By 1910, most of the easily accessible placer gold deposits were exhausted and capital-intensive technologies became necessary to extract remaining deposits. These methods were not possible with the existing transportation infrastructure. The completion of the Alaska Railroad in 1923, expanded transportation options for the region connecting Fairbanks to the tidewater at Seward, making large-scale dredging operations economically feasible. Aviation also became a key component of Interior transportation beginning in earnest in the 1920s. However, it was not until 1931, that Weeks Field, originally constructed in 1923 was officially dedicated as an airfield. Industrialized, corporate activity became the hallmark of the region's mining in the remaining years before World War II.

Development in the Alaskan interior increased dramatically with the advent of World War II and subsequent military build-up in Alaska. Of particular significance was the development of airfields near Delta Junction (Fort Greely), Fairbanks (Ladd Field, later Fort Wainwright), and 26 miles southeast of Fairbanks (Eielson Air Force Base). These locations began as lend-lease bases and cold weather testing centers, but soon expanded with the increased need for military support during World War II and later during the Cold War.

Full historic contexts of early mining, transportation, and homesteads on Fort Wainwright have been completed. These studies have determined that there are no properties eligible for the National Register under these contexts. Several village sites associated with the early contact period have been reported near Fort Wainwright. One was reported near Wood River Buttes, two just northwest of the installation's boundary and one near Fairbanks (Reynolds 1986). None have been reported or located on the Main Post.

Status of Archaeological Resources

Archaeological research on Fort Wainwright training areas has resulted in numerous technical reports (Bacon 1979; Bacon and Holmes 1979; Dixon et al. 1980; Esdale and Robertson 2007; Espenshade 2010; Bradley et al. 1973; Gaines 2009; Gaines et al. 2010, 2010; Hedman et al. 2003; Higgs et al. 1999; Holmes 1979; Johnson and Bozarth 2008; Marshal 2007; Potter 2005; Potter et al. 2000; Rabich and Reger 1978; Raymond-Yakoubian 2006; Raymond-Yakoubian and Robertson 2005; Robertson 2010; Robertson et al. 2004, 2006, 2007, 2008, 2009; Staley 1993) and several scientific papers (Holmes and Anderson 1986; West 1967, 1975).

Fort Wainwright and its training lands contain 636 known archaeological sites and four archaeological districts. Sixty sites are eligible for the National Register of Historic Properties (NRHP), 512 sites have not been evaluated, and 64 additional sites have been determined ineligible for the NRHP. Of the eligible or un-evaluated sites, 13 are historic sites and 559 are prehistoric sites.

Archaeological surveys of Fort Wainwright's main post area began in 1979. Jim Dixon surveyed the north side of the Chena River and Birch Hill area, discovering and relocating several prehistoric archaeological sites (FAI-40, 41, 42, 43, 199, and 200) (Dixon et al. 1980). Surveys of the main post building areas continued in the 1980s by Julia Steele (Steele 1992, 1983) and Georgeanne Reynolds (Reynolds 1983, 1985). No sites were found in these previously disturbed areas. John Cook surveyed the River Road pond in 1996 and found one site (FAI-509), which has failed to be relocated in subsequent attempts. In 2001, the Army began contracting cultural resource surveys and evaluations with Colorado State University's Center for Environmental Management of Military Lands (CEMML). Surveys by several different principles investigators have targeted areas of construction undertakings. Two historic sites (FAI-1603 and 1604) and one additional prehistoric site (FAI-1990) were found in these investigations. In 2011, CEMML completed survey of the entire cantonment, north and south of the Chena River, discovering one additional historic site (FAI-2117). Of the 11 archaeological sites known from the Fort Wainwright cantonment area, 2 (FAI-1603 and 1604) have been determined not eligible. The remaining sites have not yet been evaluated.

Archaeological sites were first identified in the TFTA in 1973 by Zorro Bradley and others who conducted a survey in the Blair Lakes area (Bradley et al. 1973). James Dixon continued surveys for archaeological district designations in the regions of Blair Lakes (District FAI-335), Clear Creek Butte (District FAI-336), and Wood River Buttes (District FAI-337) (Dixon et al. 1980). In 1993, proposed work in the Clear Creek Butte area prompted a contract to relocate several archaeological sites (Staley 1993.) These three districts have been revisited by CEMML archaeologists a few times over the last decade, and notably 92 new sites were found in 2009-2010 during survey of the Wood River Buttes, Salmon Loaf, and north and east of Blair Lakes. In total, archaeologists have identified 147 archaeological sites in the TFTA. Of these sites, 11 have been determined eligible for inclusion in the National Register (FAI-44, 45, 46, 48, 49, 54, and 194 to 198), 2 are not eligible (FAI-1607 and 2046), and 134 remain to be evaluated for eligibility.

The road system in the YTA was the first of many areas to be investigated. Charles Holmes discovered 8 sites in a 1978 road survey (Holmes 1979). John Cook conducted a DOE evaluation on one of these sites in 1979 (Cook 1979.) Michael Kunz surveyed the Stuart Creek Area in 1992 but discovered no archaeological sites and Northern Land Use Research's (NLUR) 1999 survey of Stuart Creek and the YTA road system uncovered 1 historic site (Higgs et al. 1999). CEMML archaeologists have been surveying portions of the YTA in conjunction with construction projects on an annual basis since 2001. Currently, North Beaver Creek, Skyline, Johnson, Quarry, Brigadier, and Manchu Roads in the YTA are almost entirely surveyed, as is the area east of Skyline Road outside of the Stuart Creek Impact Area, McMahon Trench, the Manchu Range, and the majority of training areas 307 and 310 north and south of Manchu and Quarry

Roads. Twenty-one archaeological sites have been identified in the YTA. Ten of the sites have been determined not eligible for listing in the National Register (FAI-157, XBD-93, 94, 95, 103, 104, 186, 260, 264, and 266) and 11 have not been evaluated. XBD-162 will not be evaluated due to its location in a heavily used portion of the Stuart Creek Impact Area.

Archaeological investigations in what is now the DTA began in the 1960s, when Frederick West was searching for sites related to the first Americans (West 1967). He excavated the Donnelly Ridge Site (XMH-5) in 1964 and found an assemblage containing microblade core technology similar to early Holocene Denali Complex sites. Several surveys of Fort Greely and adjacent training lands in the late 1970's documented 64 new sites (Rabich and Reger 1977, Bacon 1979, Holmes 1979, Bacon and Holmes 1979). Julia Steele surveyed various locations in DTA from 1980-1983, finding 4 additional new sites, (Steele 1980, 1980, 1982, 1982, 1983, and 1983) and Georgianne Reynolds surveyed the Donnelly Dome area in 1988, locating one more (Reynolds 1988). Investigations in DTA from 1992-2002 were by D. Staley (Staley 1993), T. Gamza (Gamza 1995), A. Higgs (Higgs et al. 1999), and D. Odess (Odess 2002). Sixteen new sites were found during this decade of fieldwork and attempts were made to relocate old sites.

Concentrated efforts to expand survey coverage of DTA East began with CEMML archaeologists in 2002. Over 200 new sites were located in the Texas Range, Donnelly Drop Zone, and Eddy Drop Zone in the first half of the decade. In 2007, one site was found in the northernmost portion of DTA West by Ben Potter and others during survey for the Alaska Railroad Northern Rail Extension Project (Potter et al. 2007). In recent years, CEMML research aimed to evaluate many known archaeological sites in DTA for inclusion in the National Register in conjunction with use of the Battle Area Complex (BAX) and its surface danger zone. Sites have also been discovered during surveys for road and trail maintenance. Potential expansions into DTA West, west of the Delta River, have prompted recent surveys into new areas such as Molybdenum Ridge, where 21 new sites were discovered in 2011. Because of its remote setting, however, the archaeology of Donnelly West is still poorly understood and represents a gap in USAG FWA's inventory of cultural properties. The Cold Regions Test Center (CRTC) has also contracted with CEMML and others since the last ICRMP to survey areas in DTA West, east of the Little Delta River, and many new archaeological sites have been recorded (Espenshade 2010).

To date, 454 archaeological sites have been identified within DTA. Forty-nine sites have been found to be eligible for the National Register, and 50 were found not eligible. An additional 355 sites remain to be evaluated. Historic archaeology sites are poorly represented in this region, with only 6 currently known to exist. The Donnelly Ridge District (XMH-388) encompasses Denali sites identified by Frederick West, south and west of Donnelly Dome.

The Gerstle River and Black Rapids Training Areas, also managed by Fort Wainwright, have been infrequently utilized by training activities and very few surveys or identification of archaeological sites have occurred these areas. CEMML archaeologists surveyed two small portions of the GRTA in 2011. One prehistoric site (XMH-1359) is previously known from this training area. Two sites, which have not been evaluated for the NRHP, have been discovered in the BRTA (XMH-317, 318).

Project 1: UAV Corridor Development

Description of Undertaking (36 CFR 800.11 (d) (1))

USAG FWA plans to develop access corridors between launch sites and restricted areas for UAV, in consultation with the Federal Aviation Administration (FAA). The corridors proposed are new controlled airspaces, separate from civilian air corridors. The corridors are located between Fort Wainwright, TFTA, YTA, DTA, and FGA (Figure 2).

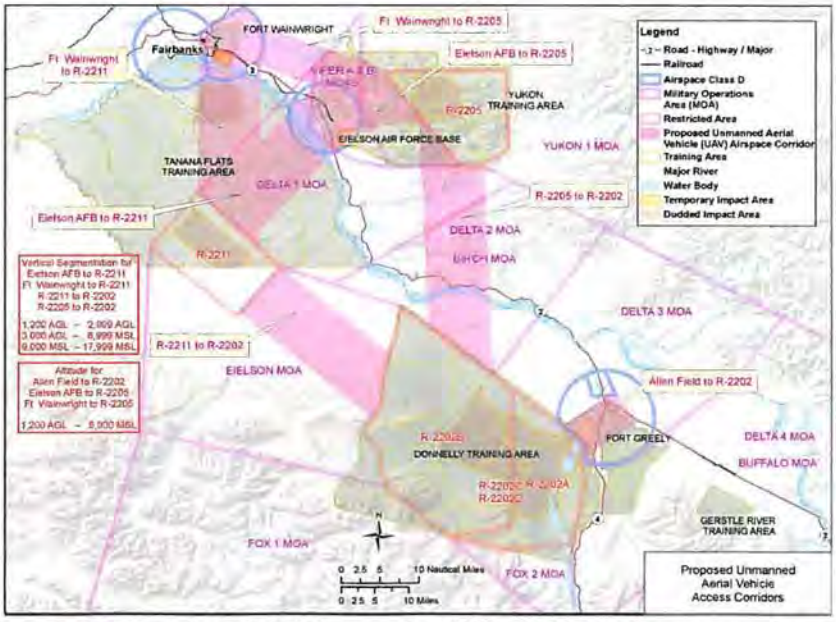

Figure 2. Proposed restricted airspace for UAV's (thick pink lines connecting Fort Wainwright training areas).

Steps Taken to Identify Historic Properties (36 CFR 800.11 (d) (2))

Much of the area beneath the proposed restricted airspaces is not on USAG FWA managed land. Review of the Alaska Heritage Resource Survey identified approximately two dozen archaeological sites under the restricted airspaces. Not all of the area appears to have been surveyed.

Determination of Effect (36 CFR 800.11 (d) (3)) - No Historic Properties Adversely Affected

The time-averaged noise levels in the corridors generated by the proposed UAV operations would be approximately 41 decibels DNL (day-night average sound level) in corridors with a floor altitude of 1,000 above ground level (AGL) and approximately 33 decibels DNL in corridors with a floor altitude of 3,000 AGL. These noise levels would not be sufficient to damage any archaeological or historic sites. No new ground disturbance is associated with the creation of these new restricted airspaces. Because of this, USAG FWA suggests a finding of "No Historic Properties Adversely Affected" for the UAV corridor undertaking.

Project 2: DMPTR Airspace Expansion

Description of Undertaking (36 CFR 800.11 (d) (1))

The USAG FWA proposes to expand the existing restricted airspace over the DMPTR area in YTA. This airspace would be of sufficient size to encompass hazardous activities and weapons footprints for ordnances used in this area. Two airspace alternatives are shown in Figures 3 and 4.

Steps Taken to Identify Historic Properties (36 CFR 800.11 (d) (2))

Although the ground area beneath the possible restricted airspaces has not been surveyed in its entirety, 10 archaeological sites are known to exist.

Determination of Effect (36 CFR 800.11 (d) (3)) - No Historic Properties Adversely Affected

Noise levels generated by munitions firing exceeding 62 decibels CDNL(C-weighted day-night average sound level) would not extend beyond range boundaries and would not be sufficient to damage any archaeological or historic sites. Moreover, there is no ground disturbance related to this undertaking. USAG FWA recommends a finding of "No Historic Properties Adversely Affected" for the expansion of the DMPTR restricted airspace.

14

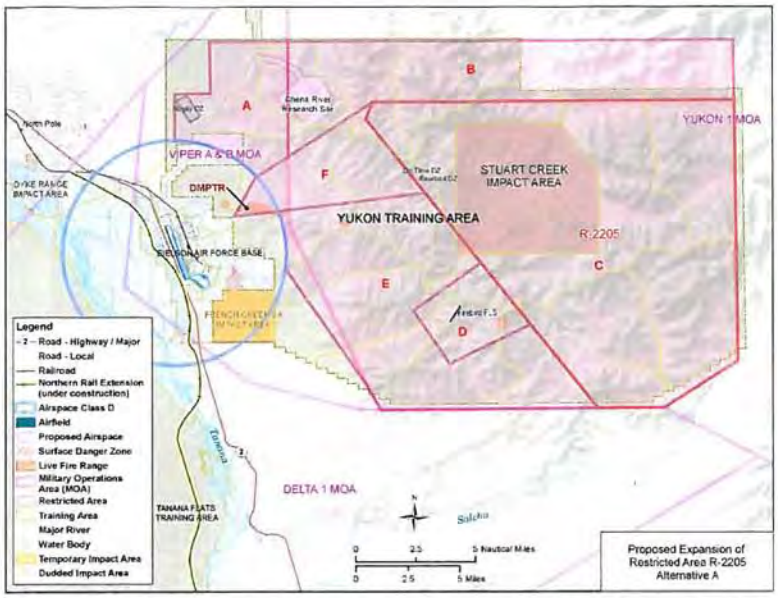

Figure 3. Restricted airspace proposed for over the DMPTR area (Alternative A)

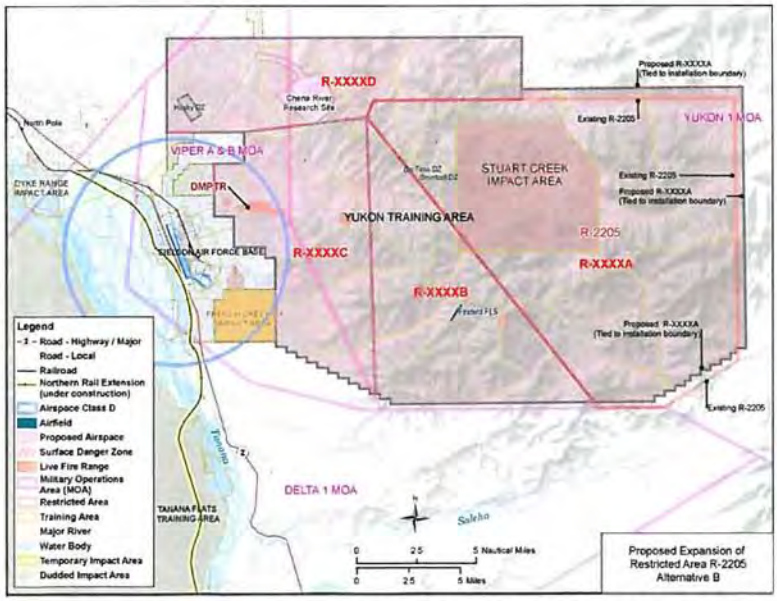

Figure 4. Restricted airspace proposed for over the DMPTR area (Alternative B)

15

Project 3: BAX Airspace and Footprint Expansion

Description of the Undertaking (36 CFR 800.11 (d) (1))

The US Army proposes to establish a new restricted airspace over the BAX in DTA East, in one of two overlapping locations (Figure 5 and 6). This airspace is proposed to be of sufficient size to encompass hazardous activities and weapons footprints for the types of ordnance used in the area. The expansion of the airspace will not have any ground effect, but a subpart of this overall project includes the expansion of the BAX Surface Danger Zone. A surface danger zone is an "off-limits" downrange safety buffer zone that covers the maximum distance stray rounds may travel, established for the purposes of protecting human health and safety.

The BAX Surface Danger Zone Programmatic Agreement (FWA-PA-1003) was established and signed by the SHPO on February 5, 2010. On-the-ground training has demonstrated that the boundaries of the BAX Surface Danger Zone should be altered slightly from those originally proposed and consulted on in 2009 and 2010. The undertaking, therefore, also includes a change expansion in the boundaries of the surface danger zone (Figure 7) which will affect an additional known fourteen archaeological sites and require additional archaeological survey.

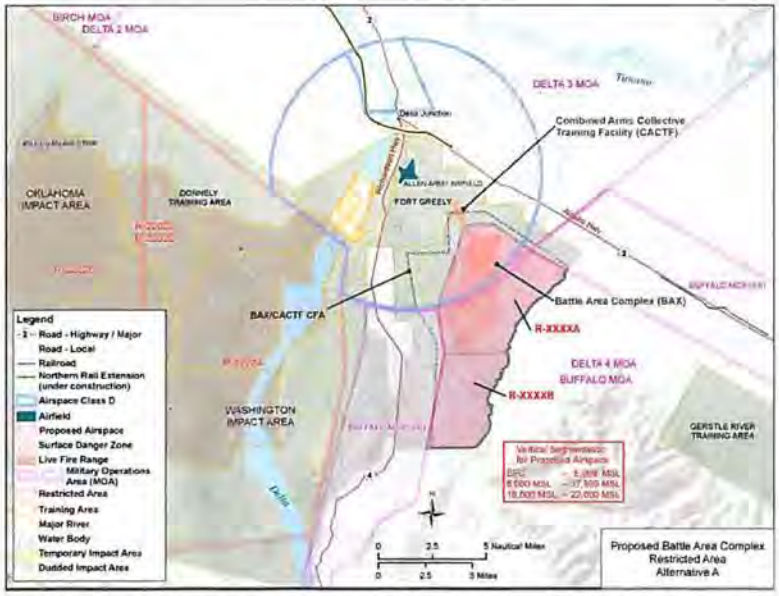

Figure 5. Restricted airspace proposed for over the BAX area (Alternative A)

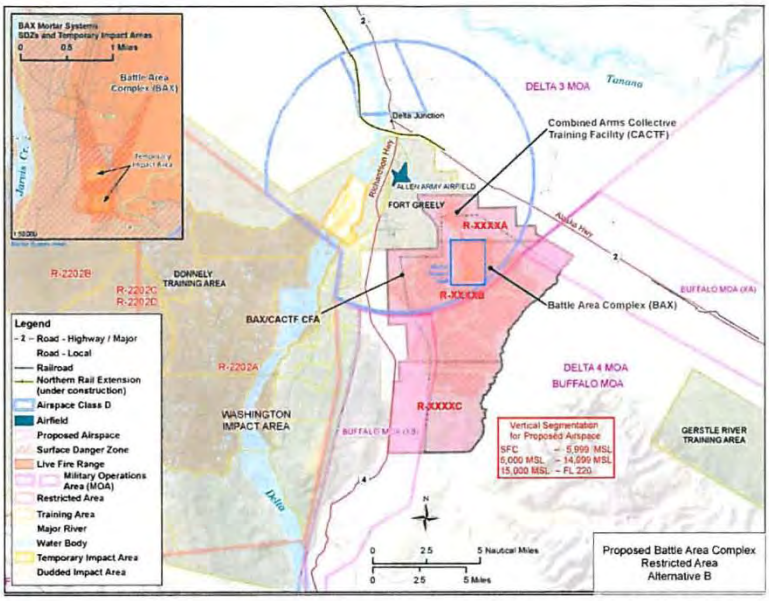

Figure 6. Restricted airspace proposed for over the BAX area (Alternative A)

Figure 7. Original and expanded BAX surface danger zone footprints.

Steps Taken to Identify Historic Properties (36 CFR 800.11 (d) (2))

There are 153 archaeological sites located under the entire restricted airspace. One hundred and thirty sites are located within the original boundaries of the BAX surface danger zone (not all sites are eligible for the NRHP). An additional 14 sites are known from the expanded portions of the BAX footprint in the northwest corner and southern end (Figure 8, Table 1). To comprehensively

identify all archaeological sites in the expanded footprint of the BAX surface danger zone, an additional 1182 acres needs to be surveyed.

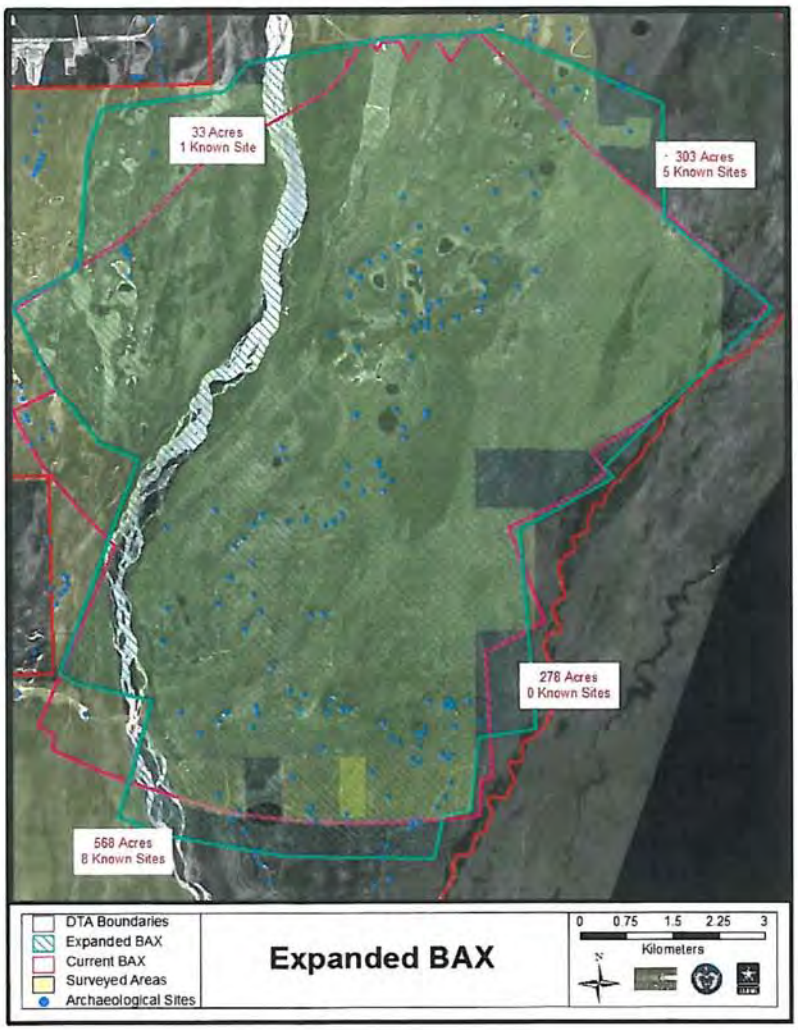

Figure 8. Survey locations in BAX SDZ expansion.

19

Table 1. Known archaeological sites in the expanded BAX footprint

Site Number	Latitude	Longitude	Eligibility	Site Type
XMH-00274	63°49'48"	-145°39'02"	Not evaluated	Surface lithic scatter
XMH-00322	63°55'47"	-145°31'00"	Not evaluated	Surface lithic scatter
XMH-00323	63°55'52"	-145°32'00"	Not evaluated	Surface lithic scatter
XMH-00902	63°56'16"	-145°32'39"	Not evaluated	Subsurface lithic scatter
XMH-00903	63°56'13"	-145°32'05"	Not evaluated	Subsurface lithic scatter
XMH-01071	63°55'44"	-145°40'39"	Not evaluated	Subsurface lithic scatter
XMH-01333	63°56'13"	-145°31'19"	Not evaluated	Surface lithic scatter
XMH-01360	63°49'54"	-145°39'25"	Not evaluated	Surface lithic scatter
XMH-01364	63°49'48"	-145°35'53"	Not evaluated	Surface lithic scatter
XMH-01365	63°49'50"	-145°35'52"	Not evaluated	Surface lithic scatter
XMH-01366	63°49'51"	-145°35'45"	Not evaluated	Surface lithic scatter
XMH-01369	63°49'37"	-145°38'57"	Not evaluated	Surface lithic scatter
XMH-01377	63°49'32"	-145°36'27"	Not evaluated	Surface lithic scatter
XMH-01378	63°49'39"	-145°36'20"	Not evaluated	Surface lithic scatter

Determination of Effect (36 CFR 800.11 (d) (3)) - Historic Properties Adversely Affected

Although 153 archaeological sites are located under the training airspace, no significant impacts are anticipated to cultural resources from the airspace reclassification and its training use. Flying operations are not conducted at a frequency sufficient to result in time-averaged noise levels exceeding 65 DNL. In addition, noise levels generated by munitions firing exceeding 62 decibels CDNL would not extend beyond range boundaries and would not be sufficient to damage any archaeological or historic sites.

USAG FWA recommends a finding of "Historic Properties Adversely Affected" for the known archaeological sites within the expanded footprint of the BAX. We also suggest to amend the existing BAX Surface Danger Zone PA to include the 14 sites mentioned above (Table 1) and any sites found during surveys of the previously un-surveyed areas (Figure 8) bounded by the expanded BAX surface danger zone footprint.

Summary and Recommendations (36 CFR 800.11 (d) (3))

Based on reviews of the UAV Corridor Development and the DMPTR Airspace Expansion, there is no reason to believe that any of these projects warrant any further fieldwork or consideration under Section 106 of the NHPA (16 USC § 470, as amended 2000), and regulations codified in 36 CFR 800 (as amended 2004). USAG FWA has determined findings of **No Historic Properties Adversely Affected** for the UAV Corridor Development and the DMPTR Airspace Expansion.

Further fieldwork in the form of archaeological survey of previously un-surveyed areas and phase two research to determine the eligibility of existing sites is recommended for the BAX footprint expansion undertaking. USAG FWA has determined a finding of **Historic Properties Adversely Affected** for this undertaking and suggests that amendments are made to the existing FWA-PA-1003 to protect and monitor archaeological sites within the expanded BAX footprint. No indications of burials or other human remains are known from within the surveyed area; therefore, barring an unforeseen discovery during the survey, there are no further considerations expected under the NAGPRA (25 USC § 3001 *et seq.*).

Copies of this letter will be sent to federally recognized tribes (Village of Dot Lake, Native Village of Eagle, Healy Lake Village, Nenana Native Association, Northway Village, Native Village of Tanacross, and Native Village of Tetlin). If you have any questions or require additional information, please contact Julie Esdale, USAG FWA Archaeologist at (907) 361-9405 or at julie.a.esdale.ctr@mail.mil.

Sincerely,

Michael T. Meeks
Director, Directorate of Public Works

21

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28

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STATE OF ALASKA

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DEPARTMENT OF NATURAL RESOURCES

DIVISION OF PARKS & OUTDOOR RECREATION
OFFICE OF HISTORY AND ARCHAEOLOGY

March 9, 2012

MAR 2 1 2012

File No.: 3130-1R ARMY

Michael T. Meeks
Director, Directorate of Public Works
Department of the Army
Headquarters, U.S. Army Garrison Fort Wainwright
1060 Gaffney Road, #6000
Fort Wainwright, Alaska 99703-6000

Subject: The Unmanned Aerial Vehicle (UAV) Corridor Development, Digital Multipurpose Training Range (DMPTR) Airspace Expansion, and Battle Area Complex (BAX) Airspace and Footprint Expansion

Dear Mr. Meeks:

The Alaska State Historic Preservation Office (AK SHPO) received your correspondence (dated February 7, 2012) on February 13, 2012. Following our review of the documentation provided, we concur with your determination that a finding of **no adverse effect** is appropriate for the following undertakings addressed in the cultural resource inventory report:

- Project 1: UAV Corridor Development
- Project 2: DMPTR Airspace Expansion

We concur that a finding of **adverse effect** is appropriate for the BAX Airspace and Footprint Expansion project. As noted within the documentation provided, there are 14 known sites within the expanded BAX footprint. We agree that an amendment to the *Programmatic Agreement Between the United States Department of the Army and the Alaska State Historic Preservation Officer Regarding Monitoring and Treatment Plan of Archaeological Sites Located within the Surface Danger Zone (SDZ) of the Battle Area Complex (BAX) Training Facility at Fort Wainwright, Donnelly Training Area* is appropriate in order to incorporate these sites. Further, we agree with the management recommendations provided, including inventory of previously unsurveyed areas and research to determine the eligibility of sites located within the BAX footprint expansion area. We look forward to receiving a proposed amended draft Programmatic Agreement (PA). Upon receipt, we will review the draft and provide any additional comments so that it may be expeditiously amended.

Thank you for the opportunity to comment. Please contact Shina duVall at 269-8720 or shina.duvall@alaska.gov if you have any questions or if we can be of further assistance.

Sincerely,

Judith E. Bittner
State Historic Preservation Officer

JEB:sad

1·1·2012 3480 ARMY MRX SDZ

FW-PA-1207

DEPARTMENT OF THE ARMY
INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, U.S. ARMY GARRISON, FORT WAINWRIGHT
1060 GAFFNEY ROAD #6000
FORT WAINWRIGHT, ALASKA 99703-6000

REPLY TO ATTENTION OF:

SEP 0 9 2012

FIRST AMENDED PROGRAMMATIC AGREEMENT
BETWEEN
THE UNITED STATES DEPARTMENT OF THE ARMY
AND
THE ALASKA STATE HISTORIC PRESERVATION OFFICER
REGARDING
MONITORING AND TREATMENT PLAN OF ARCHAEOLOGICAL SITES LOCATED WITHIN THE SURFACE DANGER ZONE OF THE BATTLE AREA COMPLEX TRAINING FACILITY AT FORT WAINWRIGHT, DONNELLY TRAINING AREA

Amendment 1

WHEREAS, the original *Programmatic Agreement between the United States Department of the Army and the Alaska State Historic Preservation Officer regarding the Monitoring and Treatment Plan of Archaeological Sites located within the Surface Danger Zone (SDZ) of the Battle Area Complex (BAX) Training Facility at Fort Wainwright, Donnelly Training Area* was executed on the 5th day of February, 2010; and

WHEREAS, in 2009, the United States Department of the Army (the "Army"), acting through the United States Army Garrison Fort Wainwright (USAG FW), proposed to establish a Surface Danger Zone (SDZ) associated with the Battle Area Complex (BAX) and Combined Arms Collective Training Facility (CACTF) at Fort Wainwright's Donnelly Training Area (DTA) (hereafter referred to as "the Undertaking"); and

WHEREAS, the Undertaking originally entailed establishing 23,741 acres downrange of the BAX complex as a restricted area in order to protect human health and safety from potential stray rounds resulting from live fire exercises at the BAX; and

WHEREAS, this first amendment incorporates an additional 3,252 acres down range of the BAX which will be established in 2012 and surveyed for archaeological sites within 5 years as part of the Joint Pacific Alaska Range Complex restricted airspace expansion (a separate undertaking from the original establishment of the BAX SDZ); and

WHEREAS, this first amendment serves to incorporate the above mentioned additional acreage down range of the BAX which has been established since the original Programmatic Agreement (PA) was executed; and

WHEREAS, due to the removal of ineligible sites, this first amendment also corrects the number of archaeological sites (also known as historic properties per 36 C.F.R.§ 800) within the SDZ from the original 136 sites to 124 sites that are eligible or may be eligible for listing in the National Register of Historic Places (National Register) and identified in Exhibit 2 hereto; and

WHEREAS, with this first amendment, the BAX SDZ monitoring schedule will be changed to more closely match military live-fire training schedules; and

WHEREAS, being no construction will take place in the SDZ, no targets will be set up within the SDZ and no archaeological sites are within the direct line of fire; potential adverse effects to historic properties will likely be limited to impacts of stray rounds from live fire training activities at the BAX; and

WHEREAS, during the 2009 field season, the USAG FW completed the archaeological excavation of the 29 archaeological sites closest to the BAX in accordance with the research design and methods detailed in *U.S. Army Alaska's Monitoring and Data Recovery Plan for Cultural Resources within the Battle Area Complex Surface Danger Zone, Fort Wainwright, Donnelly Training Area, 2009* (Section 8.0); and

WHEREAS, the USAG FW has consulted with the Alaska State Historic Preservation Officer (SHPO) pursuant to 36 C.F.R. § 800, regulations implementing Section 106 of the National Historic Preservation Act (NHPA) (16 U.S.C. 470 f) and the SHPO has concurred with a finding of no adverse effect provided that a monitoring and data recovery program is implemented; and

WHEREAS, the USAG FW invited the Advisory Council on Historic Preservation (ACHP) to participate, and the Council declined; and

WHEREAS, the USAG FW consulted the FW Cultural Resources Working Group including the Tanana Yukon Historical Society; and

WHEREAS, the USAG FW consulted with Alaska Native tribes from the Village of Dot Lake, Native Village of Eagle, Healy Lake Village, Northway Village, Native Village of Tanacross, and Native Village of Tetlin; and will continue to consult during the duration of this PA; and

WHEREAS, this PA has been prepared in consultation with the SHPO and in accordance with 36 C.F.R. § 800.14 (b)(1)(v); and

NOW, THEREFORE, the USAG FW and SHPO agree that the USAG FW shall ensure that the following stipulations are implemented in order to take into account the effects of the Undertaking on historic properties and to satisfy the USAG FW's NHPA Section 106 responsibilities.

FW-PA-1207

STIPULATIONS

The USAG FW shall ensure that the following stipulations are implemented:

I. SURVEY

a. Survey: Systematic Phase I archaeological survey of all areas added to the BAX SDZ with this first amendment will take place over a period of no more than 5 years from date of execution of this amended PA. Any archaeological sites found will be added to the monitoring program. If a Determination of Eligibility (DOE) is conducted on any archaeological site within the SDZ resulting in a site being found to not be eligible for the National Register, that site will be removed from the monitoring plan once the SHPO concurs with the DOE.

b. If, in the future, the BAX SDZ is expanded beyond its current anticipated boundary up to 20% in additional area (5,400 acres), the USAG FW will notify the SHPO prior to the expansion being formalized and will develop a plan to survey the added area.

(1) Any archaeological sites found during the survey will be added to the monitoring program.

(2) Any expansion beyond the 20% of the original size of the BAX SDZ will be treated as a new undertaking.

II. MONITORING

a. Monitoring: Monitoring will be conducted in accordance with the research design and methods detailed in Exhibit 1 *U.S. Army Alaska's Monitoring and Data Recovery Plan for Cultural Resources within the Battle Area Complex Surface Danger Zone, Fort Wainwright, Donnelly Training Area, 2009* (Section 7.0). Monitoring started in August of 2009, and will last for a period of no longer than 10 years, to be determined in consultation with the SHPO.

(1) All sites will be visited at least once each year.

(2) Site visits will be conducted after the completion of training episodes, up to 6 times a year provided regular use and training on BAX occurs. If no training occurs on BAX, sites will not be monitored more than once annually.

b. If monitoring activities identify adverse effects to any of the 124 known archaeological sites, or any other historic properties, located within the BAX SDZ, then the SHPO will be contacted directly via email or telephone within seven days. A report of the sites affected, as well as nature and extent of effects, will be submitted to the SHPO within 60 days. The USAG FW will then develop a plan to mitigate adverse effects to affected archaeological sites in consultation with the SHPO and interested Alaska Native tribes.

3

c. If mortar full range training rounds are used in the BAX, the USAG FW Cultural Resources will help site the impact area and monitor the retrieval of rounds within the BAX SDZ[1].

III. DATA RECOVERY

Data Analysis: Data analysis of recovered materials from the 2009 fieldwork will be completed in accordance with the research design and methods detailed in *U.S. Army Alaska's Monitoring and Data Recovery Plan for Cultural Resources within the Battle Area Complex Surface Danger Zone, Fort Wainwright, Donnelly Training Area, 2009* (Section 8.0).

IV. CULTURAL RESOURCE AWARENESS TRAINING

To prevent disturbance of archaeological sites by Soldiers training at the BAX range complex, as well as other Army lands in Alaska, the USAG FW will develop an educational program designed to increase soldier awareness of cultural resources on Army lands and the laws that protect these resources. This Soldier educational program will consist of three parts:

a. Updating the USAG FW Archaeological Resource Protection Act (ARPA) tri-fold handout, and ensuring that they are available to Soldiers at newcomer briefings.

b. Development of a graphical and textual display to increase Soldiers' awareness of cultural resources on the BAX SDZ and other Army lands. This display will be presented in the form of, at a minimum, one poster to be displayed at Range Control, and one interpretive panel placard to be displayed at an informational kiosk located at the BAX range.

c. Development of a Cultural Resource Awareness Powerpoint presentation to be given to Soldiers and contractors to increase knowledge of cultural resource concerns and responsible actions, and knowledge of Alaskan Native communities. The presentation will be given to relevant personnel at newcomer briefings, and prior to training or working on the BAX range. This presentation will be given throughout the duration of this PA.

V. SUBMITTALS

a. Report of Monitoring Findings: The USAG FW will submit to the SHPO, the results of monitoring on an annual basis. This will be included as part of the USAG FW Annual Cultural Resources Report.

(1) The BAX SDZ monitoring section of the annual report will include: a list of sites monitored; dates of site monitoring activities; a detailed description of the current overall site condition and integrity; a comparison of the site's current condition to past condition assessments; and photographs of the site. Reports of monitoring findings will include data obtained from the field site monitoring form detailed in *U.S. Army Alaska's Monitoring and Data Recovery Plan for Cultural Resources within the Battle Area Complex Surface Danger Zone, Fort Wainwright, Donnelly Training Area, 2009* (Appendix 1).

[1] Currently, USAG FW has no plans to use long range rounds. Mortar training crews plan to use short range training rounds that do not have the range to leave the BAZ construction footprint to impact the SDZ.

(2) Provided that no adverse effects occur to the sites in question as a result of use of the BAX SDZ, the FW DTA monitoring report will be submitted to the SHPO, Bureau of Land Management (BLM)[2] and interested Alaska Native tribes no later than May of the year following monitoring activities. If adverse effects are noted, they will be reported to the SHPO.

b. Report of Excavation Findings: the USAG FW will submit to the SHPO the results of the data recovery and subsequent data analysis. The following reports will be submitted:

(1) A preliminary interim report detailing the field work and initial findings will be submitted to the SHPO no later than April 2010. If data recovery extends past 2009, then an interim report will be submitted to the SHPO by the April following each year of fieldwork. Upon receipt of the documentation, the SHPO shall provide the USAG FW with review comments no later than 45 days. [Amendment 1 Update: Stipulation b.(1) is completed; Submitted to the SHPO in 2010]

(2) A final report will be submitted to the SHPO no later than June 2 years following the end of all data recovery fieldwork. Upon receipt of the documentation, the SHPO shall provide the USAG FW with review comments no later than 45 days. Final submittal, taking into consideration the SHPO comments, shall be no later than 60 days after receipt of review comments.

c. Submittal of updated the USAG FW ARPA tri-fold, poster, and placard: as each mitigation project is funded and subsequently initiated the USAG FW will provide drafts of the updated ARPA tri-fold, poster, and placard to the SHPO within two years of the execution of this PA. All products will be complete within 3 years of the execution of this PA.

(1) The SHPO shall have 30 days from hard copy receipt of each draft document to review and provide input.

(2) The USAG FW shall consider any timely input received in developing a second submittal of the draft mitigation projects within 45 days from the close of the review period.

d. All reports will be provided to the BLM cultural resources staff. Copies of the reports with redacted site location information will be sent to interested Alaska Native tribes and be made available to the public on the Army's website.

VI. INADVERTENT DISCOVERIES

a. If cultural remains are inadvertently discovered or there are inadvertent adverse effects as a result of training or other activities associated with this Undertaking, the USAG FW shall initiate consultation pursuant to 36 C.F.R. § 800.13 to resolve unforeseen the effect.

b. If any sacred objects, funerary objects, or objects of cultural patrimony are inadvertently encountered, the area will be avoided. Training will cease in the vicinity of the find, measures will be taken to protect objects, and the Cultural Resource Manager will be notified immediately so that appropriate action can be taken in order to follow regulations set forth in 43 C.F.R. § 10 Native

[2] Army Standard Operating Procedures requires exchange of information between the Army and BLM; BLM oversees third party permitting on Army lands.

American Graves Protection and Repatriation Act (NAGPRA).

c. If human remains are encountered, then the following actions will be taken:

(1) Training/work will be stopped immediately in the locality and the USAG FW, SHPO, and Alaska State Troopers (AST) shall be contacted immediately (Alaska Statutes 12.65.5);

(2) If the remains appear recent in the judgment of the anthropologist, the USAG FW shall defer to the opinion of the AST and Alaska State Medical Examiner (SME) for a determination of whether the remains are of a forensic nature and/or subject to criminal investigation;

(3) If the ethnic/cultural identity of any human remains is in question, a qualified anthropologist experienced in human remains analysis shall examine the remains. This examination will take place within 30 days of discovery;

(4) If Native American remains are encountered in the archaeological excavations, the USAG FW will follow NAGPRA regulations set forth 43 C.F.R. § 10;

(5) If the remains are not Native American and a determination is made by the AST and Alaska SME that a death investigation is not warranted, then The USAG FW, in consultation with the Alaska SME, will inform the known descendents of the deceased. If no descendents are found, then the remains shall be re-interred in a designated area.

VII. CURATION OF MATERIALS

All recovered artifacts will be curated at the University of Alaska Museum of the North in accordance with an existing Memorandum of Agreement. Data processing of artifacts will follow curation guidelines set by Department of Defense and the University of Alaska Museum of the North.

VIII. PROFESSIONAL STANDARDS

All work pursuant to this PA will be developed by or under the supervision of a person or persons meeting the minimum professional qualifications of an archaeologist as included in "Secretary of the Interior's Historic Preservation Professional Qualification Standards" (Federal Register Vol. 62, No.119, pp. 33719).

IX. DISPUTE RESOLUTION

a. Should any Signatory to this PA object to the manner in which the terms of this PA are implemented, the USAG FW shall consult with the objecting party to resolve the objection. If the USAG FW cannot resolve the objection, the following shall apply:

(1) The USAG FW shall forward all documentation concerning the dispute to the SHPO. The SHPO shall provide the USAG FW with a proposed resolution to the dispute within 30 days of

receiving adequate documentation. If the USAG FW agrees with the SHPO's resolution, then the Undertaking may proceed accordingly;

(2) If the SHPO does not provide its advice regarding the dispute within the 30 days time period, or the USAG FW and the SHPO cannot resolve the dispute, then the USAG FW shall forward all documentation relevant to the dispute, including the USAG FW's proposed resolution, to the ACHP. The ACHP shall provide the USAG FW with its advice on the resolution of the objection within 45 days of receiving adequate documentation;

(3) If the ACHP does not provide its advice regarding the dispute within the 45 days time period, the USAG FW may make a final decision on the dispute and proceed accordingly;

(4) Prior to reaching a final decision on the dispute, the USAG FW shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the SHPO, the ACHP, and Concurring Parties, and provide them with a copy of this written response.

(5) The USAG FW's responsibilities to carry out all other actions subject to the terms of this PA that are not the subject of the dispute remain unchanged.

b. Should any signatory to this PA object in writing to the USAG FW regarding any action carried out or proposed with respect to the implementation of this PA, the USAG FW shall consult with the objecting party. If after initiating such consultation the USAG FW determines that the objection cannot be resolved through consultation, it shall forward all documentation relevant to the objection to the ACHP, including the USAG FW's proposed response to the objection. Within thirty calendar days after receipt of all pertinent documentation, the ACHP shall provide recommendation or comment on the objection.

c. Should the ACHP not provide comment within thirty calendar days after receipt of the pertinent documentation, the USAG FW may assume the ACHP's concurrence in its proposed response to the objections.

d. The USAG FW shall take into account any the ACHP recommendation or comment provided in accordance with this stipulation with reference only to the subject of the objection; the USAG FW responsibility to carry out actions under this PA not the subject of the objection shall remain unchanged.

e. At any time during implementation of any stipulation in this PA, should an objection to any such stipulation or its manner of implementation be raised by a member of the public, the USAG FW shall take the objection into account and consult as needed with the objecting party and the SHPO to address the objection.

X. NOTICES

All notices, submissions, consents, demands, requests, or other communications which may or are required to be given hereunder to any Signatory shall be sent by (a) hand delivery (which shall be deemed to have been received upon delivery), (b) reputable overnight courier (which shall be deemed to have been received one business day after the date sent), (c) United States mail, registered or certified, return receipt requested, postage prepaid (which shall be deemed to have been received upon receipt by the sender of the return receipt), (d) facsimile, with a copy sent by reputable overnight courier (which shall be deemed to have been received when the sender receives a confirmation of successful transmission of the facsimile) or (e) electronic mail (which shall be deemed to have been received when the sender received a confirmation of successful transmission). Such documents shall be sent to the following addresses:

If to USAG FW:
Garrison Commander
U.S. Army Garrison Fort Wainwright
Fort Wainwright, AK 99703
With a copy to:

Directorate of Public Works
Attn: IMFW- PWE (CR Manager)
1060 Gaffney Road, #4500
Fort Wainwright, AK 99703-4500

If to SHPO:
State Historic Preservation Officer
Office of History and Archaeology
550 West 7th Avenue, Suite 1310
Anchorage, AK 99501

XI. AMENDMENT

The USAG FW or SHPO may request that this PA be amended, whereupon they will consult in accordance with 36 C.F.R. § 800 to consider such amendment. In particular, they will consider the information developed in the USAG FW's reports under Stipulations I and II to determine if the USAG FW can effectively or efficiently carry out activities to support its mission through revisions to this PA. No amendment shall take effect until it has been executed by the USAG FW and the SHPO.

XII. TERMINATION

The USAG FW or SHPO may propose to terminate this PA by providing thirty calendar days notice to the other explaining the reasons for the proposed termination. The SHPO and USAG FW will consult during this period to seek agreement on amendments or other actions that will avoid termination. In the event of termination, the USAG FW will comply with 36 C.F.R. §800 with regard to individual undertakings covered by this PA and not completed at time of termination.

XIII. FAILURE TO CARRY OUT AGREEMENT

In the event the USAG FW does not carry out the terms of this PA or if the ACHP determines under 36 C.F.R. § 800 that the terms of this PA are not being carried out, the USAG FW will comply with 36 C.F.R. § 800.3 through § 800.7 with regard to individual undertakings covered by this PA.

XIV. ANTI-DEFICIENCY ACT

a. All requirements set forth in this PA requiring the expenditure of the USAG FW funds are expressly subject to the availability of appropriations and the requirements of the Anti-Deficiency Act (31 U.S.C. §1341). No obligation undertaken by the USAG FW under the terms of this PA will require or be interpreted to require a commitment to expend funds not obligated for a particular purpose.

b. If the USAG FW cannot perform any obligations set forth in the PA due to the unavailability of funds, the USAG FW and SHPO intend the remainder of the agreement to be executed. In the event that any obligation under the PA cannot be performed due to the unavailability of funds, the USAG FW agrees to utilize its best efforts to renegotiate the provision, and may require that the parties initiate consultation to develop an amendment to this PA when appropriate.

XV. DURATION

This PA shall become effective upon execution by the USAG FW and SHPO and shall remain in effect until terminated in accordance with Stipulation XII or 7 years after it becomes effective. If training activities on the BAX are ongoing during that time, then the USAG FW and SHPO will review and extend this PA as necessary.

EXECUTION AND IMPLEMENTATION of this Programmatic Agreement evidences that the USAG FW has satisfied its Section 106 and Section 110(f) responsibilities for this Undertaking.

FW-PA-1207

Signatories:

UNITED STATES DEPARTMENT OF THE ARMY
FORT WAINWRIGHT

By: _____
RONALD M. JOHNSON
COL, SF
Commanding

Date: 4 September 2012

ALASKA STATE HISTORIC PRESERVATION OFFICER

By: _____
JUDITH E. BITTNER
Deputy State Historic Preservation Officer

Date: September 4, 2012

FW-PA-1207

Concurring Parties

BUREAU OF LAND MANAGEMENT, CENTRAL YUKON FIELD OFFICE

By: _____
Name:
Title:

Date: _____

11

FW-PA-1207

Exhibit 1

Robertson, A.R.
2009 *U.S. Army Alaska's Monitoring and Data Recovery Plan for Cultural Resources within the Battle Area Complex Surface Danger Zone, Fort Wainwright, Donnelly Training Area, 2009*. Edited by E.P. Gaines. Colorado State University, Center for Environmental Management of Military Lands

[Submitted to the SHPO April 22, 2009]

Exhibit 2

2012 Adjusted site list and monitoring schedule (all ineligible sites were removed)

[Submitted to the SHPO with this PA]

SITE #	NRHP Status	Monitoring Visits
XMH-00274	Not Evaluated	Annual
XMH-00277/00879	Eligible	Annual
XMH-00278	Not Evaluated	Annual + After Training
XMH-00279/00918	Eligible	Annual + After Training
XMH-00284/00882	Eligible (excavated)	Annual
XMH-00292/00885	Eligible	Annual + After Training
XMH-00322	Not Evaluated	Annual + After Training
XMH-00323/00893	Not Evaluated	Annual + After Training
XMH-00874	Eligible (excavated)	Annual
XMH-00878/00908	Eligible	Annual + After Training
XMH-00881	Eligible	Annual
XMH-00886	Not Evaluated	Annual + After Training
XMH-00887	Eligible	Annual + After Training
XMH-00890	Eligible	Annual + After Training
XMH-00891	Eligible	Annual + After Training
XMH-00894	Not Evaluated	Annual + After Training
XMH-00902	Not Evaluated	Annual + After Training
XMH-00903	Not Evaluated	Annual + After Training
XMH-00904	Eligible	Annual + After Training
XMH-00905	Not Evaluated	Annual + After Training
XMH-00906	Not Evaluated	Annual + After Training
XMH-00907	Not Evaluated	Annual + After Training
XMH-00909	Not Evaluated	Annual + After Training
XMH-00910/00911	Not Evaluated	Annual + After Training
XMH-00913	Not Evaluated	Annual + After Training
XMH-00914	Not Evaluated	Annual + After Training
XMH-00915	Not Evaluated	Annual + After Training

12

FW-PA-1207

XMH-00917	Not Evaluated	Annual + After Training
XMH-00919	Not Evaluated	Annual + After Training
XMH-00920	Eligible	Annual + After Training
XMH-00921	Not Evaluated	Annual + After Training
XMH-00923/00922	Not Evaluated	Annual + After Training
XMH-00924	Not Evaluated	Annual + After Training
XMH-00925	Not Evaluated	Annual + After Training
XMH-00926	Not Evaluated	Annual + After Training
XMH-00927	Not Evaluated	Annual + After Training
XMH-00928	Not Evaluated	Annual + After Training
XMH-00929	Not Evaluated	Annual + After Training
XMH-00945	Eligible	Annual + After Training
XMH-00983	Not Evaluated	Annual
XMH-01070	Not Evaluated	Annual
XMH-01071	Not Evaluated	Annual + After Training
XMH-01074	Not Evaluated	Annual + After Training
XMH-01075	Not Evaluated	Annual + After Training
XMH-01076	Not Evaluated	Annual + After Training
XMH-01077	Not Evaluated	Annual + After Training
XMH-01078	Not Evaluated	Annual
XMH-01084	Not Evaluated	Annual
XMH-01085	Not Evaluated	Annual + After Training
XMH-01086	Not Evaluated	Annual + After Training
XMH-01087	Not Evaluated	Annual + After Training
XMH-01088	Not Evaluated	Annual + After Training
XMH-01089	Not Evaluated	Annual
XMH-01090	Not Evaluated	Annual
XMH-01091	Not Evaluated	Annual
XMH-01092	Eligible	Annual + After Training
XMH-01093	Eligible	Annual
XMH-01095/01142	Not Evaluated	Annual + After Training
XMH-01096	Not Evaluated	Annual
XMH-01097	Not Evaluated	Annual
XMH-01098	Not Evaluated	Annual
XMH-01099	Not Evaluated	Annual
XMH-01100	Not Evaluated	Annual
XMH-01104	Not Evaluated	Annual
XMH-01105	Not Evaluated	Annual
XMH-01106	Not Evaluated	Annual
XMH-01107	Eligible	Annual
XMH-01108	Not Evaluated	Annual
XMH-01109	Eligible	Annual
XMH-01110	Eligible	Annual
XMH-01111	Not Evaluated	Annual
XMH-01114	Not Evaluated	Annual
XMH-01115/01117	Eligible	Annual

13

XMH-01365	Not Evaluated	Annual
XMH-01366	Not Evaluated	Annual
XMH-01367	Not Evaluated	Annual
XMH-01368	Not Evaluated	Annual
XMH-01377	Not Evaluated	Annual
XMH-01378	Not Evaluated	Annual
XMH-01384	Not Evaluated	Annual

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Natural Resources

DIVISION OF PARKS AND OUTDOOR RECREATION
Office of History and Archaeology

550 West 7th Avenue, Suite 1310
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Phone: 907.269.8721
Fax: 907.269.8908

September 19, 2012

File No.: 3480 ARMY BAX SDZ

Michael T. Meeks
Director, Directorate of Public Works
Department of the Army
Headquarters, U.S. Army Garrison Fort Wainwright
1060 Gaffney Road, #6000
Fort Wainwright, Alaska 99703-6000

Subject: First Amended Programmatic Agreement Between the United States Department of the Army and the Alaska State Historic Preservation Officer Regarding Monitoring and Treatment Plan of Archaeological Sites Located within the Surface Danger Zone (SDZ) of the Battle Area Complex (BAX) Training Facility at Fort Wainwright, Donnelly Training Area

Dear Mr. Meeks:

The Alaska State Historic Preservation Office (AK SHPO) received your correspondence (dated September 9, 2012) on September 11, 2012.

Following our review of the documentation provided, we have signed the amended Programmatic Agreement (PA) and are returning a copy with the original SHPO signature for your records. Once fully executed, we look forward to receiving a copy for our records.

Thank you for the opportunity to comment. Please contact Shina duVall at 269-8720 or shina.duvall@alaska.gov if you have any questions or if we can be of further assistance.

Sincerely,

Judith E. Bittner
Deputy State Historic Preservation Officer

JEB:sad

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

OCT 0 3 2012

Colonel Patrick O. Moylan
Vice Commander, Eleventh Air Force
9480 Pease Ave Ste 101
Joint Base Elmendorf-Richardson Alaska 99506-2101

Ms. Judith Bittner
Alaska State Historic Preservation Officer
Office of History and Archaeology
Department of Natural Resources
550 West 7th Avenue, Suite 1310
Anchorage Alaska 99501

Dear Ms. Bittner

The Alaskan Command (ALCOM) requests your concurrence with the finding of No Historic Properties Affected for the *Environmental Impact Statement for the Modernization and Enhancement of Ranges, Airspace, and Training Areas in the Joint Pacific Alaska Range Complex in Alaska* Realistic Live Ordnance Delivery (RLOD) proposed action.

Based on the nature of the proposed action, no historic properties will be affected within the Areas of Potential Effect for the Realistic Live Ordnance Delivery proposal. Pursuant to Section 106 of the National Historic Preservation Act of 1966 (16 USC § 470), and according to the regulations governing Section 106, 36 CFR Part 800 "Protection of Historic Properties," a determination is made of No Historic Properties Affected.

Survey results are attached to support a finding of No Historic Properties Affected. The U.S. Army Garrison Fort Wainwright, Alaska will be conducting any additional Section 106 consultation necessary for the definitive projects affecting Army-managed lands.

All correspondence associated with this consultation will be included in the Administrative Record of the EIS. If you have any questions regarding the proposals or regarding this request, please feel free to contact Mr. Jamie Spell at (907) 552-1695, LTC Russell Price at (907) 552-3683, or Ms. Erin Marynak at (907) 552-3791.

Sincerely

PATRICK O. MOYLAN
Colonel, USAF
Vice Commander

Attachment:
Realistic Live Ordnance Delivery Proposal Survey Results

Introduction

This document fulfills the interim reporting requirements for the Archaeological Studies for Realistic Live Ordnance Delivery (RLOD) and Battle Area Complex (BAX) portion of Contract W911KB-10-12-0001, Task Order 89, and can be used to begin Section 106 correspondence with the State Historic Preservation Officer (SHPO) for the construction and use of RLOD targets.

As part of the Joint Pacific Alaska Range Complex (JPARC), the Air Force has proposed to establish two temporary target areas in Donnelly Training Area (DTA) West.

The Section 106 of the National Historic Preservation Act (NHPA) (16 USC § 470, as amended 2000) review of the current project was conducted in August 2012. No historic properties will be affected by the undertaking. Application of the Criteria for Adverse Effect [36 CFR 800.5(a)] indicates a finding of "No Historic Properties Affected" for the RLOD target construction and use.

Project Setting and Environment

The proposed project is located on Fort Wainwright's DTA (Figure 1) south of Delta Junction, Alaska. The terrain of the area is characterized by round, even-topped, west to east oriented ridges that rise above adjacent valley floors to an elevation of 600-1500 m above sea level (masl). The surface topography has been carved by multiple glacial events and subdued further in some areas by the addition of moraine and outwash (Pink 2005). DTA lies within the Northern Foothills of the Alaska Range. The foothills are largely unglaciated, but past glaciations widened valleys and valley glaciers extend onto the installation. In the eastern portion of the training area elevation rises abruptly and steep slopes are incised by Holocene creeks and rivers.

Bedrock is primarily composed of Precambrian schist overlain by Cretaceous granites and Tertiary volcanic rocks. The volcanic rocks were an important raw material source for prehistoric peoples living in this area. Glacial moraine and alluvial outwash fans are among the most common surface sediments (Holmes 1965). The parent materials for soils in DTA are glacial and aeolian in origin, and profiles typically contain an organic layer above loess above till (Natural Resource Conservation Service 2010).

Figure 1. Location of the USAG FWA's DTA in central Alaska.

Historic Background

Prehistoric Context

Interior Alaska has been continuously inhabited for the last 14,000 years, and evidence of this continuum of human activity has been preserved within and around FWA's training lands. Interior Alaska's ice-free status during the last glacial period provided a corridor connecting the Bering Land Bridge and eastern Asia to North America. This allowed small bands of nomadic peoples to colonize Alaska and the rest of the continent and began a period of habitation in Interior Alaska that has persisted through the entire Holocene, the arrival of European traders in the late 1810s, the Klondike gold rush of the late 19th and early 20th centuries, and the military development of the Interior during the middle of the 20th century. FWA's cantonment and training lands comprise a vast and still relatively unsurveyed region with areas of high potential for yielding evidence of this activity.

Alaska has long been regarded as the gateway to the Americas and has held archaeological interest as the possible location for the oldest archaeological sites in the New World. This is due to more than Alaska's proximity to Asia and ice-free condition at the end of the Pleistocene. Similarities between archaeological assemblages in Siberia and Alaska and the discovery of lanceolate projectile points in the muck deposits around

Fairbanks in the early 1900s (which bore a resemblance to Clovis points of some antiquity in the American Southwest) also sparked interest in Alaska as a source area for all Native Americans.

After initial colonization, archaeologists generally divide Interior Alaska's prehistory into three broad archaeological themes: the Paleoarctic Tradition (12,000-6,000 years ago[1]), the Northern Archaic Tradition (6,000-1,000 years ago), and the Athabaskan Tradition (1,300-800 years ago) (Potter 2008). Archeological materials from these cultures are generally limited to lithic artifacts such as projectile points, cutting tools, scrapers, waste flakes from tool manufacturing, faunal remains, and hearths.

Reconstructions of paleoecological evidence suggest that the end of the Pleistocene was marked by a warming trend in Interior Alaska that may have contributed to initial colonization of the area (Bigelow and Powers 2001). Several sites in areas surrounding Army lands demonstrate that people began living in Interior Alaska 14,000 years ago. Significant sites in the Tanana Valley dating between 14,000-12,000 years ago include Healy Lake (Bigelow and Powers 2001), Walker Road (Bigelow and Powers 2001), Swan Point (Bigelow and Powers 2001), Mead (Bigelow and Powers 2001), and Broken Mammoth (Bigelow and Powers 2001). There are no sites in Alaska, however, that predate the oldest sites in the contiguous United States, nor do Alaska's oldest sites resemble the Clovis culture (Bigelow and Powers 2001). The Younger Dryas cooling event from 13,000-12,000 years ago (Bigelow and Powers 2001) may have led to a temporary population decline (Potter 2008) in the Interior before permanent colonization.

The Paleoarctic Tradition is a term now generally used by archaeologists to refer to the earliest settled people known from all over Alaska. It was originally defined by Anderson[2] (Anderson 1968, 1970) as the earliest microblade-using tradition in the American Arctic, with a proposed relationship to northeast Asian late Pleistocene cultures based on similarities in these distinctive artifact types. Archaeological evidence indicates that early settlers camped on terraces, lakeshores, buttes, and bluffs. By using these locations on high ground, they could locate and track prey that included large mammals such as mammoth and bison. Evidence from the Upward Sun River Site, located just 5 km southeast of TFTA, for example, demonstrates that hunter-gatherers in Interior Alaska were concentrating on bison and wapiti at the end of the Pleistocene (The Upward Sun River Site is also known for one of the earliest burials in the Americas [Potter 2008; Potter et al. 2008; Potter et al. 2011]). It is likely that the treeless environment and nomadic nature of these peoples had a direct impact on the kinds of tools they fashioned. Stone, bone, antler, and ivory provided the most abundant material for manufacturing weapons and cutting tools. Artifacts typically associated with this culture include small stone microblades, microblade cores, bifacial projectile points, and unifacial scraping tools.

In Interior Alaska, this tradition historically included two cultural divisions called the Nenana and Denali complexes. The Nenana Complex was identified by Powers and

[1] All dates are given in calendar years *before present*.
[2] Anderson called it the "American Palaeoarctic Tradition," but most researchers use the shortened version.

Hoffecker from sites in the Nenana Valley (Powers and Hoffecker 1989). This complex began approximately 11,000 years ago with an artifact assemblage that included triangular or teardrop-shaped, bifacially worked projectile points ("Chindadn" points [Cook 1969; 1975; Holmes and Cook 1999]); large unifacial chopper-like tools; and flake tools. The Nenana Complex is defined as lacking microblades, microblade cores, and burins, and was proposed to predate the microblade-rich Denali Complex. Many Nenana Complex archaeological sites are located in the Tanana Valley, adjacent to FWA training lands (Broken Mammoth [Holmes 1996; Yesner et al. 1999], Chugwater [Lively 1996], Donnelly Ridge [West 1967; 1996, Donnelly Ridge is located in DTA], Healy Lake [Cook 1989], Mead [Holmes 2007] and Swan Point [Holmes et al. 1996; Holmes 1998; 2007]).

The Denali Complex, dated roughly to 10,500 to 8,000 years ago, was originally defined by West (West 1967; 1975) and includes distinctive wedge-shaped microblade cores, core tablets and their derivative microblades, large blades, biconvex bifacial knives, certain end-scraper forms, and burins. West later defined the Denali Complex as a regional variant of the American Paleoarctic Tradition (West 1981). Denali sites in the vicinity of FWA's training lands include Mt. Hayes (West 1996), Swan Point (Holmes et al. 1996; Holmes 1998, 2007), and Gerstle River (Potter 2001). At least one site in TFTA (FAI-2043) has also been dated to this period.

The relationship between the proposed Nenana and Denali complexes is as of yet unresolved. As discussed above, some researchers view the Nenana Complex as a bifacial industry that predates the microblade-based Denali Complex. However, current research at sites such as Swan Point and Broken Mammoth indicates that microblades and burins were used by the earliest known cultures in Interior Alaska, with a later co-occurrence with Chindadn points—the defining artifact type of the Nenana Complex. Although some archaeologists still believe that there is a cultural distinction between the Nenana and Denali complexes (e.g., Dumond 2001), the general understanding from Interior Alaskan archaeologists is that there is a behavioral explanation for the presence or absence of microblades in different assemblages (Holmes 2001; Potter 2008; Yesner and Pearson 2002). Moreover, both Nenana and Denali technology persist in central Alaska throughout the Holocene (Bever 2006).

Site density declined in the areas around FWA in the early Holocene, suggesting a slight depopulation during a period of climate change that initiated the widespread establishment of spruce forests (Potter 2008). The boreal forest in Interior Alaska was established by 8,000 years ago (Bigelow and Powers 2001). Sites from this time period are less well publicized than the older sites, but include Houdini Creek (circa 8,600 years old), Hurricane Bluff (c. 9,800 years old), Lucky Strike (c. 8,500 years old), Gerstle River (c. 10,000 years old), and the Campus Site (c. 7,700 years old) (Pearson and Powers 2001; Potter et al. 2007; Potter 2008). Bison, wapiti, and birds were the most important subsistence game during this period (Potter 2007, 2008).

Site density increased again after about 6,000 years ago in Interior Alaska (Potter 2008). This population increase coincides roughly with the Northern Archaic Tradition and the appearance of side-notched projectile points. Anderson originally defined the

Northern Archaic Tradition to specifically address notched point-bearing stratigraphic horizons that did not contain microblades at the Onion Portage site in northern Alaska (Anderson 1968). Alaskan notched points were generally similar to Archaic-age dart points in the contiguous United States. Time has shown middle Holocene assemblages in Alaska to be quite diverse, however, and it is questionable whether this trait is related to southern forms or if it is a reliable indicator of cultural affiliation (Clark 1992; Cook and and Gillespie 1986). Artifact assemblages associated with this culture can vary but generally contain myriad tools ranging from bifacial knives and microblades to end scrapers and side-notched points. Middle Holocene hunter-gatherers had a subsistence economy focused on seasonally abundant game including caribou, fish, and moose (Potter 2008). Notched point assemblages occur in many sites in Interior Alaska, including over one dozen on Army lands (XBD-277, XMH-277, XMH-283, XMH-303, XMH-309, XMH-874, XMH-950, XMH-1130, XMH-1168, XMH-1300, Robertson et al. 2004, Raymond-Yakoubian and Robertson 2005.) Several sites (XBD-270, XMH-915, XMH-925), including the excavated Banjo Lake site in DTA (XMH-874), have also produced middle Holocene dates from hearth charcoal. The 6,300-6,700-year-old dates from Banjo Lake were also associated with a microblade component (Robertson et al. 2008).

Utilization of microblade and burin-based industries appears to continue through the middle and late Holocene in Interior Alaska (Esdale 2008; Potter 2004). By the late Holocene, archaeologists see a shift from seasonal large mammal hunting with a nomadic lifestyle to a focus on seasonally over-abundant resources, use of storage, and more permanent settlements (Potter 2008b). Artifact assemblages do not drastically change until the last millennium of the Holocene when microblades disappear from the archaeological record (Potter 2008).

Linguistic evidence suggests that the Athabaskan culture may have appeared in the Tanana Valley as early as 2,500 years ago. Through ethnography, oral history, and a broad array of cultural items, much has been learned about Athabaskan culture and history in the region. Artifacts associated with the Athabaskan culture are exceptionally diverse and include bone and antler projectile points, fishhooks, beads, buttons, birch bark trays, and bone gaming pieces. In the Upper Tanana region, copper was available and used in addition to the traditional material types to manufacture tools such as knives, projectile points, awls, ornaments, and axes (Clark 1981). A late prehistoric Athabaskan occupation is recognized at several sites in and around FWA's training lands (Andrews 1975; Andrews 1987; Cook 1989; Mishler 1986; Sheppard et al. 1991; Shinkwin 1979; Yarborough 1978). Of particular interest in this regard is a copper projectile point recently found in a buried context at DTA (XBD-272) (Robertson et al. 2009).

The Athabaskan Tradition includes late prehistoric and proto-historic cultures generally believed to be the ancestors of Athabascan tribes who currently inhabit Interior Alaska. Excavated Athabaskan sites are rare, but the limited body of evidence allows for several generalizations. Raw material usage was reorganized in the Athabaskan Tradition, which de-emphasized stone tool-making and increased the emphasis on the manufacture of items from native copper and organic materials (Dixon 1985). Assemblages include ground and pecked stone artifacts and an increased use of expedient

tools. There was a broadening and diversifying of the resource base at this time to include small mammal and freshwater marine animals such as fish and mollusks (McFadyen Clark 1981; McFadyen Clark 1996; Ream 1986; Sheppard et al. 1991; Shinkwin 1979). Athabaskan sites tend to occur in resource-rich areas near lakes, streams and rivers, and are generally characterized by large house pit and cache pit features. Proto-historic Athabaskan assemblages include Euro-American trade goods such as glass beads and iron implements. Sites of this time period reflect an increased reliance on outside trade and include log cabins co-occurring with traditional house pits, as well as a change in site location to maximize trading opportunities (Andrews 1975; Andrews 1977; Andrews 1987; McFadyen Clark 1981; VanStone and Goddard 1981).

Athabascan settlement patterns depended greatly on the availability of subsistence resources, and Interior bands lived a nomadic lifestyle. They often traversed vast areas to support themselves and spent considerable time engaged in subsistence activities. It was often necessary for bands to divide into smaller groups to find game, and preserved fish were used as a staple of the diet in addition to fresh game (Andrews 1975).

Four Athabascan linguistic and geographic groups have inhabited the Tanana Valley: the Upper Tanana, Tanacross, Tanana and Koyukon. Each group is further distinguished according to geographic location. Bands of the Tanana and Tanacross groups are historically associated with the geographic area that embodies Forts Wainwright and Greely. Salcha, Chena, Wood River, Goodpaster, and Healy Lake bands have inhabited the region since protohistoric times and possibly even prehistoric times (Andrews 1975). Use of the region varied from one band to the next. The Salcha, Chena, Goodpaster, and Wood River bands of the Tanana Athabascans and the Healy Lake band of the Tanacross Athabascans used certain parts of what are now Forts Wainwright and Greely (McKennan 1981). Several villages have been reported on or near FWA. One occupied by the Wood River band is said to have been located in the southern part of FWA but has not been found (Dixon 1980; Reynolds 1986). The Blair Lakes Archaeological District (FAI-335) on FWA may relate to the prehistory of the Athabaskan Tradition. Euro-American historic archaeological sites are also present (Gamza 1995; Phillips 1984).

Historic Context

With the beginning of Euro-American contact in Interior Alaska in the early 19th century, trade influences and influxes of new populations began to change life in the region. Land use patterns shifted from traditional indigenous uses to activities based on Euro-American economic and political systems. FWA's training lands fall within an area occupied at the time of Euro-American contact by Lower-Middle Tanana Athabascans, including bands described generally as the Salcha, Big Delta-Goodpaster, Wood River, and Chena bands (McKennan 1981; Andrews 1975; Mishler 1986). Historical accounts document traditional settlement patterns that were focused on a widely mobile season round, with the fall caribou hunt playing a pivotal role in subsistence preparations for the winter and summer activities focused at fish camps, berry and root collecting, and in sheep hunting. These activities were frequently communal, with several local bands connected by common interest, geography, and intermarriage. Despite anthropological attempts to define boundaries for the peoples living in the lower Tanana River Valley,

natural terrain served as the only definable boundary to settlement patterns (McKennan 1981).

As Euro-American traders, miners, missionaries, and explorers moved into the Tanana River Valley, the traditional life ways of local Athabascan groups were disrupted. Access to trade goods and the development of the fur trade not only affected traditional material culture, but also began to dramatically affect subsistence activities and settlement patterns. Similarly, the arrival of missionaries in the Alaskan Interior profoundly influenced traditional social organization. The introduction of mission schools for Native children and the doctrine of new religious beliefs contributed to an erosion of traditional practices (McKennan 1981).

Russian fur traders began settling Interior Alaska starting in the 1810s, establishing a post at Nulato on the Yukon River and one at Taral on the Copper River. British traders established Fort Yukon in 1847. Trade goods from these posts may have passed to Tanana Athabascans and Upper Tanana Athabascans through intra-Native trade networks. Direct contact between Tanana Athabascans and white traders increased after the 1860s. With the U.S. purchase of Alaska in 1867, control of trading stations and the fur trade passed to Americans. Through the 1880s, American traders established several additional posts on the Yukon and Tanana Rivers, including locations at Nuklukayet (modern day Tanana), Belle Isle (modern day Eagle), and Fort Yukon.

Trade goods introduced by Euro-American settlers influenced the Native lifestyle. Clothing, staples, tools, and other necessities could be obtained through trade. Guns allowed hunters to obtain game with greater efficiency. Gradually, Athabascan Native groups began to alter their traditional nomadic patterns in favor of more permanent settlements. However, while significant, this contact would not have as dramatic an impact on the region as the discovery of gold in the Interior during the last decades of the 19th century. The towns established by Euro-American settlers at the turn of the 20th century, in response to the Klondike Gold Rush and the eventual military development of the region, would rapidly and permanently change the demography and economy of Interior Alaska.

Gold strikes in the Fortymile River region, Birch Creek area, and the Canadian Klondike began drawing miners and prospectors north in the 1880s and 1890s. In response to this gold rush, E.T. Barnette established a trading post on the Chena River in 1901. The following year, prospector Felix Pedro discovered gold nearby, and a new gold rush soon led to the founding of Fairbanks at the site of Barnette's original trading post. Most mining activities in the region occurred on creeks north of Fairbanks, with the town serving as a supply center. Agricultural and other commercial activities, such as logging, also developed to support mining activities in the Fairbanks area. Homesteads existed on parts of what is today the main post of FWA as early as 1904.

In 1898, the discovery of gold in the Tanana uplands began a rush of Euro-American settlement into the Tanana River Valley. As the economic importance of the Tanana Valley increased, the need for reliable transportation routes and communication systems rose in tandem. Existing trails, such as the Bonnifield, Donnelly-Washburn, and Valdez-

Fairbanks trails, saw increased use and development in the first decade of the 20th century. This increase in activity also resulted in the establishment of several roadhouses and posts. In 1906, Congressional appropriations led to improvement of the Valdez-Fairbanks Trail, crossing the Alaska Range south of Delta Junction, following the Tanana River to Fairbanks. Completion of the Alaska Railroad in 1923 was followed two decades later by construction of the Alaska Highway in 1942, firmly tying the Alaskan Interior to the outside.

As Fairbanks grew in the first decade of the 20th century, several agricultural homesteads were developed on lands now encompassed by sections of the FWA cantonment. These homesteads provided Fairbanks with a variety of agricultural products and wood for fuel, but were subsumed when lands were withdrawn for the creation of Ladd Field, which later became FWA (Price 2002).

Riverboats were the primary means of getting people and supplies into the Interior at the turn of the 20th century. The Fairbanks town site was located at the upper limit of navigation for stern-wheeler riverboats on the Chena River. Upriver from that point, residents navigated the river using shallow-draft boats in summer and sleds in winter. As commerce in the area increased, roads and trails were constructed, sometimes following earlier indigenous routes. The major overland route to the coast was the Valdez-Fairbanks Trail, which began as a military trail from Valdez to Eagle in 1899.

Transportation and communication networks, including the Alaska Railroad, were developed to serve new settlements in Interior Alaska. A branch of the railroad route was extended to Fairbanks in 1904. Roadhouses along the route catered to travelers. Some were located on what are now Fort Wainwright training lands. One property was on the Bonnifield Trail in TFTA, and two roadhouses and a seasonal tent operation existed along the Donnelly-Washburn Trail in the current Donnelly Training Area. Secondary routes connected Fairbanks to the surrounding mining districts.

By 1910, most of the easily accessible placer gold deposits were exhausted, and capital-intensive technologies became necessary to extract remaining deposits. These methods were not possible with the existing transportation infrastructure. The completion of the Alaska Railroad in 1923 expanded transportation options for the region, connecting Fairbanks to Seward and making large-scale dredging operations economically feasible. Aviation also became a key component of Interior transportation, beginning in earnest in the 1920s. However, it was not until 1931 that Weeks Field, originally constructed in 1923, was officially dedicated as an airfield. Industrialized corporate activity became the hallmark of the region's mining in the remaining years before World War II.

Development in the Alaskan Interior increased dramatically with the advent of World War II and subsequent military build-up in Alaska. Of particular significance was the development of airfields near Delta Junction (Fort Greely), Fairbanks (Ladd Field, later FWA), and North Pole (Eielson Air Force Base). These locations began as Lend-Lease bases and cold weather testing centers, but soon expanded with the increased need for military support during World War II and later during the Cold War.

Full historic contexts of early mining, transportation, and homesteads on FWA have been completed. These studies have determined that there are no properties eligible for the National Register under these contexts. Several village sites associated with the early contact period have been reported near FWA. One was reported near Wood River Buttes, two just northwest of the installation's boundary and one near Fairbanks (Reynolds 1986). None have been reported or located on the Main Post.

Status of Archaeological Resources

Archaeological research on FWA training areas has resulted in numerous technical reports (Bacon 1979; Bacon and Holmes 1979; Dixon et al. 1980; Esdale and Robertson 2007; Espenshade 2010; Bradley et al. 1973; Gaines 2009; Gaines et al. 2010, 2010; Hedman et al. 2003; Higgs et al. 1999; Holmes 1979; Johnson and Bozarth 2008; Marshal 2007; Potter 2005; Potter et al. 2000; Rabich and Reger 1978; Raymond-Yakoubian 2006; Raymond-Yakoubian and Robertson 2005; Robertson 2010; Robertson et al. 2004, 2006, 2007, 2008, 2009; Staley 1993) and several scientific papers (Holmes and Anderson 1986; West 1967, 1975).

FWA and its training lands contain 636 known archaeological sites and 4 archaeological districts. Sixty sites are eligible for the National Register of Historic Places (NRHP), 512 sites have not been evaluated, and 64 additional sites have been determined ineligible for the NRHP. Of the eligible or un-evaluated sites, 12 are historic sites and 560 are prehistoric sites.

Archaeological surveys of the FWA main post area began in 1979. Jim Dixon surveyed the north side of the Chena River and Birch Hill area, discovering and relocating several prehistoric archaeological sites (FAI-40, 41, 42, 43, 199, and 200) (Dixon et al. 1980). Surveys of the main post building areas continued in the 1980s by Julia Steele (Steele 1992, 1983) and Georgeanne Reynolds (Reynolds 1983, 1985). No sites were found in these previously disturbed areas. John Cook surveyed the River Road pond in 1996 and found one site (FAI-509), which has failed to be relocated in subsequent attempts. In 2001, the Army began partnering cultural resource surveys and evaluations with Colorado State University's Center for Environmental Management of Military Lands (CEMML). Surveys by several different principal investigators have targeted areas of construction undertakings. Two historic sites (FAI-1603 and 1604) and one additional prehistoric site (FAI-1990) were found in these investigations. In 2011, CEMML completed survey of the entire cantonment, north and south of the Chena River, discovering one additional historic site (FAI-2117). Of the 11 archaeological sites known from the FWA cantonment, 2 (FAI-1603 and 1604) have been determined not eligible. The remaining sites have not yet been evaluated.

Archaeological sites were first identified in the Tanana Flats Training Area (TFTA) in 1973 by Zorro Bradley and others who conducted a survey in the Blair Lakes area (Bradley et al. 1973). James Dixon continued surveys for archaeological district designations in the regions of Blair Lakes (District FAI-335), Clear Creek Butte (District FAI-336), and Wood River Buttes (District FAI-337) (Dixon et al. 1980). In 1993, proposed work in the Clear Creek Butte area prompted a contract to relocate several

archaeological sites (Staley 1993.) These three districts have been revisited by CEMML archaeologists a few times over the last decade, and notably 92 new sites were found in 2009-2010 during survey of the Wood River Buttes, Salmon Loaf, and north and east of Blair Lakes. In total, archaeologists have identified 147 archaeological sites in TFTA. Of these sites, 11 have been determined eligible for inclusion in the National Register (FAI-44, 45, 46, 48, 49, 54, and 194 to 198), 2 are not eligible (FAI-1607 and 2046), and 134 remain to be evaluated for eligibility.

The road system in the Yukon Training Area (YTA) was the first of many areas to be investigated. Charles Holmes discovered eight sites in a 1978 road survey (Holmes 1979). John Cook conducted a Determination of Eligibility (DOE) evaluation on one of these sites in 1979 (Cook 1979.) Michael Kunz surveyed the Stuart Creek area in 1992 but discovered no archaeological sites, and Northern Land Use Research's 1999 survey of Stuart Creek and the YTA road system uncovered one historic site (Higgs et al. 1999). CEMML archaeologists have been surveying portions of YTA in conjunction with construction projects on an annual basis since 2001. Currently, North Beaver Creek, Skyline, Johnson, Quarry, Brigadier, and Manchu roads in YTA are almost entirely surveyed, as is the area east of Skyline Road outside of the Stuart Creek Impact Area, McMahon Trench, the Manchu Range, and the majority of Training Areas 307 and 310, north and south of Manchu and Quarry roads. Twenty archaeological sites have been identified in YTA. Ten of the sites have been determined not eligible for listing in the National Register (FAI-157, XBD-93, 94, 95, 103, 104, 186, 260, 264, and 266) and ten have not been evaluated. XBD-162 will not be evaluated due to its location in a heavily used portion of the Stuart Creek Impact Area.

Archaeological investigations in what is now the DTA began in the 1960s, when Frederick West was searching for sites related to the first Americans (West 1967). He excavated the Donnelly Ridge site (XMH-5) in 1964 and found an assemblage containing microblade core technology similar to early Holocene Denali Complex sites. Several surveys of Ft. Greely and adjacent training lands in the late 1970s documented 64 new sites (Rabich and Reger 1977, Bacon 1979; Holmes 1979; Bacon and Holmes 1979). Julia Steele surveyed various locations in DTA from 1980-1983, finding four additional new sites (Steele 1980, 1980, 1982, 1982, 1983, and 1983), and Georgianne Reynolds surveyed the Donnelly Dome area in 1988, locating one more (Reynolds 1988). Investigations in DTA from 1992-2002 were by D. Staley (Staley 1993), T. Gamza (Gamza 1995), A. Higgs (Higgs et al. 1999), and D. Odess (Odess 2002). Sixteen new sites were found during this decade of fieldwork and attempts were made to relocate old sites.

Concentrated efforts to expand survey coverage of DTA East began with CEMML archaeologists in 2002. Over 200 new sites were located in the Texas Range, Donnelly Drop Zone, and Eddy Drop Zone in the first half of the decade. In 2007, one site was found in the northernmost portion of DTA West by Ben Potter and others during survey for the Alaska Railroad Northern Rail Extension Project (Potter et al. 2007). In recent years, CEMML research aimed to evaluate many known archaeological sites in DTA for inclusion in the National Register in conjunction with use of the Battle Area Complex and its surface danger zone. Sites have also been discovered during surveys for road and

trail maintenance. Potential expansions into DTA West, west of the Delta River, have prompted recent surveys into new areas such as Molybdenum Ridge, where 21 new sites were discovered in 2011. Because of its remote setting, however, the archaeology of Donnelly West is still poorly understood and represents a gap in USAG FWA's inventory of cultural properties. The Cold Regions Test Center (CRTC) has also contracted with CEMML and others since the last ICRMP to survey areas in DTA West, east of the Little Delta River, and many new archaeological sites have been recorded (Espenshade 2010).

To date, 455 archaeological sites have been identified within DTA. Forty-nine sites have been found to be eligible for the National Register, and 50 were found not eligible. An additional 356 sites remain to be evaluated. Historic archaeology sites are poorly represented in this region, with only six currently known to exist. The Donnelly Ridge District (XMH-388) encompasses Denali sites identified by Frederick West, south and west of Donnelly Dome. Future archaeological studies in DTA will concentrate on completing survey of 100% of the land in DTA East, conducting DOEs on archaeological sites in high traffic areas, and exploring parts of DTA West that are opening up for expansion of military training activities.

Despite its incomplete nature, the archaeological record known from DTA represents all of the currently recognized prehistoric cultures of the Alaskan Interior. Of significance is the role played by sites located on DTA in the definition of the Denali Complex of the American Paleoarctic Tradition (Anderson 1970; West 1967, 1981). The oldest date for human habitation at DTA is roughly 10,100 years at site XBD-00167 (Higgs et al. 1999); however, undisturbed stratigraphic deposits 12,800-12,930 years old indicate the potential for intact archaeological occupations of this age. Sites yielding Northern Archaic side-notched points are common (Robertson et al. 2004, 2005; Raymond-Yakoubian and Robertson 2005). At DTA, site XMH-874 yielded an AMS date of 5720 +/- 50 BP from hearth charcoal associated with a microblade component (Robertson et al. 2008). A late prehistoric Athabaskan occupation is recognized at several sites (e.g. Andrews 1975, 1987; Cook 1989; Mishler 1986; Sheppard et al. 1991; Shinkwin 1979; Yarborough 1978). Of particular interest in this regard is a copper projectile point recently found in a buried context at DTA at site XBD-00272 (Roberston et al. 2009). Euro-American historic archaeological sites are also present (Gamza 1995; Phillips 1984).

The Gerstle River and Black Rapids Training Areas (GRTA and BRTA), also managed by FWA, have been infrequently utilized for training activities, and very few surveys or identification of archaeological sites have occurred in these areas. CEMML archaeologists surveyed two small portions of GRTA in 2011. One prehistoric site (XMH-1359) is previously known from this training area. Two sites, which have not been evaluated for the NRHP, have been discovered in BRTA (XMH-317, 318). Future research is planned for GRTA where military activities are planned to take place in the next five years.

Description of Undertaking (36 CFR 800.11 (d) (1))

In order to facilitate realistic live ordnance delivery training for pilots, the Air Force has proposed to establish two targets locations for inert ordnance dropping events outside of established impact areas in DTA West. Temporary targets (such as conex containers) would be placed at two locations with little to no ground disturbance (Figure 2).

Specifically under this proposal, the Air Force would establish:

- A new target area in northeast Donnelly Training Area (DTA) in Training Area (TA) 544 for new run-in headings, release points, and hazard zones from Joint Base Elmendorf-Richardson (JBER) to the south
- A new target area in southwest DTA in TA 533 for new run-in headings, release points, and hazard zones from Eielson AFB from the north.

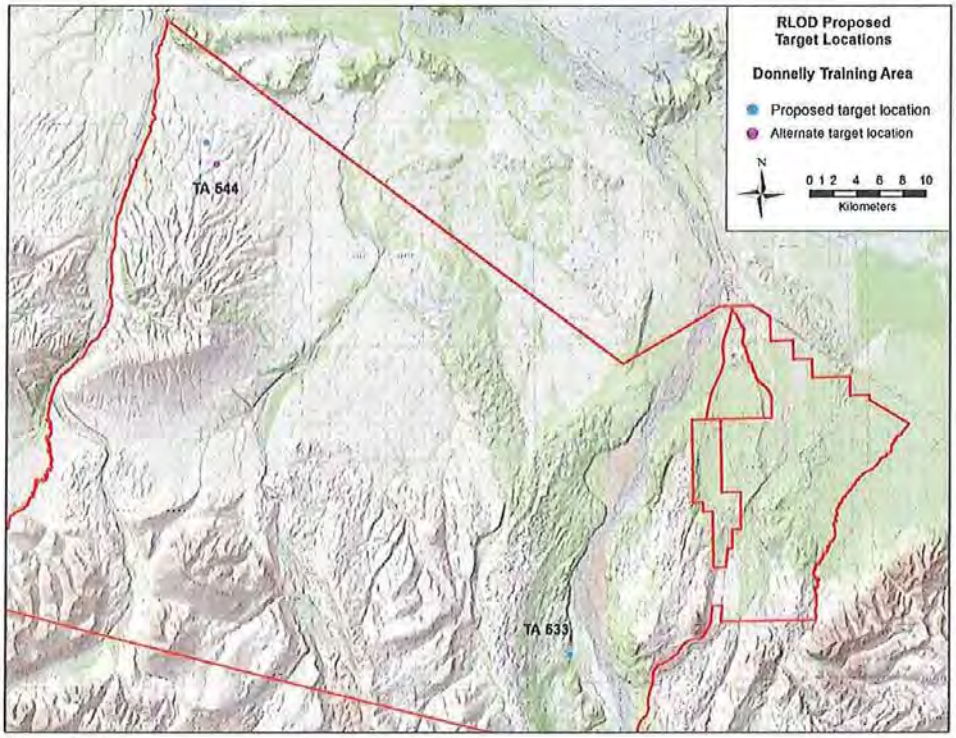

Figure 2. Proposed target locations in DTA West.

12

Steps Taken to Identify Historic Properties (36 CFR 800.11 (d) (2))

Archaeological surveys of the two proposed target locations were conducted by CEMML on 16 July 2012. Helicopter survey identified non-wetland localities in the vicinity of the target locations. The proposed target area, 64°09'23.39"N 146°39'01.73'W, in TA544 had wetland and black spruce (Figure 3). The closest non-wetland locality to this site, 64°08'27.71", 146°37'49.64"W, is represented by the purple dot in Figure 2. This preferred location was a spruce covered knoll above the wetland areas (Figure 4). Pedestrian surface survey covered a 50 m diameter area of potential effect (APE) around the coordinate location. Two shovel tests were excavated. No cultural material was discovered.

The proposed target location in TA 533, 63°45'31.35"N 146°01'00.72", is a high river terrace not inundated by wetland vegetation (Figure 5). A pedestrian surface survey covered a 50 m diameter APE around this coordinate. Two shovel tests were excavated in a birch and alder-treed area (Figure 6). No cultural material was discovered.

Figure 3. Proposed TA 544 target area.

13

Figure 4. Preferred TA 544 target area.

Figure 5. Proposed TA 533 target area.

14

Figure 6. Shovel test location in TA 533.

Only two archaeological sites are known from within 5 km of either of the target locations (Figure 7). Both are located in TA 533 near the southern target. XMH-00018 is an isolated artifact found on the north slope of a hill overlooking Jarvis Creek. It was originally discovered by Frederick Hadleigh West in 1967 and the site has not been reevaluated since that time. It is located across the Delta River from the proposed target location and would not be impacted by construction associated with this undertaking. XMH-00238 consists of a single chert flake found by Charles Holmes in 1979 on the top of a glacial moraine knoll west of the Delta River. Test pits in the vicinity of the flake encountered no other cultural material. Neither of the sites have had further evaluations for the NHRP, but they are both isolated finds and located far from the project areas.

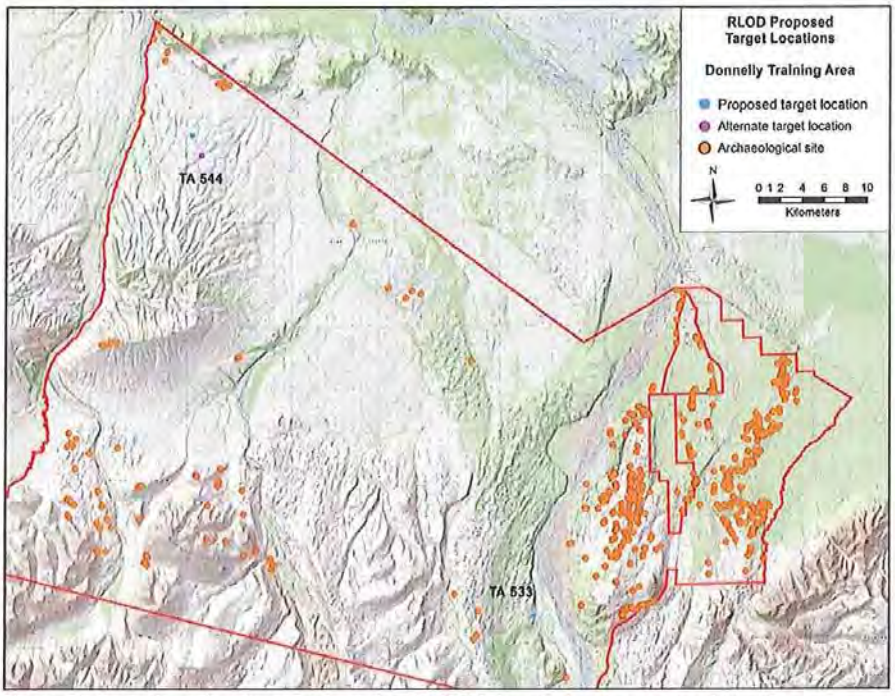

Figure 7. Location of archaeological sites in DTA in relation to proposed target areas.

Determination of Effect (36 CFR 800.11 (d) (3)) - No Historic Properties Affected

No archaeological sites were discovered during pedestrian survey and shovel testing in DTA West for RLOD target construction. Therefore, there is no reason to believe that this project warrants any further fieldwork or consideration under Section 106 of the NHPA (16 USC § 470, as amended 2000), and regulations codified in 36 CFR 800 (as amended 2004). The Air Force has determined a finding of **No Historic Properties Affected** for the RLOD target undertaking.

Copies of this letter will be sent to federally recognized tribes (Village of Dot Lake, Native Village of Eagle, Healy Lake Village, Nenana Native Association, Northway Village, Native Village of Tanacross, and Native Village of Tetlin). If you have any questions or require additional information, please contact Julie Esdale, USAG FWA Archaeologist at (907) 361-9405 or at julie.a.esdale.ctr@mail.mil.

Sincerely,

Patrick O. Moylan

16

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10.5.2012 3130-1R AIR FORCE

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

OCT 0 3 2012

Colonel Patrick O. Moylan
Vice Commander, Eleventh Air Force
9480 Pease Ave Ste 101
Joint Base Elmendorf-Richardson Alaska 99506-2101

RECEIVED
OCT 04 2012
OHA

Ms. Judith Bittner
Alaska State Historic Preservation Officer
Office of History and Archaeology
Department of Natural Resources
550 West 7th Avenue, Suite 1310
Anchorage Alaska 99501

No Historic Properties Affected
Alaska State Historic Preservation Officer
Date. 10.5.2012
File No. 3130-1R AIR FORCE

Dear Ms. Bittner

The Alaskan Command (ALCOM) requests your concurrence with the finding of No Historic Properties Affected for the *Environmental Impact Statement for the Modernization and Enhancement of Ranges, Airspace, and Training Areas in the Joint Pacific Alaska Range Complex in Alaska* Realistic Live Ordnance Delivery (RLOD) proposed action.

Based on the nature of the proposed action, no historic properties will be affected within the Areas of Potential Effect for the Realistic Live Ordnance Delivery proposal. Pursuant to Section 106 of the National Historic Preservation Act of 1966 (16 USC § 470), and according to the regulations governing Section 106, 36 CFR Part 800 "Protection of Historic Properties," a determination is made of No Historic Properties Affected.

Survey results are attached to support a finding of No Historic Properties Affected. The U.S. Army Garrison Fort Wainwright, Alaska will be conducting any additional Section 106 consultation necessary for the definitive projects affecting Army-managed lands.

All correspondence associated with this consultation will be included in the Administrative Record of the EIS. If you have any questions regarding the proposals or regarding this request, please feel free to contact Mr. Jamie Spell at (907) 552-1695, LTC Russell Price at (907) 552-3683, or Ms. Erin Marynak at (907) 552-3791.

Sincerely

PATRICK O. MOYLAN
Colonel, USAF
Vice Commander

Attachment:
Realistic Live Ordnance Delivery Proposal Survey Results

L.5 OTHER FEDERAL AGENCIES

L.5.1 Department of Interior, Bureau of Land Management

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Alaska State Office
222 West Seventh Avenue, #13
Anchorage, Alaska 99513-7504
http://www.blm.gov/ak

TAKE PRIDE IN AMERICA

In Reply Refer To:
1610 (930)

FEB 10 2011

Lieutenant General Dana T. Atkins, USAF
Commander, Alaskan Command
9480 Pease Avenue, Suite 110
Joint Base Elmendorf-Richardson, AK 99506-2101

Dear General Atkins:

On December 10, 2010, you sent notice of your intent to prepare an Environmental Impact Statement evaluating proposed modernizing and enhancing of current military ground and air training assets in Alaska. Based on the information in your document, "Joint Pacific Alaska Range Complex: Description of Proposed Action and Alternatives" dated October 2010, we decline your invitation to be a Cooperating Agency. The Bureau of Land Management (BLM) does not have a permitting, authorizing or financing role for any of the actions proposed in the alternatives presented during scoping. If the actions in the alternatives are modified where the BLM would have a permitting, authorizing or financing role, we would like to reconsider your cooperating agency invitation.

Your proposed expansion of Military Operation Areas (Fox and Paxson) does cover areas within the BLM-Glennallen Field Office. In particular, the Delta Range Special Recreation Management Area, and the Delta and Gulkana Wild and Scenic River corridors.

Under agreement with the U.S. Army, the BLM-Alaska Fire Service does provide wildland fire and vegetative management services within the proposed area. We do ask that you continue to honor those current notification and coordination protocols and that any existing mitigation measures will remain.

The BLM-Alaska Fire Service and Glenallen Field Office will provide you with more detailed comments on-line, as requested in your scoping letter. If you have questions regarding this response, please contact Callie Webber, Acting Supervisory Planning and Environmental Coordinator, at 907-271-3167.

Sincerely,

Bud C. Cribley
State Director

cc:
Deputy State Director, Division of Resources (AK930)
Anchorage District Manager (AK000)
Glennallen Field Manager (AK020)
Fire Management Officer, Alaska Fire Service (AK9F0)

DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

OFFICE OF THE ASSISTANT SECRETARY

FEB 16 2011

SAF/IEI
1665 Air Force Pentagon
Washington, DC 20330-1665

Mr. Bud C. Cribley
State Director, U.S. Bureau of Land Management
Alaska State Office
222 West 7th Ave., #13
Anchorage, Alaska 99513-7504

Dear Mr. Cribley:

The Air Force and the Army jointly request your formal participation in the preparation of an Environmental Impact Statement (EIS) for the Joint Pacific Alaska Range Complex (JPARC) as prescribed in the President's Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Regulations, 40 CFR § 1501.6 *Cooperating Agencies*.

As the lead agencies for the JPARC EIS, the Air Force and the Army request you participate in various portions of the EIS development as may be required. Specifically the Air Force and the Army ask for your support as a Cooperating Agency by:

a. Participating in the scoping process

b. Assuming responsibility, upon request by the Army and Air Force, for developing information and preparing analyses on issues for which you have special expertise

c. Making staff available for interdisciplinary review

To avoid unnecessary delays in the NEPA process, the Air Force and the Army will provide appropriate information and related materials in a timely fashion to enable your agency to complete its review and respond promptly. Should you or your staff have any questions regarding this letter, our point of contact is Mr. Jamie Spell, Alaskan Command, Staff Engineer, (907) 552-1695.

Sincerely,

KATHLEEN I. FERGUSON, P.E.
Deputy Assistant Secretary of the Air Force
(Installations)

cc:
SAF/IEE
SAF/GCN
HQ USAF/A7C
HQ USAF/A3O
HQ PACAF/A7PI
ALCOM/J42

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Glennallen Field Office
P.O. Box 147
Glennallen, Alaska 99588
www.blm.gov/ak/st/en/fo/gdo.html

TAKE PRIDE IN AMERICA

In Reply Refer To:
1793, 2330 (AKA020)

MAR – 3 2011

ALCOM Public Affairs
9480 Pease Avenue, Suite 120
JBER, Alaska 99506

RE: JPARC EIS Scoping

Dear Planner,

The Bureau of Land Management Glennallen Field Office (BLM-GFO) has land and resource management responsibilities for federally managed lands that are encompassed by the Proposed Fox 3, 4, 5, and 6 MOAs and the Proposed Paxson MOA. In review of past documentation of the Fox 3 and proposed Fox MOA areas and plans, and of current proposals as well as our office's recreation and subsistence use data, management plans and objectives and current resource and land management issues and objectives, our office would like to make the following comments during the Joint Pacific Alaska Range Complex Environmental Impact Statement (EIS) Scoping Period:

BLM-GFO Planning Documents:
Enclosed you will find BLM-GFO planning documents that have been completed or that are underway and share some of the same planning areas as this current JPARC EIS. Each of these BLM plans has had considerable public involvement and will be helpful to you in recognizing sensitive areas for recreation, wildlife, and subsistence. The East Alaska Proposed Resource Management Plan and Final EIS completed in 2006 and the subsequent East Alaska Resource Management Plan Record of Decision (ROD) and Approved Plan completed in 2007 guide BLM-GFO management actions and objectives. The BLM-GFO would especially like to point out the following maps in the East Alaska ROD which have overlapping areas to the Fox 3, 4, 5, 6, and Paxson Proposed MOAs: Map 3 on page 65 identifies moose habitat; Map 9 on page 71 shows the extent of the Delta River Special Recreation Management Area; Map 10 on page 72 shows the extent of the Gulkana River Special Recreation Management Area(SRMA); Map 13 on page 75 shows the extent of the Delta Range SRMA; Map 15 on page 77 shows designated trails within the Delta River SRMA; Map 16 on page 78 shows designated trails within the

Gulkana River SRMA; And, Map 17 documents the Visual Resource Management Classes for the entire BLM Glennallen Field Office Management Area. The BLM-GFO would also like to point out the following maps in the East Alaska Resource Management Plan Final EIS that provide important scoping background for the JPARC plan within the BLM-GFO management boundary: Map 27 on page 189 shows GPSed Trials, ANCSA 17b Easements, and State-recognized RS 2477 travel routes which have documented public use; Map 28 on page 197 shows State of Alaska Game Management Units; Map 29 on page 205 demonstrates Recreation Opportunity Spectrums within the East Alaska planning area which demonstrates the types of recreation experiences visitors expect to have for different management areas; Map 32 on page 239 shows Black and Grizzly Bear habitat; Map 33 on page 241 shows the Bison calving area; Map 34 on page 243 shows Caribou summer and winter habitat and calving areas; Map 35 on page 245 shows Dall Sheep habitat; Map 36 on page 247 shows Mountain Goat habitat; Map 37 on page 249 shows Moose habitat; Map 38 on page 255 shows Bald Eagle breeding and nesting habitat; Map 41 on page 269 shows Trumpeter Swan nesting sites; and Map 42 on page 275 shows anadromous rivers and streams; These maps and the entire East Alaska RMP Record of Decision provides the background and general basis for the BLM Glennallen Field Office's scoping comments.

Wild and Scenic Rivers:
Enclosed you will also find a copy of the Gulkana National Wild River Record of Decision completed in 2006 and the latest draft of the Delta Wild and Scenic River Resource Management Plan. These documents further guide management actions and objectives for the BLM Glennallen Field Office within the nationally recognized wild and scenic river corridors and provide additional background within the Proposed Fox 3, 4, 5, 6 and Paxson MOAs.

The proposals to expand the FOX 3 MOA and create the new Paxson MOA would likely have a negative effect on opportunities for solitude on both the Delta and Gulkana Wild and Scenic Rivers (WSR). The BLM-GFO rivers program has documented numerous encounters with military overflights over the years. These encounters have included low level overflights on the Upper Tangles and Delta River; sometimes these encounters have included shockwaves and deafening noise that is associated with aircraft breaking the sound barrier. See attached reports labeled "Over flights 2007" and "Over flights 2000." Low level military over flights have been an issue over the river corridors for a number of years. The BLM-GFO has consulted with the United States Air Force to discuss this issue. Upon concerns raised by the BLM-GFO, the existing Fox 3 MOA boundaries were modified in 1997 to avoid the Delta WSR corridor, currently being situated on the western side of the river.

At this point in time, the existing situation is as follows:
"In 1997, the Federal Aviation Administration and United States Air Force, after conducting an Environmental Impact Statement, issued a Record of Decision that, in part, modified the boundaries of the Fox Military Operations Area (MOA) to exclude the DWSR corridor. A MOA is a Special Use Airspace designated for non-hazardous military flight activities such as air combat tactics, transition, formation training, and aerobatics. The new boundaries of the FOX MOA were situated on the western boundary of the Delta River, and include portions of the Denali Highway to the west of the river corridor. The average daily military aircraft operations in the Fox MOA is estimated to be 16 aircraft operations per day in a routine flying day and up to 80 aircraft operations per day during specialized training."

With the proposed changes to the FOX 3 MOA and the extension of the Proposed Paxson MOA, the entire Delta and Gulkana WSR corridors would be open to military overflight maneuvers. It appears through reading the JPARC scoping notices and planning newsletter dated 12.03.10 that the flight ceiling would be lowered to 500 AGL, from 5000 AGL, and that the number of sorties would increase. A lower flight ceiling level and additional sorties per day would affect opportunities for solitude. Visitor use on both rivers occurs primarily during the summer months (June-October). Outside of these months, very few users would be affected. Total summer visitors for the Delta River and Upper Tangles are approximately 1,426 visitors. Total summer visitors for the Gulkana River are approximately 3,606 visitors.

The BLM-GFO would like to work with JPARC to find mitigation measures to address this issue. Possible mitigation measures might include a request to reduce the number of sorties from June-October, not reducing the flight ceiling to 500 feet, creating a buffer zone that extends 5 miles around both river corridors, and discussions to reduce sound barrier disruptions in the vicinity of the river corridors.

BLM-GFO Campgrounds:
The Proposed Fox 3 and Paxson MOA expansion is not a compatible use with our nationally designated recreation areas and federal campgrounds. These proposals would have an adverse effect on our visiting public during high visitation months. The current Fox 3 MOA was arrived at through negotiation and compromise to provide ALCOM with the middle of the Denali Highway. Current overflights at 5,000 AGL cause a disturbance to the recreating public. The BLM-GFO is concerned that overflights conducted at 500 AGL with any type of aircraft, especially military high speed aircraft, would not be tolerated by the recreating public and those trying to view and photograph wildlife. The expansion area includes some very populated roads within our management area that travel through or are in the vicinity of the Alaska Range. The Denali and Richardson Highways connect two of the largest and most visited National Parks in Alaska. The Denali Highway is a destination for visitors who want to experience a glimpse of the Last Frontier. Visitors come to the Denali Highway to camp, fish, view wildlife and birds, hike, bicycle, canoe, and explore Alaska's geologic and archaeological and historic past. BLM-GFO managed campgrounds and facilities are dispersed across the Denali Highway and down the Richardson Highway. Travelers seeking the solitude of the Last Frontier do not appreciate experiencing military maneuvers taking place along these routes, especially when there is a vast amount of remote lands within the State of Alaska that could be alternately utilized. The BLM-GFO would like ALCOLM to consider alternative areas in Alaska for these maneuvers that would be more appropriate and isolated from the recreating public and federally managed recreation areas.

Trails and Travel Management:
The BLM-GFO documented 10,039 trail users in Fiscal Year 2010 within the current Fox 3 and proposed MOA areas. Dispersed recreation totals add an additional 28,500 visitors within this area. Within the proposed Paxson MOA area during the same time frame, 10,035 trail users were counted and dispersed recreation counts added an additional 6,448 visitors within this area. For both of these areas, generally the most concentrated use occurs in conjunction with hunting seasons (August and September). Use does occur year round however, generally decreasing in

2

intensity the further away you travel from the road system. The exception is some areas within the proposed Paxson MOA which has significant snowmachine use and non-motorized winter activities within the Delta Range Special Recreation Management Area.

The duration and frequency of flights would obviously affect experiences as would flight floor levels. Without knowing how many flights may take place, it is difficult for the BLM-GFO to analyze the potential effects. Essentially a couple of planes per day or every few days would have far less effects than aerial operations taking place on a daily basis or a large group of planes in a single formation. The Recreation Opportunity Spectrum (ROS) classifications were determined during the BLM-GFO East Alaska Resource Management Plan process which was completed in 2007. These ROS classifications guide the BLM-GFO recreation management objectives for all lands managed by this office. A review of these classifications may help to determine how to meet the JPARC's needs while protecting user experiences and management objectives.

Wildlife and Subsistence:
Wildlife resources in conjunction with subsistence uses are extensively utilized within the proposed area. A significant expansion to the south and east of the current Fox 3 MOA boundary, to include the proposed Paxson MOA, will likely affect wildlife and subsistence activities at certain times of the year. From January till March, the Nelchina Caribou Herd is scattered through much of the eastern part of the proposed Fox 3 MOA and within the proposed Paxson MOA Addition, with an active federal subsistence hunt that ends March 30 of each year along the Delta and Gulkana Wild and Scenic River corridors. Wintering moose generally congregate at higher elevations and, relevant to subsistence uses and JPARC's proposed MOAs, within the Alphabet Hills system. Human disturbance increases stress in overwintering moose during an already-stressful time of the year. Snow conditions may also contribute to stress levels as moose move around and search for forage in the snow. From April till June, migratory birds arrive in the proposed area to mate and nest. Subsistence users utilize the Tangle Lakes and nearby lakes for the spring migratory bird subsistence hunt. Caribou calves are born mid-May within the Talkeetna Mountains, within the western half of the existing and the proposed Fox 3 MOA. By July, fledglings begin to fatten up for the trip south. Trumpeter Swans (a BLM sensitive species) congregate in large lakes during this time. August till September is moose hunting season as well as the start of caribou hunting season. Federal subsistence hunters and state hunters congregate in the area for the prospect of bagging a moose or caribou. Subsistence use significantly increases during this time. By October, the fall caribou migration is in full swing. Hunters congregate along the Richardson Highway within the proposed Paxson MOA addition for the resumption of the winter caribou hunt. The subsistence caribou hunt continues in November and December but at a slower pace as the caribou continue their eastward movement to wintering grounds. Moose begin to congregate and move towards higher elevations and their digestive tract begins to adapt to winter forage. This is generally a quiet time when animals prepare for the winter.

The degree to which the proposed action may affect wildlife depends largely on noise level, frequency of activity, the intensity of the activity, and the wildlife community that is present at the time of the activity. The social significance of the area in terms of federal subsistence use also needs to be considered.

Documented Noise Sensitive Areas:
The BLM-GFO would like to bring ALCOM to the attention of their own map provided on page 14 of the JPARC Modernization and Enhancement EIS handout provided at scoping meetings in Glennallen. The map titled "Proposed Night Joint Training Special Use Airspace" documents known noise sensitive areas. The BLM-GFO would like ALCOM to continue to recognize these documented noise sensitive areas that were created during the last planning period and would also request that they be reviewed and updated to reflect current use and resource issues (see attached pdf titled, "Noise/Flight Sensitive Area List (current as of November 1996)." Some of these documented areas coincide with several of the locations presented in these comments, namely the Delta and Gulkana Wild and Scenic Rivers, and areas utilized by migratory birds, nesting waterfowl, and calving moose and caribou.

Planning Process:
The JPARC planning newsletter dated 12.03.10 shows that ALCOM is in the scoping phase for the JPARC EIS. However, throughout the document, alternatives A, B, C, and D as well as the No Action Alternative are already being proposed. The use of the word "alternatives" during the scoping phase of a National Environmental Policy Act (NEPA) planning process is confusing. Scoping should provide an opportunity to develop issues that then lead to the development of alternatives in a Draft EIS.
Thank you for the opportunity to comment. Our office looks forward to working with ALCOM throughout the JPARC EIS planning period to mitigate concerns and to suggest alternatives. If you have additional questions, please contact our office at 907-822-3217.

Sincerely,

Beth Maclean

Beth Maclean
Field Manager

Enclosure(s):
1. East Alaska Proposed Resource Management Plan and Final EIS (cd)
2. East Alaska Resource Management Plan Record of Decision and Approved Plan (cd)
3. Gulkana National Wild River Record of Decision Final Environmental Assessment and Revised River Management Plan
4. Draft Environmental Assessment for the Delta River Special Recreation Management Area Plan and East Alaska Resource Management Plan Amendment
5. Over flights 2007
6. Over flights 2000
7. Summary of comments to Draft EA for the Delta River SRMA Plan and East Alaska RMP Amendment
8. Noise/Flight Sensitive Area List (current as of November 1996)"

Kari Rogers/GFO/AK/BLM/DOI
05/30/2007 04:02 PM
To
Heath Emmons/GFO/AK/BLM/DOI@BLM, William Runnoe/GFO/AK/BLM/DOI@BLM
cc
Bruce E Rogers/GFO/AK/BLM/DOI@BLM, Ramone McCoy/GFO/AK/BLM/DOI@BLM
bcc

Subject
military overflight in the Delta WSR corridor

Today, 30 May 2007 at about 1 p.m., while I was driving south on the Richardson Highway near MP 207 adjacent to the Delta Wild and Scenic River corridor, I experienced something like never before. Out of nowhere, there was a deafening blast with repercussion and tremendous roar that absolutely scared me to death. My first thought was that my truck had exploded and I hit the brakes and pulled off the highway immediately. The roar continued as I jumped out of the truck; then another deafening blast and roar hit and I saw an F-16 jet blasting downriver above the Delta River, scarcely 200 feet above the water. The jet was visible for only a moment or two before disappearing around a bend in the river. It banked hard around the corner and flipped 90 degrees to maneuver, like you see them do in the movies.

It was an impressive sight, but not something that I expected to see that close to the ground or within the Delta WSR corridor.

Kari

~~~~~~~~~~~~~~~~~~~
Kari Rogers
BLM - Wildlife Biologist
Glennallen Field Office
P.O. Box 147
Glennallen, Alaska 99588
phone: (907)-822-3217
fax: (907)-822-3120
~~~~~~~~~~~~~~~~~~~

Military Overflights
Delta National Wild and Scenic River
Gulkana National Wild River
Summer 2000

To files:

On July 17, 2000, BLM staff (Kathy Liska, Brian Glaspell, Denton Hamby and Heath Emmons) left the Delta NWSR Wayside boat launch at approximately 2:30pm to canoe through the Upper Tangle Lakes (in the Delta National Wild & Scenic River corridor) and portage to Dickey Lake to float the Middle Fork of the Gulkana River (in the Gulkana National Wild River corridor).

While portaging from Upper Tangle Lake to Mud Lake, the group saw two USAF F-15 aircraft flying overhead from west to east at 1000 agl or lower at 4:05pm. (The cockpits were easily visible, but couldn't make out the shape / forms of the pilots.) The noise was deafening.

The following day (July 18), the group entered the Middle Fork (from Dickey Lake) at approximately 3:15pm. At approximately 3:30pm two USAF F-15 aircraft flew past from west to east at about 1000 agl. The level of flight and noise and flight pattern were similar to that experienced on July 17.

On August 9, 2000, at approximately 4:25 pm, Brian Glaspell and Denton Hamby were just getting out of a canoe at the Delta NWSR Wayside boat launch when multiple sonic booms occurred. The booms were so loud / intense, they nearly knocked them over. They did not immediately spot the plane but shortly after thought they saw the aircraft flying north - northeast.

Another BLM crew was on the Delta River (near Eureka Creek) on August 9 also reported hearing a series of sonic booms about the same time but no aircraft was sighted.

On August 8, Kathy Liska was driving the Denali Highway. At approximately 4:00 pm at MP 85 (west of the Susitna River) a loud roar was followed by a second roar (that was loud enough to be almost overwhelming) caused her to pull off the road until the noise subsided. A passenger car coming in the opposite direction stopped in the middle of the road and driver jumped out and ran to the ditch. No aircraft was sighted.

Kathy Liska

NOISE/FLIGHT SENSITIVE AREA LIST

Current as of November 1996
(Denotes change from previous list)**

****1. Pleasant Valley Subdivision**

a. Description: 64° 55' 00"N/147° 00' 00"W to
64° 55' 00"N/146° 45' 00"W to
64° 51' 30"N/146° 45' 00"W to
64° 50' 00"N/146° 50' 00"W to
64° 50' 00"N/147° 00' 00"W to
point of beginning

EIL TACAN 340°R to 007°R
10 to 16 DME

b. Altitude: Surface to 6000' MSL. Other altitudes restricted to non-maneuvering, non-afterburning, navigational flight

c. Time of year: Continuous

2. Chena Recreation Area

a. Description: 65° 00' 00"N/146° 16' 00"W to
65° 00' 00"N/146° 05' 00"W to
64° 52' 00"N/146° 05' 00"W to
64° 49' 00"N/146° 09' 00"W to
64° 49' 00"N/146° 15' 00"W to
64° 51' 00"N/146° 35' 00"W to
64° 55' 33"N/146° 35' 00"W to
64° 57' 00"N/146° 18' 00"W to
point of beginning

b. Altitude: Surface to 1500' AGL

c. Time of year: 1 May to 30 Sep

3. Chena Hot Springs Resort

a. Description: Three nautical mile radius around 65° 03' 00"N/146° 03' 00"W

b. Altitude: Surface to 1500'AGL

c. Time of year: Continuous

****4. Salcha River Area One**

a. Description:

– 64° 29' 20"N/146° 55' 00"W thence via the 4nm arc
centered at 64° 25' 30"N/146° 51' 00"W counterclockwise to
64° 22' 15"N/146° 46' 00" W to
64° 32' 00"N/146° 05' 00"W to
64° 34' 00"N/146° 15' 00"W to
64° 34' 00"N/146° 35' 00"W to
point of beginning

b. Altitude: Surface to 8000' MSL for turbojet/turbofan aircraft
Surface to 1500' AGL for all other aircraft

c. Time of year: Continuous

****5. Salcha River Area Two**

a. Description: 64° 34' 00"N/146° 15' 00"W to
64° 37' 00"N/146° 12' 00"W to
64° 41' 00"N/145° 46' 00"W to
64° 40' 00"N/145° 38' 00"W to
64° 32' 00"N/146° 05' 00"W to
point of beginning

b. Altitude: Surface to 1000' AGL continuous
Surface to 5000' MSL 1 Sep to 20 Sep for turbojet/turbofan aircraft

6. Sheep Lambing Area and Newman Creek Airstrip (63° 58' 41"N/147° 15' 42"W)

a. Description: 64° 00' 00"N/148° 00' 00"W to
63° 34' 00"N/148° 00' 00"W to
63° 34' 00"N/146° 24' 00"W to
63° 40' 00"N/146° 58' 00"W to
63° 55' 00"N/147° 15' 00"W to
63° 58' 45"N/147° 13' 20"W to
64° 00' 00"N/147° 15' 00"W to
point of beginning

b. Altitude: Surface to 1500' AGL

c. Time of year: 1 May to 30 Jun

7. Wood River Lodge

a. Description: Three nautical mile radius around 63° 46' 00"N/147° 58' 00"W

b. Altitude: Surface to 1500'AGL

c. Time of year: Continuous

8. Clear Creek Cabins

a. Description: One nautical mile radius around 64° 13' 05"N/146° 13' 00"W

b. Altitude: Surface to 1500'AGL

c. Time of year: Continuous

9. Delta Junction

a. Description: Three nautical mile radius around 64° 02' 30"N/145° 43' 30"W.

b. Altitude: Surface to 1500' AGL

c. Time of year: Continuous

10. Birch Lake State Recreation Site

a. Description: One nautical mile radius around 64° 19' 00"N/146° 39' 00"W

b. Altitude: Surface to 2000' AGL

c. Time of year: 15 May to 30 Sep

****11. Harding Lake - ~~11. Harding Lake~~**

~~a. Description: Two nautical mile radius around 64° 25' 30"N/146° 51' 00"W~~

~~b. Altitude: Surface to 1000' AGL~~

~~c. Time of year: Continuous~~
Replaced by new #4

12. Hog Farm

a. Description: One nautical mile radius around 61° 59' 00"N/147° 01' 00"W

b. Altitude: Surface to 1000' AGL

c. Time of year: Continuous

13. Ryan Lodge

a. Description: One nautical mile radius around 62° 02' 00"N/146° 40' 00"W

b. Altitude: Surface to 1500' AGL

c. Time of year: Continuous

14. Parks Highway

a. Description: Two nautical miles either side of the highway from Willow, 61° 45' 00"N/150° 02' 00"W, to Palmer, 61° 36' 00"N/149° 07' 00"W

b. Altitude: Surface to 500' AGL

c. Time of year: Continuous

15. Glenn Highway

a. Description: Two nautical miles either side of Glenn Highway from Sheep mountain NDB, 61° 49' 00"N/147° 30' 00"W, to Palmer, 61° 36' 00"N/149° 07' 00"W

b. Altitude: Surface to 1000' AGL

c. Time of year: Continuous

16. Denali Highway

a. Description: Five nautical miles either side of the road from the park entrance, 63° 44' 00"N/148° 55' 00"W, to Kantishna, 63° 32' 00"N/150° 57' 00"W

b. Altitude: Surface to 2000' AGL

c. Time of year: 15 May to 15 Sep

17. Yukon MOAs Peregrine Falcon Areas

a. Description: Two nautical miles either side of riverbank

Upper Yukon River: 64° 41' 00"N/141° 00' 00"W to 65° 46' 00"N/144° 00' 00"W

Charley River: 64° 41' 00"N/143° 38' 00"W to 65° 19' 00"N/142° 46' 00"W

Kandick River: 65° 44' 00"N/141° 17' 00"W to 65° 22' 00"N/142° 30' 00"W

Porcupine River: 67° 24' 00"N/141° 00' 00"W to 66° 59' 00"N/143° 08' 00"W

b. Altitude: Surface to 2000' AGL

c. Time of year: 15 Apr to 31 Aug

18. Fox Farm

a. Description: One nautical mile radius around 64° 09' 12"N/145° 52' 30"W

b. Altitude: Surface to 1000' AGL

c. Time of year: 1 Feb to 1 Jul

19. Delta National Wild and Scenic River

a. Description: Five nautical miles either side of the river from 63° 03' 00"N/ 145° 59' 00"W to 63° 34' 00"N/145° 53' 00"W

b. Altitude: Surface to 5000' MSL

c. Time of year: 27 Jun to 11 Jul

20. Mulchatna River Fishing Lodge

a. Description: One nautical mile radius around 60° 24' 00"N/155° 54' 00"W

b. Altitude: Surface to 1500' AGL

c. Time of year: 1 May to 30 Sep

21. Town of Nulato

a. Description: Two nautical mile radius around 64° 43' 00"N/158° 09' 00"W

b. Altitude: Surface to 1000' AGL

c. Time of year: Continuous

22. Healy Lake/Village

a. Description: Three nautical mile radius around 63° 59' 00"N/144° 45' 00"W

b. Altitude: Surface to 6000' MSL

c. Time of year: Continuous

23. Fielding Lake State Recreation Sites

a. Description: One nautical mile radius around 63° 10' 00"N/145° 40' 00"W and one nautical mile radius around 63° 11' 12"N/145° 38' 00"W

b. Altitude: Surface to 2000' AGL

c. Time of year: 15 May to 30 Sep

24. Donnelly Creek State Recreation Site

a. Description: One nautical mile radius around 63° 39' 40"N/145° 53' 00"W

b. Altitude: Surface to 2000' AGL

c. Time of year: 15 May to 30 Sep

****25. Summit Lake Lodge** - No longer exists

26. Caribou Calving Area

a. Description: Five nautical miles either side of the line from 62° 17' 00"N/148° 00' 00"W to 62° 43' 00"N/147° 22' 00"W

b. Altitude: Surface to 1000' AGL

c. Time of year: 1 May to 30 Jun

27. Sheep Lambing Area

a. Description: 63° 21' 00"N/145° 05' 00"W to
63° 33' 00"N/144° 05' 00"W to
63° 22' 00"N/144° 05' 00"W to
63° 10' 00"N/145° 05' 00"W to
point of beginning

b. Altitude: Surface to 1000' AGL

c. Time of year: 1 May to 30 Jun

28. Lake George

a. Description: Two nautical mile radius around 63° 47' 00"N/144° 32' 00"W

b. Altitude: Surface to 1500' AGL

c: Time of year: Continuous

29. Shaw Creek Youth Camp

a. Description: One nautical mile radius around 64° 16' 00"N/146° 06' 00"W

b. Altitude: Surface to 1500' AGL

c. Time of year: Continuous

30. Town of Circle City

a. Description: Two nautical mile radius around 65° 50' 00"N 144° 04' 00"W

b. Altitude: Surface to 6000' MSL

c. Time of Year: Continuous

31. Towns of Central and Circle Hot Springs

a. Description: 65° 35' 00"N/144° 55' 00"W to
65° 38' 00"N/144° 45' 00"W to
65° 29' 00"N/144° 30' 00"W to
65° 26' 00"N/144° 39' 00"W to
point of beginning

b. Altitude: Surface to 10,000' MSL

c. Time of Year: Continuous

32. Mouth of Alexander Creek

a. Description: One nautical mile radius around 61° 25' 00"N/150° 35' 00"W

b. Altitude: Surface to 1500' AGL

c. Time of Year: 1 May to 1 Oct

33. Mouth of Lake Creek

a. Description: One nautical mile radius around 61° 54' 18"N/150° 54' 30"W

b. Altitude: Surface to 1500' AGL

c. Time of Year: 1 May to 1 Oct

34. Mouth of Kroto (Deshka) Creek

a. Description: One nautical mile radius around 61° 42' 00"N/150° 18' 18"W

b. Altitude: Surface to 1500' AGL

c. Time of Year: 1 May to 1 Oct

35. Neil Lake

a. Description: One nautical mile radius around 61° 56' 00"N/150° 23' 00"W

b. Altitude: Surface to 1500' AGL

c. Time of Year: 1 May to 1 Oct

36. Gulkana National Wild and Scenic River

a. Description: Five nautical miles either side of the river from 62° 52' 00"N/ 145° 36' 00"W to 62° 31' 00"N/145° 31' 00"W

b. Altitude: Surface to 5000' MSL

c. Time of year: 27 Jun to 11 Jul

37. Towns of Central and Circle Hot Springs (Supersonic operations)

a. Description: No supersonic operations within a ten nautical mile radius of 65° 31' 00"N/144° 43' 00"W

b. Altitude: Surface to FL350

c. Time of year: Continuous

****38. Hunting Season in the Yukon MOA** - Replaced by #4, #5, and #40

39. Gold King Creek Airstrip

a. Description: Three nautical mile radius around 64° 10' 29"N/147° 56' 00"W

b. Altitude: Surface to 1500' AGL

c. Time of Year: Continuous

****40. Salcha River Area Three**

a. Description: Two nautical miles either side of Salcha River from 64° 39' 30"N/145° 45' 00"W to 64° 39' 00"N/145° 20' 15"W

b. Altitude: Surface to 5000' MSL for turbojet/turbofan aircraft
Surface to 1000' AGL for all other aircraft

c. Time of Year: 1 Sep to 20 Sep

****41. Caribou Hunting Area**

a. Description: Five nautical miles either side of the line from 62° 51' 00"N/147° 09' 00"W to 62° 59' 00"N/145° 54' 00"W

b. Altitude: Surface to 1000' AGL

c. Time of Year: 1 Aug to 30 Sep

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