ENVIRONMENTAL ASSESSMENT
UPPER STILES CREEK SHOOTING RANGE IMPROVEMENT PROJECT, CHENA RIVER STATE RECREATION AREA, ALASKA

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ACRONYMS AND ABBREVIATIONS

ACGP	Alaska Construction General Permit
ADA	Americans with Disabilities Act
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
ADOT	Alaska Department of Transportation
ANSCA	Alaska Native Claims Settlement Act
APDES	Alaska Pollutant Discharge Elimination System
BMP	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CRSRA	Chena River State Recreation Area
CWA	Clean Water Act
DM	Departmental Manual
DPOR	Division of Parks and Outdoor Recreation
DWC	Division of Wildlife Conservation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
USEPA	U.S. Environmental Protection Agency
U.S. EPA BMP's	U.S. EPA Best Management Practices for Lead at Outdoor Shooting Ranges Manual
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FNSB	Fairbanks North Star Borough
FONSI	Finding of No Significant Impact
IPaC	Information for Planning and Consultation
ITRC	Interstate Technology and Regulatory Council
MBTA	Migratory Bird treaty Act
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historical Preservation Act
NOAA	National Oceanic and Atmospheric Administration

NRA	National Rifle Association
NRHP	National Register of Historic Places
PJD	Preliminary Jurisdictional Determination
PM	Particulate Matter
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
SHPO	State Historic Preservation Office
SWPPP	Storm Water Pollution Prevention Plan
USAEC	United States Army Environmental Center
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USDOI	United States Department of the Interior
Service	United States Fish and Wildlife Service
WOTUS	Waters of the United States

CHAPTER 1: PROJECT DESCRIPTION

1.1 Introduction

The Alaska Department of Natural Resources (ADNR), Division of Parks and Outdoor Recreation (DPOR) has applied to the Alaska Department of Fish and Game (ADF&G), Division of Wildlife Conservation (DWC) for a grant to upgrade the existing Stiles Creek shooting range at Mile 36.4 of Chena Hot Springs Road, within the Chena River State Recreation Area (CRSRA) outside Fairbanks, Alaska. The range is in a former Alaska Department of Transportation (ADOT) gravel pit and lacks all safety and environmental controls found in modern ranges.

The project will be completed using grant funds administered through the United States Fish and Wildlife Service (Service) Wildlife Restoration Program. By using Federal grant monies, a federal nexus is triggered, requiring the implementation of a National Environmental Policy Act (NEPA) review resulting in the preparation of this Environmental Assessment (EA).

This EA has been prepared pursuant to NEPA (42 U.S.C. § 4321, *et seq.*), the United States Department of the Interior (USDOI) NEPA regulations (43 CFR 46), and the Departmental Manual (516 DM 8) to ensure NEPA compliance for the proposed project [1].

Pursuant to the NEPA and associated regulations, this EA assesses potential impacts caused by the Preferred Action Alternative, to the natural and human environment and includes a reasonable range of alternatives including Alternative C. Mitigation measures have been considered throughout EA development and incorporated where feasible.

[1] 1. Executive Order 14154, *Unleashing American Energy* (Jan. 20, 2025), and a Presidential Memorandum, *Ending Illegal Discrimination and Restoring Merit-Based Opportunity* (Jan. 21, 2025), require the Department to strictly adhere to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 et seq. Further, such Order and Memorandum repeal Executive Orders 12898 (Feb. 11, 1994) and 14096 (Apr. 21, 2023). Because Executive Orders 12898 and 14096 have been repealed, complying with such Orders is a legal impossibility. The [bureau] verifies that it has complied with the requirements of NEPA, including the Department's regulations and procedures implementing NEPA at 43 C.F.R. Part 46 and Part 516 of the Departmental Manual, consistent with the President's January 2025 Order and Memorandum. The U.S. Fish and Wildlife Service has also voluntarily considered the Council on Environmental Quality's rescinded regulations implementing NEPA, previously found at 40 C.F.R. Parts 1500–1508, as guidance to the extent appropriate and consistent with the requirements of NEPA and Executive Order 14154.

Impacts may be beneficial or detrimental, direct, or indirect, and short-term or long-term. The EA also analyzes the potential for reasonably foreseeable effects and makes a determination as to the significance of those effects. In the absence of significant impacts to the natural and human environment, this EA would result in a Finding of No Significant Impact (FONSI). Should significant adverse impacts be identified as a result of the direct, indirect, or reasonably foreseeable effects of the Preferred Action Alternative, NEPA requires the preparation of an environmental impact statement.

The lead federal agency for the NEPA compliance is the Service. The United States Army Corps of Engineers (USACE) will serve as a cooperating agency. ADNR DPOR is a participating agency. The grant is being administered by the ADF&G, DWC Hunter Access Program.

After the Service signs a decision notice, the Preferred Action Alternative, if implemented, would be funded in part through a Service grant under the (Wildlife Restoration Act of 1937 (Pittman-Robertson Act)), which is funded by excise taxes on firearms, ammunition, and archery equipment.

1.2 Purpose and Need

The purpose of the proposed action is to improve an existing, rudimentary, public outdoor shooting range to expand capacity and promote safe, responsible, and knowledgeable firearm use. The need for the proposed action is to provide an upgraded, expanded, and more environmentally friendly public shooting range in a region severely lacking a sufficient number of shooting range facilities.

The proposed upgrades were called for in the 2006 Chena River State Recreation Area Management Plan (ADNR DPOR, 2006 p. 35-36)*:*

Shooting Range

- *1) Upgrade benches, trash receptacle, and re-install a vaulted toilet.*
- *3) Seek funding and volunteers to upgrade or extend the shooting range*

The proposed action is intended to upgrade and expand the range to conform to the current National Rifle Association (NRA) range guidance as described in the *NRA Range Source Book* (2012). In addition to increasing safety, the project will provide an expanded, confined, and cleaner environment for recreational shooting activities. Proposed range improvements would

include expansion and access upgrades including berms to increase safety and help prevent lead shot from entering adjacent waters, walkways, a covered firing line, additional benches (including an Americans with Disabilities Act (ADA)-compliant bench, additional parking (including ADA compliant parking), and access road improvements to meet visitor needs and to improve hydrological connections.

1.3 Background Information

The existing rudimentary Stiles Creek Shooting Range Facility has been owned and managed by the ADNR DPOR since the late 1960s. Prior to ADNR DPOR ownership, the gravel pit was owned by the ADOT and used as a materials site for the construction and maintenance of Chena Hot Springs Road. Once ADOT no longer had a need and the site was abandoned, the gravel pit was used by locals for recreational shooting. ADNR DPOR has turned a portion of the gravel pit into a serviceable public shooting range. Over time, a few improvements at the range were performed by volunteer groups but fell short of meeting any type of standards. The most recent improvement work was in 2006 when minimal upgrades occurred to the range in response to increased use, however, the range still does not meet any established outdoor range guidelines. Other concerns include lack of drainage, limited parking, lack of ADA access, a narrow, exposed firing line, the presence of the Winter Trail near the firing line, the presence of litter, and wildfire ignition hazard. As a result, there is a lack of accessibility, an increased concern for safety, continued site degradation, and dissatisfaction from the public.

This site is one of two public outdoor shooting ranges that serve the 7,444 square mile Fairbanks-North Star Borough and surrounding area. Given the interest in hunting and target shooting, safe, public gun ranges are too few to support the demand. Shooting ranges that are constructed for safety and public accessibility play a key role in recruiting new hunting and target shooting enthusiasts, and in improving their skill and proficiency.

ADNR DPOR is experienced in operating and maintaining this shooting range with multiple third-party groups to help. ADNR DPOR also operates and maintains numerous other properties including parks, campgrounds, and lake access areas.

1.4 Project Location

The existing Stiles Creek Shooting Range is located within the Fairbanks North Star Borough (FNSB) at latitude 64.90544, longitude -146.45802 (See Figure 1: Stiles Creek Shooting Range Site Location) and is 245,080 acres in size.

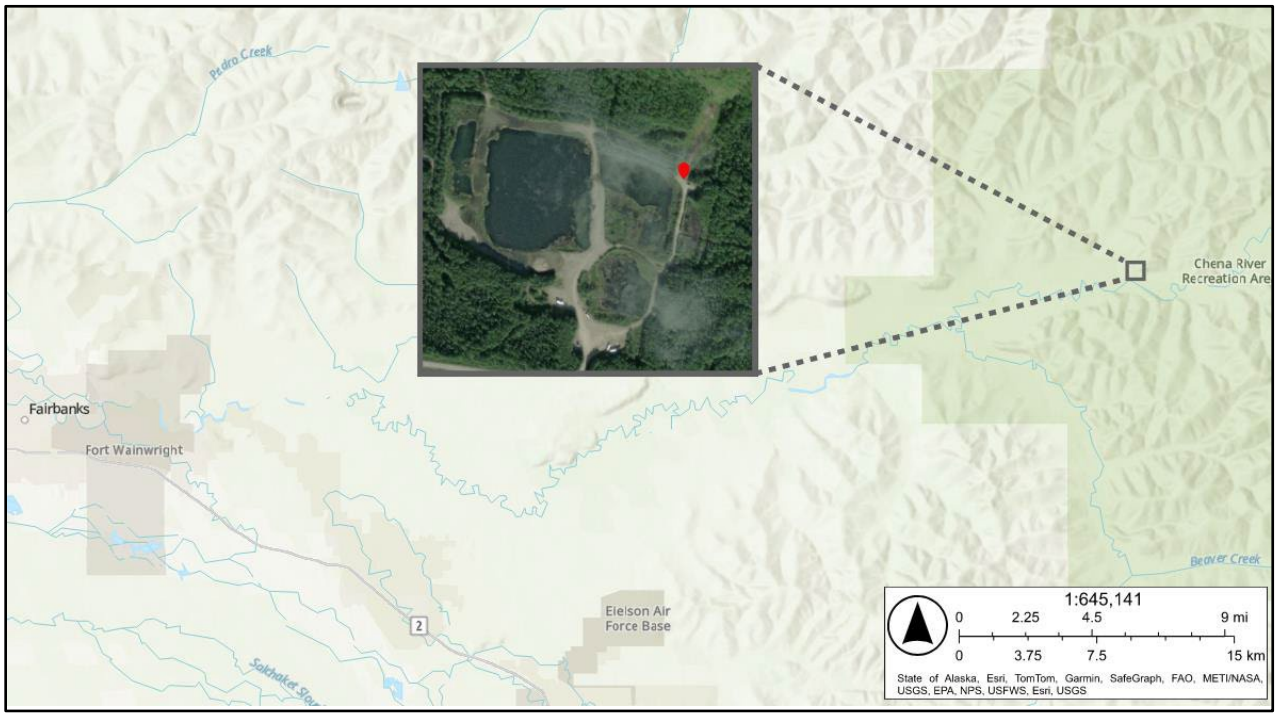

Figure 1: Stiles Creek Shooting Range Site Location

1.5 Scoping and Areas of Consideration

This draft EA was prepared in accordance with NEPA (42 USC 4321), 43 C.F.R. Part 46, and Part 516 of the Department of Interior Manual. During the internal scoping process, we reviewed the proposed action and conducted an effects analysis for the use of the (Proposed Action) Stile's Creek location for an expanded and improved shooting range.

Through internal scoping and careful consideration, we have determined that an analysis of project effects should be completed on the following resources and areas of consideration. Since the proposed project is located in a rural State Recreation Area, effects on land use and site topography as related to recreational values were analyzed. The proposed project will require land clearing, soil disturbance, deposition of spent lead, and has potential for wetland fill, therefore, effects on soils, vegetation, water (including wetlands), wildlife (including threatened and endangered species), and fish (including other aquatic species) were analyzed. Potential impacts related to noise (construction and use), local air quality, historical and cultural resources, and socioeconomic conditions were also analyzed. Cumulative effects were also looked at under each resource or area of consideration analysis. Once analysis was completed, a determination of substantial effects was made for each resource or area of consideration.

1.6 Previous Environmental Documentation

ADNR DPOR implemented the CRSRA Management Plan in 2006 to provide guidance for managing and improving outdoor recreation opportunities within the CRSRA.

In September 2023, a Wetland Delineation Report was completed (Appendix A). In May 2024 a Wetlands Assessment following the Wetland Ecosystem Services Protocol for Alaska, regionalized for use in the Interior of Alaska (WESPAK-Int) (Adamas, 2021), was used to evaluate the condition of the five discrete wetlands identified in the Shannon & Wilson, Wetland Delineation Report and to identify the functions and services they provide, and a summary report was prepared (Appendix B). Wetland Assessments are used to systematically evaluate the condition of a wetland, and/or to identify the functions and services it provides. This is done using data collected through geospatial data aggregation, rapid field testing, and sometimes monitoring. The outcome of a wetland assessment is then used to support decision-making and planning processes. The outcome of the Wetlands Assessment can be used to help determine if compensatory mitigation might be necessary under the Service's "No Net Loss" Policy based on Executive Order 11990, Protection of Wetlands (42 FR 26961), which states that federal agencies shall "provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands". The Order requires federal agencies to avoid undertaking or providing financial assistance for new construction projects located within wetlands unless no practical alternative is available. While the Stiles Creek Shooting Range upgrade project enhances the Public Interest in many ways, (safety, recreation, etc.), some Public Interest Factors pertaining to wetlands may be unavoidably impacted by the expansion of infrastructure at the site.

Soil lead sampling and a corresponding A Lead Assessment Report was completed in October 2023 (Appendix C).

1.7 Regulatory and Permit Requirements

Cultural/Historical Resources

Historic properties, or cultural resources, on federal or Tribal land are protected by many laws, regulations, and agreements. Section 106 of the National Historic Preservation Act (NHPA) of 1966 (16 USC 470 et seq.) requires, for any federal, federally assisted, or federally licensed undertaking, that the federal agency consider the effect of that undertaking on any district, site, building, structure, or object included in the National Register of Historic Places (NRHP) before

the expenditure of any federal funds or the issuance of any federal permits. Cultural resources are a broad term that encompasses sites, objects, and practices of archaeological, historical, cultural, and religious significance. Eligibility criteria (36 CFR 60.4) include association with important events or people in history, distinctive construction or artistic characteristics, and either a record of yielding or a potential to yield information important in regard to prehistory or history. In practice, properties generally are not eligible for the NRHP if they lack diagnostic artifacts, subsurface remains, or structural features, and those considered eligible are treated as though they were listed in the NRHP even when no formal nomination has been filed. The Service is required to consult with potentially affected Tribes and the State Historic Preservation Office (SHPO) concerning potential effects on historic properties. This process of considering an undertaking's effect on historic properties is known as a 'Section 106 Review'.

Wetlands

Section 404 of the Clean Water Act (CWA) regulates discharges of dredged or fill material into wetlands and waterbodies meeting the definition of Waters of the United States (WOTUS). The USACE, Regulatory Division is the agency with the authority to officially determine if an area contains Waters of the United States (WOTUS). The discharge of fill into, or work in, under or over WOTUS may require a permit from the USACE. Further, Executive Order 11990, Protection of Wetlands, directs federal agencies to avoid, to the extent possible, adverse impacts associated with the destruction or modification of wetlands, and to avoid supporting new construction in wetlands whenever there is a practicable alternative. Wetlands are present at the proposed project site as determined by the wetland delineation conducted on August 23, 2023 (see Appendix A and Section 3.1 for wetlands information). USACE Jurisdictional wetlands are areas that meet the necessary criteria in the USACE's 1987 Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Alaska Region (Alaska Regional Supplement). A June 2024 USACE Preliminary Jurisdictional Determination (PJD) response letter confirmed the proposed project site may contain wetlands under USACE regulatory jurisdiction (Appendix D). To expand the current footprint of the range, a USACE wetland permit will be required under Section 404 CWA due to impacts to jurisdictional wetlands. The project falls within the thresholds of NWP 42 which covers discharge of dredged or fill material into non-tidal waters of the United States (US) for the construction or expansion of recreational facilities. The NWP also authorizes the construction or expansion of small support facilities, such as maintenance and storage buildings directly related to the recreational activity. The discharge may not cause the loss of greater than ½-acre of non-tidal waters of the

US. NWP 42 requires the permittee to submit a pre-construction notification to the district engineer prior to commencing the activity.

Water Quality

The ADEC, APDES program, would require the submittal of a Storm Water Pollution Prevention Plan (SWPPP) and a Notice of Intent (NOI) in accordance with the Alaska Construction General Permit (ACGP) AKR100000[2] prior to the initiation of construction activities. The ACGP would be required to comply with the provisions of the Clean Water Act (CWA), 33 U.S.C. §1251 et. seq., as amended by the Water Quality Act of 1987, P.L. 100-4, and the permit is issued under provisions of Alaska Statutes 46.03. The ACGP allows construction sites to discharge stormwater if they implement specific measures to minimize pollution in that runoff. These measures include the submittal of the SWPPP seven days prior to initiating site work and utilizing best management practices (BMP's) to control sediment and other pollutants from entering waters, thereby protecting water quality.

Per Section 401 of the Federal Clean Water Act of 1977 and the Alaska Water Quality Standards provisions, ADEC has issued a 401 Water Quality Certification (401 Cert) related to certain USACE NWPs issued in Alaska. The ADEC Program Manager for the Wastewater Discharge Authorization Program was consulted via telephone on December 9, 2024, and verified that NWP 42 is included among the NWPs covered by the ADEC 401 Certification (Personal Communication J. Rypkema, 2024).

Local Permitting

The proposed project site is located within the FNSB and would be subject to its permitting requirements, which include obtaining Floodplain Development and Building Permits.

CHAPTER 2: ALTERNATIVES

This chapter explains the alternatives considered for this project and provides a summary of the more substantive differences amongst alternatives that were evaluated in detail in the NEPA review.

[2] Alaska Construction General Permit - https://dec.alaska.gov/media/22136/2021-cgp-pmt-akr10-fnl-20201217.pdf

2.1 Alternative A – Stiles Creek Shooting Range Upgrade and Expansion (Preferred Action Alternative)

Alternative A is the Preferred Action Alternative because of the many desired amenities supportive of the 2006 CRSRA Management Plan and ADF&G's priorities for providing public shoot ranges as well as the environmental improvements beyond baseline conditions that will be implemented.

Alternative A would include widening the existing footprint of the range from approximately 80' to approximately 180' which would allow for the installation of an approximately 85-foot-long by 15-foot-wide concrete slab-covered shooting pavilion that would provide for a minimum of seven additional benches to supplement the three current benches, including an ADA-compliant bench. Side or backstop berms do not currently exist and would be designed and constructed for increased safety of range and winter trail users, as well as reducing wildfire risk and minimizing the amount of lead that might migrate off the range.

To accommodate the shooting range improvements, this project would include a parking lot expansion and paving to include ADA-compliant parking and improvements to the access road. The access road would be culverted, graded, scarified, and paved. The culverts which would be appropriately sized to restore proper hydrologic connectivity between the wetlands.

Alternative A would minimize environmental impacts related to range operations and improve current environmental conditions by following the pertinent and feasible U.S. Environmental Protection Agency's (USEPA) *Best Management Practices for Lead at Outdoor Shooting Ranges* (2005) and conform to current NRA range guidance as described in the *NRA Range Source Book* (2012). Alternative A would implement stormwater controls, and drainage structures in accordance with the ADEC, Alaska Pollutant Discharge Elimination System (APDES), General Permit for Discharges from Large and Small Construction Activities, AKR100000.

ADNR DPOR has consulted, and is working closely, with agencies such as USACE, ADF&G, and the Service to address regulatory compliance for the proposed project. Final shooting range designs may be altered to adjust to all federal, state, and local permitting as required.

The expansion and associated improvements under Alternative A would increase capacity of the range drawing additional users to the facility as intended in Pub. L. 116-17 Target Practice and Marksmanship Training Support Act of 2019 (Tar-Mark) (Appendix E) which amended the

Pittman-Robertson Wildlife Restoration Act to facilitate the construction and expansion of public target ranges in the United States.

2.2 Alternative B – Stiles Creek Shooting Range Upgrade Without Expansion

Alternative B would not expand the footprint of the existing range therefore improvements would be greatly reduced compared to Alternative A. Alternative B would provide for a covered firing line but would keep the range at the current size of approximately 80 feet wide by 400 feet long which would result in far fewer firing lanes (shooting benches) than Alternative A due to the need to construct side berms within the existing footprint. Alternative B would provide a reduced amount of additional parking commensurate with fewer shooting benches, the down range area would be elevated and resurfaced, and the access road would be minimally upgraded instead of resurfaced, paved, and culverted as under Alternative A. Alternative B would minimally improve the existing Stiles Creek Shooting Range, which could draw some additional users to the facility but would not expand capacity to the desired extent as in Alternative A.

2.3 Alternative C – No-Action Alternative

A No-Action Alternative is included reflecting baseline conditions that would continue to exist if neither Alternative A or B is implemented. With the No-Action Alternative, the proposed project site would continue to be used, in its current condition, as an active shooting range with none of the improvements called for in the CRSRA Management Plan. The range would not conform to safety standards outlined in NRA Range Source Book, nor implement the USEPA Best Management Practices for Lead at Outdoor Shooting Ranges document.

Implementation of Alternative C would result in continued potential impacts to adjacent wetland and waterways from sedimentation runoff and the potential release of lead into the environment from accumulated spent lead. The facility would continue to perpetuate existing safety issues, especially for nearby trail users and other outdoor recreationalists, and perpetuating existing access issues, especially for disabled users as the range is not currently ADA-compliant.

Alternative C would fail to expand capacity of the range as intended in grant authorizing legislation Pub. L. 116-17 Tar-Mark (Appendix E).

CHAPTER 3: AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES

This section establishes the background conditions of the project area and its surroundings. Knowledge of these background conditions will assist in making determinations of project-related impacts, if any, that the Alternatives will have on environmental resources.

After a summary of the background conditions, any impacts to environmental resources, caused by each of the alternatives is analyzed. These impacts may also include cumulative impacts. Cumulative impacts are those environmental impacts that accumulate over time or in combination with similar events in the area. Unrelated and dissimilar activities may also have negative impacts on critical elements, thereby contributing to cumulative impacts. Because of the overall undeveloped nature of the proposed project area, past and current recreational activities, recreation infrastructure, and road infrastructure.

3.1 Land Use

The proposed project site is an existing state-owned public shooting range located at MP 36.4 Chena Hot Springs Road within the CRSRA which has been active since the mid-1960s. Alaska Statute 41.21.475 which established the CRSRA in 1967 and expanded it in 1975 reserves the area from all uses incompatible with the primary function as public recreation land. There are no designated residences in the surrounding area due to the rural location and size of the CRSRA. Multiple recreational trail systems are present within the CRSRA.

The shooting range is located in CRSRA Unit 1 as designated in the CRSRA Management Plan. The Chena River, paralleled by Chena Hot Springs Road, forms the spine of Unit 1, which contains a free-flowing clear-water stream for grayling fishing, salmon viewing, boating, river floating, camping and a variety of associated recreational opportunities. Landforms flanking the river valley rise to panoramic alpine ridges, the highest of which, Chena Dome, is 3,700 feet above the river valley. In summer, the Stiles Creek, Chena Dome, Angel Rocks, and Granite Tors areas are major hiking attractions.

The CRSRA Management Plan designated Unit 1 for Recreational Development to meet the more intensive recreational needs of the public. This unit is intended to provide convenient and well-defined access via roads, boat access, and high-standard trails; more intensively developed recreational facilities; and a potential information center to orient visitors to the unit's special features (ADNR, 2006, p29). However no reasonably foreseeable future development is

anticipated at this time in the CRSRA due to funding limitations and the priority to maintain existing sites.

The area adjacent to the shooting range is generally undeveloped forest with both winter and summer recreational public-use trails. The parking lot in the proposed project area intersects with a Winter Trail that runs behind the firing line. In winter, the area provides excellent opportunities for snowmachining, cross-country skiing, skijoring and dog mushing, especially in the lowlands adjacent to streams (ADPOR, 2006, p71). Unsanctioned camping and general day use recreation occurs throughout the year at CRSRA trails, gravel bars, and parking areas.

ENVIRONMENTAL CONSEQUENCES

Alternative A – Upgrade and Expansion (Preferred Action Alternative)

The proposed project site is currently used as an active public shooting range and the Alternative A will make substantial improvements and alterations to the existing site in accordance with the CRSRA Management Plan (ADNR, 2006, p22). These improvements will expand user accessibility and increase safety in the area, both for range users and users of the Winter Trail.

Parking lot and range construction activities would not change the current or future land use as defined within the current CRSRA Management Plan. Construction and site upgrades would improve overall site safety.

Construction of firing range berms will mitigate the existing substantial safety risks for those using the Winter Trail. Appropriate shooting range signage and trail crossing signage at the parking lot and access road would be posted during and after construction. No negative impacts to trail access are anticipated from the proposed expansion of the parking lot. Winter Trail users would have the option of following the existing route behind the firing line or rerouting around the man-made ponds via the range access road looping by the vault toilet. Chapters 2 and 3 of the CRSRA Management Plan states that ADNR DPOR will work with interested individuals and user groups to improve the shooting range and make it safer for trail users and others (ADNR, 2006, p22).

Alaska Statute 41.21.485 reserves zoning of private inholdings within the CRSRA (ADNR, 2006, p132). Planning constraints are addressed within the CRSRA Management Plan and would be reviewed accordingly for any proposed changes in land use.

No significant impacts related to land use are anticipated under alternative A.

Alternative B – Upgrade Without Expansion Alternative

Alternative B would provide similar benefits as the Alternative A and bring about some of the changes recommended in the CRSRA Management Plan. The impacts and mitigation measures would be the same as for Alternative A, though at a smaller scale since no site expansion would be included. The purpose of the grant authorizing legislation Pub. L. 116-17 Tar-Mark (Appendix E) is to construct and expand public shooting ranges and site expansion will be necessary to achieve the desired increase in capacity.

No significant impacts related to land use are anticipated under alternative B.

Alternative C – No Action Alternative

Land use will remain the same, which fails to meet purposes of the CRSRA Management Plan which is to improve recreation facilities, trails, visitor service and other developments for today and future generations, (Lewanski, 2006, P1) and fails to increase safety and capacity at the range.

No significant impacts related to land use are anticipated under alternative C.

3.2 Topography

Topography in the immediate project area generally slopes gently to the south to the Chena River, while the existing shooting range remains relatively flat at the shooting line and further down range with an approximate elevation gain of 37 feet at the backstop. An earthen hill at the end of the existing shooting range creates a natural barrier with an elevation gain of approximately 430 feet within a 1,000-foot distance and average slope of 32.5%. Figure 2 shows the current topography and Figure 3 shows a photo of the hill beyond the shooting range.

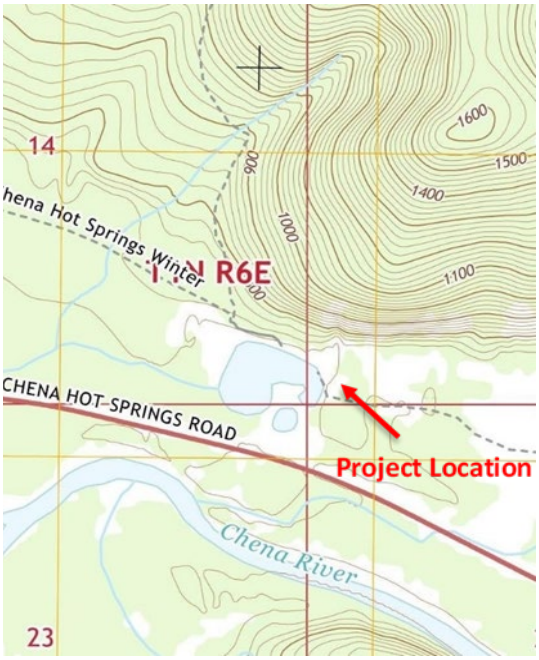

Figure 4: Site Topography (20 Feet Contours) (U.S. Geological Survey, 2023)

Figure 5: Looking Downrange to Hillside

ENVIRONMENTAL CONSEQUENCES

Alternative A – Upgrade and Expansion (Preferred Action Alternative)

Alternative A would regrade the range widening it and the parking area, add appropriate berms for public safety and wildfire prevention, and install culverts appropriately sized and designed for the location. Existing topography would be utilized to the greatest extent possible; however, construction activities would move some organic material to widen, lengthen, or increase the height of the natural topography. Changes to topography would be limited and would not negatively impact user access to surrounding established trails.

While there are areas of extreme slope and rugged terrain, the renovations of Alternative A would not take place in those areas. This alternative is designed to utilize the topography to follow BMP's that include an earthen backstop that is between approximately 15 and 20 feet high with a recommended slope as steep as possible following US*EPA BMP for Lead Outdoor Shooting Ranges*, P III-2 (2005) and *NRA Range Source Book* (2012). The BMP's also state that for lead reclamation, the area should be level and flat, if possible (PII-5), making the existing established shooting range an ideal area for renovations. The main firing line areas would be constructed and elevated on the relatively flat existing topography. Ground contouring would be used to control stormwater and increase lead containment. Existing gravel roadways allow heavy equipment easy access to the site for construction renovations.

No significant impacts on topography are anticipated under Alternative A.

Alternative B – Upgrade Without Expansion Alternative

The impacts would be similar to those described in Alternative A above.

No significant impacts on topography are anticipated under Alternative B.

Alternative C – No Action Alternative

Topography will remain the same leaving inadequate safety berms, stormwater controls, and lead containment.

No significant impacts on topography are anticipated under Alternative C.

3.3 Soils

According to the U.S. Department of Agriculture (USDA) Soil Survey, a single soil type, Goldstream peat, 0 to 3 percent slopes (76.9%), and Water (23.1%) is present at the proposed project site (USDA, 2023, p1) (Appendix F). The Goldstream series consists of very poorly drained soils formed in silty alluvium and colluvium containing permafrost with pH values ranging from 4.4 (extremely acidic) to 4.9 (very strongly acidic) (USDA, 2022, p1). Lead becomes soluble in soil when the PH is less than 6.5 or greater than 8.5 (U.S. Army Environmental Center (USAEC), p9). Organic material is known to remove lead from water through absorption, particularly in oxygen deficient conditions such as wetland soils where organic carbon may reduce oxidized forms of lead into lead sulfides, which remain relatively immobile. Therefore, layers of organic material generally reduce lead leachate into groundwater (The Interstate Technology and Regulatory Council (ITRC), 2005, p9). Topography and presence of permafrost in soils may increase the horizontal migration of lead leachate. Dissolved lead migrates vertically in unfrozen soils, once it reaches the impermeable permafrost, it can be transported horizontally until it reaches ground level or surface water (USAEC, 1998 p 11).

No soils are considered prime farmland per the National Resources Conservation Service (Appendix F).

On February 2, 2023, a geotechnical investigation was conducted during the design process for the covered pavilion at the proposed project site. Two boreholes in the proposed project site were drilled to confirm soil types. Boreholes confirmed soils to be organics/vegetation upon silty gravel/sand with an observed water table at 6 feet (Appendix G). Although the organic material at the surface will bind some soluble lead, the permeable underlayers and shallow water table increases the potential for vertical movement of leachate and groundwater contamination (USAEC, 1998, p9-10).

Given the project site is an active shooting range, consideration of potential lead-contaminated soil was investigated. Shannon and Wilson completed a lead assessment for the proposed project site in October 2023 (Appendix B). Soil samples were collected following a modified incremental sampling methodology from three wooded areas on either side (east and west) of the current shooting lanes and in the planned parking lot expansion area for analytical lead testing. The report indicated that lead is present in the areas sampled but at concentrations below ADEC's soil cleanup level of 400 mg/kg and below the EPA's recently reduced residential

screening levels of 200 mg/kg (i.e., 200 ppm). The results from the Lead Assessment Report (Appendix B) are shown below.

Table 1. Lead Sampling Detectable Results Summary

Client Sample ID SC23-ISM01 Lab Sample ID: 1234625001 IRTC Incremental Samp Method (2012) Metals by ICP/MS	Parameter Multi-Incremental Sub Sampling Lead	Result 0.00 18.5	Units mg/kg
Client Sample ID SC23-ISM02 Lab Sample ID: 1234625002 IRTC Incremental Samp Method (2012) Metals by ICP/MS	Parameter Multi-Incremental Sub Sampling Lead	Result 0.00 161	Units mg/kg
Client Sample ID SC23-ISM03 Lab Sample ID: 1234625003 IRTC Incremental Samp Method (2012) Metals by ICP/MS	Parameter Multi-Incremental Sub Sampling Lead	Result 0.00 10.6	Units mg/kg
Client Sample ID SC23-ISM13 Lab Sample ID: 1234625004 IRTC Incremental Samp Method (2012) Metals by ICP/MS	Parameter Multi-Incremental Sub Sampling Lead	Result 0.00 9.43	Units mg/kg
Client Sample ID SC23-ISM23 Lab Sample ID: 1234625005 IRTC Incremental Samp Method (2012) Metals by ICP/MS	Parameter Multi-Incremental Sub Sampling Lead	Result 0.00 10.8	Units mg/kg

Lead shot is not considered a hazardous waste subject to the Resource Conservation and Recovery Act (RCRA) at the time it is discharged from a firearm because the shot is being used for its intended purpose. As such, a RCRA permit is not required to operate a shooting range (USEPA, n.d. B, p.1). Additionally, it is the USEPA's position at active, outdoor shooting ranges that the backstop and shot fall zone soils are part of a range and are not considered waste when moved or relocated within the range boundaries, as long as the site continues to be used as an active range and the backstop materials continue to be used as backstop materials.

ENVIRONMENTAL CONSEQUENCES

Alternative A – Upgrade and Expansion (Preferred Action Alternative)

The use and accumulation of spent lead at shooting ranges can have localized negative effects on soil quality. According to the USEPA's *Best Management Practices for Lead at Outdoor Shooting Ranges* (2005), lead can be introduced into the environment through one or more pathways, with each pathway being site-specific and may or may not occur at individual shooting ranges. These pathways include lead oxidizing when exposed to air and dissolving when exposed to acidic water or soil, lead bullets, bullet particles, or dissolved lead being moved by storm water runoff, and dissolved lead migrating through soils to groundwater.

Since the proposed project site has been an active shooting range since the 1960's, it would be inconceivable to think that there are no current negative impacts to soils on site. However, implementing this alternative would reduce future impacts by improving the existing site resulting in better containment and management of spent lead by stabilizing the ground surface, managing runoff, and installing side and end berms. Since solubility rates of lead are lowest in soils with a pH between 6.5 and 8.5 (USAEC 1998 p 9), neutral fill used for the backstop, side berms and firing line floor would upgrade the baseline condition of the site reducing soluble lead levels in the soil which would not be achieved under Alternative C.

Surface disturbance caused by construction activities would result in the removal of vegetation from the soil surface. Removal of vegetation could damage soil crusts and destabilize the soil. As a result, the soil surface could become more prone to accelerated erosion by wind and water which could increase lead movement. However, revegetation efforts would mitigate this to a large degree. Lead particles are heavy compared to other suspended particles of similar size, ground contouring and reseeding with grass and other vegetation would minimize the likelihood of lead particles migrating with water runoff.

The use of heavy equipment may result in soil compaction which can decreases permeability and increases surface runoff, especially in silt and clay soils. In addition, soils may be impacted by mixing of soil horizons. Soil compaction and mixing of soil horizons would be minimized by topsoil segregation and reuse.

Potential for chemical contamination of soils could occur if accidental spills or inadvertent leaks of vehicle or other fluids occur during construction activities, however appropriate BMP's will

be implemented under the ACGP. As such, this may result in temporary, minor, indirect soil impacts due to fluid releases.

BMP's would be implemented during construction to minimize soil impacts, such as re-seeding inactive areas, erosion control mats, and/or silt fences.

Since current lead concentrations in soils that will be disturbed during construction are below ADEC and EPA clean up levels, construction activities should not pose a significant risk.

No significant impacts to soils are anticipated under Alternative A. If Alternative A were implemented site upgrades would improve soil conditions into the future through increased lead containment.

Alternative B – Upgrade Without Expansion Alternative

The impacts and mitigation measures would be the same as for Alternative A, though at a smaller scale since no site expansion would be included. The purpose of the grant authorizing legislation Pub. L. 116-17 Tar-Mark (Appendix E) is to construct and expand public shooting ranges and site expansion will be necessary to achieve the desired increase in capacity. This alternative would also improve the existing site resulting in reduced impacts to soils through improved containment/management of spent lead that will would not occur under Alternative C.

No significant impacts to soils are anticipated under Alternative B. If Alternative B were implemented site upgrades would improve soil conditions into the future through increased lead containment.

Alternative C – No Action Alternative

No significant impacts to soils are anticipated under Alternative C, as conditions at the site will not change. If Alternative C were implemented no site upgrades would occur that may improve soil conditions into the future through increased lead containment.

3.4 Vegetation

Vegetation at the proposed project site includes a mixture typical of Interior Alaska. Vegetation species includes: Bebb willow *(Salix bebbiana*) and alder (*Alnus incana*), bluejoint grass (*Calamagrostis canadensis*), iris (*Iris setosa*), Siberian yarrow (*Achillea alpina*), yellow rattle (*Rhinanthus minor*), Alaska paper birch (*Betula neoalaskana*), white spruce (*Picea glauca*),

prickly rose (*Rosa acicularis*), bunchberry (*Cornus canadensis*), meadowsweet (*Spiraea stevenii*), woodland horsetail (*Equisetum sylvaticum*), meadow horsetail (*Equisetum pratense*), fireweed (*Chamaenerion angustifolium*) as described in the Wetlands Delineation Report (Appendix A).

ENVIRONMENTAL CONSEQUENCES

Alternative A – Upgrade and Expansion (Preferred Action Alternative)

Construction activities under Alternative A would cause minor temporary impacts to vegetation at the proposed project site through land clearing and construction activities. Mitigation measures would be implemented to protect the vegetation from damage by heavy equipment and tracked vehicles during construction. Additional mitigation activities include limiting construction disturbance to within the project boundary, and re-vegetation of all disturbed areas. Revegetation would begin as soon as site conditions allow and would use grasses suitable for range maintenance and lead reclamation. Only native species would be planted using an approved seed mix according to the *Revegetation Manual for Alaska* (Wright, 2008).

Loss of some vegetation through expansion of the range would not have long term or population level impacts as all species are commonly found across northern boreal forests and none are endangered, threatened, listed as a species of concern, or protected. Soluble forms of lead can be taken up from soil water through capillary action by a plants root system or from airborne sources through cellular respiration (Sharma and Dubey, 2005). While most plants that take up lead store it in their root system, some plants can store lead in the above ground parts (leaves, seeds, and stems) (ITRC, 2005, p. 13 -14). Lead concentrations in soils are known to have negative effects on vegetation growth including root elongation, seed germination, seedling development, transpiration, and chlorophyll production (Kumar et. al, 2013, p. S2340) however site improvements made through implementation of Alternative A may help to reduce soil lead concentrations. Loss of a small amount of vegetation would not impact the area's ecosystem functions.

No significant impacts to vegetation are anticipated under Alternative A. If Alternative A were implemented site upgrades may improve vegetation conditions into the future through increased lead containment.

Alternative B – Upgrade Without Expansion Alternative

A smaller overall area will be disturbed, but the applied mitigating measures would be the same as in Alternative A. The purpose of the grant authorizing legislation Pub. L. 116-17 Tar-Mark (Appendix E) is to construct and expand public shooting ranges and site expansion will be necessary to achieve the desired increase in capacity.

No significant impacts to vegetation are anticipated under Alternative B. If Alternative B were implemented site upgrades may improve vegetation conditions into the future through increased lead containment.

Alternative C – No Action Alternative

Vegetation conditions will remain the same. No significant impacts to vegetation are anticipated under Alternative C. If Alternative C were implemented no site upgrades would occur that may improve vegetation conditions and habitat into the future through increased lead containment.

3.5 Water

The primary water body in the surrounding area is the Chena River, located approximately 1,500 feet south of the shooting range and approximately 20-feet lower in elevation. The area between the proposed project site and the river encompasses wetlands, mixed forest, an access road, an established parking area, and the Chena Hot Springs Road. A meandering channel characterizes the Chena River and drains the non-glaciated, mountainous region northeast of Fairbanks. It is estimated that as much as 42% percent of the Chena River, Two Rivers Basin is underlain by permafrost (USACE, 2012, p. 22). The presence of permafrost inhibits infiltration, thus increasing runoff. Stream flow patterns in the basin consist of high flows during the months of May through September and low flows from November through April. During the winter months, the Chena River and its tributaries are frozen over and the principal source of flow is from groundwater. As the groundwater storage is gradually depleted, the flow diminishes to a minimum in March or April. With the advent of above-freezing temperatures in April and May, the flow increases from snowmelt runoff and breakup of river ice. Peak flows generally occur in May or June but can also occur between July and September due to widespread rainfall (ADPOR, 2006, p. 78). According to the CRSRA Management Plan, the Chena River is unique, in that it is the only clear water river of such a length in Interior Alaska that is extensively road accessible. The productive grayling fishery is an indicator of its excellent water quality.

Due to the remote undeveloped nature of the CRSRA, no surface water quality reports are available, and no surface water quality testing has been conducted at the proposed project site.

Wetlands

Work that results in a discharge of dredged or fill material into waters of the United States, which may include certain wetlands, streams, rivers, lakes, and impoundments (regulated under Section 404 of the CWA of 1972). This can involve placing fill, placing dredged material, grading an area, side-casting material, or pushing material around within aquatic resources. Under Section 401 of the CWA, a federal agency may not issue a permit or license to conduct any activity that may result in any discharge into waters of the United States unless a Section 401 water quality certification is issued, or certification is waived. The State of Alaska and the EPA (in certain locations) are the certifying authorities responsible for issuing water quality certifications in the State of Alaska. The Section 401 certification can cover both the construction and operation of the proposed project. Conditions of the Section 401 certification become conditions of the DA permit issued by USACE. Section 404 permits generally require Section 401 water quality certifications. A wetland delineation of the Proposed Action site was contracted and performed by Shannon & Wilson staff on August 23, 2023 (Appendix A) identified seven wetlands partially within the project area (Wetland A through G). Wetlands F (0.02 acres within project area) and G (0.07 acres within project area) are part of the wetland identified as "Wetland E" that extends into the expanded project area. Wetlands A (0.19 acres within project area), B (0.07 acres within project area), C (0.01 acres within project area), and D (0.05 acres within project area) appear to have formed after gravel pits were abandoned. Based on the prevalence of cobbles at the surface and thin organic layer in Wetlands E, F, and G, these wetlands could also have been the result of man-made disturbance connected with past gravel mining. Wetlands A through G are within the Chena River floodplain U.S. Federal Emergency Management Agency (FEMA) Flood Zone A.

Based on review of collected data, there are generally two wetland types in the Proposed Action site: 1.) palustrine scrub-shrub, broad-leaved deciduous, continuously saturated (PSS1/EM1D), and 2.) palustrine scrub-shrub, broad-leaved deciduous, seasonally flooded (PSS1C).

Much of the area including all sampling locations have been disturbed during gravel mining in the past as stated in the 2023 Wetland Delineation Report. The wetlands around the range complex have been disrupted hydrologically because they are bisected by the access road to the range.

Based on the PJD received from the USACE, all aquatic resources determined to occur in the review area are treated as jurisdictional and are subject to the CWA, sections 404 and 401 requirements.

In March 2024, The Services' Conservation Planning Assistance Branch conducted a wetland assessment to systematically evaluate the condition of wetlands at the proposed project site, and to identify the functions and services they provide. The outcome of a wetland assessment is used to support decision-making and planning processes. When faced with the potential need to offset the loss of wetlands to development, wetland assessment scores provide a quantified result of the type and quality of the functions and benefits that will be lost post-development. The type and quality of lost functions should direct any compensatory mitigation or offset efforts within the same watershed to bring the overall loss of specific functions to zero. This is the concept of 'on site' (within the same watershed) and 'in-kind' (replace the lost function with an increase of the same function). It is often difficult to find opportunities to offset wetland loss with exactly the same type and amount of wetland gains. For this reason, WESPAK-INT aggregates the nineteen specific functions and attributes tested into four general groups: Hydrologic & Water Purification, Substrate Protection, Aquatic Connectivity, Aquatic Productivity, and Transition Zone Habitat. When identifying potential projects (restoration sites, Mitigation Bank or In-Lieu Fee credits) to offset wetland losses, one should endeavor to match the function being lost with the function being restored or preserved at least at the group level if not at the individual functions and attributes level.

All five wetland Assessment Areas evaluated for this project (Appendix B, Figure 2) scored highly for the functions of Sediment and Toxicant Retention and Stabilization and Nutrient Removal and Retention. This means they are important for intercepting and filtering suspended inorganic sediments thus allowing their deposition, resisting excessive erosion, and stabilizing underlying sediments or soil. Additionally, the evaluated wetlands provide for intercepting, retaining, and/or removing water soluble or labile toxicants. To a lesser extent, the wetlands in this project area scored moderately high to high in the functions of Keystone Mammal Habitat, which is a wetland's capacity to support an abundance of wetland-associated mammals that are ecological keystones and/or are of recognized importance as game or for subsistence in this region (primarily beaver, moose, muskrat). Not surprisingly, Wetlands "A" and "B, C" (Figure 2) also scored highly for Waterbird Habitat, which is a wetland's capacity to support or contribute to an abundance or diversity of waterbirds (ducks, geese, swans, shorebirds, and others) that breed in or migrate through the region.

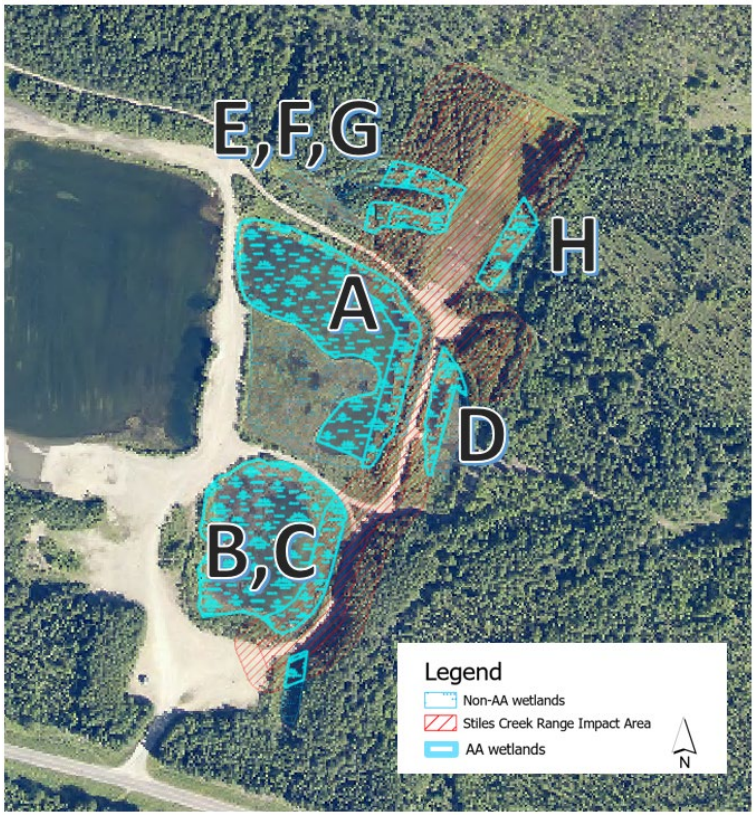

Figure 2. Wetland assessment areas (AA).

The other high scoring category across all assessed wetlands of Key Mammal Habitat is very common within the watershed. The loss of this service will not have a significant effect overall onsite or on a landscape level.

One last notable result was that the watershed position of all five wetlands was a large factor in the high benefit scores they received for the category of Water Storage and Delay. Wetland benefits are positive services provided to humans and the environment, verses wetland functions which are natural processes a wetland performs. All five wetlands can act as a protective buffer for downstream infrastructure at risk from floods (e.g., Chena Hot Springs Road and associated culverts and bridges) and provide water quantity maintenance for downstream ecological systems (e.g., the Chena River). They rated high in offering this benefit due to the downstream urban areas which rely upon the service, though functional scores in this category indicate they are only moderate to low performers in the function of Water Storage and Delay relative to other Interior wetlands.

Compensatory mitigation could be used to offset any negative impacts the range expansion will have on the wetland Public Interest Factors such as fish and wildlife values, flood hazard, water supply and conservation, and wetlands themselves among others (33 CFR Part 320.4(a)(1)). Wetlands in the CRSRA are unique in that there is very little disturbance in this portion of the watershed, and Stiles Creek is the only shooting range in the vicinity. Therefore, it is almost impossible to replace the protection these wetlands provide to overall water quality as they buffer the effects of toxicants and sediment coming off the range because there is no other similar degraded area available to protect. Offset or compensation for the loss of services such as Sediment and Toxicant Retention and Stabilization, and Nutrient Removal and Retention must happen on site, or no net-loss may not be achievable. That said, it is possible to mitigate the loss of functions by implementing best management practices that reduce the amounts of toxicants and sediments in the surrounding environment to below the current baseline. This type of 'out of kind' mitigation involves replacing functions and benefits of subject wetlands with non-wetland remedies to create uplift in the function or service categories lost. Typically, out of kind mitigation involves the addition of features that increase water quality in the same watershed or resolves specific threats to a resource such as point source pollution. In lieu of creating on-site wetlands to offset the loss of those receiving fill from range expansion activities, it is possible to mitigate the anticipated loss of function with other features to create functional uplift in the same categories. For example, the loss of Sediment and Toxicant Retention & Stabilization could be offset by using neutral fill to create berms to capture spent lead along with periodic lead removal.

Floodplains

The FEMA Flood Hazard Boundary Map for the proposed project site has not been updated since 1992. According to the recent Wetlands Delineation Report, the Proposed project site is within the FEMA Flood Zone A with a 25% chance of flooding in a 30-year period (Appendix H). The FNSB currently participates in the FEMA National Flood Program and a floodplain permit will be obtained from the FNSB. Review of the National Oceanic and Atmospheric Administration (NOAA) weather data indicates this area on average receives approximately 9.03 inches of moisture per year (Appendix I) designating it an arid region (National Park Service (NPS) 2019, p1).

Since the existing range was established within the Chena River floodplain and the proposed action is to improve/expand an existing range we did not consider any alternatives outside of the floodplain to be reasonable. Decommissioning a 60 plus year old shooting range and constructing a new range outside of the floodplain was deemed infeasible.

The NEPA statute and its reference to Executive Order No. 11988 - Floodplain Management require the agency to consider alternatives to avoid adverse effects and incompatible development in floodplains. Since the existing range was established within the Chena River floodplain and the proposed action is to improve/expand an existing range we did not consider any alternatives outside of the floodplain to be reasonable. Decommissioning a 60 plus year old shooting range and constructing a new range outside of the floodplain was deemed infeasible.

Wild and Scenic Rivers (WSR)

The Chena River, the only river within the CRSRA is not designated as a WSR or a WSR study river (National Wild and Scenic Rivers System 2025, P1).

Impaired Water Bodies

No ADEC designated impaired waterbodies exist in the area (ADEC n.d., p1).

Drinking Water

Groundwater exists in the saturated zones beneath the ground surface. Boreholes installed at the Proposed project site observed groundwater located 6 feet below ground surface (Appendix G).

The Safe Drinking Water Act of 1974 requires protection of drinking water systems that are the sole or principal drinking water source for an area and which, if contaminated, would create a significant hazard to public health. Sole-sources aquifers are groundwater supplies that provide the only source of drinking water for a particular area, which are afforded protection by the Safe Drinking Water Act. There are no sole source aquifers in Alaska (USEPA n.d. A, p. 1).

Hand-pump wells exist at the CRSRA campgrounds with the nearest campground approximately three miles from the proposed project site. Most area wells draw water from water-bearing layers (aquifers) recharged by precipitation on the hills surrounding Fairbanks (Swift, 1976, p. 1).

ENVIRONMENTAL CONSEQUENCES

Alternative A – Upgrade and Expansion (Preferred Action Alternative)

Direct impacts to surface water and wetlands would be avoided to the extent possible through Alternative A design which would improve grading and drainage to the site and expand the shooting range boundaries. Based on design plans at the 100% stage we anticipate the need to fill

approximately 0.1769 acres of wetlands E, F, and G as identified in the Wetland Delineation Report completed in September 2023 (Figure 2, Appendix A, Appendix B). An end berm and side berms would be installed to contain spent lead and mitigate dissolution and leachate from moving off the range. Alternative A would also restore the connectivity of wetlands A and D across the access roadway through the installation of properly sized culverts, both of which would be beneficial to the floodplain and other aspects of the site.

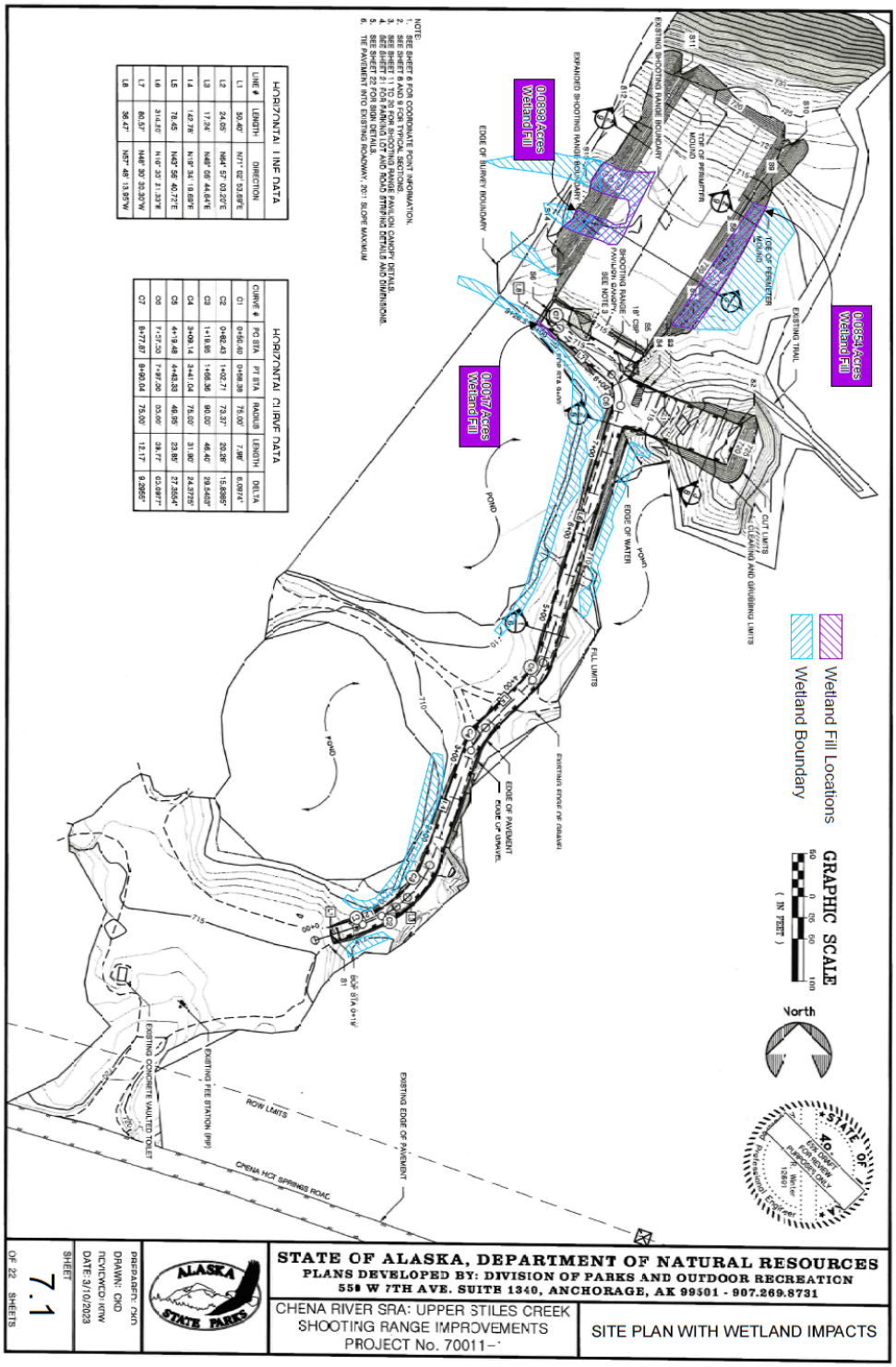

Figure 3. Anticipated Wetland Fill Locations

Based on the PJD received from the USACE, there may be jurisdictional wetlands subject to the CWA, Section 404 requirements. It is anticipated the project will be covered under NWP 42 – Recreational Facilities (USACE, n.d., p1). Under this NWP the following mitigating measures would be implemented:

- Prior to commencement of construction activities within waters of the United States, the permitted limits of disturbance shall be clearly identified at the project site with highly visible markers (e.g., construction fencing, flagging, silt barriers, etc.).
- Natural drainage patterns shall be maintained. No excessive ponding or drying adjacent to fill areas shall occur.
- Re-vegetation of all disturbed areas within the project site shall begin as soon as site conditions allow for it. Topsoil (usually the top 2-8 inches) removed from the construction area shall be separated and used for site rehabilitation. When back filling topsoil shall be placed as the top layer to provide a seed bed for regrowth. If topsoil is not available from the project site, local native soil material obtained from a commercial site may be used. Species used for seeding and planting shall be in the following order of preference: 1) species native to the site; 2) species native to the region; 3) species native to the state.

Concurrent with the Section 404 process, an ADEC Section 401 Water Quality Certification would also be obtained. ADEC has issued a general concurrence 401 in conjunction with the NWPs.

To minimize impacts caused by stormwater runoff during construction, the project will comply with the conditions found in the ACGP AKR-1000, including the preferred use of non-plastic erosion control fabrics, and installation of erosion and sediment control measures such as silt fences, sediment traps, stabilized construction access points, erosion control blankets, and soil stabilization techniques. If plastic erosion control fabrics and silt fences are used, they would be removed after construction to prevent degradation and creation of micro plastics that would remain in the environment. These control measures would be instituted to control the discharge of pollutants from the construction site prior to and during construction.

To improve water quality, Alternative A will minimize the potential of lead migration to ground water and adjacent waterways by bringing the range complex up to design guidelines recommended in the *NRA Range Source Book* (2012). Some lead management guidelines in the US*EPA Best Management Practices for Lead at Outdoor Shooting Ranges* manual (*EPA BMP's*)

(2005) would be implemented (unless restricted by a regulatory agency permit) in Alternative A and Alternative B to protect water resources in this area. These BMP's would include elevation of the range, ground contouring, use of neutral fill and vegetative cover. The construction of berms, re-establishment of vegetation, proper selection of fill soils, and other site improvements would improve the likelihood that lead will be retained on the range and not migrate into waterways.

Per EPA BMP's (2005, Ch 2, p. II-2), annual precipitation is one of the most important factors influencing lead degradation and migration (ITRC, 2005 p. 9, 11). When heavy rain saturates soils, it can cause lead particles from spent ammunition at shooting ranges to leach into ground water nearby surface waters. Since the current range is in an arid region, the relatively low level of precipitation will naturally result in reduced lead dissolution rates.

Soil acidity significantly increases the dissolution rate of lead; so, the higher pH of existing site soils would lead to higher lead dissolution (USAEC, 1998, p. 9) and mobility than the borrow and D1 fill that will be used to elevate the range and construct the berms. This fill, which is neutral in nature, would be placed as part of Alternative A and the Upgrade Without Expansion Alternative. The addition of berms to the range complex would minimize and mitigate potential impacts from lead exposure from lead bullets, or dissolved lead migrating through soils to groundwater or adjacent surface waters. Exposure can occur as lead bullets oxidize when exposed to air and dissolve when exposed to acidic water or soil. With spent bullets lodging in the newly constructed berms, less exposure to air and water will occur reducing dissolution rates and potential for movement.

The earthen backstop or end berm will be separated from the toe of the existing hillside and be constructed of neutral fill to capture and contain much of the spent lead which will allow for practical reclamation efforts in the future. Since reclamation of existing lead is not included under any of the proposed project alternatives any spent lead in the hillside which currently functions as the backstop will remain for the foreseeable future. During consultation with the ADEC, Contaminated Sites Program DPOR engineers were advised to leave any existing lead encapsulated in the current backstop (Personal Communication Rys Miranda, January 16, 2025). EPA Region 10 staff from the RCRA Corrective Action, Permits, and Polychlorinated Biphenyls Section within the Land, Chemicals, and Redevelopment Division were consulted to ensure that failure to reclaim spent lead during reconstruction would not violate EPA statutes or policies. EPA does not consider lead shot a hazardous waste subject to RCRA at the time it is discharged from a firearm because the shot is being used for its intended purpose. (USEPA, 2005, p. 1-8).

EPA staff recommended that DPOR utilize a range history and records document to permanently record that spent lead was not reclaimed from the hillside during reconstruction (ITRC, 2003, p,5, Personal Communication L. Cuaderno, March 13, 2025). This will ensure that it is not overlooked during future operations and maintenance or in the event the range is ever decommissioned. In the event of decommissioning, all spent lead would be subject to RCRA requirements. DPOR staff maintain facility files and have indicated that project documentation will be available to future staff performing due diligence work for improvements or decommissioning (Personal Communication Rys Miranda, March 19, 2025).

EPA staff also requested confirmation that a deed restriction or other mechanism esists prohibiting residential development at the proposed project site and confirmed that Alaska Statute 41.21.475 which reserves the CRSRA from all uses incompatible with the primary function as public recreation land was adequate (Personal Communication L. Cuaderno, March 13, 2025).

Spent lead remaining in the hillside may continue to degrade and produce leachate from precipitation and snow melt runoff from the steep hillside. To mitigate this potential, the area between the newly constructed backstop and the toe of the existing hillside (current backstop) will be contoured to create a vegetative swale (stormwater channel) to direct any runoff from the hillside (current backstop) and the newly constructed backstop. This vegetated stormwater channel will capture surface water, reduce water velocity thereby capturing leachate, lead and sediment and direct it off the range (USAEC, 1998, p. 21, EPA, 2005, III-8) into the adjacent forested wetlands allowing for additional sediment and toxicant retention and stabilization services.

Natural regeneration of vegetation on the hillside (current backstop) and seeding vegetation on the backside and top of the newly constructed backstop will help to reduce offsite transport of lead and sediment by reducing potential for erosion (USAEC, 1998, p. 25).

Ground contouring will be used to elevate the existing firing lane floor with neutral pH fill which will lift the base range elevation above the wet season water table, helping to prevent any spent lead from being exposed to seasonal ponding conditions and thereby reducing the leaching potential. This contouring will also allow snow melt and rain runoff to flow off the range into the adjacent wetlands allowing for sediment and toxicant retention and stabilization services of the forested wetlands to trap any potential lead leachate leaving the range. Since any spent lead in the firing lane floor will not be reclaimed during reconstruction and will be covered with fill,

EPA has recommended that DPOR utilize a range history and records document to permanently record that spent lead was not reclaimed from the firing lane floor but rather covered with fill during reconstruction (Interstate Technology and Regulatory Council, 2003, p5, Personal Communication L. Cuaderno, March, 13, 2025). This will ensure that it is not overlooked during future operations and maintenance or in the event the range is ever decommissioned. In the event of decommissioning, all spent lead would be subject to RCRA requirements. DPOR staff maintain facility files and have indicated that project documentation will be available to future staff performing due diligence work for improvements or decommissioning (Personal Communication Rys Miranda, March 19, 2025).

Spent lead remaining in the current firing lane floor and covered with fill may continue to degrade and produce leachate however it is likely that much of it sits within the organic layer at the current surface. As lead has a strong tendency to bind to organic matter (USAEC, 1998, p. 9) retention of the organic layer may reduce for potential for leachate from existing lead and from future deposits in the neutral fill placed above.

Where practical (locations outside the line-of-fire), shall be revegetated which will reduce the erosion potential and reduce the amount of surface runoff.

Wetland Assessment Areas, “A” and “B, C” scored high for Waterbird Habitat due to their larger areas of open water. These areas would not be directly impacted other than through restoring connectivity via the proposed culverts which would be beneficial. An additional 100-foot buffer was added to the areas of direct impact to represent the secondary impacts (dust, noise, erosion and sedimentation, etc.) each wetland would receive because of the primary impact of road and range upgrades. Waterbird habitat within this buffer would likely receive temporary negative indirect impacts during the construction period. These indirect impacts are not likely to be significant as many bird species will acclimate to increased activity, and activity duration and intensity is not likely to be constant. The planned range cover may help to absorb firearm noise depending on design and reduce indirect impacts on water and shore bird habitat. It is also worth noting that sound levels are greatest directly downrange and lowest 180 degrees directly behind the firing line (NRA, 2023, p. 92) which is where the ponds/waterbird habitat is located. The ponds are currently surrounded by native shrub-scrub vegetation buffers which provide visual screening and may help to ensure continued use by waterbirds and shorebirds and improve the likelihood of continued habitat use and value. Using ground contouring to direct surface water into the adjacent wetlands allowing for sediment and toxicant retention and stabilization services of the wetlands to trap any potential lead leachate will reduce the likelihood that the water and

shore bird habitat values of Wetland Assessment Areas, “A” and “B, C are not diminished through water quality effects. These measures will help to mitigate any loss of function due to indirect effects on water and shore bird wetland habitat.

Since the proposed project site has been an active shooting range since the 1960’s, it would be inconceivable to think that there are no current negative impacts to water quality and wetlands on site. However, implementing this alternative would reduce future impacts by improving the existing site and its baseline conditions. Construction of the Preferred Alternative will benefit on site water quality and offset the loss of approximately 0.1769 acres of wetlands by creating uplift in the functional or service categories lost, through sound design, appropriate mitigation measures, reestablishing wetland connectivity, and adherence to the best management practices as described.

The small addition of impermeable surface due to paving the access road and parking lot may lead to increased surface runoff into the wetlands. Due to the small scale and footprint of the project this is not expected to result in significant impacts to water quality or the Chena River floodplain. The culverts which would be appropriately sized for restore proper hydrologic connectivity will benefit hydrologic conditions within the floodplain.

No significant impacts to water quality are anticipated under Alternative A. If Alternative A were implemented site upgrades may improve water quality conditions into the future through increased lead containment.

Alternative B – Upgrade Without Expansion Alternative

Alternative B would keep the range at the current size of approximately 80 feet wide by 400 feet long, and would include construction of side berms, and an end berm and use of ground contouring which would benefit water quality as described in the Preferred Alternative. The impacts and mitigation measures would be the same as for Alternative A, though at a smaller scale since no site expansion would be included. Alternative B would eliminate the need for any wetland fill, however, expansion activities would not take place to the desired extent. The purpose of the grant authorizing legislation Pub. L. 116-17 Tar-Mark (Appendix E) is to construct and expand public shooting ranges and site expansion will be necessary to achieve the desired increase in capacity. Alternative B would result in a smaller parking lot that would be resurfaced with gravel instead of pavement. Additionally, Alternative B would not restore the wetland connectivity along the access road.

No significant impacts to water quality are anticipated under Alternative B. If Alternative B were implemented site upgrades may improve water quality conditions into the future through increased lead containment although to a lesser extent than Alternative A.

Alternative C – No Action Alternative

Alternative C will not have any significant impacts, nor will it provide any benefits through site upgrades. Any current impacts to surface and groundwater quality will remain unchanged with the continued possibility of existing sediments and lead migration from the poorly graded and unimproved site.

3.6 Threatened and Endangered Species

The Endangered Species Act (ESA) protects specific plant and wildlife species and their habitats. A search through the Service Information for Planning and Consultation (IPaC) report (Appendix J) indicated the proposed project site is not within the range of any species listed, proposed to be listed, or considered a candidate for listing under the Endangered Species Act (ESA) by the Service. There is no federally designated critical habitat for any Service ESA-listed species on or near the proposed project site. There are no ESA listed or proposed species under jurisdiction of the National Marine Fisheries Service on or near the proposed project site. The proposed project site is not in or adjacent to the marine environment and the nearby Chena River does not contain any ESA listed anadromous fish species, and there is no designated Essential Fish Habitat on or near the site.

ENVIRONMENTAL CONSEQUENCES

All Alternatives

The proposed project site is not within the range of any species listed, proposed to be listed, or considered a candidate for listing under the ESA. Nor is there any federally designated critical habitat for any ESA-listed species at the proposed project site.

No significant impacts to Threatened and Endangered species are anticipated under any proposed Alternatives.

3.7 Wildlife

Wildlife at the proposed project site is typical to this part of Interior Alaska. Common large mammals include moose (*Alces alces*), wolf (*Canis lupus*), brown bear (*Ursus arctos)*, black bear (*Ursus americanus*), and caribou (*Rangifer tarandus*). Smaller fur bearing species include ground squirrel (*Spermophilus sp*), red squirrel (*Sciurus vulgaris*), snowshoe hare (*Lepus americanus*), river otter (*Lontra canadensis*), beaver (*Castor canadensis*), marten (*Martes martes*), mink (*Mustela vison*), weasel (*Mustela sp.*), red fox (*Vulpes vulpes*) and lynx (*Lynx canadensis*).

The federal Migratory Bird Treaty Act (MBTA) protects migratory bird species and their nests. Wetlands and riparian areas in nearby streams and lakes may provide migratory bird nesting habitat for waterfowl and shorebirds. At least 93 species of birds are known to breed in the area.

According to the USFWS IPaC report (Appendix J), the Lesser Yellowlegs (*Tringa flavipes*) a Bird of Conservation Concern (BCC) may be present at the proposed project site.

The federal Bald and Golden Eagle Protection Act protects bald and golden eagle and their nests. The proposed project site is within Bald Eagle habitat; however, an environmental planning site visit on August 29, 2023, confirmed there were no observed nests or eagle activity at the existing shooting range or immediate area (Appendix J).

ENVIRONMENTAL CONSEQUENCES

Alternative A – Upgrade and Expansion (Preferred Action Alternative)

Alternative A to upgrade an established shooting range complex is not anticipated to pose long term, significant impacts to wildlife resources. Short-term impacts may include anthropogenic disturbance from increased dust, and construction noise, which may temporally stress and/or startle wildlife in the vicinity. Larger more mobile wildlife may temporarily abandon use or avoid the site during construction. Short-term impacts are anticipated to last during construction of the proposed project and would be concentrated during the summer months when construction activities would be at their peak. Natural shrub scrub vegetation which surrounds the open water ponds will help to screen construction site activities and buffer some construction noise reducing potential for disturbance. The planned cover over the range firing line will help to absorb some sound from active range operations also reducing potential for disturbance. Elevating the range above the surrounding wetlands which are lower in elevation than the open water ponds will

allow seasonal melt and runoff to flow into the wetlands thereby reducing the potential for lead leachate to degrade wildlife habitat in and around the open water ponds. Of course, there may be some minor effects to wildlife inhabiting these wetlands, but the improvements to the range will reduce those effects below current baseline. Since the area is currently an active shooting range and wildlife is habituated to the current shooting range activities, disruptions to species' normal behavior, including displacement from the area during construction, is expected to be minimal and temporary and no adverse population-level impacts are anticipated to any species.

Plants that take up and store lead may be consumed by wildlife, therefore it is possible that herbivores could potentially be affected through biomagnification of lead. Small mammals would be more susceptible due to a small home range size than would larger herbivores such as moose that utilize a larger home range. Generally large mammals are thought to be at low risk for lead contamination from shooting ranges. Insectivores and ground feeding birds are thought to have a greater risk for inadvertent lead ingestion through feeding habits or biomagnification in prey items. Waterfowl are known to ingest lead shot while feeding, however no solid lead is being deposited in the ponds behind the firing line and the forested wetlands adjacent to the range do not provide suitable habitat for most waterfowl. Amphibians, and invertebrates inhabiting the wetlands adjacent to range may be at higher risk from lead contaminated runoff. Any negative effects on wildlife would be limited to a small number of individuals making up a tiny fraction of the populations distribution and would not have population level effects on any species (The Interstate Technology & Regulatory Council, 2005, p 14-15).

Due to the need to fill approximately 0.1769 acres of wetland, there would be an insignificant loss to migratory bird and other wetland adapted species habitat. Much of the CRSRA contains similar wetland habitat so the minor loss and disturbance from Alternative A would not result in population-level impacts to migratory birds or other wildlife.

All construction activities would comply with the MBTA and Executive Order 13186 for the conservation of migratory birds, and consultation with the Service would occur as needed. To avoid impacts to migratory birds during nesting season, land clearing activities would not take between May 1 and July 15 (USFWS, 2017, p. 2). If an active migratory bird nest is encountered at any time during construction the nest will be left in place and undisturbed until the eggs hatch and the young depart the nest. Unless approval to do otherwise is received from the Service.

Long-term impacts on wildlife from construction activity is not likely as there is no shortage of habitat within the CRSRA and any displaced individuals would likely return to the proposed project site after the cessation of construction activities.

The project site and area of potential impacts will be re-surveyed for eagles' nests or eagle activity prior to initiation of construction activities. If any eagle nests are found during construction, construction activities will stop until the ADNR DPOR Project Manager, ADF&G, and the Service are notified and will not resume until the Service provides authorization.

Since the proposed project site has been an active shooting range since the 1960's, it would be inconceivable to think that there are no current localized negative impacts to wildlife on site. However, implementing this alternative would reduce future impacts by improving the existing site and its baseline conditions by reducing lead movement off the range.

No significant impacts to wildlife are anticipated under Alternative A. If Alternative A were implemented site upgrades may improve wildlife habitat into the future through increased lead containment.

Alternative B – Upgrade Without Expansion Alternative

The impacts and mitigation measures would be the similar as for Alternative A, though at a smaller scale since no site expansion would be included. The purpose of the grant authorizing legislation Pub. L. 116-17 Tar-Mark (Appendix E) is to construct and expand public shooting ranges and site expansion will be necessary to achieve the desired increase in capacity.

No significant impacts to wildlife are anticipated under Alternative B. If Alternative B were implemented site upgrades may improve wildlife habitat into the future through increased lead containment.

Alternative C – No Action Alternative

No significant impacts will occur, any existing impacts to wildlife will continue as will the current potential for lead leachate moving off the range. If Alternative C were implemented no site upgrades would occur that may improve wildlife habitat conditions into the future through increased lead containment.

3.8 Fish and Other Aquatic Species

The Chena River located approximately 1,500 feet south of the proposed project site, provides habitat for approximately 12 species of fish with Arctic grayling (*Thymallus arcticus*) being the most popular species for sport fishing (ADEC, 2006, p87). Other aquatic species include humpback whitefish (*Coregonus pidschian*), burbot (*Lota lota*), northern pike (*Esox lucius*), longnose sucker (*Catostomus catostomus*), Arctic lamprey (*Lampetra camtschatica*), least cisco (*Coregonus sardinella*), and slimy sculpin (*Cottus cognatus*). Chinook (king) (*Oncorhynchus tshawytscha*) and chum salmon (*Oncorhynchus keta)* spawn in the Chena River in late July and early August.

A shallow man-made gravel pit pond resides directly south of the shooting range (Figure 6). However, whether aquatic species inhabit or not it is unknown. It is currently not stocked by the ADF&G according to the ADF&G Fish Stocking Database (Appendix K).

Figure 6: Existing Gravel Pit Pond South of Shooting Range

ENVIRONMENTAL CONSEQUENCES

Alternative A – Upgrade and Expansion (Preferred Action Alternative)

A man-made pond resulting from gravel extraction when the Chena Hot springs Road was built is located south of the Proposed project site, and may contain suitable habitat for fish, however

no fish are known to inhabit it. An aquatic species inventory within the man-made pond has never been conducted; however, it is assumed general aquatic species (invertebrates, waterfowl, etc.) inhabit them. ADF&G does not currently stock any of the ponds in the area (Appendix K). Alternative A would not utilize gravel material from the existing pond/pit. There is some potential for lead to migrate into the pond, however the upgraded range design included in Alternative A will reduce potential and improve current site conditions (see the water quality and wetlands sections).

Approximately 0.1769 acres of wetlands E, F, and G as identified in the Wetland Delineation Report would be filled resulting in an insignificant loss of habitat for any aquatic species present. Much of the CRSRA contains similar wetland habitat so the loss will not have material effects on any species at a population level.

No significant impacts to fish and other aquatic species are anticipated under Alternative A. If Alternative A were implemented site upgrades may improve habitat for some species into the future through increased lead containment.

Alternative B – Upgrade Without Expansion Alternative

No wetland loss will occur, and construction activities will occur on a smaller temporal and spatial scale. The impacts and mitigation measures would be the same as for Alternative A, though at a smaller scale since no site expansion would be included. The purpose of the grant authorizing legislation Pub. L. 116-17 Tar-Mark (Appendix E) is to construct and expand public shooting ranges and site expansion will be necessary to achieve the desired increase in capacity.

No significant impacts to fish and other aquatic species are anticipated under Alternative b. If Alternative b were implemented site upgrades may improve habitat for some species into the future through increased lead containment.

Alternative C – No Action Alternative

No new impacts will occur; however, the range complex would continue as an inadequately designed active shooting range lacking environmental protections related to lead migration. If Alternative C were implemented no site upgrades would occur that may improve fish and aquatic species habitat conditions into the future through increased lead containment.

3.9 Noise

The proposed project is not creating a new use of the property at this location, current noise levels from range activities are anticipated to modestly increase with increased capacity (increased number of benches) and upgrades to the range. Temporary noise impacts will occur during construction activities form heavy vehicles, earth-moving equipment, and power tools.

Noise generators at or near the proposed project site include traffic along the Chena Hot Springs Road approximately 1,000 feet away, boat use on the Chena River approximately 1,500 feet away, off-road vehicles along trails nearby, and existing firearm use at the shooting range. The nearest airport and railroad are approximately 25 miles away, which is far beyond any airport/railroad noise and safety zones. The largest noise generator that will occur at the site is general recreational firearm use which ranges from 140-175 decibels peak pressure level (dbp) intermittently throughout the day (American Speech-Language-Hearing Association, 2024, p1).

There are two private properties (inholdings) located within a 1-mile radius of the Proposed project site according to the public use FNSB Property Search database. One is vacant land and the other is a seasonal camp, making range activity noise levels non-intrusive to local residences. The proposed project has gone through a public review process during the adoption of the CRSRA Management Plan and as described in chapter 5 (Public Involvement Process). No concerns with the existing shooting range were noted.

ENVIRONMENTAL CONSEQUENCES

Alternative A – Upgrade and Expansion (Preferred Action Alternative)

Noise levels at the proposed project site would temporarily increase from construction equipment, which are anticipated to have sound levels that range between 80 and 95 decibels at 50 feet (Federal Transit Administration 2018, p 176). Field measurements in Denali National Park have shown construction equipment to be clearly audible at distances of approximately 4,300 to 4,600 feet (National Park Service 2022, p35 citing Withers 2011 and Betchkal 2013).

Although firearm noise ranges from 140-175 dbp, modestly increased noise levels are expected to occur from increased capacity. Alternative A will increase the number of shooting benches (up to eight additional benches to supplement the three current benches, including an ADA-compliant bench) which could result in concurrent increased use resulting in an increase in the amount of noise generated by gun fire. The only other recreational infrastructure close to the

range is the winter trail and since the access road to the range is not maintained in the winter it is unlikely that disturbance to the visitors of the recreation area and seasonal use of a nearby property will pose a significant impact over the baseline.

No studies were found specifically addressing the impacts of recreational shooting range noise on wildlife. Noise from recreational shooting may temporarily displace wildlife, but as the proposed project site is already an established shooting range, it is assumed no long-term effects on wildlife would occur. The CRSRA is largely undeveloped thus there is no shortage of wildlife habitat outside the range of shooting noise impacts.

Alternative A would include several noise mitigation strategies including the addition of steeper earthen berms and the already strategic placement of the existing range. The range also sits in a "basin" that is lower in elevation and oriented towards a hill of more than 430 feet of positive elevation change. Alternative A includes a covered shooting pavilion over the line of fire, this pavilion would further buffer noise coming from the shooting range. Should complaints occur from increased noise, DPOR would adjust noise mitigation strategies as needed including limiting open hours.

No significant impacts to resources or the human environment are expected to occur through implementation of Alternative A.

Alternative B – Upgrade Without Expansion Alternative

The impacts and mitigation measures would be the same as identified in Alternative A, though on a slightly smaller scale due to less construction activity and a reduced number of shooting benches than in alternative A. The purpose of the grant authorizing legislation Pub. L. 116-17 Tar-Mark (Appendix E) is to construct and expand public shooting ranges and site expansion will be necessary to achieve the desired increase in capacity.

No significant impacts are anticipated to occur through implementation of Alternative B.

Alternative C –No Action Alternative

Under Alternative C, no significant impacts are anticipated. Baseline noise levels would remain unchanged.

3.10 Air Quality

The proposed project site is located within EPA's Northern Alaska Intrastate Air Quality Control Region 009 (ADEC, 1972, p. II-4) which covers 320,000 square miles of mostly unpopulated wilderness in the northern half of Alaska.

The Clean Air Act (CAA) of 1970 (42 USC 7401 et seq.), as amended in 1977 and 1990, is the basic federal statute governing air pollution and administered by the EPA. The EPA sets National Ambient Air Quality Standards (NAAQS) for six commonly found air pollutants under the Clean Air Act. The EPA Green Book provides detailed information on NAAQS designations, classifications, and nonattainment status of areas of the country that meet or violate the air quality standards. The nearest non-attainment area to the Proposed project site is a portion of the FNSB, including the City of Fairbanks and the City of North Pole. The areas were designated as a $PM_{2.5}$, as they exceeded the health based 24-hour $PM_{2.5}$ NAAQS standard of 35 micrograms/cubic meter. Analysis shows that local emissions from wood stoves, burning distillate oil, industrial sources, and mobile emissions contribute to particulate pollution. For planning purposes, $PM_{2.5}$ is primarily a concern during the winter months (October through March) when extremely strong temperature inversions are frequent and human-caused air pollution impacts increase (ADEC, n.d., p1).

The proposed project site is not located within the EPA-designated FNSB non-attainment air quality area, which contains an EPA Non-attainment/Maintenance area for particulate matter ($PM_{2.5}$) pollutants. On February 26, 2024, ADEC Air Quality Division confirmed that "the proposed project is not located within the PM2.5 non-attainment area or the CO maintenance area for air quality under the Clean Air Act. Therefore, it does not require an applicability analysis under the General Conformity regulations." ADEC further noted that "if any of the work involves disposal of organic debris, and the DNR DPOR, ADF&G DWC, or the contractor chooses bush burning as a disposal method, they must use "reasonable procedures to minimize adverse environmental effects and limit the amount of smoke generated." "Also, they must apply for applicable permits". "A complete description of the open burn information, including policies, can be found at: http://dec.alaska.gov/air/air-permit/open-burn-info/". "Also, any construction activities should follow all reasonable precautions in accordance with 18 AAC 50.045(d) to prevent particulate matter from being emitted into the ambient air" and "Best Management Practices (BMP's) should be used to mitigate any potential dust issues during the project" (A. Alimi personal communication, February 6, 2024.

ENVIRONMENTAL CONSEQUENCES

Alternative A – Upgrade and Expansion (Preferred Action Alternative)

Northern Alaska Intrastate Air Quality Control Region 009 covers 320,000 square miles of mostly unpopulated wilderness in the northern half of Alaska but does include all of the oilfield infrastructure located on Alaska's North Slope. This makes it very difficult to assess reasonably foreseeable actions over such a large area, therefore we will restrict our effects analysis to the immediate CRSRA.

The project area is in a rural state recreation area (245,080 acres) with no infrastructure or anticipated future infrastructure that would impact air quality in the local area.

Exhaust from large equipment would temporarily affect localized air quality but would be limited to a small number of machines operating during the short construction period and localized in the vicinity of the project site. Potential dust generated during the construction phase would also be temporary in nature and would not have substantial effects on current air quality conditions. Dust generation would be minimized through BMP's in the Storm Water Pollution Prevention Plan (SWPPP).

Vehicle traffic on the Chena Hot Springs Road also contributes an insignificant amount of emissions within the CRSRA. Increasing capacity and improving the range may draw additional users which could result in a small increase in vehicle traffic and resulting emissions. However, this increase is expected to be minimal and will not result in a substantial increase in emissions that would affect local air quality. Although the increased capacity of the range is expected to draw some additional users and increase overall use, the amount of traffic is not anticipated to significantly change in the foreseeable future.

No significant impacts to air quality are anticipated if Alternative A is implemented.

Alternative B – Upgrade Without Expansion Alternative

The impacts and mitigation measures would be the same as identified in Alternative A, though on a slightly smaller scale due to less construction activity and no site expansion. The purpose of the grant authorizing legislation Pub. L. 116-17 Tar-Mark (Appendix E) is to construct and expand public shooting ranges and site expansion will be necessary to achieve the desired increase in capacity.

No significant impacts are anticipated to occur through implementation of Alternative B.

Alternative C – No Action Alternative

Air quality will remain the same, thus no significant impacts will occur.

3.11 Historical and Cultural Resources

To fulfill the requirements of Section 106 of the NHPA, the Service offered Government to Government Consultation to seven Federally Recognized Tribes and offered to consult with seven Alaska Native Claims Settlement Act (ANSCA) Village corporations and one ANSCA Regional Corporation (Appendix L) located within a 100-mile radius of the proposed project site. No offers of consultation were accepted. The Service also consulted with the Alaska State Historic Preservation Office (SHPO) on the proposed project.

ENVIRONMENTAL CONSEQUENCES

All Alternatives

The Service conducted a NHPA Section 106 Review and recommended a finding of no historic properties affected per 36 CFR 800.4 (d)(1) (Appendix M). The Winter Trail that runs through the project site is not eligible for listing under the NRHP. On November 29, 2024, the State of Alaska, State Historical Preservation Officer concurred with the Service's finding (Appendix M).

Should historic properties (cultural or paleontological resources) be discovered during construction, all work at the proposed project site would halt and SHPO and the Service would be notified immediately. Work would not resume until Section 106 consultation is reinitiated with SHPO, the Service, and any concerned Tribes, and the Service provides authorization to resume work.

No significant impacts to historic and cultural resources are expected to occur under any alternative.

3.12 Socioeconomic Conditions

The proposed project site is located deep within 245,080-acre CRSRA which was established to ensure access to recreational opportunities for Alaskans and visitors. There are no designated

residences within the CRSRA. People who live close by to the CRSRA choose to do so for the many recreational opportunities present in the area likely including the Stiles Cr Shooting Range.

ENVIRONMENTAL CONSEQUENCES

Alternative A – Upgrade and Expansion (Preferred Action Alternative)

Alternative A has the potential to draw an increased number of individuals from around the region to visit and recreate within the CRSRA. Service stations and small community businesses which are scattered along Chena Hot Springs Road outside the CRSRA, may see an increase in business with direct benefits to the local economy. Construction activities may also provide a temporary increase in the number of local jobs with local contractors and suppliers who provide goods and services in the region. The Chena Hot Springs Resort which is a popular tourist destination is approximately 20 miles past the shooting range will not be negatively affected. Upgrading and increasing capacity of the range only adds to the attractiveness of living nearby and improves, the aesthetic quality of the recreational resource of the CRSRA.

No significant impacts to socioeconomic conditions are anticipated if Alternative A is implemented. We consider any impacts to socioeconomic conditions to be positive.

Alternative B – Upgrade Without Expansion Alternative

Alternative B will have similar impacts as Alternative A, but at a smaller scale as expansion activities would not take place to the desired extent. The purpose of the grant authorizing legislation Pub. L. 116-17 Tar-Mark (Appendix E) is to construct and expand public shooting ranges and site expansion will be necessary to achieve the desired increase in capacity.

No significant impacts to socioeconomic conditions are anticipated if Alternative B is implemented. We consider any impacts to socioeconomic conditions to be positive.

Alternative C – No Action Alternative

Under Alternative C construction activities would not occur, therefore no significant impacts would occur and the positive direct and indirect impacts to the socioeconomics of local communities would not occur.

CHAPTER 4: REASONABLY FORSEEABLE EFFECTS

Reasonably foreseeable effects pursuant to 43 CFR 46.140, would consist of the direct and indirect reasonably foreseeable effects of implementation of the action in addition to other potential past, present, and future reasonably foreseeable effects. regardless of what agency (Federal or non-Federal) or person undertakes such other actions.

The proposed project is not expected to conflict with any local, state, Tribal or Federal plans for the area. All the adjacent land is under the ownership and managed by ADNR DPOR, no additional development or further expansion of the range is planned, once the proposed project is completed. No reasonably foreseeable future activities or development are anticipated at this time in the CRSRA due to funding limitations and the priority to maintain existing sites. Therefore, any reasonably foreseeable future effects would solely result from the proposed action, are anticipated to be minor or insignificant, and are anticipated to range from short-term, negative effects to long-term, beneficial effects as described in the analysis. None of the alternatives considered are anticipated to result in significant impacts to the quality of any aspect of the human environment.

CHAPTER 5: PUBLIC INVOLVEMENT PROCESS

Visitors of the CRSRA, area shooting enthusiasts, and members of the public have all expressed support for the upgraded shooting range as greatly needed. In October 2023 a 30-day public review of the proposed project was published electronically through the ADNR Stiles Creek Improvements webpage, online public notice, as well as the ADF&G social media page and as such, public involvement and agency coordination requirements for Alternative A were fulfilled. Records are included in Table 2 below and in Appendix N.

Table 2. –Proposed Project Public Involvement and Comment/Response Summary.

Comment Number	Summary of Comment	ADF&G/DNR DPOR Response
1	The proposed improvements to the Stiles Creek Shooting Range look great. One thing that doesn't seem to be considered is the Chena Hot Springs Winter Trail. I believe the trail passes very close to the shooting benches. The trail is sometimes used in the summer as well. Please be sure to	No re-route of the Winter Trail or shifting of the shooting area is proposed, however, construction of the berms as called for in

	coordinate a reroute of the trail or shifting of the shooting area.	Alternative A and Alternative B will substantially mitigate risk to trail users. A second option is for users to loop past the man-made ponds via the access road, past the vault toilet, and then continue on the Winter Trail Route.
2	Great…much needed!	Thank you for your comment.
3	We need something like this on the kenai!	Thank you for your comment.
4	The area is most always wet	Thank you for your comment.
5 (2019 letter)	The Northern Area Alaska State Parks Citizen Advisory Board would like to express their support for improvements to the 36.4 mile shooting range within the Chena River State Recreation Area. This range has been in use since the 1970's and is very popular. Over 1,500 people use it yearly. Law enforcement agencies also use the facilities. Alaska State Parks has issued special use permits to agencies such as the Alaska Wildlife Troopers and the Fairbanks Police Department. Sister agencies such as the State Division of Forestry and Division of Mining, Land, and Water use the facilities for bear defense shotgun training.	DPOR: Alternative A and Alternative B propose to minimize flooding concerns along the access road and on the range.

	Unfortunately, the road to the shooting range and the range itself are subject to flooding and are extremely wet during breakup in the spring. Fill needs to be brought in to build up the road and range. This will make the site easier to mechanically clean as well as making it more accessible for folks with disabilities. Outdoor shooting ranges within the Fairbanks North Star Borough (FNSB) are extremely limited. There are two in Fairbanks. One on South Cushman operated by FNSB and the other at the airport The airport range is being closed down for good in December 2019 which will put additional pressure on the remaining ranges. [The airport range did close on December 31, 2022]	
6 (2019 email)	I would like to offer my support for proposed implementation of the online reservation system, as well as the upgrades to the CRSRA shooting range. I am a regular user of the range, and it is quite instrumental for the DNR, Division of Mining, Land, and Water's Wildlife Safety training. As you know, we use the range for training several times per year. For the safety of staff as well as the public, we are required to reserve the range for agency use. Although we do our best to minimize impact to the public and to notify the public in advance, an online reservation system would be greatly beneficial and a very practical way to minimize conflicts. I also support the proposed upgrades to the range. For many years, the benches at the range have been in desperate need of repair or replacement. Often, unless a user brings their own portable bench or stool, the benches are largely unusable. Additionally, the downrange conditions are often rather poor, with large pools of standing water, occasionally untraversable. The ability to walk all the way down range	Thank you for your comment.

	would make the range a much nice place to shoot, make it easier to maintain, and would likely reduce the amount of trash and debris left down range if it is easier to recover. When we use the range for agency training, we try our best to do our part to clean it up, but the poor down range conditions make it rather challenging, especially during the wetter parts of the year. Again, I am in full support of the proposed upgrades to the CRSRA range. If you have any questions of would like any additional information, please let me know.	

COORDINATION & CONSULTATION

In preparation of this EA, the following state and federal agencies were consulted:

- Alaska Department of Environmental Conservation
- Alaska Department of Fish and Game
- Alaska Department of Natural Resources
- U.S. Army Corps of Engineers – Alaska District
- U.S. Environmental Protection Agency, Region 10
- U.S. Fish and Wildlife Service, Alaska Region

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