USAG Alaska Cultural Resources Annual Report, 2022

USAG Alaska Cultural Resources Annual Report, 2022

By:

Julie A. Esdale, Ph.D., RPA; Heather D. Hardy, M.A; Whitney E. McLaren, B.A.; and Robert J. Nethken, B.S.

Prepared by:

Center for Environmental Management of Military Lands
Colorado State University
Fort Collins, CO 80523-1500

Prepared for:

Elizabeth A. Cook
Planning Branch
Directorate of Public Works
U.S. Army Garrison Alaska
Fort Wainwright, AK 99703

May 2023

List of Acronyms

AHRS – Alaska Heritage Resources Survey
AR 200-1 – Army Regulation 200-1
ARPA – Archaeological Resources Protection Act
BAX – Battle Area Complex
BP – Before Present
BRTA – Black Rapids Training Area
CEMML – Center for Environmental Management of Military Lands
cm - centimeters
cmbs – centimeters below surface
CRM – Cultural Resources Manager
CRTC – Cold Regions Test Center
DOE – Determination of Eligibility
DTA – Donnelly Training Area
FAI – Fairbanks
GRTA – Gerstle River Training Area
HD – Historic District
ICRMP – Integrated Cultural Resources Management Plan
JPARC – Joint Pacific Alaska Range Complex
m – meter
masl – meters above sea level
NAGPRA – Native American Graves Protection and Repatriation Act
NHL – National Historic Landmark
NHPA – National Historic Preservation Act
NLUR – Northern Land Use Research, Inc.
NRHP – National Register of Historic Places
NWTC – Northern Warfare Training Center
OP – Observation Point
SDZ – Surface Danger Zone
SHPO – State Historic Preservation Officer
TFTA – Tanana Flats Training Area
USAF –United States Air Force
USAG Alaska – United States Army Garrison Alaska
UTM – Universal Transverse Mercator
XBD – Big Delta
XMH – Mount Hayes
YTA – Yukon Training Area

Table of Contents

Introduction 1
Setting 3
Prehistoric Context 3
Historic Context 8
Status of Archaeological Sites 12
Status of Buildings and Structures 15
2022 Fort Wainwright Cantonment 18
Section 106 Activities 18
Section 110 Activities 18
Newly Discovered Archaeological Sites 18
Post-Review Discoveries 18
NAGPRA and ARPA Activities 21
Archaeological Site Monitoring and Site Protection Measures 21
Determinations of Eligibility 21
Summary of Archaeological Surveys and Sites 21
2022 Tanana Flats Training Area 23
Section 106 Activities 23
Section 110 Activities 23
Newly Discovered Archaeological Sites 23
Post-Review Discoveries 26
NAGPRA and ARPA Activities 26
Archaeological Site Monitoring and Site Protection Measures 26
Determinations of Eligibility 26
Summary of Archaeological Surveys and Sites 30
2022 Yukon Training Area 31
Section 106 Activities 31
Section 110 Activities 31
Newly Discovered Archaeological Sites 31
Post-Review Discoveries 31
NAGPRA and ARPA Activities 31
Archaeological Site Monitoring and Site Protection Measures 31
Determinations of Eligibility 32
Summary of Archaeological Surveys and Sites 32
2022 Fort Greely and Donnelly Training Area 34
Section 106 Activities 34
Section 110 Activities 34
Newly Discovered Archaeological Sites 34
Post-Review Discoveries 41

NAGPRA and ARPA Activities 41
Archaeological Site Monitoring and Site Protection Measures 41
Determinations of Eligibility 45
Summary of Archaeological Surveys and Sites 50
2022 Gerstle River Training Area 52
Section 106 Activities 52
Section 110 Activities 52
Newly Discovered Archaeological Sites 53
Post-Review Discoveries 55
NAGPRA and ARPA Activities 56
Archaeological Site Monitoring and Site Protection Measures 56
Determinations of Eligibility 56
Summary of Archaeological Surveys and Sites 56
2022 Haines Fuel Terminal 57
Section 106 Activities 57
Section 110 Activities 57
Newly Discovered Archaeological Sites 58
Post-Review Discoveries 58
NAGPRA and ARPA Activities 58
Archaeological Site Monitoring and Site Protection Measures 59
Determinations of Eligibility 59
Summary of Archaeological Surveys and Sites 59
Summary 60
References 62

List of Figures

Figure 1. USAG Alaska training lands. 3
Figure 2. Post review discoveries found in 2022. 18
Figure 3. Concrete block and pipes found from 1-3 m below the modern ground surface. These have been determined to be the bury-in-place debris associated with World War II barracks. 19
Figure 4. Additional concrete and metal debris found during excavation. 19
Figure 5. Additional concrete and metal debris found during excavation. 20
Figure 6. Additional concrete and metal debris found during excavation. 20
Figure 7. Pile of concrete removed from excavations for the new aquatic center foundation. 21
Figure 8. Archaeological sites and surveys on the cantonment, all years. 22
Figure 9. Archaeological surveys in TFTA in 2022. 23
Figure 10. Archaeological sites monitored, evaluated, and discovered in TFTA in 2022. 24
Figure 11. FAI-02812 aerial overview to the southwest. 25

Figure 12. FAI-02812 site overview (view to west) 25
Figure 13. FAI-02812 site map. 26
Figure 14. Archaeological sites and surveys in TFTA, all years. 30
Figure 15. Archaeological sites monitored and evaluated in YTA in 2022. 32
Figure 16. Archaeological sites and surveys in YTA, all years. 33
Figure 17. Archaeological surveys in DTA in 2022. 34
Figure 18. Archaeological sites monitored, evaluated, and discovered in DTA in 2022. 35
Figure 19. XBD-00458 site overview (view to west). 36
Figure 20. XBD-00458 site map. 37
Figure 21. XBD-00458 shovel test. 37
Figure 22. XBD-00458 stratigraphic profile. 38
Figure 23. XMH-01616 site overview (view to south). 39
Figure 24. XMH-01616 site map. 39
Figure 25. XMH-01616 UA2022-069-0001 in situ. Scale= 10cm. 40
Figure 26. XMH-01616 test pit. 40
Figure 27. XMH-01616 stratigraphic profile. 41
Figure 28. XMH-01539 vehicle overview to the north. 47
Figure 29. XMH-01539 site map. 48
Figure 30. XMH-01539 identification plate on left and a restored plate on right for comparison. 48
Figure 31. XMH-01539 chrome bands on left and a restored headlight on right for comparison. 49
Figure 32. XMH-01539 dashboard on left and a restored dashboard on right for comparison. 49
Figure 33. Close-up of a restored dashboard to illustrate configuration. 49
Figure 34. XMH-01539 interior passenger door on left and a restored door on right for comparison 50
Figure 35. Archaeological sites and surveys in DTA, all years. 51
Figure 36. Section 110 surveys in GRTA during 2022. 52
Figure 37. GRTA overview. 53
Figure 38. Location of XMH-01617. 54
Figure 39. XMH-01617 site overview to the southwest. 54
Figure 40. XMH-01617 site overview (view to east). 55
Figure 41. XMH-01617 site map. 55
Figure 42. Archaeological sites and surveys in GRTA, all years. 56
Figure 43. Section 110 surveys at the Haines Fuel Terminal in 2022. 57
Figure 44. Overview of vegetation and terrain at the Haines Fuel Terminal, facing west. 58
Figure 45. Close-up view of vegetation and terrain at the Haines Fuel Terminal. 58
Figure 46. Archaeological sites and surveys in Haines Fuel Terminal, all years 59

List of Tables

Table 1. Archaeological sites monitored in TFTA in 2022. 27
Table 2. Archaeological sites monitored in YTA in 2022. 31
Table 3. Sites monitored in DTA in 2022 42
Table 4. Archaeological surveys by training area 60
Table 5. Archaeological sites and eligibility status 60
Table 6. Archaeological sites monitored in 2022. 61

Introduction

Army Regulation 200-1 (AR 200-1), Chapter 6, instructs installations to make informed decisions regarding cultural resources under their control in compliance with public laws, in support of the military mission, and consistent with sound principles of cultural resources management. In addition to having an updated, 5-year Integrated Cultural Resources Management Plan (ICRMP) and an established government-to-government relationship with Federally-recognized tribes, the Army must comply with three federal laws: the Native American Graves Protection and Repatriation Act (NAGPRA); the Archaeological Resources Protection Act (ARPA); and the National Historic Preservation Act (NHPA). This report provides an annual review of United States Army Garrison Alaska's (USAG Alaska) compliance with AR 200-1 and Federal laws. It is intended to create an administrative record of all program activities.

When NAGPRA was enacted in 1990, it required Federal agencies to return Native American human remains, funerary objects, and objects of cultural patrimony to the lineal decedents and culturally affiliated tribes. USAG Alaska worked with University of Alaska's Museum of the North (the repository for cultural remains discovered on Army-managed lands in Alaska that meets the criteria outlined in 36 CFR 79) to ensure there were no items meeting NAGPRA standards in storage. An inadvertent discovery plan that includes ceasing all work when human remains, bones, or artifacts are encountered, noting the coordinates of the remains, notifying the Alaska State Troopers in the event of human remains, and contacting the garrison Cultural Resources Manager (CRM) was enacted. This plan is articulated to project managers, training supervisors, and the public, and is included in all Memorandums of Agreement (MOA) for undertakings impacting historic properties.

ARPA aims to protect archaeological sites on public lands that are at least 100 years old. It stipulates criminal and civil penalties for the looting of archaeological sites and the trafficking of artifacts. It also requires Federal agencies to monitor and protect their archaeological sites from looting and to report violations. While to date USAG Alaska has encountered no ARPA violations, it is also responsible for permitting scientific excavations for research. USAG Alaska has established an application process whereby researchers can request to excavate archaeological sites on Army-managed lands. This permit is signed by the Garrison Commander and is reinforced by a MOA. Summaries of these permits and updates on the excavations are provided in this report.

The NHPA (54 U.S.C. § 470 et seq.) was enacted in 1966 to ensure that every federal agency establishes a preservation program for the identification, evaluation, and care of historic and archaeological sites. Title I of the statute established the National Register of Historic Places (NRHP), administered by the National Park Service (NPS), and State Historic Preservation Officers (SHPOs), partners of the national historic preservation program. Both Sections 106 and 110 of the statute are contained in Title I. Section 106 requires that federal agencies provide the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on undertakings that have the potential to impact historic properties on or

eligible for the NRHP. It also establishes a procedure (regulated in 36 CFR 800) determining the effects of an undertaking on historic properties as well as a consultation process to inform stakeholders and resolve adverse effects. USAG Alaska complies with these regulations through annual reporting of undertakings covered by an operations and maintenance Programmatic Agreement (FW-PA-1601) and individual letters on undertakings that include ground disturbance or alterations to historic properties. This report summarizes the undertakings requiring Section 106 consultation for archaeology and historic buildings that took place in 2021.

Section 110 of the NHPA requires that federal agencies establish their own historic preservation programs for the identification, evaluation, and protection of historic properties using standards established by the Secretary of the Interior. Although AR 200-1 requires full compliance with federal law, most Section 110 inventories and evaluations in Army training lands take place in coordination with Section 106 reviews of project undertakings. The USAG Alaska's CRM has established a consultation process with Range Control offices at Fort Wainwright and Donnelly Training Area (DTA) to determine potential development zones (PDZs) based upon projected training needs. These PDZs are located in the major training areas outside Fort Wainwright's Main Post cantonment in areas that the Army plans to develop in the 2 to 10-year time range. Identification of PDZs has allowed the CRM to focus survey efforts, in conjunction with Section 106 reviews, in the areas of the 1.6 million acres managed by USAG Alaska that are considered most critical.

This report summarizes all cultural resources fieldwork conducted on USAG Alaska-managed lands during 2022. First, it describes all activities on USAG Alaska-managed lands that required consultation under NAGPRA or required permitting under ARPA during the current year and provides an update on activities from previous year permits. The report then provides a brief summary of all Army undertakings that took place in 2022 that required Section 106 consultation under the NHPA, including a summary of those that had previously been described in detail in individual letters to the SHPO. Next, it provides descriptions of all buildings surveyed during the year that were not previously tracked by the cultural resources program. It then outlines all cultural resources surveys during 2022 related to future Army project areas under Section 110 of the NHPA that were not described in individual Section 106 letters. All newly found resources on USAG Alaska-managed lands are described in the text. New AHRS cards will be supplied to the SHPO office. Next, a list of register eligible or not yet determined archaeological sites, buildings, and structures monitored during the current year and their condition and recommendation is provided along with any new site protection measures installed over the same period. When sites or buildings are monitored, their condition is photo documented. These photos are on file at Fort Wainwright and can be viewed upon request. Determinations of eligibility for archaeological sites, buildings, and structures are then reported. Finally, this report summarizes the total acreage of archaeological surveys since 2002 and total number of archaeological sites or historic buildings known from the Fort Wainwright cantonment and training areas for use in the ICRMP, Federal data calls, and the geographic information systems-based Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE).

This report is organized into sections by USAG Alaska-managed properties. No work took place in the following training areas or other areas managed by USAG Alaska in 2022: Black Rapids Training Area, Whistler Creek Training Area, Tok Fuel Terminal, Seward Military Resort, and Sears Creek Pump Station.

All archaeological fieldwork, including building and structure surveys, were conducted by Colorado State University's Center for Environmental Management of Military Lands (CEMML) employees under the direct supervision of Julie Esdale, Ph.D., an archaeologist meeting the professional standards outlined in the Secretary of the Interior's Professional Qualifications Standards as defined in 36 CFR 61 Appendix A. Two crews comprised of three to five archaeologists conducted the fieldwork.

Setting

USAG Alaska manages of the Main Post cantonment area, Yukon Training Area (YTA), Tanana Flats Training Area (TFTA), Donnelly Training Area (DTA), Gerstle River Training Area (GRTA), Black Rapids Training Area (BRTA), Whistler Creek Training Area (WCTA), and miscellaneous outlying properties including Seward Military Resort and remnants of the Haines-Fairbanks pipeline-- Sears Creek Pump Station, Tok Fuel Terminal, and Haines Fuel Terminal. The majority of these are located in central Alaska, north of the Alaska Range in the Tanana River Valley (Figure 1). The Main Post lies 120 miles south of the Arctic Circle near the cities of Fairbanks and North Pole in the Fairbanks North Star Borough.

Figure 1. USAG Alaska training lands.

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 USAG Alaska'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. Fort Wainwright's cantonment and associated 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. In recent years, the Tanana Valley has proven to be an early New World population center with a number of reliably dated archaeological sites placing humans in the area at the end of the last glacial period. These sites include Shég' Xdaltth'I' (formerly McDonald Creek), a 13,900[1] year old bison processing site with stone tool resharpening debris (Goebel et al. 2014, Graf et al. 2018) located in the TFTA, as well as Swan Point, dating to 14,150 years ago (Holmes 2011), and Holzman, at 13,600 years ago (Wygal et al. 2018), all three of which are located within a 10-mile radius. These sites have stone tool debris, human-worked bone, and remains of extinct Pleistocene fauna in well stratified sediments with radiocarbon dates from charcoal and faunal material in cultural contexts. No other regional complex of well-dated pre-Clovis sites exists anywhere else in North or South America.

After initial colonization, archaeologists generally divide Interior Alaska's prehistory into three broad time periods: the Paleoarctic Tradition (12,000-7,000 years ago), the Northern Archaic Tradition (7,000-1,500 years ago), and the Athabaskan Tradition (1,500-800 years ago) (Potter 2008a, 2008b). Archaeological 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-managed lands demonstrate that people were well established in Interior Alaska by 13,000 years ago. Significant sites in the Tanana Valley dating between 13,500-12,000 years ago include Healy Lake (Cook 1996), Walker Road (Goebel et al. 1996), Mead (Holmes 2001), Upward Sun River (Potter et al. 2014), Keystone Dune (Reuther et al. 2016), Broken Mammoth (Holmes 1996), and Delta River Overlook (Potter et al. 2018). The Younger Dryas cooling event from 13,000-12,000 years ago may have led to a temporary population decline (Potter 2008a, 2008b) in the Interior before permanent, wide-spread colonization.

[1] All dates are given in calendar years before present.

The Paleoarctic Tradition is a term now generally used by archaeologists to refer to the first 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 late Pleistocene northeast Asian 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 higher ground, they could locate and track prey that included large mammals such as mammoth and bison. Evidence from the Upward Sun River site, located on the south side of the Tanana River between Army training areas, for example, demonstrates that hunter-gatherers in Interior Alaska were concentrating on harvesting 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 2008a, 2008b; Potter et al. 2008; Potter et al. 2011]). The nearby Shég' Xdaltth'I' site on Army-managed land yielded artifacts in association with bison, waterfowl, and small game (Esdale et al. 2012c, Gaines et al. 2011, Goebel et al. 2014, Graff et al. 2018). Delta River Overlook, in DTA, also contained an archaeological record with early diet indicators. This site was visited twelve times between 12,000 and 2,000 years ago, and its earliest inhabitants were big game hunters concentrating on the procurement bison and wapiti (Potter et al. 2018). 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 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, in and adjacent to Army training areas (Broken Mammoth [Holmes 1996; Yesner et al. 1999], Chugwater [Lively 1996], Donnelly Ridge in DTA [West 1967, 1996], Healy Lake [Cook 1989], Delta River Overlook in DTA [Potter et al. 2018], Mead [Holmes 2007], Shég' Xdaltth'I' in TFTA [Graf et al. 2018], and Swan Point [Holmes et al. 1996; Holmes 1998, 2007]).

The Denali Complex, dated roughly to 10,500 to 8,500 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 USAG Alaska's training lands include Mount Hayes (West 1996), Swan Point (Holmes et al. 1996; Holmes 1998, 2007), and Gerstle River (Potter 2001). Several sites in DTA and the

[2] Anderson called it the "American Palaeoarctic Tradition," but most researchers use the shortened version.

Tanana Flats have been dated to this period (including Delta River Overlook [Potter et al. 2018] and Hurricane Bluff [Esdale et al. 2015]).

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 of Interior Alaskan archaeologists is that there is a behavioral explanation for the presence or absence of microblades in different assemblages (Holmes 2001; Potter 2008a, 2008b; Yesner and Pearson 2002). Moreover, both Nenana and Denali technology persist in central Alaska throughout the Holocene (Bever 2006).

The site density declined in the areas around USAG Alaska-managed training lands in the early Holocene, suggesting a slight depopulation during a period of climate change that initiated the widespread establishment of spruce forests (Potter 2008a, 2008b). 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 (c. 8,600 years old) (Bever 2001), Lucky Strike (c. 8,500 years old) (Potter et al. 2007), Blair Lakes in TFTA (c. 8,000 years old) (Esdale et al. 2017), Delta River Overlook (several components) (Potter et al. 2018), Delta Creek (c. 8,000) (Doering pers. comm. 2018), 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, 2008a, 2008b).

The site density increased again after about 6,000 years ago in Interior Alaska (Potter 2008a, 2008b). This population increase coincides roughly with the emergence of 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 Gillispie 1986). Artifact assemblages associated with this culture can vary but generally contain a myriad of tools ranging from bifacial knives and microblades to end scrapers and side-notched projectile points. Middle Holocene hunter-gatherers had a subsistence economy focused on seasonally abundant game including caribou, fish, and moose (Potter 2008a, 2008b). Notched point assemblages occur in many sites in Interior Alaska, including over one dozen on Army-managed lands (XBD-00277, XMH-00277, XMH-00283, XMH-00303, XMH-00309, XMH-00874, XMH-00950, XMH-01130, XMH-01168, and XMH-01300). Several sites (XBD-00270, XMH-00915, XMH-00925), including the excavated Banjo Lake site in DTA (XMH-00874), 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).

Use 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 gradually disappear from the archaeological record (Potter 2008a, 2008b).

Linguistic evidence suggests that the Athabascan culture may have appeared in the Tanana Valley as early as 2,500 years ago, or earlier (Kari 2016; Kari and Potter 2010). Through ethnography, oral history, and a broad array of cultural items, much has been learned about Athabascan culture and history in the region. The artifacts associated with the Athabascan 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 Athabascan occupation is recognized at several sites in and around Army training lands (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 found in a buried context at DTA (XBD-00272) (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 in the interior are rare, but the limited body of evidence allows for several generalizations. The 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 mammals and freshwater marine animals such as fish and mollusks (McFadyen Clark 1981, 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, 1977, 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. The 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 proto-historic 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 Army-managed lands (McKennan 1981). Several villages have been reported on or near Fort Wainwright. One occupied by the Wood River band is said to have been located in the southern part of TFTA but has not been found (Dixon 1980; Reynolds 1986). The Blair Lakes Archaeological District (FAI-00335) in TFTA 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. USAG Alaska-managed 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 seasonal round, with the fall caribou hunt playing a pivotal role in subsistence preparations for the winter and summer activities focused at fish camps, on 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 or Nuchalawoyya (modern-day Tanana), Belle Isle (modern-day Eagle), and Fort Yukon.

Trade goods introduced by Euro-American settlers influenced the Native lifestyle. Clothing, food, staples, tools, and other necessities could be obtained through trade. Guns allowed hunters to obtain game with greater efficiency. Gradually, Athabascan 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.

The 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 Fort Wainwright 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 Fort Wainwright 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 Fort Wainwright (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 Army 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 DTA. 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.

The development in the Alaskan interior increased dramatically with the onset of World War II, subsequent military build-up in Alaska, and, later, the beginning of the Cold War. Of particular significance was the development of airfields near Delta Junction (Fort Greely), Fairbanks (Ladd Field, later Fort Wainwright), and North Pole (Eielson Air Force Base).

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 NRHP under these contexts. Several village sites associated with the early contact period have been reported near USAG Alaska-managed lands. 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.

During the summer of 1934, then Lieutenant Colonel Henry H. (Hap) Arnold lead *The Alaska Flight*, a contingency of ten B-10 bombers, to scout for potential airfield sites. This resulted in selection of land outside Fairbanks being chosen for Ladd Field's authorization by Congress in 1935. Construction began on the small cold weather testing station in 1939; and, by 1940, Ladd Field was operational.

Cold weather testing at Ladd Field helped to improve the aircraft and equipment used by front-line aircrews. The Cold Weather Test Detachment's experimental tests contributed to the development of aircraft design, ground procedures, and personnel equipment with stateside research agencies and manufacturers. After the start of World War II, Ladd Field also served as the transfer point for the Alaska Siberia (ALSIB) Lend-Lease aid to the Soviet Union. From 1942 to the end of the war in 1945, Ladd Field saw 7,926 aircraft and associated cargo change hands. Though it was controversial, the Lend-Lease aid

to the Soviet Union played a part in the eventual defeat of Nazi Germany. Ladd Field also served as an air depot for the repair and supply of aircraft under the Air Transport Command, processing thousands of passengers as well as tons of cargo and mail.

In 1947, the Air Force became a separate service and Ladd Field became known as Ladd Air Force Base (AFB). Missions flown out of Ladd AFB played a significant role in the early years of the Cold War confrontation with the Soviet Union. Early in the Cold War, military planners decided on a heartland concept for Alaskan defense, concentrating on bases near Anchorage and Fairbanks as the strategic anchor points. Ladd AFB became the Northern Sector Headquarters for the Alaskan Air Command, and its foremost missions during the Cold War were air defense, strategic reconnaissance, and arctic research.

Ladd AFB's air defense mission was part of the plan to deter the Soviet Union from taking Alaskan territory and using it as a base from which to threaten the continental United States. Ladd AFB hosted tactical fighter intercept squadrons and combat alert cells. An Air Defense Command Center located on Ladd AFB was responsible for directing air battles in Alaska's northern sector. It also provided support to segments of the Distant Early Warning Line. In the earliest years of the Cold War, Ladd AFB hosted some of the first long-range strategic aerial reconnaissance units.

Ladd AFB was also the scene of significant Cold War arctic research. The cold weather equipment testing, begun during World War II, continued through the Cold War, and expanded to include the Arctic Aeromedical Laboratory (AAL). The AAL studied human adaptation to arctic and sub-arctic climates with an eye toward military applications.

In 1960, Ladd AFB was transferred to the Army and renamed Fort Jonathan Wainwright on January 1, 1961. In Alaska, Cold War missions were predominately under the command of the Air Force, with the Army providing ground force defense and logistical supply. The Army also carried out cold weather training tactics and cold weather equipment testing. The onset of the Vietnam War and its high costs drained the Army's resources; troops at Fort Wainwright were reassigned or deployed, causing a significant decrease in the post's population. In 1986, the mission of the post changed once again with the assignment of the 6th Light Infantry Division to Fort Wainwright, promoting the mission to support expeditious worldwide deployment. Management of Fort Wainwright was removed from the mission element and unified with all other installations under the Installation Management Agency in 2002, later transformed into Installation Management Command (IMCOM). Relieved of the burden of day-to-day installation management, U.S. Army Alaska redirected its focus to Army modernization and transformation. As a result, Fort Wainwright became home to the 1-25th Stryker Brigade Combat Team (SBCT), 1-25th Attack Reconnaissance Battalion, and 1-52nd General Support Aviation Battalion, continuing a tradition of enabling global deployment. In 2022, US Army Alaska was reflagged as the 11th Airborne Division. The 1-25th SBCT was reflagged as the 1-11th Infantry Brigade Combat Team (IBCT), with the last Stryker vehicles leaving Alaska in October 2022.

Status of Archaeological Sites

Archaeological research on USAG Alaska-managed lands has resulted in numerous technical reports (Bacon 1978; Bacon and Holmes 1979; Bradley et al. 1973; Carlson et al. 2016; Dixon et al. 1980; Esdale et al. 2020a, 2020b, 2018 a, 2018 b, 2017a, 2017c, 2016, 2015b, 2015c, 2014, 2013, 2012a, 2012b, and 2012c; Esdale and McLaren 2014, 2013; Esdale and Pelto 2017; Esdale and Robertson 2007; Espenshade 2010; Gaines 2009; Gaines et al. 2010a, 2010b; Hedman et al. 2003; Higgs et al. 1999; Holmes 1979b; Johnson and Bozarth 2008; Marshall 2007; Potter et al. 2018; Potter 2005; Potter et al. 2000, 2007a; Rabich and Reger 1978; Raymond-Yakoubian and Robertson 2006; Raymond-Yakoubian and Robertson 2005; Robertson et al. 2004, 2006, 2007, 2008, 2009b, 2013; Staley 1993), and scientific papers (Esdale et al. 2017 b, 2015a; Holmes and Anderson 1986; West 1967, 1975).

Fort Wainwright and its training lands contain 735 known archaeological sites, one traditional cultural property, and six archaeological districts. Seventy-seven sites are eligible for the NRHP, 516 sites have not been evaluated, and 142 additional sites have been determined not eligible for the NRHP. Of the eligible or un-evaluated sites, 6 are historic and 587 are prehistoric sites.

Archaeological surveys of the Fort Wainwright 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-00040, 00041, 00042, 00043, 00199, and 00200) (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-00509), which has failed to be relocated in subsequent attempts. In 2001, the Army began partnering cultural resources surveys and evaluations with CEMML. Surveys by several different principal investigators have targeted areas of construction undertakings. Two historic sites (FAI-01603 and 01604) and one additional prehistoric site (FAI-01990) were found in these investigations. In 2011 and 2012, CEMML completed survey of the entire cantonment, north and south of the Chena River, discovering three additional historic sites (FAI-02117, FAI-02197, and FAI-02198). Two sites were evaluated for the NRHP in 2013 (FAI-00199 and FAI-00200). Of the 11 archaeological sites known from the Fort Wainwright cantonment, 10 have been determined not eligible and one has been determined eligible (FAI-00040) for the NRHP. This total does not include any historic buildings related to the Ladd Field National Historic Landmark or the Ladd AFB Cold War Historic District.

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-00335), Clear Creek Butte (District FAI-00336), and Wood River Buttes (District FAI-00337) (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. The district boundaries were adjusted in 2016 to accommodate the

new discoveries (Carlson et al. 2017). Recent surveys have focused on the Blair Lakes region which has a long history of use dating from late glacial times to the more recent homesteading period and has also been a significant region for military training. This area hosts the second oldest archaeological site in all of Alaska, the McDonald Creek site (FAI-02043), with stone tool debris dating to 13,900 years ago (Esdale et al. 2014, Graf et al. 2018). In total, archaeologists have identified 168 archaeological sites in TFTA. Of these sites, 17 have been determined eligible for inclusion in the NRHP, five sites are not eligible and 146 remain to be evaluated for eligibility.

The road system in the 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-two archaeological sites have been identified in YTA. Seventeen of the sites have been determined not eligible for listing in the NRHP and five have not been evaluated. Surveys continue annually in YTA in association with range control development projects and timber sales.

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-00005) 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 1970s documented 64 new sites (Rabich and Reger 1978; Bacon 1978; Holmes 1979b; Bacon and Holmes 1979). Julia Steele surveyed various locations in DTA from 1980-1983, finding four additional new sites (Steele 1980a, 1980b, 1982a, 1982b, 1983a, 1983b), and Georgeanne Reynolds surveyed the Donnelly Dome area in 1988, locating one more site (Reynolds 1988). Investigations in DTA from 1992-2002 were made 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 W. Hedman in others in 2002 (Hedman et al. 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 recent years, CEMML research aimed to evaluate many known archaeological sites in DTA for inclusion in the NRHP in conjunction with use of the Battle Area Complex (BAX) and its Surface Danger Zone (SDZ). Sites have also been discovered during surveys for road and trail maintenance. Major excavations have taken place in training area that have greatly increased our understanding of the prehistory of the area, including the middle Holocene Banjo Lake

site (Esdale et al. 2013) and the multicomponent Delta River Overlook (XMH-00297) and Hurricane Bluff (XMH-00297) sites (Potter et al. 2018).

Potential expansions into DTA West, west of the Delta River, prompted 2011 and 2012 surveys into new areas such as Molybdenum Ridge, where 21 new sites were discovered in 2011. Eleven surface sites were also found along Dinosaur Ridge in 2016. Because of its remote setting and a lack of military development, however, the archaeology of DTA West is still poorly understood and represents a gap in USAG Alaska's inventory of cultural properties.

To date, 491 archaeological sites have been identified within DTA. Fifty sites have been found to be eligible for the NRHP, and 95 were found not eligible. An additional 346 sites remain to be evaluated. Historic archaeology sites are poorly represented in this region, with only five currently known to exist. The Donnelly Ridge Archaeological District (XMH-00388) encompasses Denali Complex sites, identified by Frederick West, south and west of Donnelly Dome. Two new prehistoric districts were identified in 2016, east and west of Jarvis Creek: the Jarvis Creek Archaeological District (XMH-01553) and the Heart among the Glaciers Archaeological District (XMH-01552) (Carlson et al. 2016). Archaeological studies in DTA in recent years have concentrated 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.

In 2020 USAG Alaska reacquired cultural resources responsibilities for the Fort Greely cantonment. Sixteen prehistoric sites are known from this parcel of land and NRHP evaluations were completed for all sites in 2010 (Gaines et al. 2010a). Sites are situated on outwash deposits west of Jarvis Creek, seven are eligible for the NRHP and nine have been found not eligible.

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 dates for human habitation at DTA are roughly 10,100 years at site XBD-00167 (Higgs et al. 1999) and 12,000 years at Delta River Overlook (Potter et al. 2018); however, undisturbed stratigraphic deposits that are 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, the Banjo Lake site yielded an AMS date of 5720 ± 50 BP from hearth charcoal associated with a microblade component (Esdale et al. 2015, Robertson et al. 2008). Euro-American historic archaeological sites are also present (Gamza 1995; Phillips 1984). The Delta River Overlook site (XMH-00297) may prove to be one of the most significant prehistoric sites in the region. The site, overlooking the Delta River from a high bluff, has deeply stratified deposits and contains evidence of at least twelve occupations over the time span of 2,000 to 12,000 years before present (Potter et al. 2018). People using the site were hunting bison in the river valley and processing the animals on the bluff edge. This site provides important evidence concerning changing subsistence strategies and tool technology over time (Potter et al. 2018).

Survey efforts increased in 2013 in the BRTA in advance of military installation of a high-angle marksmanship range. Eleven sites, eight of which were discovered during CEMML surveys in 2013, are known from this rocky landscape. Four sites have been determined ineligible for the NRHP, and all sites are small surface lithic scatters and isolated points as there is very little deposition in most of the mountainous training area. Two additional surficial prehistoric sites were found in the small WCTA to the south of BRTA in 2015 and 2021.

Six sites were discovered at Tok Fuel Terminal by John Cook in the early 1980s. In recent years, several of these site localities have merged into single sites and new prehistoric sites in other areas have been found. Currently, eight prehistoric sites are located on the Tok Fuel Terminal hill, and two are eligible for the NRHP. One eligible traditional cultural property is also known from this Army-managed property (TNX-00067) (Simon and Gelvin-Reymiller 2002).

The GRTA and Haines Fuel Terminal, also managed by USAG Alaska, have not been thoroughly surveyed for archaeological resources. CEMML archaeologists surveyed small portions of GRTA from 2011 through 2013, as well as in 2022. Five prehistoric sites are known from this training area. One site, XMH-01494, was determined not eligible in 2013 (Esdale et al. 2013b). One ineligible historic site is known from Haines Fuel Terminal (SKG-00043). Sears Creek Pump Station and Seward Military Resort are two additional small properties that have not yet been surveyed for archaeological sites.

Status of Buildings and Structures

Cultural resource management of Ladd Field's structural environment began in earnest with the listing of the National Historic Landmark (NHL) in 1985 (FAI-00236) The NPS produced the *World War II in the Pacific Theme Study* for Congress and the Secretary of the Interior's Advisory Board. The study was in partial fulfillment of PL 95-348 with the purpose evaluating resources and producing recommendations for National Historic Landmark designations. Resources were considered against the subthemes of Japanese Expansion in the Pacific, the United States Home Front, Alaska and the Aleutians, and the United States' Central Pacific Drive.

Ladd Field was recommended under the subtheme of Alaska and the Aleutians, along with Sitka Naval Base and Coastal Defenses, Kodiak Naval Base and Coastal Defense, and Dutch Harbor Naval Base and Coastal Defense. The nomination forms were prepared by Erwin N. Thompson, a historian with the NPS-Denver Service Center, and dated June 18, 1984. These locations were recommended "because they represent the build-up of Alaska's defenses from almost nothing in 1938 to a position of increasing strength by the time of the Japanese attack on Dutch Harbor and occupation of the western Aleutians in 1942." (Thompson, 1984) In particular, Ladd Field was recognized as being established as a cold weather testing station and as a critical transfer site for American Lend-Lease planes from American to Soviet crews. The original nomination included 23 buildings and structures.

Following the NHL designation, a flurry of undertakings involved the demolition of many World War II and Cold War era temporary structures as the installation prepared to stand up the 6th Infantry Division

(6th ID) in 1986. With the deactivation of the 6th ID in 1994 and that activation of US Army Alaska, various units were positioned at Fort Wainwright resulting in construction that met specific unit needs. In 2003, the Army transformed in to a modular brigade structure with large specialized units. Fort Wainwright became the home of the 172nd Stryker Brigade Combat Team (SBCT) which later became the 1-25th SBCT. These new vehicular assets necessitated additional vast new construction within the NHL boundary. This lasted through 2009 with new aviation assets requiring additional, larger hangars and consolidated barracks on and adjacent to the airfield. Aviation transformation concluded with the stationing of the Gray Eagle UAV unit and its hangar built on the airfield within the NHL in 2017. In addition to the mission-related construction, Army-wide housing privatization in 2009 and utility privatization in 2010 resulted in large amounts of demolition, construction, and jurisdictional transfers across the installation. As of 2021, there are 20 buildings and 4 structures contributing to the NHL and 6 buildings and 2 structures noncontributing to the NHL. A re-evaluation of the NHL has been conducted in fulfillment of a stipulation in agreement document FW-MOA-1401. It is currently being processed by the NPS's regional office for forwarding to and review by the NPS National Historic Landmarks Committee.

In 2000, the historic context *Northern Defenders: Cold War Context of Ladd Air Force Base Fairbanks, Alaska, 1947-1961* evaluated buildings from the vast build-up that occurred in the 1950s (Price, 2001). During the Cold War period of significance, approximately 500 World War II era buildings were demolished and 300 permanent buildings were constructed, two-thirds of which were Capehart housing (Sackett, ND). The Alaska SHPO concurred with the historic district evaluation prepared by CEMML historians on March 14, 2001. The themes of significance included the stationing of the 46th/72nd Reconnaissance Squadron and Fighter Intercept Squadrons. The Ladd AFB Cold War Historic District (HD) (FAI-01288) nomination originally included 68 contributing resources. Currently, there are 37 contributing and 30 noncontributing properties in the historic district. A re-evaluation of the district has been submitted in fulfillment of a stipulation in agreement document FW-MOA-1803.

Additionally, three buildings and one structure on Fort Wainwright were determined individually eligible for the NRHP. Building 4070 (the Arctic Aeromedical Laboratory, FAI- 01283) was concurred eligible in 2001. Building 4391 (Chena Elementary School, FAI-01789) was concurred eligible by the Alaska SHPO in 2010. Building 1060 (Air Defense Command Communication Center, FAI-01257) was determined eligible in 2010, but lost its eligibility due to a loss of integrity in 2015. The Bailey Bridge (FAI-02138), having previously been determined not eligible, was re-evaluated and determined eligible in 2018. This structure was demolished in 2020 due to its not meeting mission requirements.

Surveys of building interiors within the NHL and HD were conducted in 2012. DOEs for 25 interiors were submitted and 6 of those were concurred to be contributing to the NHL and HD – B1043, B1045, B1047, B1049, B1557 (in part), and B2077 (in part) – for various aspects of interior character. An additional interior, Building 1048, is also considered to have a historic interior and is under the jurisdiction of the installation privatized housing partner, although consultation on all undertakings at this location are the responsibility of the installation.

The Base Realignment and Closure Act (BRAC) of 1995 slated the closure and future dismantling of Fort Greely. In preparation of the installation properties leaving Federal ownership, correspondence with the Alaska SHPO negotiated a MOA that included stipulations for recording a majority of the installation's Cold War era mission buildings. The MOA also described a Fort Greely New Post Historic District that was later considered eligible for the National Register with 23 contributing resources (XMH-01275). The timeline of determination for this district is somewhat murky and, for working purposes, has been determined to coincide with the MOA's execution in March 1999. Mitigation included in the MOA was HABs-like recordation of 23 buildings, which was completed.

In August 1999 in preparation for the BRAC process, Tetra Tech, Inc. and Charles M. Mobley, and Associates prepared the *Inventory and Evaluation of Military Structures at Fort Greely, Delta Junction*. This volume evaluated 208 structures, 20 of which dated to World Wat II, 188 of which were from the Cold War era (of which 60 were residential), and 168 of which were subject to disposal. Currently one resource, P606 (SM-1A nuclear reactor, XMH-00670) has been determined eligible for the NRHP. Is it slated for decommissioning and final demolition beginning in 2023.

USAG Alaska assumed management of the cultural resources at Fort Greely in 2020 and began with a re-evaluation of the known historic district and any other resources over 50 years of age. The intent of this process is to clear up the status of properties and assist with future management.

Programmatic evaluation of buildings and structures of 45 years of age on the two cantonments is practiced. Beginning in 2019, program emphasis on ensuring a complete survey of buildings on all of the non-cantonment USAG Alaska-managed properties began. These efforts continue with the goal of folding those properties into the programmatic evaluation schedule.

2022 Fort Wainwright Cantonment

Section 106 Activities

No undertakings requiring section 106 consultation took place on the cantonment in 2022.

Section 110 Activities

No archaeological or building surveys were conducted on the cantonment in 2022.

Newly Discovered Archaeological Sites

No new archaeological sites were found on the cantonment in 2022.

Post-Review Discoveries

One post review discovery took place on the cantonment in 2022 (Figure 2). Concrete blocks and some metal pipe was discovered during excavation for a new aquatic center (Figure 3 through Figure 7). These materials belonged to the foundation of World War II era barracks that were demolished in 1957. This discovery falls under Section IV F of AK-PA-2202, as a post-review discovery of military demolition and bury-in-place.

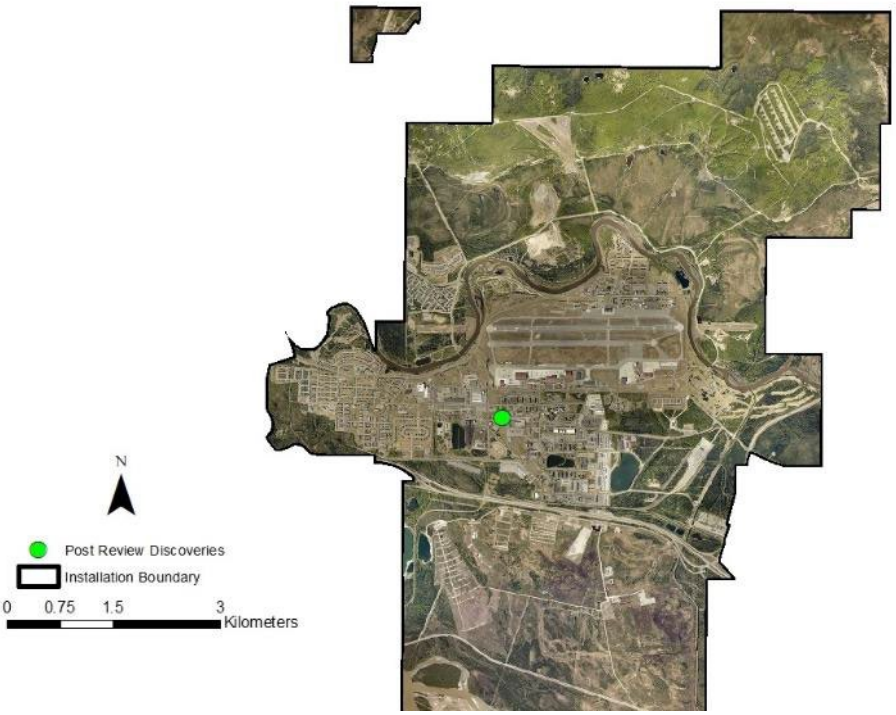

Figure 2. Post review discoveries found in 2022.

Figure 3. Concrete block and pipes found from 1-3 m below the modern ground surface. These have been determined to be the bury-in-place debris associated with World War II barracks.

Figure 4. Additional concrete and metal debris found during excavation.

Figure 5. Additional concrete and metal debris found during excavation.

Figure 6. Additional concrete and metal debris found during excavation.

Figure 7. Pile of concrete removed from excavations for the new aquatic center foundation.

NAGPRA and ARPA Activities

No activities related to NAGPRA or ARPA took place on the cantonment in 2022.

Archaeological Site Monitoring and Site Protection Measures

No archaeological sites were monitored on the cantonment in 2022.

Determinations of Eligibility

No archaeological sites or historic buildings were evaluated on the cantonment during in 2022.

Summary of Archaeological Surveys and Sites

A 100% survey of Fort Wainwright's cantonment and adjacent areas (Farmer's Loop and the Permafrost Tunnel) was completed in 2013 (Figure 8). These surveys include 12,500 acres of training lands and undisturbed areas (13,525 acres total including the disturbed Ladd Field footprint). Of the 11 archaeological and historic sites discovered during these surveys, only one prehistoric site (FAI-00040) is eligible for the NRHP. Ten sites have been found not eligible.

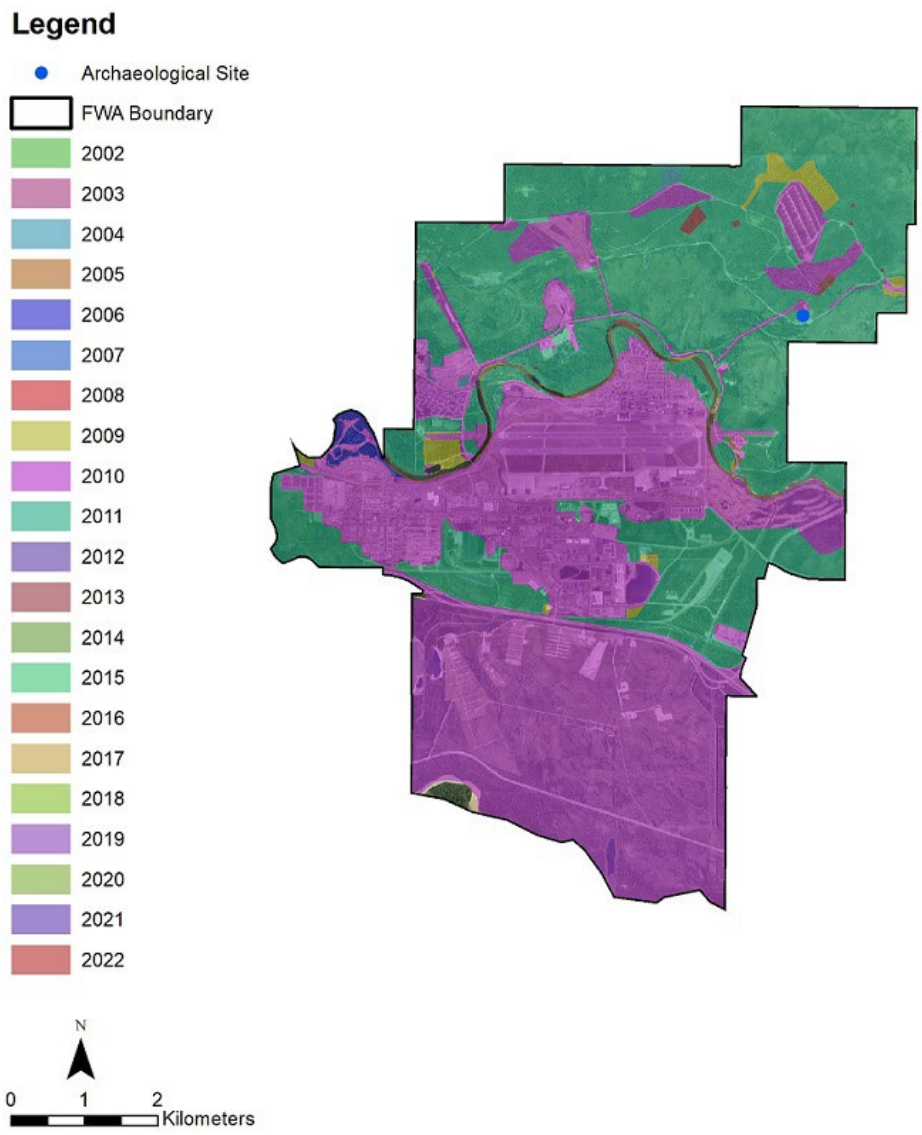

Figure 8. Archaeological sites and surveys on the cantonment, all years.

.

2022 Tanana Flats Training Area

Section 106 Activities

No undertakings requiring section 106 consultation took place in TFTA in 2022.

Section 110 Activities

A small 201-acre survey took place in TFTA during the 2022 field season (Figure 9). No cultural resources were identified during the survey. No buildings or structures were surveyed.

Figure 9. Archaeological surveys in TFTA in 2022.

Newly Discovered Archaeological Sites

One new site was discovered in TFTA in 2022 during monitoring efforts at Wood River Buttes (FAI-02812) (Figure 10).

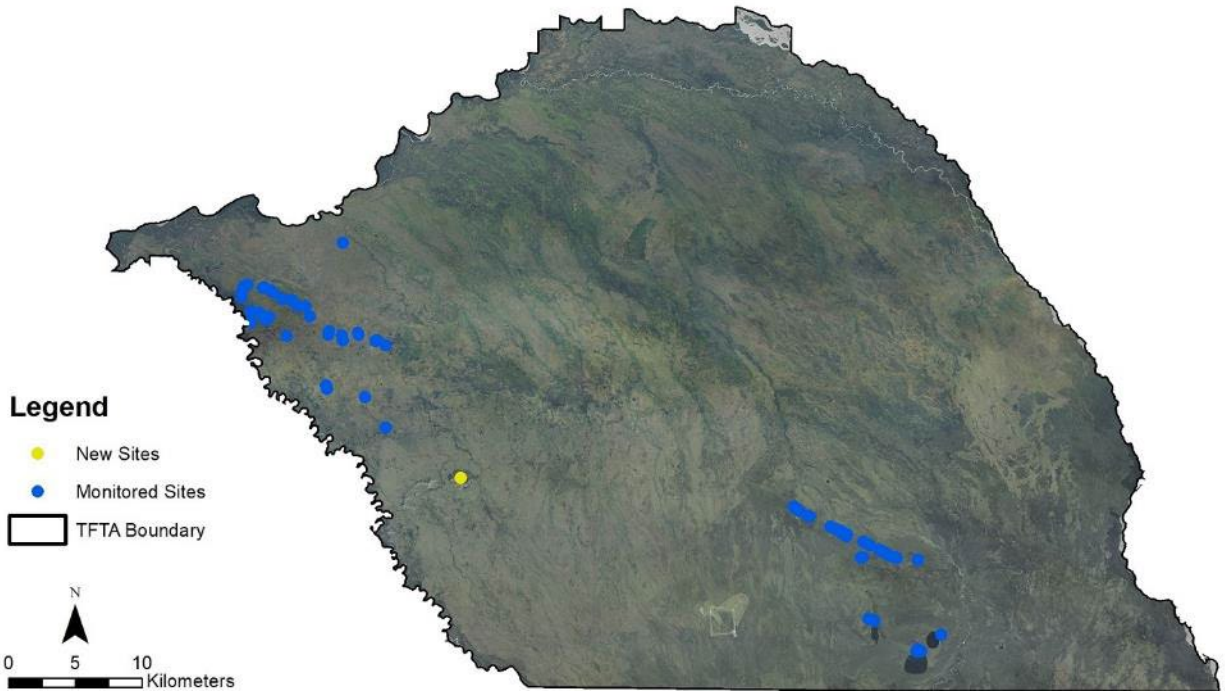

Figure 10. Archaeological sites monitored, evaluated, and discovered in TFTA in 2022.

FAI-02812

Location: on file with SHPO and USAG Alaska
Determination of Eligibility: Not evaluated

This site is located on a lower rise on a northern east-west trending finger of Wood River Butte East, approximately 10x40 m in area, and 43 km southwest of Fairbanks (Figure 11, Figure 12). A single black chert flake was found on the surface (not collected). Site vegetation consists of juniper, spruce, young aspen, grasses cranberry, moss, and lichen. Exposed areas on the hillside with bedrock outcrops present on the surface (extending 10-15 cm at most). The top of the rise has 80-90% exposure and can be seen from the air or from higher elevation on the butte. View shed is limited in areas; however Fairbanks hills are visible to the north and the Alaska Range is visible to the southwest.

Surface examination was hastily executed at the site and only a single flake was found on the surface at this time (Figure 13). No subsurface excavation was conducted. FAI-02812 is on a landform with high concentration of sites and in a high probability area for artifacts. The site has not yet been evaluated for the NRHP.

Figure 11. FAI-02812 aerial overview to the southwest.

Figure 12. FAI-02812 site overview (view to west)

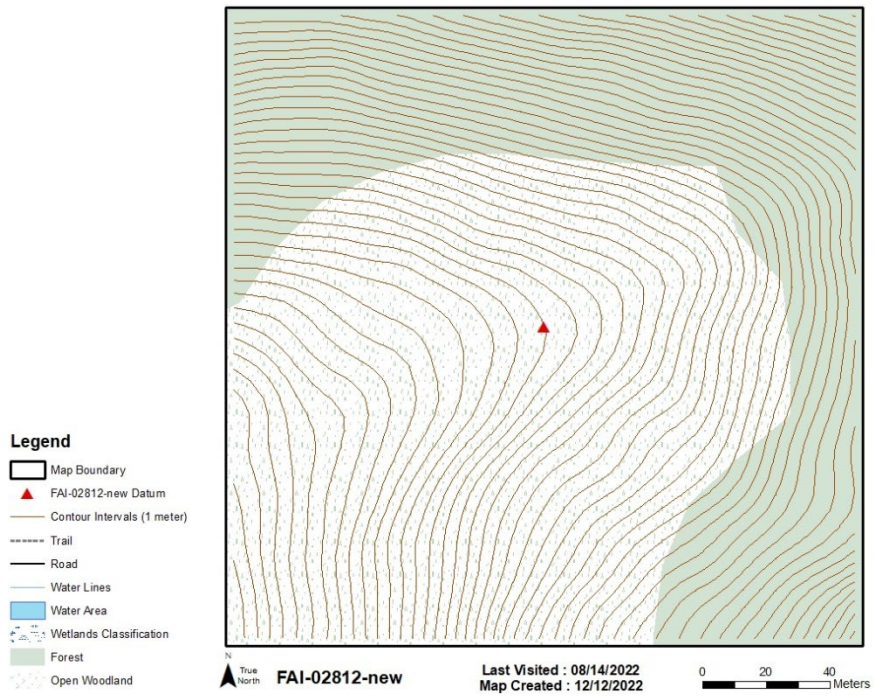

Figure 13. FAI-02812 site map.

Post-Review Discoveries

No post-review discoveries occurred in TFTA in 2022.

NAGPRA and ARPA Activities

No activities related to NAGPRA took place in TFTA in 2022. In 2022, USAG Alaska sent the annual ARPA report for scientific excavations at FAI-02043, required under the ARPA permit and MOA-WC1SH5-2103, to the SHPO and consulting parties. The SHPO accepted the report on 20 December 2022.

Archaeological Site Monitoring and Site Protection Measures

Seventy-two sites were monitored in TFTA in 2022 (Table 1, Figure 10). Site evaluations are recommended for two sites that are experiencing erosion by natural and cultural factors (FAI-00047 and FAI-02080).

Determinations of Eligibility

No archaeological sites, buildings, or structures were evaluated for NRHP eligibility in TFTA 2022.

Table 1. Archaeological sites monitored in TFTA in 2022.

AHRS #	Date	Artifacts Exposed	Surface Condition	Danger of Destruction	Protection
FAI-00044	8/16/22	No	Erosion at lake edge, but very slow	Natural erosion	
FAI-00046	8/16/22	Yes	Natural erosion of historic debris.	Natural erosion	
FAI-00047	9/7/22	No	Evidence of digging and use of site. Trash mixed into upper sediments.	Recreation	DOE needed
FAI-00052	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-00053	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-00087	7/20/22	No	Some vegetation disturbance from ATV trail bisecting site	Vehicle use	
FAI-01998	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02001	8/16/22	No	Vegetation and surface undisturbed except from older forest fire.	None	
FAI-02003	8/16/22	Yes	Vegetation intact and undisturbed, some erosion near lake edge.	Natural erosion	
FAI-02004	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02005	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02006	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02008	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02009	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02010	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02011	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02012	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02013	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02014	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02021	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02022	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02023	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02024	8/15/22		Site appeared undisturbed as observed from helicopter	None	

FAI-02025	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02026	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02027	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02028	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02029	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02030	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02031	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02045	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02046	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02047	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02048	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02049	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02050	8/15/22	Vegetation intact and undisturbed	None
FAI-02051	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02053	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02054	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02055	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02056	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02057	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02061	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02065	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02066	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02067	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02068	8/15/22	Site appeared undisturbed as observed from helicopter	None
FAI-02069	8/15/22	Site appeared undisturbed as observed from helicopter	None

FAI-02070	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02071	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02072	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02073	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02074	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02075	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02076	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02077	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02078	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02079	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02080	8/15/22		Vegetation and ground disturbance visible from the air	Recreation	DOE needed
FAI-02081	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02083	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02084	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02086	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02087	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02088	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02089	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02090	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02091	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02094	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02244	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02361	8/15/22		Site appeared undisturbed as observed from helicopter	None	
FAI-02812	8/15/22	Yes	Vegetated with some exposure at top of landform.		

Summary of Archaeological Surveys and Sites

Between 2002 and 2022, CEMML archaeologists conducted systematic archaeological survey on 28,534 acres of land in TFTA (Figure 14). This accounts for approximately 4.9% of available survey areas (not including impact areas). The majority of upland locations in the training area have had at least preliminary survey but historic features are also known from lowland areas.

There are a total of 168 archaeological sites one historic trail known in the training area. Most of the sites are found within three archaeological districts (Blair Lakes Archaeological District: FAI-00335; Clear Creek Buttes Archaeological District: FAI-00336; and Wood River Buttes Archaeological District: FAI-00337). Of the sites located in TFTA, 17 are eligible for the NRHP and 146 have not been evaluated. Five sites site have been found not eligible.

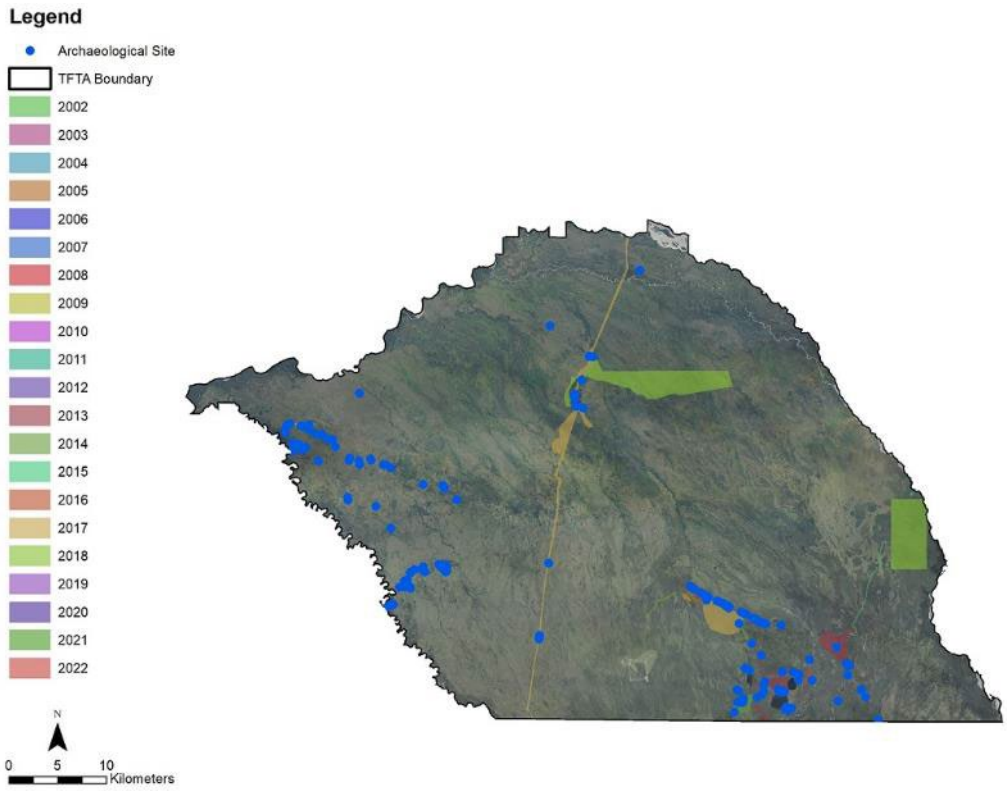

Figure 14. Archaeological sites and surveys in TFTA, all years.

2022 Yukon Training Area

Section 106 Activities

No undertakings requiring section 106 consultation took place in YTA in 2022.

Section 110 Activities

No archaeological surveys were conducted in YTA during the 2022 field season. No buildings or structures were surveyed.

Newly Discovered Archaeological Sites

No new archaeological sites were discovered in YTA during 2022.

Post-Review Discoveries

No post-review discoveries were found in YTA in 2022.

NAGPRA and ARPA Activities

No activities related to NAGPRA or ARPA took place in YTA in 2022.

Archaeological Site Monitoring and Site Protection Measures

Two sites were monitored in YTA in 2022 (Table 2, Figure 15). It is recommended that site XBD-00370 be evaluated for its NRHP eligibility.

Table 2. Archaeological sites monitored in YTA in 2022.

AHRS #	2022 Visit	Artifacts Exposed	Surface Condition	Danger of Destruction	Protection
XBD-00370	06/09/2022	No	Old road runs 5m N of site and is scraped to gravels, with push piles from construction. It is largely revegetated, with 10-20% exposure. There are also 4 military foxholes, 1x1m, dug to gravel on the E side of the site.	Military activity	DOE needed
XBD-00452	06/09/2022	No	Vegetated	None	

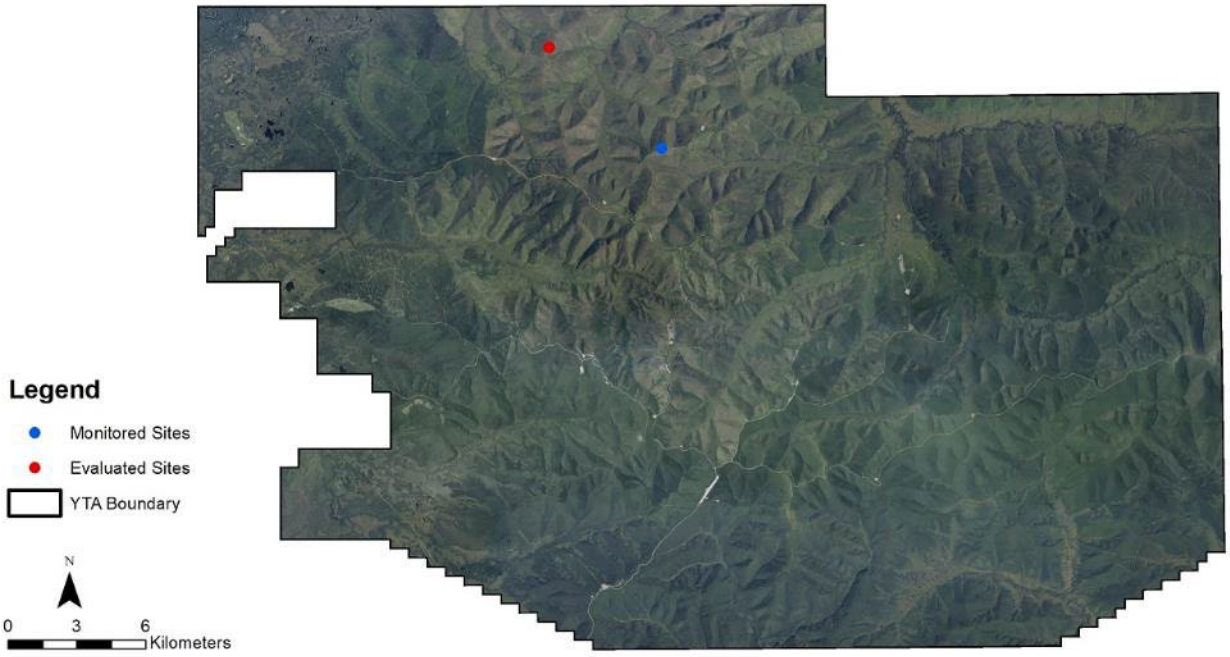

Figure 15. Archaeological sites monitored and evaluated in YTA in 2022.

Determinations of Eligibility

Fieldwork at one archaeological site, XBD-00452, for a NRHP evaluation was completed in YTA in 2022 (Figure 15). Results of this analysis will be presented in a separate report.

Summary of Archaeological Surveys and Sites

Between 2002 and 2022, CEMML archaeologists have conducted systematic archaeological survey on 63,788 acres of land in YTA (Figure 16). This accounts for approximately 25.8% of available survey areas. The road system and major training locations have been examined and surveys are expanding into areas of future Range Control development in northeast YTA. A total of 22 archaeological sites have been found in the YTA. Seventeen of these have been found not eligible for the NRHP and five sites have not yet been evaluated.

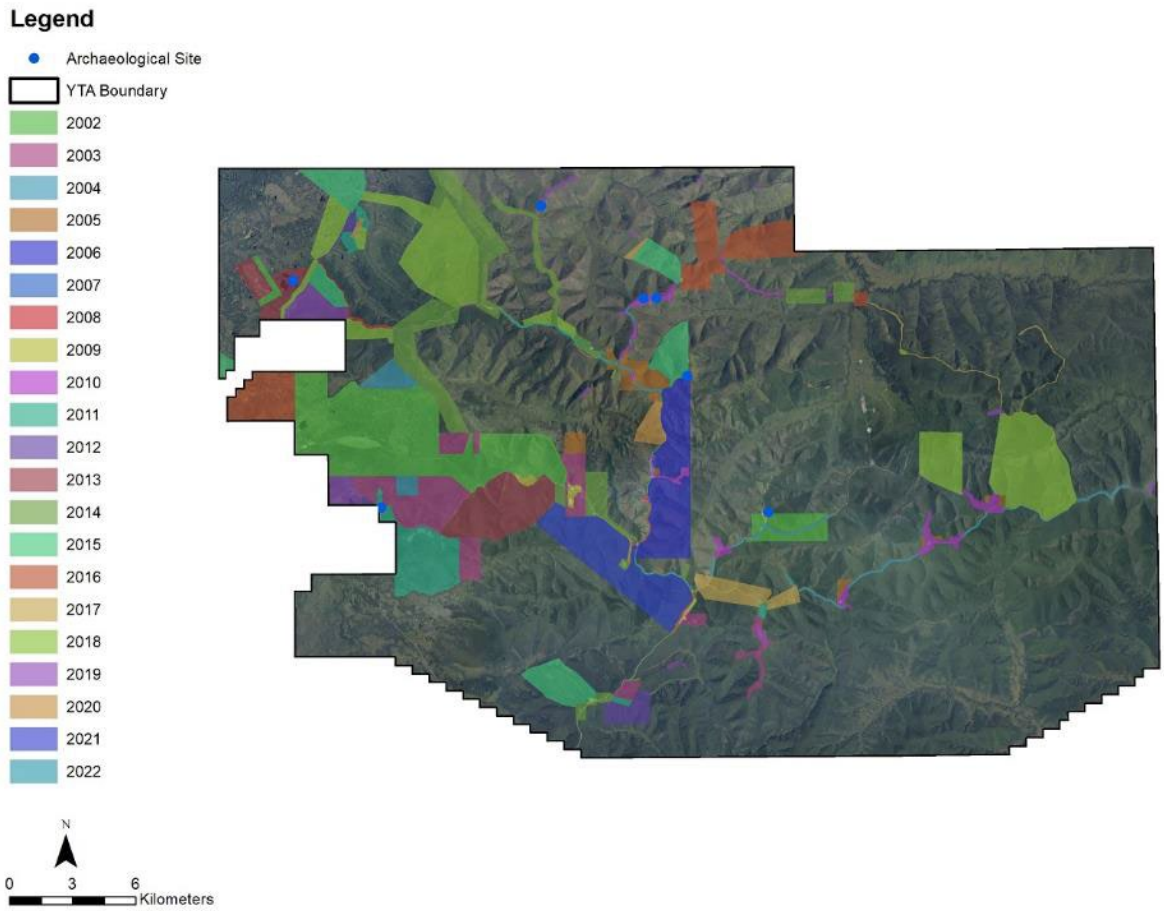

Figure 16. Archaeological sites and surveys in YTA, all years.

2022 Fort Greely and Donnelly Training Area

Section 106 Activities

No undertakings requiring section 106 consultation took place on Fort Greely or in DTA during 2022.

Section 110 Activities

A small 38-acre survey took place in DTA West during the 2022 field season (Figure 17). One archaeological site (XBD-00458) was identified during the survey. An additional site (XMH-01616) was located in a previously surveyed area during site monitoring. No buildings or structures were surveyed.

Figure 17. Archaeological surveys in DTA in 2022.

Newly Discovered Archaeological Sites

One new archaeological site was discovered in DTA West (XBD-00458), and one new site was discovered in DTA East (XMH-01616) in 2022 (Figure 18).

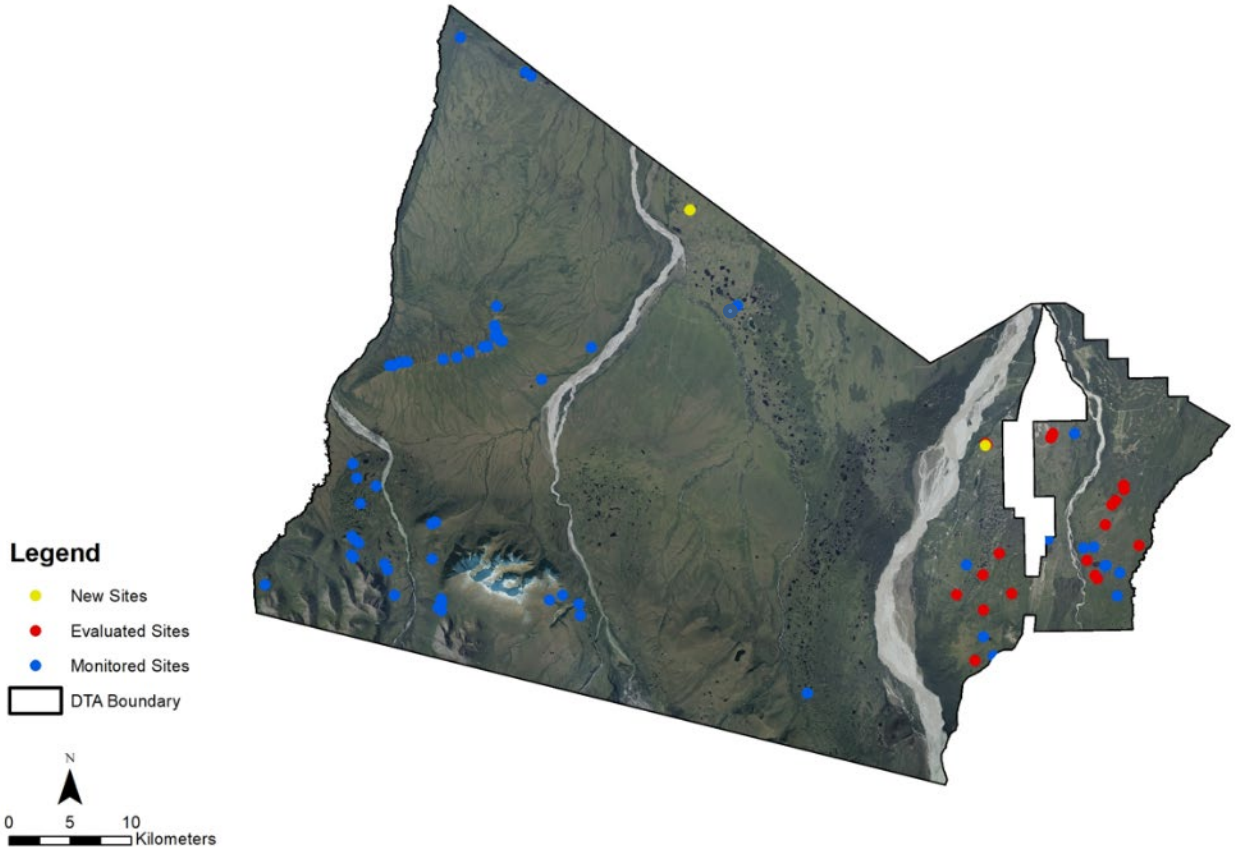

Figure 18. Archaeological sites monitored, evaluated, and discovered in DTA in 2022.

XBD-00458

Location: on file with SHPO and USAG Alaska
Determination of Eligibility: Not Evaluated

XBD-00458 is located on a small landform, 290 m north of a small unnamed lake in the northern portion of DTA West, 29.7 km east of Delta Junction. The east-west trending landform rises 20-30 m above the surrounding landscape. There is a great southwest view of the Alaska Range to the southwest. Other directions are partially visible through standing deadfall. Landmarks visible from the site are the Granite Mountains to the east and southeast, the Alaska Range to the south, and rolling unnamed hills to the north. Vegetation at the site is fire regrowth in the form of juvenile aspen, birch, white spruce, and willow. Groundcover is primarily made up of fireweed and Labrador Tea. Surface visibility is 40 percent with fire regrowth and deadfall obscuring the rest. The closest water source is an unnamed lake 290 m to the south of the site. The only disturbance to note is the aftermath of a wildfire that swept over the site roughly 5 years ago, leaving standing and fallen deadfall littered about (Figure 19, Figure 20).

Only one shovel test was dug at the site. One basalt flake was recovered from silt, 25-30 cmbs (Figure 21, Figure 22). A datum was placed 10 m north of the positive shovel test. No other shovel tests were excavated.

Figure 19. XBD-00458 site overview (view to west).

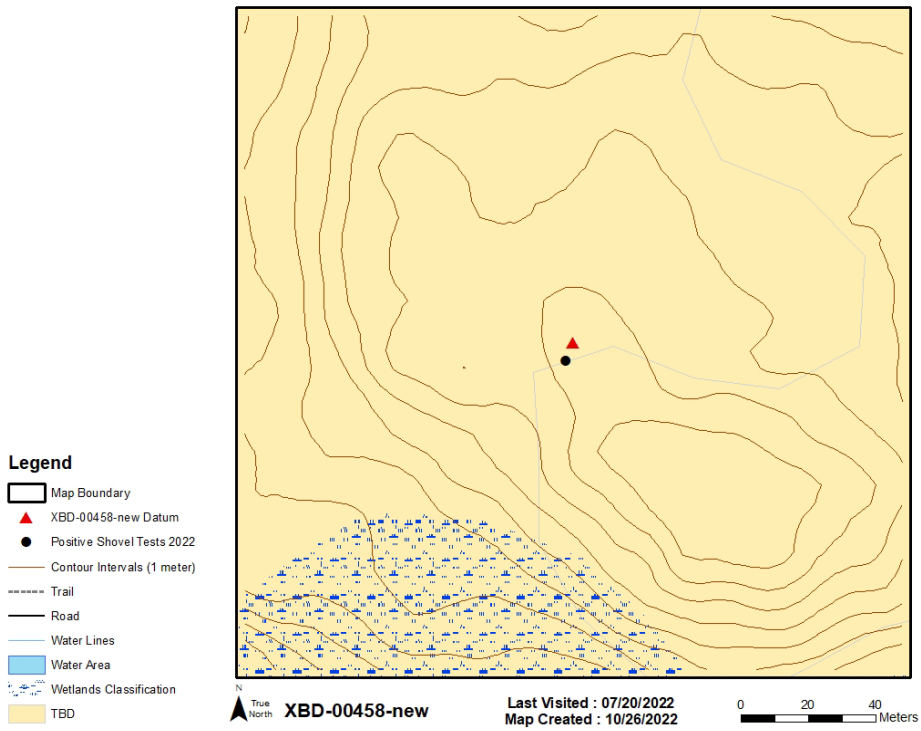

Figure 20. XBD-00458 site map.

Figure 21. XBD-00458 shovel test.

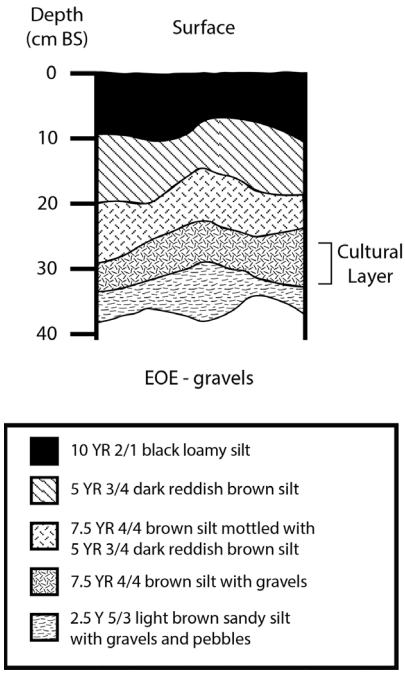

Figure 22. XBD-00458 stratigraphic profile.

XMH-01616

Location: on file with SHPO and USAG Alaska
Determination of Eligibility: Not Evaluated

XMH-01616 is located on an east-west trending glacial moraine in DTA East, 14 km southwest of Delta Junction. The ridge has a great vantage point and overlooks a small valley that contains a kettle lake to the south. Site vegetation is young regrowth of birch, aspen, willow, and spruce with 80% surface exposure (Figure 23, Figure 24).

A single rhyolite bifacial midsection fragment was found on the surface slope of a mostly east west trending ridge (UA2022-069-0001) (Figure 25). The isolated find was discovered when evaluations were happening at nearby sites. During the same year of discovery 25 shovel tests were excavated surrounding the find and no additional cultural material was recovered. These were excavated to sandy gravels, which were encountered from surface to 65 cmbs overlaid with 2-3 layers of silt depending on depth. Stratigraphy at XMH-01616 consists of an organic layer averaging 2 cm thick, followed by an average 45 cm thick silt package above sandy gravels (Figure 26, Figure 27).

Figure 23. XMH-01616 site overview (view to south).

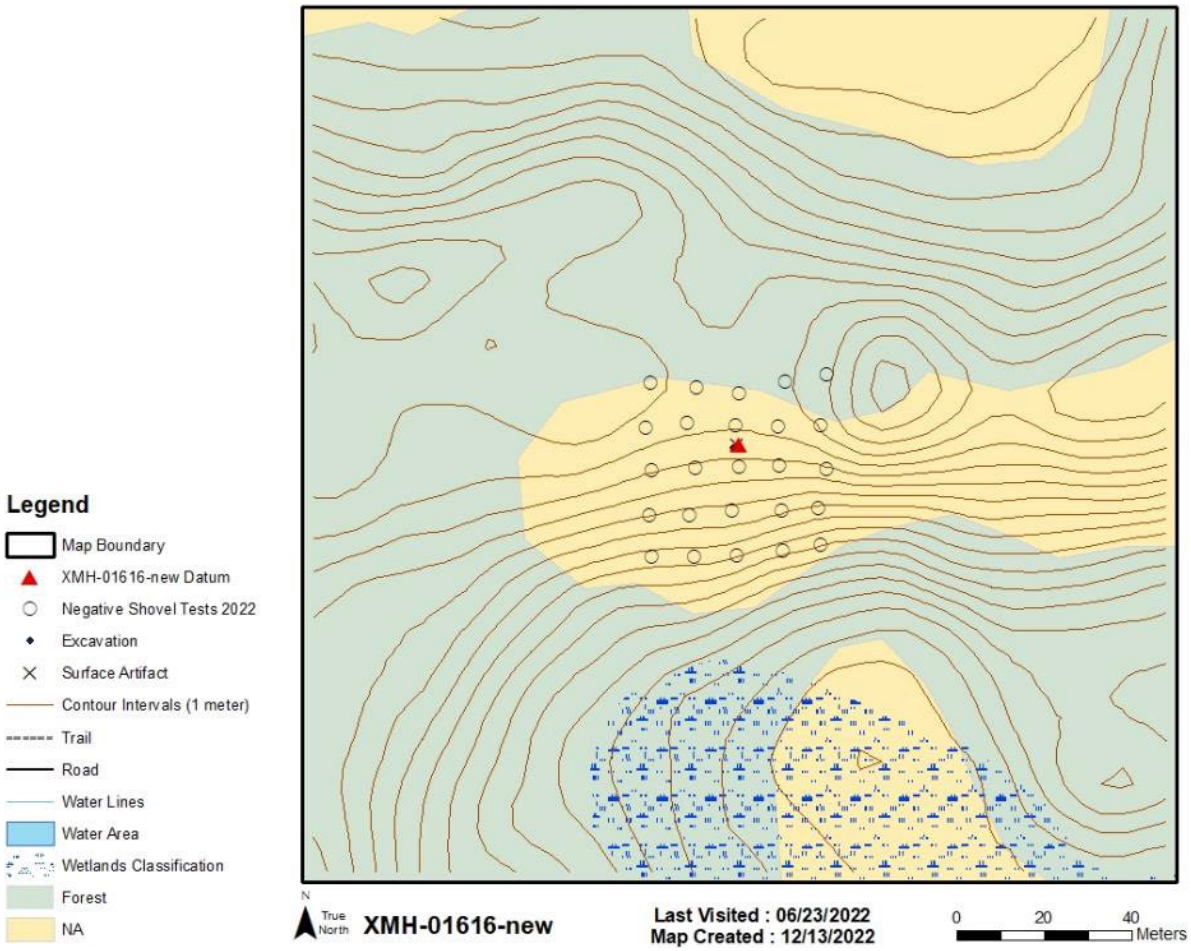

Figure 24. XMH-01616 site map.

Figure 25. XMH-01616 UA2022-069-0001 in situ. Scale= 10cm.

Figure 26. XMH-01616 test pit.

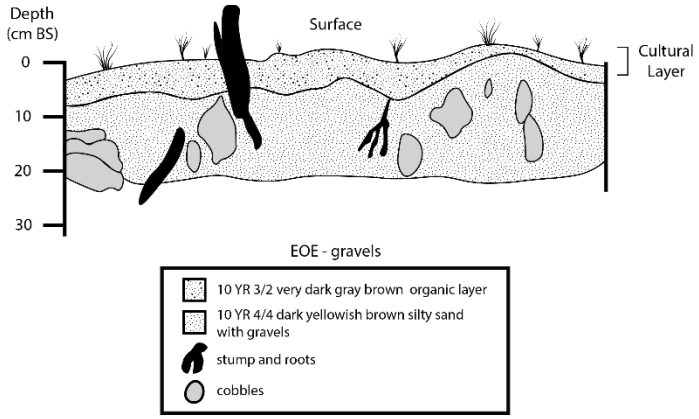

Figure 27. XMH-01616 stratigraphic profile.

Post-Review Discoveries

No post-review discoveries were found in DTA in 2022.

NAGPRA and ARPA Activities

No activities related to NAGPRA took place in DTA in 2022. In 2022, USAG Alaska sent the annual ARPA report for scientific excavations at XBD-00110, required under the ARPA permit and MOA-WC1SH5-2108, to the SHPO and consulting parties. The SHPO accepted the report on 22 December 2022.

Archaeological Site Monitoring and Site Protection Measures

Eighty-six sites were monitored in DTA in 2022 (Table 3, Figure 18). Of these, 24 sites show minor natural erosion or disturbance by bioturbation. Erosion from vehicle traffic or recreational use was noted on 18 sites. Of these, site evaluations are recommended for nine sites (XBD-00426, XMH-00304, XMH-00890, XMH-00977, XMH-01163, XMH-01371, XMH-01373, XMH-01377, and XMH-01607). Seibert stakes are recommended at five sites (XBD-00106, XMH-00304, XMH-01062/1063, XMH-01089, and XMH-01414). During the 2022 field season, Seibert stakes were placed at ten sites (XMH-01071, XMH-01106, XMH-01141, XMH-01226, XMH-01303, XMH-01359, XMH-01362, XMH-01363, XMH-01373, and XMH-01567).

Table 3. Sites monitored in DTA in 2022.

AHRS #	2022 Visit	Artifacts Exposed	Surface Condition	Danger of Destruction	Protection
HEA-00685	7/24/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XBD-00033	7/23/22	No	Vegetation intact and undisturbed		
XBD-00106	7/23/22	No	Vegetation intact and undisturbed		Seibert stakes recommended
XBD-00187	7/23/22	No	Vegetation intact and undisturbed		
XBD-00311	7/23/22	No	Vegetation intact and undisturbed		
XBD-00425	7/23/22	No	Vegetation intact and undisturbed		
XBD-00426	7/23/22	No	Surface is exposed but intact, USAF structure nearby	Military activities	DOE recommended
XBD-00427	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XBD-00428	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XBD-00429	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XBD-00430	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XBD-00431	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XMH-00005	8/18/22	Yes	Vegetation intact on north end, gravels exposed across the top and south side of site	Archaeological investigations	
XMH-00282	8/22/22	Yes	Northeast portion of the site highly eroded by major road surface	Vehicle traffic	Seibert stakes present
XMH-00299	7/24/22	No	Vegetation intact and undisturbed		
XMH-00300	7/24/22	No	Vegetation intact and undisturbed		
XMH-00303	7/24/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XMH-00304	7/24/22	No	Vegetated with ATV trail bisecting site	Recreation and vehicle use	DOE and Seibert stakes recommended
XMH-00305	7/24/22	No	Vegetation intact and undisturbed		
XMH-00306	7/24/22	No	Vegetation intact and undisturbed		
XMH-00307	7/24/22	No	Vegetation intact and undisturbed		
XMH-00310	7/24/22	No	Vegetation intact and undisturbed		
XMH-00311	7/24/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XMH-00313	7/24/22	No	Vegetation intact and undisturbed		
XMH-00829	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XMH-00830	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XMH-00831	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		

XMH-00832	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XMH-00833	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XMH-00834	7/24/22	No	Vegetation intact and undisturbed		
XMH-00835	7/24/22	No	Vegetation intact and undisturbed		
XMH-00836	7/24/22	No	Vegetation intact and undisturbed		
XMH-00837	7/24/22	No	Vegetation intact and undisturbed		
XMH-00840	7/24/22	No	Vegetation intact and undisturbed		
XMH-00841	7/24/22	No	Vegetation intact and undisturbed		
XMH-00871	10/25/22	No	Vegetation intact and undisturbed		
XMH-00887	6/21/22	Yes	Vegetated with evidence of digging and vehicle trail crossing site	Military activity, recreation, vehicle traffic	Seibert stakes present
XMH-00890	6/15/22	Yes	Vegetated with evidence of digging	Military activity and recreation	Seibert stakes present, DOE recommended
XMH-00956	7/13/22	Yes	Vegetation intact with some gravels exposed	Animal trails	
XMH-00977	8/22/22	No	Very disturbed, site has evidence of mechanical digging and vehicle use	Military use and vehicle traffic	DOE recommended
XMH-01062/1063	7/13/22	Yes	Vegetated with exposures in places (10%)	Military use and vehicle traffic	Seibert stakes recommended
XMH-01067	8/2/22	No	Vegetated with exposures in places (10-20%)	Natural erosion	
XMH-01068	8/4/22	No	Vegetated with exposures in places (10-20%)	Natural erosion	
XMH-01069	8/10/22	No	Vegetated with exposures in places (10-20%)	Natural erosion	
XMH-01071	9/20/22	No	Vegetated	Animal trails	Seibert stakes present
XMH-01087	6/15/22	No	Vegetated		
XMH-01089	6/15/22	No	Vegetated with exposures in places (10-20%)	Military activity, recreation, vehicle traffic	Seibert stakes present but need reset
XMH-01106	9/22/22	Yes	Vegetated, vehicle tracks on site and an ATV track leads to it	Vehicle traffic	Seibert stakes present
XMH-01141	9/22/22	No	Vegetated		Seibert stakes present
XMH-01152	6/27/22	No	Vegetated		
XMH-01163	9/8/22	Yes	Vegetated with exposures in places (15%), evidence of hand digging, campfires, litter, game trails and natural erosion on south slope	Military activity, recreation, vehicle traffic	Seibert stakes present, DOE recommended
XMH-01168	10/25/22	No	Vegetation intact and undisturbed		
XMH-01197	7/7/22	No	Vegetated		
XMH-01199	6/29/22	No	Vegetated with exposures in places (50-10%)		
XMH-01201	8/23/22	No	Vegetated with exposures in places (10-20%)	Natural erosion	

XMH-01216	8/24/22	No	Vegetated with exposures in places (10-20%)	Natural erosion	
XMH-01237	8/31/22	No	Vegetated with exposures in places (10-20%)	Natural erosion	
XMH-01301	6/21/22	Yes	Vegetated with exposures in places (25%)	Animal trails and digging, natural erosion	
XMH-01302	7/8/22	Yes	Vegetated with exposures in places (25%), one fox hole or similar activity	Animal trails and digging, natural erosion, military activity	
XMH-01362	9/20/22	No	Vegetated with one new ATV trail	Vehicle traffic	Seibert stakes present
XMH-01363	9/20/22	No	Vegetated, ATV trail bisects the site	Vehicle traffic	Seibert stakes present
XMH-01371	7/5/22	Yes	Site is alongside a trail and shows significant erosion	Vehicle traffic	DOE recommended
XMH-01373	9/22/22	Yes	Vegetated with erosion exposures across 50% of the site	Vehicle traffic, recreation	Seibert stakes present, DOE recommended
XMH-01377	9/22/22	yes	Vegetated with a trail crossing the site	Vehicle traffic	Seibert stakes present, DOE recommended
XMH-01414	7/23/22	No	Vegetation cleared for USAF structure	Military activity	Seibert stakes recommended
XMH-01434	7/24/22	No	Vegetation intact and undisturbed		
XMH-01437	7/24/22	No	Vegetation intact and undisturbed		
XMH-01438	7/24/22	No	Vegetation intact and undisturbed		
XMH-01439	7/24/22	No	Vegetation intact and undisturbed		
XMH-01445	7/24/22	No	Vegetation intact and undisturbed		
XMH-01446	7/24/22	No	Vegetation intact and undisturbed		
XMH-01447	7/24/22	No	Vegetation intact and undisturbed		
XMH-01451	7/24/22	No	Vegetation intact and undisturbed		
XMH-01452	7/24/22	No	Vegetation intact and undisturbed		
XMH-01453	7/24/22	No	Vegetation intact and undisturbed		
XMH-01454	7/24/22	No	Vegetation intact and undisturbed		
XMH-01491	7/23/22	No	Vegetation intact and undisturbed		
XMH-01539	6/13/22	No	This is a historic car that is surrounded by dense vegetation but is eroding through natural measures and vandalism	Vandalism, natural erosion	DOE included in this report
XMH-01544	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XMH-01545	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XMH-01549	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XMH-01550	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		

XMH-01551	7/23/22	No	Vegetation intact and undisturbed, small areas of aeolian erosion		
XMH-01567	7/7/22	No	Vegetated, with a trail running to the site	Vehicle traffic	Seibert stakes present
XMH-01607	6/30/22	Yes	Vegetated with an ATV trail causing much erosion on the site	Vehicle traffic	DOE recommended
XMH-01616	6/23/22	Yes	Vegetation intact and undisturbed		

Determinations of Eligibility

Fieldwork for evaluation of 21 sites was completed in DTA in 2022 (XMH-00887, 00890, 00956, 01062/01063, 01067, 01068, 01069, 01087, 01089, 01108, 01152, 01163, 01197, 01199, 01201, 01216, 01301, 01302, 01567, 01607, and 01616) (Figure 18). The results of these investigations in will be presented in a multi-property NRHP DOE report. No buildings or structures were evaluated in 2022, but the site of one historic vehicle was evaluated (XMH-01539).

XMH-01539

Location: on file with SHPO and USAG Alaska
Determination of Eligibility: Not Eligible

XMH-01539 is a vehicle lying 10 m west of the Old Richardson Highway on the southwest side of Donnelly Dome, 30.3 km southwest of Delta Junction, Alaska. The viewshed at the site is impaired by rolling, unnamed hills to the west, Donnelly Dome is clearly visible to the north, as are the Granite Mountains to the east and the Alaska Range to the south. Mature alder and white spruce obscure close-proximity views. A transmitter tower is visible on a ridgeline to the west of the site. Vegetation at the site consists of mature-growth alder, willow, and white spruce while the undergrowth is primarily fireweed and horsetails, with forget-me-nots, and assorted grasses rounding out the groundcover (Figure 28). Due to vegetation the surface visibility is close to 0%, however, the vehicle structure is mostly unobscured. The closest water source is Weasel Lake, 240 m to the north.

The site was first recorded in 2015 during a pedestrian survey (Figure 29). No shovel tests were excavated nor were any diagnostic features of the vehicle removed. The site was revisited for monitoring on at least two occasions before a site evaluation in 2022.

Recent research has identified that the remains of the vehicle are the front portions of a Diamond T Model 406 commercial freight truck. It is the front portion because the vehicle consists of its front wheel wells, engine compartment, and cab while behind the cab the frame shows signs of being cut with a welding torch and the rear portion of the vehicle is missing. Identification is based on the Diamond T Motor Car Co. identification plate (Figure 30) still attached to the front portion of the vehicle, distinctive features present on the portions of the vehicle that remain (Figure 31 through Figure 34), chronological information from the Federal Register, and consultation with the manager of the Fountainhead Automotive Museum in Fairbanks, Alaska.

The identification plate is mounted on the passenger side of the truck's engine compartment, ahead of the cab. The paint that was originally on the identification plate has eroded off, though the engraved numbers are present and legible. Comparison with this vehicle's identification plate with a restored Diamond T tag provides detail about the vehicle model. (Figure 30). The chassis number is 4061337, the chassis model is 406, the maximum speed in high and low gears is 51-37 M.P.H., the chassis weight is 5400 pounds, and the Must-Not-Exceed weight is 13,400 pounds. Using this information, the automotive cab present at XMH-01539 is identified as a Diamond T model 406 commercial freight truck.

The headlights mounted on the front fenders of the vehicle chassis at XMH-01539 are of a distinct shape and have two chrome bands underneath that wrap three-quarters of the way around the base (Figure 31). These chrome bands are an aesthetic element that was present on Diamond T trucks and can be found in period photographs of Diamond T model 201 and 406 trucks, as well as on restored versions of those models. The manager of the Fountainhead Automotive Museum in Fairbanks, Alaska verified the use of the distinctive chrome trim on Diamond T trucks of this time period.

The dashboard has housing for three gauges on both the left and right side with the center portion which is occupied by four knobs that have lost their labeling, as well as three additional spaces where something was inserted into the dashboard (Figure 32). The gauges, however, provide clues with the upper left gauge reading 'Temperature' and the upper right gauge reading 'Oil Pressure'. The far-left gauge, where the speedometer would be, still has the mechanical odometer present with five places for total miles traveled on the upper portion of the gauge and four places present for current trip on the bottom. The center portion of the chassis' dashboard has four knobs with chrome plating present which, if starting with the upper left and moving in a clockwise fashion, align with the spark, choke, throttle, and lights knobs. The open spaces near them would have housed the cigar lighter in the upper position, the start button in the center position, and the placement for the ignition lock cylinder where the key would be inserted at the bottom position (Figure 33). On the far right you can make out where a clock previously was in the dashboard. Though the chrome backing has been removed from the vehicle's dashboard, retention clips that the chrome backing would attach to are still plainly visible around the gauges. The position and placement of the gauges on the dashboard is indicative of Diamond T model 201 and 406 trucks produced between 1938 and 1941. Comparison pictures of XMH-01539's dashboard, and gauge placement to restored vehicles allowed for identification of this age range (Figure 33).

Due to vandalism the driver's side door is disfigured and damaged, however the passenger door is mostly intact and also offers clues for vehicle identification. The shape of the window cavity and the stainless-steel trim match with period Model T trucks. The view of the door from inside the passenger compartment shows an armrest with a small amount of chrome trim along the lower portions of the door, the remnants of the chrome-plated window crank handle, and the lever where the door lock release latch would attach protruding from the interior of the door frame (Figure 34).

The year the Diamond T model 406 was produced can be narrowed down with reference to the chassis number. The Federal Register Volume 10, Number 233, Part 1360, Page 13898, Section 7 dated November 14, 1945, records the price for used Diamond T vehicles manufactured since 1933. Using the

chassis number, one can identify that in 1939 Diamond T model 406S (S denoting single tires or wheels, or both) with chassis numbers 4060941 to 4061852 have a resale value of $950, indicating that the vehicle was produced in 1939. On page 13897, section 6 in the Federal Register one can also see that Diamond T model 406S trucks from 1938 only have a chassis number range starting at 4060001 to 4060940, indicating that chassis number 4061377 (the vehicle at XMH-01539) had not been produced yet.

Based on historical investigations, XMH-01539 is composed of the front chassis of a 1939 Diamond T model 406 commercial freight truck. The chassis and associated components are located in a 5 x 5 m area, with no other corresponding features, structures, or historic artifacts present. The site retains some integrity though its placement directly off the Old Richardson Highway has put it and still puts it in a highly disturbed context with vandalism over the years readily apparent as well has being impacted by any road work or snow removal done on the Old Richardson Highway. It is highly unlikely that future investigations would uncover more details about the truck or why the chassis lies where it is. Based on the scant remains of the vehicle present, and the lack of other historical artifacts or structures, XMH-01539 is not eligible for inclusion in the NRHP under any criterion including D, information potential.

Figure 28. XMH-01539 vehicle overview to the north.

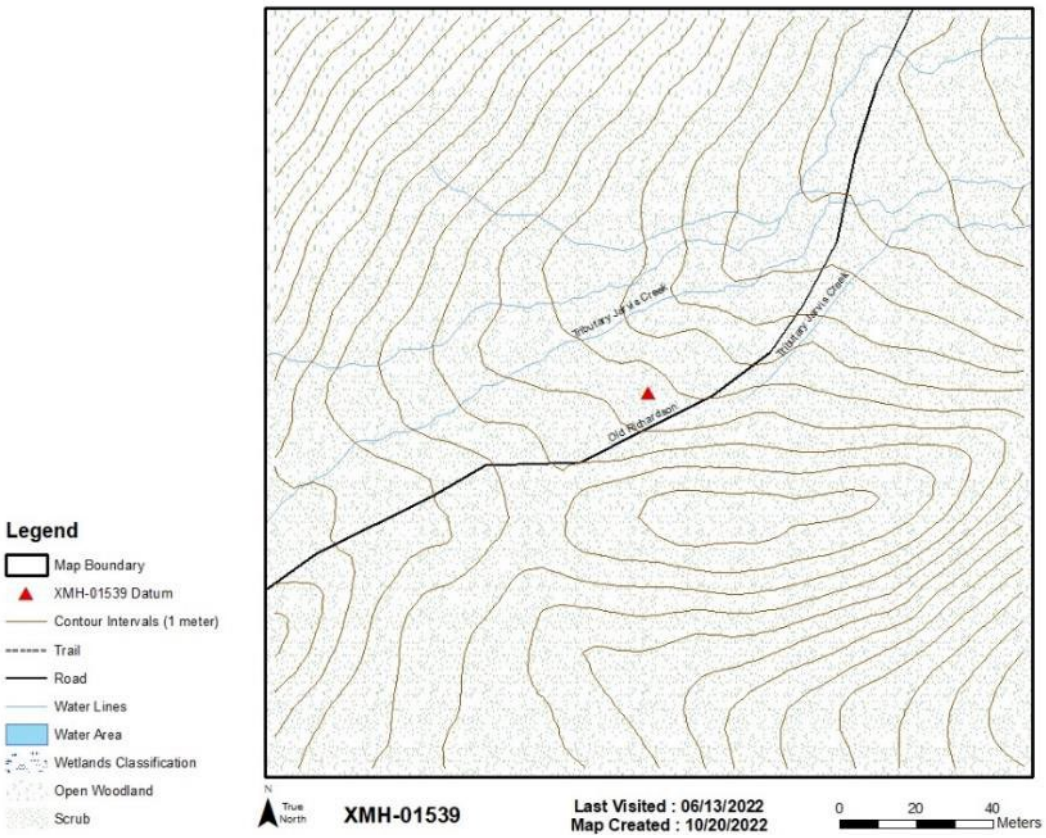

Figure 29. XMH-01539 site map.

Figure 30. XMH-01539 identification plate on left and a restored plate on right for comparison.

Figure 31. XMH-01539 chrome bands on left and a restored headlight on right for comparison.

Figure 32. XMH-01539 dashboard on left and a restored dashboard on right for comparison.

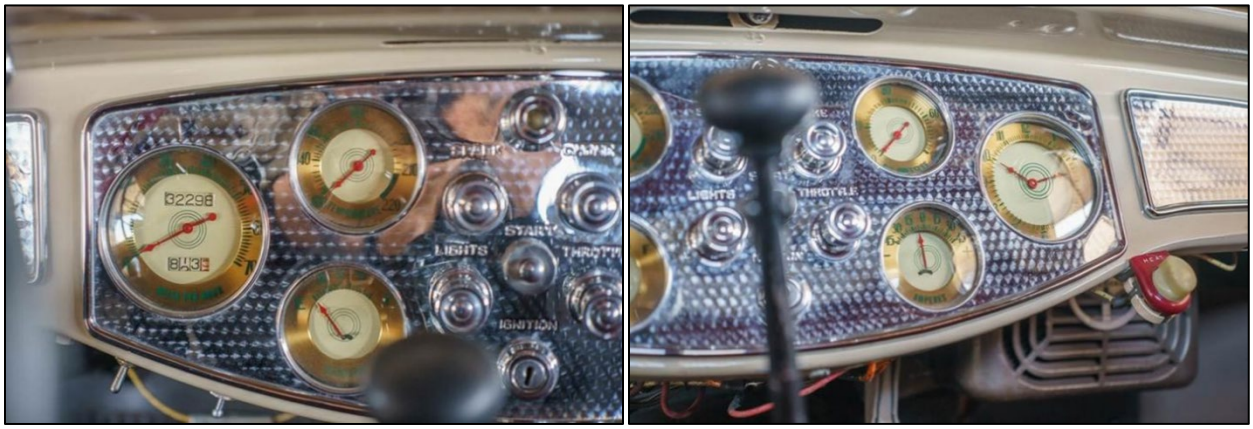

Figure 33. Close-up of a restored dashboard to illustrate configuration.

Figure 34. XMH-01539 interior passenger door on left and a restored door on right for comparison.

Summary of Archaeological Surveys and Sites

A total of 6,831 acres of land have been surveyed on Fort Greely between 2004 and 2005 (Figure 35). This accounts for 100% of the total land area. A total of 16 prehistoric archaeological sites have been found on Fort Greely. Of these 16 sites, seven have been found eligible for the NRHP and nine are not eligible.

A total of 123,465 acres of land have been surveyed in DTA between 2002 and 2022 (Figure 35). This accounts for 25.1% of the total land area (not including impact areas. The majority of survey has been in DTA East and only portions of TA 508, and TA 532 are incomplete. Army trainings and development activities continue to expand in DTA East. A total of 491 archaeological sites have been found in DTA. Five sites are historic and 486 are prehistoric. Of the total sites, 50 have been found eligible for the NRHP, 95 are not eligible, and the remaining 346 have not yet been evaluated.

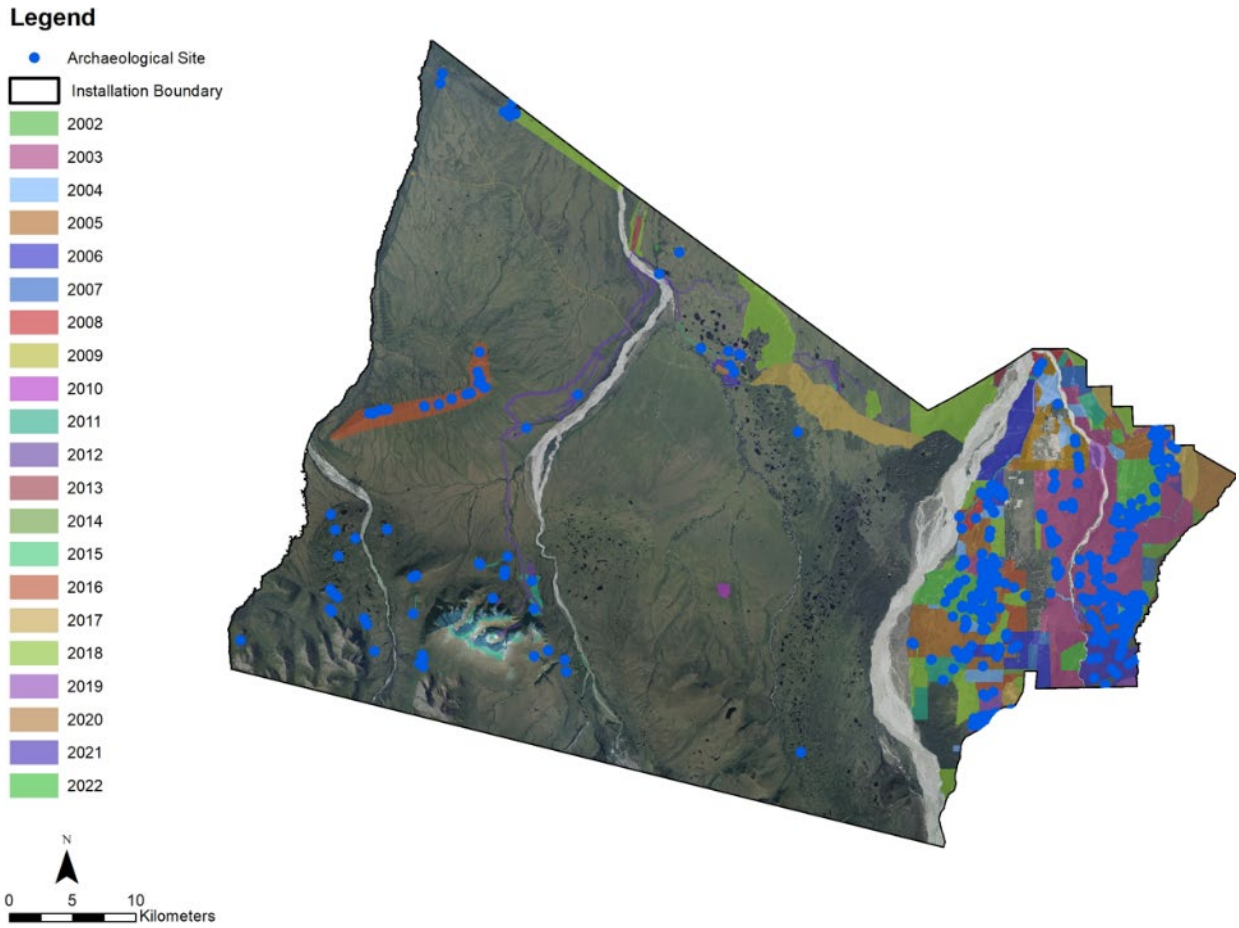

Figure 35. Archaeological sites and surveys in DTA, all years.

2022 Gerstle River Training Area

Section 106 Activities

No undertakings requiring section 106 consultation took place in GRTA in 2022.

Section 110 Activities

Nearly 94 acres of land were surveyed in GRTA during the 2022 field season (Figure 36). No new archaeological sites were discovered. The terrain in GRTA is relatively flat. The eastern half is entirely forested (Figure 37).

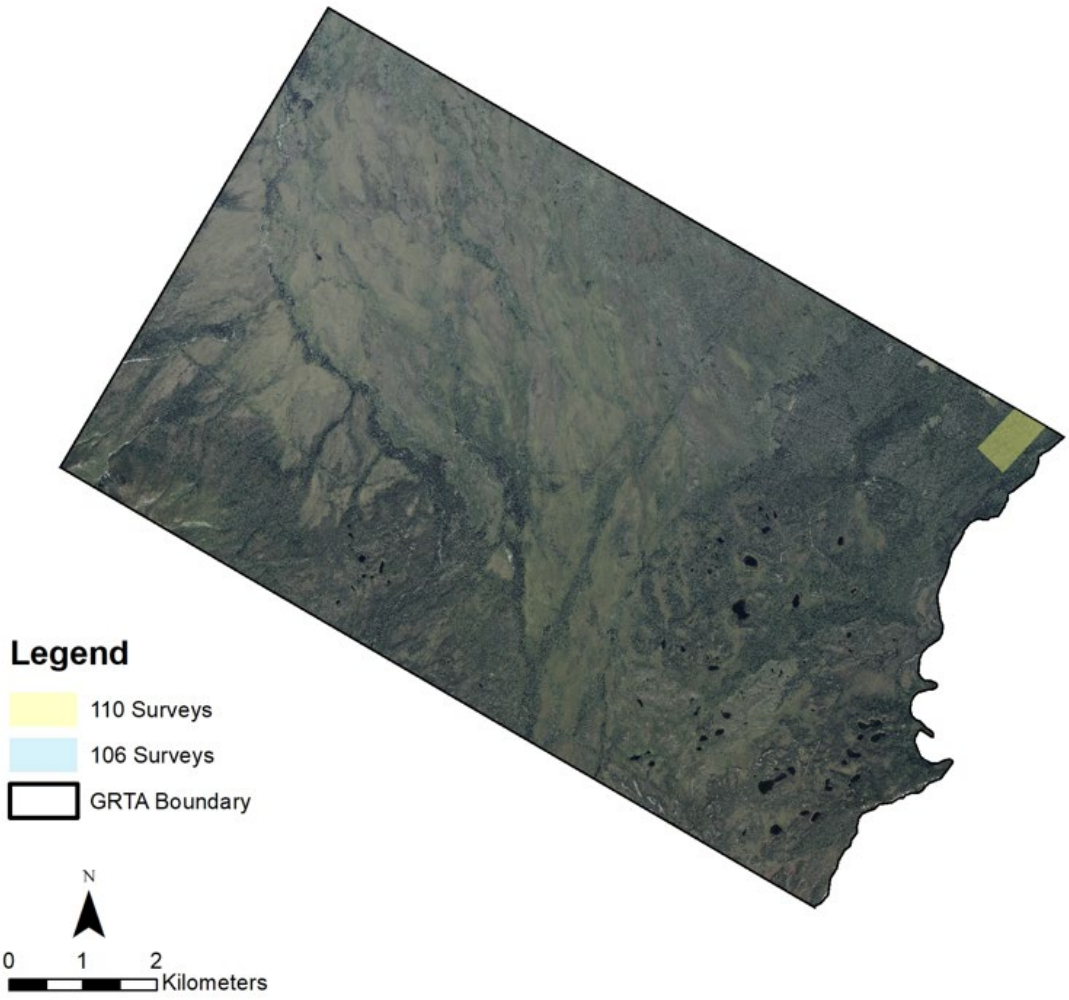

Figure 36. Section 110 surveys in GRTA during 2022.

Figure 37. GRTA overview.

Newly Discovered Archaeological Sites

One new archaeological site was discovered in GRTA during the 2022 field season (XMH-01617) (Figure 38).

XMH-01617

Location: on file with SHPO and USAG Alaska
Determination of Eligibility: Not Evaluated

This site is located in the GRTA, 45 km southeast of Delta Junction. It was found on a south-facing bluff edge that overlooks Gerstle River to the south and east with a 180° viewshed (Figure 38 through Figure 41). Vegetation includes grasses, sage, bird vetch, dwarf birch, and white spruce. A northeast-southwest trending trail runs approximately 30 m to the west of the site and the bluff drops steeply 30 m to river basin below. The viewshed includes the Granite Mountains to the west and the Alaska Range to the southwest.

A single black chert flake was found and collected from the surface eroding out of the bluff edge beneath an overhanging spruce tree (UA2022-070-0001). No subsurface excavations were conducted.

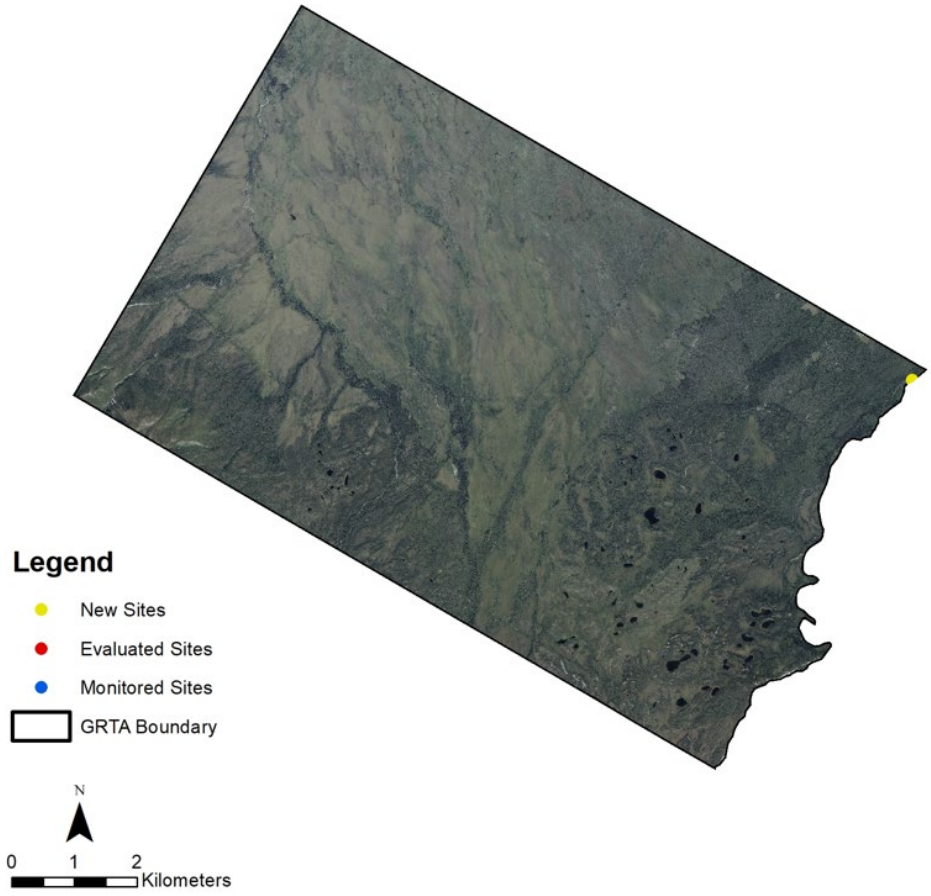

Figure 38. Location of XMH-01617.

Figure 39. XMH-01617 site overview to the southwest.

Figure 40. XMH-01617 site overview (view to east).

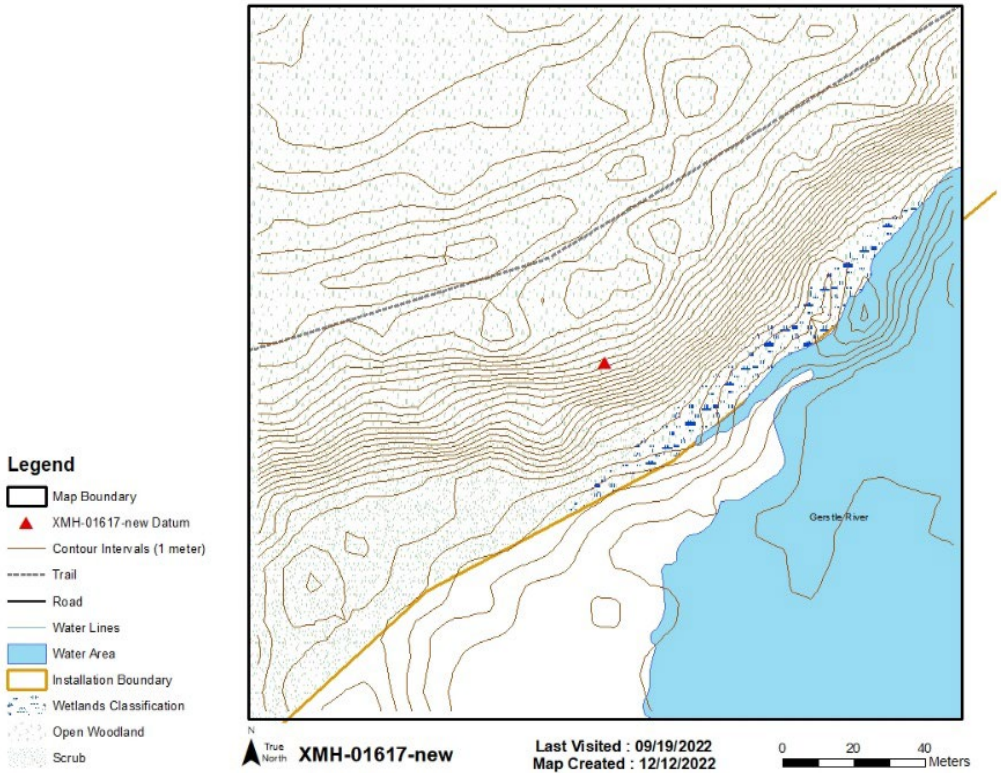

Figure 41. XMH-01617 *site map.*

Post-Review Discoveries

No post-review discoveries were made in GRTA in 2022.

NAGPRA and ARPA Activities

No activities related to NAGPRA or ARPA took place in GRTA in 2022.

Archaeological Site Monitoring and Site Protection Measures

No sites in GRTA were monitored during the 2022 field season.

Determinations of Eligibility

No archaeological sites, buildings, or structures were evaluated for the NRHP during the 2022 field season in GRTA.

Summary of Archaeological Surveys and Sites

A total of 443 acres of land have been surveyed in GRTA between 2002 and 2022 (Figure 42). This accounts for 2.5% of the total land area. A total of five prehistoric archaeological sites have been found in GRTA. Of the total sites, none have been found eligible for the NRHP, one is not eligible, and the remaining four have not yet been evaluated.

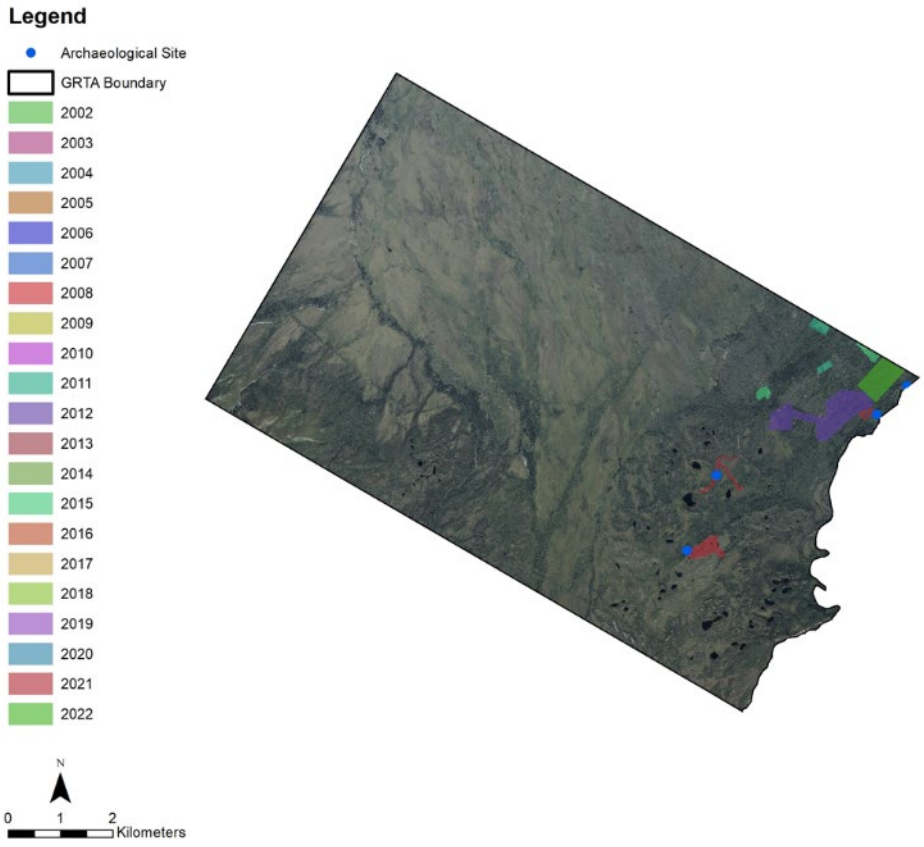

Figure 42. Archaeological sites and surveys in GRTA, all years.

2022 Haines Fuel Terminal

Section 106 Activities

No undertakings requiring Section 106 consultation took place at the Haines Fuel Terminal in 2022.

Section 110 Activities

Over 96 acres of land were surveyed at the Haines Fuel Terminal during the 2022 field season (Figure 43). The terrain at Haines Fuel Terminal is hilly in the west and gradually levels out towards the eastern coast. The whole area is forested with an anthropogenic grassland in the location of fuel terminal administrative space (Figure 44, Figure 45). These survey efforts completed a goal of 100% survey of the undeveloped areas on this property.

Figure 43. Section 110 surveys at the Haines Fuel Terminal in 2022.

Figure 44. Overview of vegetation and terrain at the Haines Fuel Terminal, facing west.

Figure 45. Close-up view of vegetation and terrain at the Haines Fuel Terminal.

Newly Discovered Archaeological Sites

No new archaeological sites were discovered at the Haines Fuel Terminal in 2022.

Post-Review Discoveries

No post-review discoveries were found at the Haines Fuel Terminal in 2022.

NAGPRA and ARPA Activities

No activities related to NAGPRA or ARPA took place at the Haines Fuel Terminal in 2022.

Archaeological Site Monitoring and Site Protection Measures

No sites were monitored at the Haines Fuel Terminal in 2022.

Determinations of Eligibility

No archaeological sites, buildings, or structures were evaluated for the NRHP at the Haines Fuel Terminal in 2022.

Summary of Archaeological Surveys and Sites

A total of 96 acres of land have been surveyed at the Haines Fuel Terminal between 2002 and 2022 (Figure 46). This accounts for 57% of the total land area. Much of the remaining 43% has been disturbed by the development of the tank farm associated with the fuel terminal. One historic site, Tanani Village (SKG-00043) occupied the southeastern corner of the property. The approximate position is shown in Figure 46. This native village site was found not eligible for the NRHP on 12 January 2001. More information about the village can be found in a 1998 report by Northern Land Use Research, Inc. (NLUR 1998).

Figure 46. Archaeological sites and surveys in Haines Fuel Terminal, all years.

Summary

In summary, no Section 106 consultations for Army undertakings in addition to activities covered under the O&M PA took place in 2022.

Activities under Section 110 of the NHPA that occurred during the 2022 field season include the survey of 429 acres of training area. A total of 15.3% of USAG Alaska-managed lands has been surveyed for archaeological sites and historic structures (Table 4).

During archaeological surveys in 2022, four new sites were discovered (Table 5). In total, 735 have been recorded and 77 have been found eligible for the NRHP (Table 5).

Table 4. Archaeological surveys by training area.

Training Area	2022 Acres Surveyed	Total Acres Surveyed	Percent Surveyed
Cantonment	0	13,525	100
TFTA	201	28,534	4.9
YTA	0	63,788	25.8
Fort Greely & DTA	38	130,296	25.1
BRTA & WCTA	0	1820	57
GRTA	94	443	2.5
Tok Fuel Terminal	0	68	100
Seward Military Resort	0	0	0
Sears Creek Pump Station	0	0	0
Haines Fuel Terminal	96	96	53
Total	**429**	**238,570**	**15.3**

Table 5. Archaeological sites and eligibility status.

Training Area	2022 Sites	Total Sites	Eligible	Not Eligible	Not Evaluated
Cantonment	0	11	1	10	0
TFTA	1	168	17	5	146
YTA	0	22	0	17	5
Fort Greely & DTA	2	507	57	104	346
BRTA & WCTA	0	13	0	4	9
GRTA	1	5	0	1	4
Tok Fuel Terminal	0	8	2	0	6
Seward Military Resort	0	0	0	0	0
Sears Creek Pump Station	0	0	0	0	0
Haines Fuel Terminal	0	1	0	1	0
Total	**4**	**735**	**77**	**142**	**516**

A post review discovery of a World War II foundation as located on the cantonment. This discovery is not considered eligible for the NRHP and is covered under USAG Alaska's Operations and Maintenance Programmatic Agreement with the SHPO.

Exactly 160 archaeological sites were monitored on USAG Alaska-managed training lands in 2022 (Table 6). The majority of these were located in TFTA and DTA. Of the monitored sites, it was found that 12 sites were good candidates for site evaluations in the immediate future. Five sites were marked for the placement of Seibert stakes.

No buildings were evaluated for the NRHP in 2022. The site of one historic vehicle, XMH-01539, underwent a determination of eligibility for the NRHP.

This report summarizes all cultural resources activities completed on Fort Wainwright, Fort Greely, and associated training lands during 2022. Archaeological site evaluations will follow in a separate report.

Table 6. Archaeological sites monitored in 2022.

Training Area	**2022 Sites Monitored**
Cantonment	0
TFTA	72
YTA	2
Fort Greely& DTA	86
BRTA & WCTA	0
GRTA	0
Tok Fuel Terminal	0
Seward Military Resort	0
Sears Creek Pump Station	0
Haines Fuel Terminal	0
Total	**160**

References

Alaska Climate Research Center. 2020. http://climate.gi.alaska.edu/Climate/Normals.

Anderson, D.D. 1968. "A Stone Age Campsite at the Gateway to America." *Scientific American 218(6)*: 24-33.

Anderson, D.D. 1970. "Microblade Traditions in Northwestern Alaska." *Arctic Anthropology 7(2)*: 2-16.

Andrews, E.F. 1987. "Archaeological Evidence of European Contact: The Han Athabascans near Eagle, Alaska." *High Plains Applied Anthropologist 7(2)*: 51-64.

Andrews, E.F. 1977. *Report on the Cultural Resources of the Doyon Region, Central Alaska: Volumes I and II.* Fairbanks: Anthropology and Historic Preservation, Cooperative Park Studies Unit, University of Alaska Occasional Paper No. 5.

Andrews, E.F. 1975. *Salcha: an Athabaskan Band of the Tanana River and its Culture.* M.A. Thesis, Fairbanks: Department of Anthropology, University of Alaska.

Bacon, G.H. 1978. *Final Report on the Archeological Survey of the XM-1 Tank Range, Fort Greely, Alaska.* Fairbanks: Prepared for the U.S. Army Corps of Engineers, Alaska District, by Alaskaarctic.

Bacon, G.H., and C.E. Holmes. 1979. *Archaeological Survey and Inventory of Cultural Resources at Fort Greely.* Fairbanks: Prepared by Alaskaarctic.

Bever, M.R. 2006. "Too Little, Too Late? The Radiocarbon Chronology of Alaska and the Peopling of the New World." *American Antiquity 71(4)*: 595-620.

Bever, M.R. 2001a. "An Overview of Alaskan Late Pleistocene Archaeology: Historical Themes and Current Perspectives." *Journal of World Prehistory 15(2)*: 125-191.

Bever, M.R. 2001b. "Stone Tool Technology and the Mesa Complex: Developing a Framework of Alaska Paleoindian Prehistory." *Arctic Anthropology 38(2)*: 98-118.

Bigelow, N.H., and R.W.M. Powers. 2001. "Climate, Vegetation, and Archaeology 14,000-9000 Cal Yr B.P. In Central Alaska." *Arctic Anthropology 38(2)*: 171-195.

Bradley, Z., J. Cook, and A. Frizzera. 1973. *Preliminary Survey Report, Blair Lakes Alaska.* Fairbanks: University of Alaska Fairbanks, Anthropology Department.

Buchanan, B., and M. Collard. 2008. "Phenetics, Cladistics, and the Search for the Alaskan Ancestors of the Paleoindians: a Reassessment of Relationships Among the Clovis, Nenana, and Denali Archaeological Complexes." *Journal of Archaeological Science 35*: 1683-1694.

Bureau of Land Management and U.S. Army. 1994. *Fort Wainwright Fort Greely: Resource Management Plan, Final Environmental Impact Statement.* Anchorage: Bureau of Land Management, Steese/White Mountains District and U.S. Army, 6th Infantry Division.

Carlson, E.S., J.A. Esdale, J.J. Lynch. 2016. *Archaeological Districts on Fort Wainwright.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Clark, D.W. 2001. "Microblade-Culture Systematics in the Far Interior Northwest." *Arctic Anthropology 38(2)*: 64-80.

Clark, D.W. 1992. "The Archaic in the Extreme Northwest of North America." *Revista de Arqueologia Americana 5*: 71-99.

Clark, D.W. 1981. "Prehistory of the Western Subarctic." In *The Handbook of North American Indian: Subarctic, Volume 6*, by J. Helm, 120. Washington, D.C.: Smithsonian Institution.

Cook, J.P. 1996. "Healy Lake." In *American Beginnings: The Prehistory and Palaeoecology of Beringia*, by F.H. West, 323-327. Chicago: University of Chicago Press.

Cook, J.P. 1989. "Historic Archeology and Ethnohistory at Healy Lake, Alaska." *Arctic 42(3)*: 109-118.

Cook, J.P. 1979. *Site XBD-094: Aircraft Assault Strip Fort Wainwright, Alaska.* Fairbanks: Final Report to U.S. Army Corps of Engineers.

Cook, J.P. 1975. "Archaeology of Interior Alaska." *Western Canadian Journal of Anthropology 3*: 125-133.

Cook, J.P. 1969. *The Early Prehistory of Healy Lake, Alaska.* Ph.D. Dissertation, Madison: Department of Anthropology, University of Wisconsin.

Cook, J.P., and T.E. and Gillispie. 1986."Notched Points and Microblades." 13th Annual Meeting of the Alaska Anthropological Association. Fairbanks: Alaska.

Dixon, E.J. 1985. "Cultural Chronology of Central Interior Alaska." *Arctic Anthropology 22*: 47-66.

Dixon, E.J., G.S. Smith, and D. Plaskett. 1980. *Archeological Survey and Inventory of Cultural Resources, Fort Wainwright, Alaska.* Prepared for the U.S. Army Corps of Engineers, Alaska District.

Dumond, D.E. 2001. "The Archaeology of Eastern Beringia: Some Contrasts and Connections." *Arctic Anthropology 38(2)*: 196-2005.

Esdale, J.A. 2008. "A Current Synthesis of the Northern Archaic." *Arctic Anthropology 45(2)*: 3-38.

Esdale, J.A., E.P. Gaines, W.E. McLaren, and J. Quinn. 2012b. *Battle Area Complex Surface Danger Zone Archaeological Site Monitoring, Donnelly Training Area: Annual Report 2010 and 2011.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., E.P. Gaines, K.S. Yeske, W.E. McLaren, M. Shimel, and J.F. Kunesh. 2012c. *Section 110 Report, Cultural Resources Survey and Evaluation, Fort Wainwright and Training Lands: 2010 and 2011.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., H.D. Hardy, J.J. Lynch, G.J. Henderson, J.K.T. Smith, W.E. McLaren, and K.S. Yeske. 2017a. *Cultural Resources Survey and Evaluation, Fort Wainwright, and Training Lands 2015 and 2016.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., H.D. Hardy, J.J. Lynch, and W.E. McLaren. 2018. *Fort Wainwright Archaeology Annual Report, 2017.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., C.E. Holmes, and K.S. Yeske. 2017b. Core and Blade Technology at the Fort Greely Entrance Site. *Research Notes. Alaska Journal of Anthropology 14(1-2):114-120.*

Esdale, J.A., and W.E. McLaren. 2018. *Battle Area Complex Surface Danger Zone Archaeological Site Monitoring, Donnelly Training Area; 2017 Annual Report.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., and W.E. McLaren. 2014. *Battle Area Complex Surface Danger Zone Archaeological Site Monitoring, Donnelly Training Area. Annual Report 2013*. Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., and W.E. McLaren. 2013. *Battle Area Complex Surface Danger Zone Archaeological Site Monitoring, Donnelly Training Area. Annual Report 2012*. Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., and A.S. Pelto. 2017. *Battle Area Complex Surface Danger Zone Archaeological Site Monitoring, Donnelly Training Area: Annual Report 2016.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., A.S. Pelto, and W.E. McLaren. 2017c. *Battle Area Complex Surface Danger Zone Archaeological Site Monitoring, Donnelly Training Area. Annual Report 2016*. Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., A.S. Pelto, and W.E. McLaren. 2016. *Battle Area Complex Surface Danger Zone Archaeological Site Monitoring, Donnelly Training Area. Annual Report 2015*. Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., A.S. Pelto, and W.E. McLaren. 2015c. *Battle Area Complex Surface Danger Zone Archaeological Site Monitoring, Donnelly Training Area. Annual Report 2014*. Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., J. Quinn, K.S. Yeske, and W.E. McLaren. 2012a. *2011 Archaeological Survey and Report of CRTC Project Areas in Donnelly Training Area for the Cold Regions Test Center.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., and A.C. Robertson. 2007. *Final Report: Archaeological Data Recovery for Sites XMH-00284 and XMH-00881, 33-Mile Loop Road Gravel Source Mitigation: Donnelly Training Area, Fort Wainwright, Alaska 2007.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A. A. Robertson, and W. Johnson. 2015a. "Banjo Lake: A Middle Holocene Site in the Tanana Valley." *Alaska Journal of Anthropology* 13(1):35-56.

Esdale, J.A., C.R. Woster, H.D. Hardy, J.J. Lynch, and K.A. Freeman. 2020a. *Fort Wainwright Cultural Resources Annual Report, 2018.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., C.R. Woster, J.J. Lynch, H.D. Hardy, D.I. Skinner, and K.A. Freeman. 2020b. *Fort Wainwright Cultural Resources Annual Report, 2019.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., K.S. Yeske, H. D. Hardy, J. Lynch, and W.E. McLaren. 2015b. *Cultural Resources Survey and Evaluation, Fort Wainwright and Training Lands 2014.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., K.S. Yeske, H. D. Hardy, W.E. McLaren, J. Lynch and L. Sample. 2014. *Cultural Resources Survey and Evaluation, Fort Wainwright and Training Lands 2013.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Esdale, J.A., K.S. Yeske, W.E. McLaren, H. Hardy, M.S. Sweeney, and J. Quinn. 2013. *Section 110 Report: Cultural Resources Survey and Evaluation, Fort Wainwright and Training Lands 2012.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Espenshade, C.T. 2010. *Archaeological Investigations, Donnelly Training Area near Delta Junction.* Greensboro: Prepared by New South Associates. Technical Report 1922.

Gaines, E.P. 2009. *Report: Archaeological Survey and Evaluation Fort Wainwright and Fort Richardson, Alaska 2008.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Gaines, E.P., H. Hardy, and H. Brown. 2010a. *Final Report: Determination of National Register Eligibility for Eleven Archaeological Sites at Fort Greely, Alaska 2010.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Gaines, E.P., K.S. Yeske, and S.J. McGowan. 2010b. *Annual Report: Cultural Resources Survey and Evaluation, Fort Wainwright, Alaska 2009.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Gaines, E.P., K.S. Yeske, S.J. Shirar, W.C. Johnson, and J.F. Kunesh. 2011. "Pleistocene Archaeology of the Tanana Flats, Eastern Beringia." *Current Research in the Pleistocene* 29:42-44.

Gamza, T. 1995. *Excavation and Evaluation of Sullivan's Roadhouse (XBD-061), Fort Greely, Alaska 1994.* Anchorage: Final Report, Prepared for the Office of History and Archaeology, Division of Parks and Recreation, Alaska Department of Natural Resources.

Goebel, T., J. Esdale, M. Mueller, and C. Ketron. 2014. *New Prehistoric Archaeological Research in the Blair Lakes Area, Tanana Valley, Alaska.* Paper presented at the 41st Annual Meeting of the Alaska Anthropology Association. Fairbanks.

Goebel, T., W.R. Powers, N.H. Bigelow, and A.S. Higgs. 1996. "Walker Road." In *American Beginnings: The Prehistory and Palaeoecology of Beringia*, by Frederick H. West, 356-363. Chicago: University of Chicago Press.

Graf, K., J.A. Esdale, and T. Goebel. 2018. "2017 Excavations at McDonald Creek (FAI-2043), a Multicomponent, Open-Air Site in the Tanana Flats Training Area, Fort Wainwright, Central Alaska". Paper presented at the 83rd Annual Meeting of the Society for American Archaeology. Washington, D.C.

Haynes, T.L., and W.E. Simeone. 2007. *Upper Tanana Ethnographic Overview and Assessment, Wrangell St. Elias National Park and Preserve.* Juneau: Alaska Department of Fish and Game, Division of Subsistence.

Hedman, W., A. Robertson, N. Fichter, and K. Anderson. 2003. *Report: Archaeological Survey and Evaluation, Fort Richardson and Fort Wainwright, 2002.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Higgs, A.S., B.A. Potter, P.M. Bowers, and O.K. Mason. 1999. *Cultural Resource Survey Report of the Yukon Training Area and Fort Greely Army Lands Withdrawal, Alaska. Vol. 2.* Fairbanks: Prepared by Northern Land Use Research, Inc.

Holmes, C.E. 2011. "The Beringian and Transitional Periods in Alaska: Technology of the East Beringian Tradition as Viewed from Swan Point". In *From the Yenisei to the Yukon,* edited by T. Goebel and I. Buvit. College Station: Texas A&M University Press.

Holmes, C.E. 2007."The East Beringian Tradition and the Transitional Period: New Data from Swan Point." 34th Annual Meeting of the Alaskan Anthropological Association. Fairbanks.

Holmes, C.E. 2001."Tanana River Valley Archaeology Circa 14,000 to 9,000 B.P." *Arctic Anthropology 38(2)*: 154-170.

Holmes, C.E. 1998. "New Data Pertaining to Swan Point, the Oldest Micoblade Site Known in Alaska." *Current Research in the Pleistocene 15*: 21-22.

Holmes, C.E. 1996. "Broken Mammoth." In *American Beginnings: The Prehistory and Palaeoecology of Beringia*, by F.H. West, 312-318. Chicago: University of Chicago Press.

Holmes, C.E., and J. Anderson. 1986. *Archaeology and Paleoecology of the Delta River Area, Interior Alaska.* Anchorage: National Science Foundation Project Summary Manuscript on file at the State Historic Preservation Office.

Holmes, C.E., and J.P. Cook. 1999. "Tanana Valley Archaeology ca. 12,000 to 10,000 yrs B.P." 64th Annual Meeting of the Society for American Archaeology.

Holmes, C.E., R. VanderHoek, and T.E. Dilley. 1996. "Swan Point." In *American Beginnings: The Prehistory and Palaeoecology of Beringia*, by F.H. West, 319-323. Chicago: University of Chicago Press.

Holmes, C.E. 1979a. *Report on Archeological Reconnaissance: Yukon Training Command Withdrawal Area. Ft. Wainwright.* Report prepared for the U.S. Army Corps of Engineers under Contract DACA85-79-M-0001.

Holmes, C.E. 1979b. *Archaeological Reconnaissance Report for Fort Wainwright, Fort Greely, and Fort Richardson Withdrawal Lands, Alaska.* Fairbanks: Prepared for the 172nd Infantry Brigade.

Holmes, G.W. 1965. *Geologic Reconnaissance Along the Alaska Highway, Delta River to Tok Junction, Alaska. Bulletin B 1181-H.* Anchorage: U.S. Geological Survey.

Johnson, W.C., and S.R. Bozarth. 2008. *Geoarchaeology and Environmental Reconstruction at XMH-874, Fort Wainwright Donnelly Training Area.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Kari, J.M., and J.A. Fall. 2016. *Shem Pete's Alaska (Revised Third Edition).* Fairbanks: University of Alaska Press.

Kari, J.M., and B.A. Potter, eds. 2010. *The Dene-Yeniseian Connection*. Department of Anthropology, University of Alaska Fairbanks.

Lively, R.A. 1996. "Chugwater." In *American Beginnings: The Prehistory and Palaeoecology of Beringia*, by F.H. West, 308-311. Chicago: University of Chicago Press.

Marshall, T. 2007. *Archaeological Survey and Evaluation: Fort Wainwright, 2006.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

McFadyen Clark, A. 1996. *Who Lived in This House? A Study of Koyukuk River Semi Subterranean Houses.* Hull: Mercury Series Archaeological Survey of Canada Paper 153. Canadian Museum of Civilization.

McFadyen Clark, A. 1981."Koyukon." In *Handbook of North American Indians, Volume 6: Subarctic*, by J. Helm, 582-601. Washington, D.C.: Smithsonian Institution.

McKennan, R.A. 1981."Tanana." In *Handbook of North American Indians, Volume 6: Subarctic*, by J. Helm. Washington, D.C.: Smithsonian Institution.

Meltzer, D.J. 2001. "Late Pleistocene Cultural and Technological Diversity of Beringia: A View from Down Under." *Arctic Anthropology 38(2)*: 206-213.

Mishler, C.W. 1986. *Born With the River: An Ethnographic History of Alaska's Goodpaster and Big Delta Indians.* Fairbanks: Alaska Departmet of Natural Resources, Division of Geological and Geophysical Surveys Reports, Public Data File 68-14.

Muhs, D.R. and J.R. Budahn. 2006. Geochemical evidence for the origin of late Quaternary loess in central Alaska. *Canadian Journal of Earth Science* 43: 323-337.

Natural Resource Conservation Service. 2010. *Soil Survey for Alaska: Fort Greely and Donnelly Training Area.* Palmer: Natural Resource Conservation Service.

Northern Land Use Research, Inc. (NLUR). 1998. Cultural Resource Survey of the Haines Fuel Terminal, Haines, Alaska: Final Report on the Archaeology of Tanani Point. Pepared for the US Army Corps of Engineers.

Odess, D. 2002. *Preliminary Report of Archaeological Investigations on Military Lands in the Vicinity of Donnelly Dome, Alaska, Under TCC Contract #DAPC49=01-D-0004.* Fairbanks: Report on file with the Tanana Chiefs Conference.

Odess, D., and J.T. Rasic. 2007. "Toolkit Composition and Assemblage Variability: The Implications of Nogahabara I, Northern Alaska." *American Antiquity 72(4)*: 691-717.

Pearson, G.A., and W.R. Powers. 2001. "The Campus Site Re-Excavation: New Efforts to Unravel Its Ancient and Recent Past." *Arctic Anthropology 38(1)*: 100-119.

Phillips, W.T., Sr. 1984. *Roadhouses of the Richarson Highway, the First Quarter Century: 1898-1923.* Anchorage: State of Alaska, Alaska Historical Commission,

Pink, T. 2005. *Soil Survey of Fort Greely and Donnelly Training Area, Alaska.* Washington D.C.: USDA-Natural Resources Conservaiton Service.

Potter, B.A. 2008a. "Exploratory Models of Intersite Variability in Mid to Late Holocene Central Alaska." *Arctic 61(4)*: 407-425.

Potter, B.A. 2008b. "Radiocarbon Chronology of Central Alaska: Technological Continuity and Economic Change." *Radiocarbon 50(2)*: 181-204.

Potter, B.A. 2007. "Models of Faunal Processing and Economy in Early Holocene Interior Alaska." *Environmental Archaeology 12(1)*: 3-23.

Potter, B.A. 2005. *Site Location Model and Survey Strategy for Cultural Resources in the Alaska Railroad Northern Rail Extension Project Area.* Fairbanks: Report submitted by Northern Land Use Research, Inc. and ICF Consulting Services, LLC.

Potter, B.A. 2004. "Modeling Intersite Variability in Interior Alaska: Overcoming Conceptual Ambiguity Through Pattern Recognition." 60th Annual Meeting of the Society for American Archaeology. Montreal.

Potter, B.A. 2001. "Recent Investigations at the Gerstle River Site, a Multicomponent Site in Central Alaska." *Current Research in the Pleistocene 18*: 52-54.

Potter, B.A., P.M. Bowers, J.D. Reuther, and O.K. Mason. 2007b. "Holocene Assemblage Variability in the Tanana Basin: NLUR Archaeological Research, 1994-2004." *Alaska Journal of Anthropology 5(1)*: 23-42.

Potter, B.A., J.A. Esdale, C.E. Holmes, J.D. Reuther, and H.J. McKinney. 2016. Delta River Overlook: A terminal Pleistocene-late Holocene multicomponent site in central Alaska. Paper presented at the 43st Annual Meeting of the Alaska Anthropology Association. Sitka.

Potter, B.A., J.A. Esdale, J.D. Reuther, H.J. McKinney, C.E. Holmes, C.R. Holloway, C.R., and C.L. Glassburn. 2018. *Archaeological Investigations at Delta River Overlook, Central Alaska*. Archaeology GIS Laboratory, Report #7. Department of Anthropology, University of Alaska Fairbanks.

Potter, B.A., S.C. Gerlach, A.S. Higgs, and P.M. Bowers. 2000. *Final Cultural Resources Survey: Fort Greely, Yukon Training Area (Fort Wainwright), Alaska for the National Missile Defense Program, for USAR Space and Missile Defense Command.* Fairbanks: Report prepared by Northern Land Use Research, Inc.

Potter, B.A., J.D. Irish, J.D. Reuther, C.l Gelvin-Reymiller, and V.T. Holliday. 2011. "A Terminal Pleistocene Child Cremation and Residential Structure from Eastern Beringia." *Science 331*: 1058-1062.

Potter, B.A., J.D. Reuther, P.M. Bowers, and C. Gelvin-Reymiller. 2008. "Little Delta Dune Site: A Late-Pleistocene Multicomponent Site in Central Alaska." *Current Research in the Pleistocene 25*: 132-135.

Potter, B.A., J.D. Reuther, P.M. Bowers, and C. Gelvin-Reymiller. 2007a. *Results of the 2007 Cultural Resource Survey of Proposed Alaska Railroad Northern Rail Extension Routes, Alaska.* Fairbanks: Report submitted by Northern Land Use Research, Inc.

Powers, W.R., and J.F. Hoffecker. 1989. "Late Pleistocene Settlement in the Nenana Valley, Central Alaska." *American Antiquity 54(2)*: 263-287.

Price, K. 2002. *Homesteads on Fort Wainwright, Alaska.* Fort Collins: Center for Environmental Management of Military Lands, Colorado State University.

Price, K. 2001. *Northern Defenders: Cold War Context of Ladd Air Force Base Fairbanks, Alaska 1947-1961.* Fort Collins: Center for Environmental Management of Military Lands, Colorado State University.

Rabich, J.C., and D.R. Reger. 1978. *Archaeological Excavations at the Gerstle River Quarry Site. In, Archaeological Survey Projects 1977.* Anchorage: OHA Miscellaneous Publications 18, Office of History and Archaeology.

Racine, C.H., R. Lichvar, B. Murray, G. Tande, R. Lipkin, and M. Duffy. 1997. *A Floristic Inventory and Spatial Database for Fort Wainwright, Interior Alaska.* Fairbanks: U.S. Army Cold Regions Research and Engineering Laboratory, Special Report 97-23.

Raymond-Yakoubian, J., and A. Robertson. 2006. *Annual Report: Archaeological Survey and Evaluation, Fort Richardson and Fort Wainwright, 2005.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Raymond-Yakoubian, J., and A. Robertson. 2005. *Annual Report: Archaeological Survey and Evaluation, Fort Richardson and Fort Wainwright, 2004.* Annual Report, Fort Collins: Center for Environmental Management of Military Lands (CEMML).

Ream, B.A. 1986. *Old Fish Camp: an Ethnohistoric and Archeological Analysis of a Lower Yukon Koyukon Athapaskan Winter Village, Khotol River, Alaska.* M.A. Thesis, Department of Anthropology, Western Washington University.

Reynolds, G.L. 1988. *Archaeological Site Report Fort Greely Cantonment Area.* Anchorage: Manuscript on file at the Office of History and Archaeology.

Reynolds, G.L. 1986. *Inventory of Cultural Resources and Overview, Phase I.* Prepared for the 172nd Infantry Brigade by Georgeanne Reynolds, Fairbanks: Alaska Heritage Group, Inc.

Reynolds, G.L. 1985. *Survey of Construction Projects, Fort Wainwright Cantonment.* Anchorage: Manuscript onfile at the Office of History and Archaeology.

Reynolds, G.L. 1983. *Archaeological Reconnaissance of Four Borrow Pits, Fort Wainwright, Alaska.* Anchorage: Submitted to the U.S. Army Corps of Engineers.

Robertson, A.C. 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.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Robertson, A.C., J. Esdale, W.C. Johnson, S.R. Bozarth, S. McGowan, M. Proue, C.K. Paraso, S. Shirar, and P. Gilbert. 2009a. *Final Report: 2006-2007 Archaeological Data Recovery for Site XMH-00874 Battle Area Complex (BAX) Mitigation, Donnelly Training Area, Fort Wainwright, Alaska.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Robertson, A.C., J. Esdale, J. Quinn III, H. Hardy, and V. Aziz. 2013. *Archaeological Data Recovery, Battle Area Complex, Donnelly Training Area, Fort Wainwright, Alaska 2009.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Robertson, A.C., N. Fichter, and K. Anderson. 2004. *Annual Report: Archaeological Survey and Evaluation, Fort Richardson and Fort Wainwright 2003.* Ft. Collins: Prepared by the Center for Environmental Management of Military Lands.

Robertson, A.C., S.J. Meitl, D. White, P. Gilbert, and C. Ciancibelli. 2009b. *Archaeological Survey and Evaluation: Donnelly Training Area, Fort Wainwright.* Ft. Collins: Prepared by the Center for Environmental Management of Military Lands.

Robertson, A.C., M. Proue, P. Hall, S. Shirar, and C.K. Paraso. 2007. *Archaeological Survey, Evaluation, and Mitigation: Donnelly Training Area, Fort Wainwright, Alaska 2006.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Robertson, A.C., M. Proue, C.K. Paraso, S. Shirar, and P. Gilbert. 2008. *Archaeological Data Recovery for Site XMH-00874, Battle Area Complex (BAX) Mitigation, Donnelly Training Area, Fort Wainwright, Alaska, 2007.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Robertson, A.C., J. Raymond-Yakoubian, M. Proue, S. Shirar, J. Burr, H. Robbins, D. Cory. 2006. *Annual Report: Archaeological Survey and Evaluation, Donnelly Training Area, Fort Wainwright, Alaska, 2005.* Fort Collins: Prepared by the Center for Environmental Management of Military Lands.

Sackett, R.H. ND. *Living in a Landmark: Ladd Field National Landmark*. Unpublished paper, on file at Fort Wainwright, Cultural Resources Office.

Simon, J. and C. Gelvin-Reymiller. 2002. ALCANGO (Haines-Gairbanks Pipeline) Tok Terminal Traditional Cultural Property Evaluation Report. Prepared for the US Army Corps of Engineers, Alaska District. Prepared by Tanana Chiefs Conference, Inc. Fairbanks.

Sheppard, W., A.F. Seffian, D.P. Staley, and N.H. Bigelow. 1991. *Late Holocene Occupations at the Terrace Site, Tok, Alaska.* Final Report, Fairbanks: Prepared for U.S. Air Force Over-the-Horizon Backscatter Radar Program.

Shinkwin, A.D. 1979. *Dakah De'nin's Village and the Dixthada Site: a Contribution to Northern Alaskan Prehistory.* National Museum of Man Mercury Series NO. 91.

Staley, D.P. 1993. *A Phase 1 Cultural Resources Survey of 19 Locations for the Proposed Yukon Measurement and Debriefing System in Interior Alaska.* Albuquerque: Mariah and Associates.

Steele, J.L. 1983a. *Cultural Resource Assessment of a Powerline Extension: Fort Greely, Alaska.* Anchorage: Alaska District, U.S. Army Corps of Engineers.

Steele, J.L. 1983b. *Cultural Resources Assesment of Proposed Borrow Area, Fort Wainwright, Alaska.* Anchorage: Report on file at the Office of History and Archaeology.

Steele, J.L. 1982a. *Archaeological Assessment of Proposed Range Control Headquarters Building, Fort Wainwright, Alaska.* Anchorage: Alaska District, U.S. Army Corps of Engineers.

Steele, J.L. 1982b. *Cultural Resource Assessment for a Quarry Site at Donnelly Dome, Fort Greely, Alaska.* Anchorage: Alaska District, U.S. Army Corps of Engineers.

Steele, J.L. 1980a. *Archaeological Assessment of Squad Assault Range, Powerline Extension, and M-16 Record Fire Range, Fort Greely, Alaska.* Anchorage: Alaska District, U.S. Army Corps of Engineers.

Steele, J.L. 1980b. *Fort Greely Bison Trail Archaeological Survey, Fort Greely, Alaska.* Anchorage: Alaska District, U.S. Army Corps of Engineers.

VanStone, J.W., and I. Goddard. 1981. "Territorial Groups of West-Central Alaska Before 1898." In *Handbook of North American Indians, Volume 6: Subarctic*, by J. Helm, 556-561. Washington D.C.: Smithsonian Institution.

Viereck, L.A., and E.L., Jr. Little. 1972. *Alaska Trees and Shrubs.* Washington, D.C.: Agricultural Handbook 410. U.S. Forest Service.

West, F.H. 1996. "Donnelly Ridge." In *American Beginnings: The Prehistory and Palaeoecology of Beringia*, by F.H. West, 302-307. Chicago: University of Chicago Press.

West, F.H. 1996. "Other Sites in the Tangle Lakes." In *American Beginnings: The Prehistory and Palaeoecology of Beringia*, by F.H. West, 403-408. Chicago: University of Chicago Press.

West, F.H. 1981. *The Archaeology of Beringia.* New York: Columbia Press.

West, F.H. 1975. "Dating the Denali Complex." *Arctic Anthropology 12*: 76-81.

West, F.H. 1967. "The Donnelly Ridge Site and the Definition of an Early Core and Blade Complex in Central Alaska." *American Antiquity 32(2)*: 360-382.

Wygal, B.T., K.E. Krasinski, C.E. Holmes, and B.A. Crass. 2018. Holzman South: A Late Pleistocene Archaeological Site along Shaw Creek, Tanana Valley, Interior Alaska. *PaleoAmerica* 4(1):90-93.

Yarborough, L.F. 1978. *Chena River Lakes Project Cultural Resource Investigation.* Final Report, Fairbanks: Prepared for the U.S. Army Corps of Engineers, Alaska District.

Yesner, D.R. 2001. "Human Dispersal into Interior Alaska: Antecedent Conditions, Mode of Colonization, and Adaptations." *Quaternary Science Reviews*: 315-327.

Yesner, D.R., C.E. Holmes, and G. Pearson. 1999. "Recent Excavations at the Broken Mammoth Site, Big Delta, Alaska: Reflections on Activity Patterning and Artifact Assemblages." 64th Annual Meeting of the Society for American Archaeology. Chicago.

Yesner, D.R., and G.A. Pearson. 2002. "Microblades and Migrations: Ethnic and Economic Models in the Peopling of the Americas." In *Thinking Small: Global Perspectives on Microlithization*, by R.G. Elston and S.L. Kuhn, 133-161. Arlington: Archaeological Papers of the American Anthropological Association Number 12.