec. 2 amended by EO 12148 of July 20, 1979, 44 FR 43239, 3 CFR, 1979 Comp., p. 412]

SEC. 3. In addition to the requirements of Section 2, agencies with responsibilities for Federal real property and facilities shall take the following measures:

(a) The regulations and procedures established under Section 2(d) of this Order shall, at a minimum, require the construction of Federal structures and facilities to be in accordance with the standards and criteria and to be consistent with the intent of those promulgated under the National Flood Insurance Program. They shall deviate only to the extent that the standards of the Flood Insurance Program are demonstrably inappropriate for a given type of structure or facility.

(b) If, after compliance with the requirements of this Order, new construction of structures or facilities are to be located in a floodplain, accepted floodproofing and other flood protection measures shall be applied to new construction or rehabilitation. To achieve flood protection, agencies shall, wherever practicable, elevate structures above the base flood level rather than filling in land.

(c) If property used by the general public has suffered flood damage or is located in an identified flood hazard area, the responsible agency shall provide on structures, and other places where appropriate, conspicuous delineation of past and probable flood height in order to enhance public awareness of and knowledge about flood hazards.

(d) When property in floodplains is proposed for lease, easement, right-of-way, or disposal to non-Federal public or private parties, the Federal agency shall (1) reference in the conveyance those uses that are restricted under identified Federal, State or local floodplain regulations; and (2) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successors, except where prohibited by law; or (3) withhold such properties from conveyance.

SEC. 4. In addition to any responsibilities under this Order and Sections 202 and 205 of the Flood Disaster Protection Act of 1973, as amended (42 U.S.C. 4106 and 4128), agencies which guarantee, approve, regulate, or insure any financial transaction which is related to an area located in a floodplain shall, prior to completing action on such transaction, inform any private parties participating in the transaction of the hazards of locating structures in the floodplain.

SEC. 5. The head of each agency shall submit a report to the Council on Environmental Quality and to the Water Resources Council on June 30, 1978, regarding the status of their procedures and the impact of this Order on the agency's operations. Thereafter, the Water Resources Council shall periodically evaluate agency procedures and their effectiveness.

SEC. 6. As used in this Order:

(a) The term "agency" shall have the same meaning as the term "Executive agency" in Section 105 of Title 5 of the United States Code and shall include the military departments; the directives contained in this Order, however, are meant to apply only to those agencies which perform the activities described in Section 1 which are located in or affecting floodplains.

Chapter 40—Protection of Environment

(b) The term “base flood” shall mean that flood which has a one percent or greater chance of occurrence in any given year.

(c) The term “floodplain” shall mean the lowland and relatively flat areas adjoining inland and coastal waters including floodprone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year.

SEC. 7. Executive Order No. 11296 of August 10, 1966, is hereby revoked. All actions, procedures, and issuances taken under that Order and still in effect shall remain in effect until modified by appropriate authority under the terms of this Order.

SEC. 8. Nothing in this Order shall apply to assistance provided for emergency work essential to save lives and protect property and public health and safety, performed pursuant to sections 305 and 306 of the Disaster Relief Act of 1974 (88 Stat. 148, 42 U.S.C. 5145 and 5146).

SEC. 9. To the extent the provisions of section 2(a) of this Order are applicable to projects covered by Section 104(h) of the Housing and Community Development Act of 1974, as amended (88 Stat. 640, 42 U.S.C. 5304(h)), the responsibilities under those provisions may be assumed by the appropriate applicant, if the applicant has also assumed, with respect to such projects, all of the responsibilities for environmental review, decisionmaking, and action pursuant to the National Environmental Policy Act of 1969, as amended.

APPENDIX E

Executive Order 11990, Protection of Wetlands

THE WHITE HOUSE
EXECUTIVE ORDER 11990
PROTECTION OF WETLANDS

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in furtherance of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.), in order to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative, it is hereby ordered as follows:

Section 1. (a) Each agency shall provide leadership and shall take action to the destruction, loss or degradation of wetlands, and to preserve and enhance natural and beneficial values of wetlands in carrying out the agency's responsibilities (1) acquiring, managing, and disposing of Federal lands and facilities; and (2) providing Federally undertaken, financed, or assisted construction and improvement; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

(b) This order does not apply to the issuance by Federal agencies of permits, licenses, or allocations to private parties for activities involving wetlands on non-Federal

Sec. 2. (a) In furtherance of Section 101(b)(3) of the National Environmental Policy Act of 1969 (42 U.S.C. 4331(b)(3)) to improve and coordinate Federal plans, functions, programs and resources to the end that the Nation may attain the widest range of beneficial uses of the environment without degradation risk to health or safety, each agency, to the extent permitted by law, shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds (1) that there is practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. In making this finding the head of the agency may take into account economic, environmental and other pertinent factors.

(b) Each agency shall also provide opportunity for early public review of any plans or proposals for new construction in wetlands, in accordance with Section 2(b) of Executive Order No. 11514, as amended, including the development of procedures to accomplish this objective for Federal actions whose impact is not significant enough to require the preparation of an environmental impact statement under on 102(2)(C) of the National Environmental Policy Act of 1969, as amended.

Sec. 3. Any requests for new authorizations or appropriations transmitted to the Office of Management and Budget shall indicate, if an action to be proposed will be located in wetlands, whether the proposed action is in accord with this Order.

Sec. 4. When Federally-owned wetlands or portions of wetlands are proposed for loan, easement, right-of-way or disposal to non-Federal public or private parties, the Federal agency shall (a) reference in the conveyance those uses that are restricted under identified Federal, State or local wetlands regulations; and (b) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law; or (c) withhold such properties from disposal.

Sec. 5. In carrying out the activities described in Section 1 of this Order, each agency shall consider

factors relevant to a proposal's effect on the survival and quality of the wetlands. Among these factors are:

- (a) public health, safety, and welfare, including water supply, quality, recharge and discharge; pollution; flood and storm hazards, and sediment and erosion;
- (b) maintenance of natural systems, including conservation and long term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber, and food and fiber resources; and
- (c) other uses of wetlands in the public interest, including recreational, scientific, and cultural uses.

Sec. 6. As allowed by law, agencies shall issue or amend their existing procedures in order to comply with this Order. To the extent possible, existing processes, such as those of the Council on Environmental Quality and the Water Resources Council, shall be utilized to fulfill the requirements of this Order.

Sec. 7. As used in this Order:

(a) The term "agency" shall have the same meaning as the term "Executive agency" in Section 105 of Title 5 of the United States Code and shall include the military departments; the directives contained in this Order, however, are meant to apply only to those agencies which perform the activities described in Section 1 which are located in or affecting wetlands.

(b) The term "new construction" shall include draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities begun or authorized after the effective date of this Order.

(c) The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.

Sec. 8. This Order does not apply to projects presently under construction, or to projects for which all of the funds have been appropriated through fiscal Year 1977, or to projects and programs for which a draft or final environmental impact statement will be filed prior to October 1, 1977. The provisions of Section 2 of this Order shall be implemented by each agency not later than October 1, 1977.

Sec. 9. Nothing in this Order shall apply to assistance provided for emergency work, essential to save lives and protect property and public health and safety, performed pursuant to Sections 305 and 306 of the Disaster Relief Act of 1974 (88 Stat. 148, 42 U.S.C. 5145 and 5146).

Sec. 10. To the extent the provisions of Sections 2 and 5 of this Order are applicable to projects covered by Section 104(h) of the Housing and Community Development Act of 1974, as amended (88 Stat. 640, 42 U.S.C. 5304(h)), the responsibilities under those provisions may be assumed by the appropriate applicant, if the applicant has also assumed, with respect to such projects, all of the responsibilities for environmental review, decision making, and action pursuant to the National Environmental Policy Act of 1969, as amended.

Jimmy Carter

The White House

May 24, 1977