Fort Wainwright Archaeology Annual Report, 2017

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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
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
NHPA – National Historic Preservation Act
NLUR– Northern Land Use Research, Inc.
NRHP – National Register of Historic Places
SDZ – Surface Danger Zone
SHPO – State Historic Preservation Officer
TFTA – Tanana Flats Training Area
USARAK – US Army Alaska
UTM – Universal Transverse Mercator
XBD – Big Delta
XMH – Mount Hayes
YTA – Yukon Training Area

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Introduction

Army Regulation 200-1 (AR 200-1), Chapter 6, ensures that installations 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 Fort Wainwright's (USAG Alaska) compliance with AR 200-1 and Federal laws.

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 Federally-approved repository for cultural remains discovered on Army-managed lands in Alaska) 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 advent of human remains, and contacting the Garrison Cultural Resources manager was enacted. This plan is articulated to project managers, training supervisors, and the public, and is included in all Memorandums of Agreement (MOA) for excavations and other related activities.

ARPA aims to protect archaeological resources 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 resources from looting and to report violations. While to date USAG Alaska has encountered no APRA 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 followed by an 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, and State Historic Preservation Officers, partners of the national historic preservation program. Both Section 106 and 110 of the statue are contained in Title I. Section 106 requires that federal agencies provide the Advisory Council on Historic Preservation (ACHP) have 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. Fort Wainwright complies with these regulations through annual reporting of undertakings covered in the Operations and Management Programmatic Agreement (FW-PA-1601) and individual letters on undertakings that include ground disturbance or alterations to historic buildings. This report summarizes the undertakings requiring Section 106 consultation for archaeology that took place in 2017.

Section 110 NHPA requires that federal agencies to 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. In recent years, Fort Wainwright's Cultural Resources Manager (CRM) has begun a consultation process with Range Control at Fort Wainwright and Donnelly Training Area (DTA) to establish potential development zones based upon projected training needs. These PDZs are located in the large tracts of military managed land outside Fort Wainwright's Main Post cantonment area with no immediate undertakings, but regions that the Army plans to develop in the 2-10 year time range. Identification of PDZs has allowed the CRM to focus archaeological survey efforts, in conjunction with 106 projects, in the areas of Fort Wainwright's 1.6 million acres considered most critical.

This report has four main purposes. First, it summarizes all activities on USAG Alaska managed lands that required consultation under NAGPRA and relates all permitting required under ARPA during the current year and on-going activities from previous year permits. Second, it gives a brief summary of all Army activities that took place in 2017 that required Section 106 consultation under the NHPA and had previously been described in detail in individual letters to the State Historic Preservation Officer (SHPO). Third, it outlines all archaeological or historic surveys during 2017 related to future Army project areas under Section 110 of the NHPA that were not described in individual Section 106 letters. All new archaeological sites found on USAG Alaska managed lands are described in the text. Finally, this report summarizes all areas surveyed and archaeological or historic sites 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. This report is organized into sections by Fort Wainwright Training Areas. Each section includes information on the Section 106 activities, areas surveyed, and new sites discovered during the 2017 field season. Site DOEs that took place in 2017 will be described in a separate report.

All archaeological fieldwork was conducted by 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 and Environment

Fort Wainwright consists of the Main Post cantonment area and associated training lands, which include three main areas: the Yukon Training Area (YTA), the Tanana Flats Training Area (TFTA), and the Donnelly Training Area (DTA). These are located in central Alaska, north of the Alaska Range in the Tanana River Valley (Figure 1). The post lies 120 miles south of the Arctic Circle near the cities of Fairbanks and North Pole in the Fairbanks North Star Borough. Fort Wainwright has the northern continental climate of the Alaskan Interior, characterized by short, moderate summers; long, cold winters; and little precipitation or humidity (Natural Resources Branch 2002).

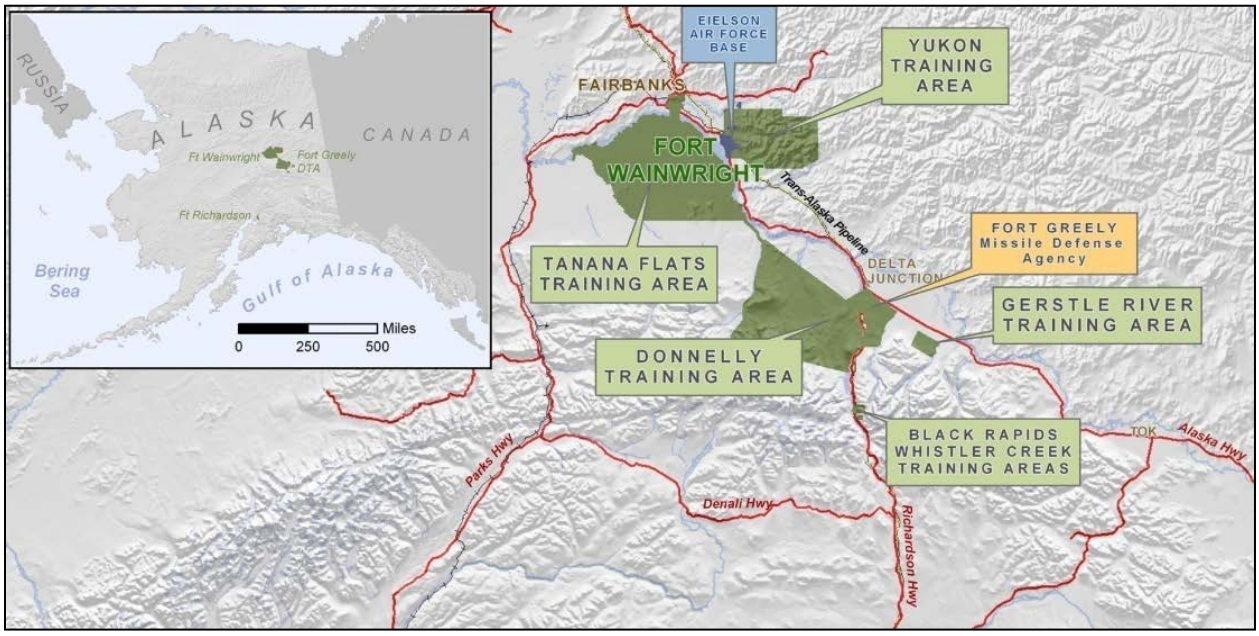

Figure 1. Fort Wainwright training lands.

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 Fort Wainwright'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 training lands comprise a vast and still relatively unsurveyed region with areas of high potential for yielding evidence of this activity.

Alaska has long been regarded as the gateway to the Americas and has held archaeological interest as the possible location for the oldest archaeological sites in the New World. This is due to more than Alaska's proximity to Asia and ice-free condition at the end of the Pleistocene. Similarities between archaeological assemblages in Siberia and Alaska and the discovery of lanceolate projectile points in the muck deposits around Fairbanks in the early 1900s (which bore a resemblance to Clovis points of some antiquity in the American Southwest) also sparked interest in Alaska as a source area for all Native Americans.

After initial colonization, archaeologists generally divide Interior Alaska's prehistory into three broad archaeological themes: the Paleoarctic Tradition (12,000-6,000 years ago[1]), the Northern Archaic Tradition (6,000-1,000 years ago), and the Athabaskan Tradition (1,300-800 years ago) (Potter 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 lands demonstrate that people began living in Interior Alaska 14,000 years ago. Significant sites in the Tanana Valley dating between 14,000-12,000 years ago include Healy Lake (Cook 1996), Walker Road (Goebel et al. 1996), Swan Point (Holmes et al. 1996), Mead (Holmes 2001), McDonald Creek (Goebel et al. 2014), and Broken Mammoth (Holmes 1996). There are no sites in Alaska, however, that predate the oldest sites in the contiguous United States, nor do Alaska's oldest sites resemble the Clovis culture (Bigelow and Powers 2001). The Younger Dryas

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

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 colonization.

The Paleoarctic Tradition is a term now generally used by archaeologists to refer to the earliest settled people known from all over Alaska. It was originally defined by Anderson[2] (Anderson 1968, 1970) as the earliest microblade-using tradition in the American Arctic, with a proposed relationship to 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 high ground, they could locate and track prey that included large mammals such as mammoth and bison. Evidence from the Upward Sun River Site, located on the south side of the Tanana River between Army training areas, for example, demonstrates that hunter-gatherers in Interior Alaska were concentrating on bison and wapiti at the end of the Pleistocene (the Upward Sun River Site is also known for one of the earliest burials in the Americas [Potter 2008a, 2008b; Potter et al. 2008; Potter et al. 2011]). The nearby 14,000-year old McDonald Creek site on Army- managed land had artifacts in association with bison, waterfowl, and small game (Esdale et al. 2012c, Gaines et al. 2011, Goebel et al. 2014). 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, adjacent to Fort Wainwright training lands (Broken Mammoth [Holmes 1996; Yesner et al. 1999], Chugwater [Lively 1996], Donnelly Ridge [West 1967, 1996; Donnelly Ridge is located in the DTA], Healy Lake [Cook 1989], Mead [Holmes 2007] and Swan Point [Holmes et al. 1996; Holmes 1998, 2007]).

The Denali Complex, dated roughly to 10,500 to 8,000 years ago, was originally defined by West (West 1967, 1975) and includes distinctive wedge-shaped microblade cores, core tablets and

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

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 Fort Wainwright's training lands include Mount Hayes (West 1996), Swan Point (Holmes et al. 1996; Holmes 1998, 2007), and Gerstle River (Potter 2001). At least one site in TFTA (FAI-02043) has also been dated to this period.

The relationship between the proposed Nenana and Denali Complexes is as of yet unresolved. As discussed above, some researchers view the Nenana Complex as a bifacial industry that predates the microblade-based Denali Complex. However, current research at sites such as Swan Point and Broken Mammoth indicates that microblades and burins were used by the earliest known cultures in Interior Alaska, with a later co-occurrence with Chindadn points—the defining artifact type of the Nenana Complex. Although some archaeologists still believe that there is a cultural distinction between the Nenana and Denali complexes (e.g., Dumond 2001), the general understanding from Interior Alaskan archaeologists is that there is a behavioral explanation for the presence or absence of microblades in different assemblages (Holmes 2001; Potter 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 Fort Wainwright 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 (circa 8,600 years old), Hurricane Bluff (c. 9,800 years old), Lucky Strike (c. 8,500 years old), Gerstle River (c. 10,000 years old), and the Campus Site (c. 7,700 years old) (Pearson and Powers 2001; Potter et al. 2007; Potter 2008). Bison, wapiti, and birds were the most important subsistence game during this period (Potter 2007, 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 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 myriad tools ranging from bifacial knives and

microblades to end scrapers and side-notched points. Middle Holocene hunter-gatherers had a subsistence economy focused on seasonally abundant game including caribou, fish, and moose (Potter 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).

Utilization of microblade and burin-based industries appears to continue through the middle and late Holocene in Interior Alaska (Esdale 2008; Potter 2004). By the late Holocene, archaeologists see a shift from seasonal large mammal hunting with a nomadic lifestyle to a focus on seasonally over-abundant resources, use of storage, and more permanent settlements (Potter 2008b). Artifact assemblages do not drastically change until the last millennium of the Holocene when microblades disappear from the archaeological record (Potter 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 Fort Wainwright's training lands (Andrews 1975; Andrews 1987; Cook 1989; Mishler 1986; Sheppard et al. 1991; Shinkwin 1979; Yarborough 1978). Of particular interest in this regard is a copper projectile point 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 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 mammal and freshwater marine animals such as fish and mollusks (McFadyen Clark 1981; McFadyen Clark 1996; Ream 1986;

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

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

Four Athabascan linguistic and geographic groups have inhabited the Tanana Valley: the Upper Tanana, Tanacross, Tanana, and Koyukon. Each group is further distinguished according to geographic location. 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 protohistoric times and possibly even prehistoric times (Andrews 1975). Use of the region varied from one band to the next. The Salcha, Chena, Goodpaster, and Wood River bands of the Tanana Athabascans and the Healy Lake band of the Tanacross Athabascans used certain parts of what are now Fort Wainwright and Fort Greely (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 Fort Wainwright but has not been found (Dixon 1980; Reynolds 1986). The Blair Lakes Archaeological District (FAI-00335) on Fort Wainwright 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. Fort Wainwright's training lands fall within an area occupied at the time of Euro-American contact by Lower-Middle Tanana Athabascans, including bands described generally as the Salcha, Big Delta-Goodpaster, Wood River, and Chena bands (McKennan 1981; Andrews 1975; Mishler 1986). Historical accounts document traditional settlement patterns that were focused on a widely mobile seasonal round, with the fall caribou

hunt playing a pivotal role in subsistence preparations for the winter and summer activities focused at fish camps, berry and root collecting, and in sheep hunting. These activities were frequently communal, with several local bands connected by common interest, geography, and intermarriage. Despite anthropological attempts to define boundaries for the peoples living in the lower Tanana River Valley, natural terrain served as the only definable boundary to settlement patterns (McKennan 1981).

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

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

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

The transportation and communication networks, including the Alaska Railroad, were developed to serve new settlements in Interior Alaska. A branch of the railroad route was extended to Fairbanks in 1904. Roadhouses along the route catered to travelers. Some were located on what are now Fort Wainwright training lands. One property was on the Bonnifield Trail in TFTA, and two roadhouses and a seasonal tent operation existed along the Donnelly-Washburn Trail in the current 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 advent of World War II and subsequent military build-up in Alaska. Of particular significance was the development of airfields near Delta Junction (Fort Greely), Fairbanks (Ladd Field, later Fort Wainwright), and North Pole (Eielson Air Force Base). These locations began as Lend-Lease bases and cold weather testing centers, but soon expanded with the increased need for military support during World War II and later during the Cold War.

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

In 1935, Ladd Field was authorized as a small cold weather testing station that was envisioned by General H. H. Arnold. Construction began 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 some 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 1985, Ladd Field was listed on the National Register of Historic Places (NRHP). Ladd Field was designated a National Historic Landmark for the themes of cold weather testing; aircraft repair, supply depot and air transfer hub; and transfer point for aircraft and cargo transiting the ALSIB route to the Soviet Union.

In 2001, the Ladd AFB Cold War Historic District was determined eligible for the NRHP. It was determined to be significant for its role in the early Cold War missions of the 46th/72nd Air Reconnaissance unit and for the fighter intercept squadrons stationed here. In 1960, Ladd AFB was transferred to the Army and was 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 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. Since 1986, Fort Wainwright's mission has been to support worldwide deployment.

Status of Archaeological Resources

Archaeological research on Fort Wainwright training areas 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. 2017a, 2017b, 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 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. 2015a, Holmes and Anderson 1986; West 1967, 1975).

Fort Wainwright and its training lands contain 700 known archaeological sites, one traditional cultural property, and six archaeological districts. Seventy-two sites are eligible for the National Register, 529 sites have not been evaluated, and 99 additional sites have been determined ineligible for the National Register. Of the eligible or un-evaluated sites, 9 are historic and 592 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 Colorado State University's Center for Environmental Management of Military Lands (CEMML). Surveys by several different principal investigators have targeted areas of construction undertakings. Two historic sites (FAI-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 National Register 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 National Register. This total does not include any historic buildings related to the Ladd AFB Historic District, World War II, or the Cold War.

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). In total, archaeologists have identified 168 archaeological sites in TFTA. Of these sites, 17 have been determined eligible for inclusion in the National Register, one site is not eligible (FAI-00053) and 150 remain to be evaluated for eligibility.

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

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

To date, 475 archaeological sites have been identified within DTA. Fifty-four sites have been found to be eligible for the National Register, and 57 were found not eligible. An additional 354 sites remain to be evaluated. Historic archaeology sites are poorly represented in this region, with only four 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). Future archaeological studies in DTA will concentrate on completing survey of 100% of the land in DTA East, conducting DOEs on archaeological sites in high traffic areas, and exploring parts of DTA West that are opening up for expansion of military training activities.

Despite its incomplete nature, the archaeological record known from DTA represents all of the currently recognized prehistoric cultures of the Alaskan Interior. Of significance is the role played by sites located on DTA in the definition of the Denali Complex of the American Paleoarctic Tradition (Anderson 1970; West 1967, 1981). The oldest dates for human habitation at DTA are roughly 10,100 years at site XBD-00167 (Higgs et al. 1999) and 10,900 radiocarbon years BP at XMH-00297 (Potter et al. 2016); 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, site XMH-00874 yielded an AMS date of 5720 ± 50 BP from hearth charcoal associated with a microblade component (Esdale et al. 2015, Robertson et al. 2008). A late prehistoric Athabascan occupation is recognized at several sites (e.g., Andrews 1975, 1987; Cook 1989; Mishler 1986; Sheppard et al. 1991; Shinkwin 1979; Yarborough 1978). Of particular interest in this regard is a copper projectile point found in a buried context at DTA at site XBD-00272 (Robertson et al. 2009). Euro-American historic archaeological sites are also present (Gamza 1995; Phillips 1984). The Delta River Overlook Site (XMH-00297), excavated in 2015 and 2017 and now undergoing analysis by University of Alaska Fairbanks, 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 ten occupations over the time span of 3,000 to 11,000 years before present. 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. 2016).

Survey efforts increased in 2013 in the Black Rapids Training Area (BRTA) in advance of military installation of a high-angle marksmanship range. Ten 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. An additional surficial prehistoric site, XMH-01504, was found in the small Whistler Creek Training Area (WCTA) to the south of BRTA in 2015.

The Gerstle River Training Area (GRTA), Tok Fuel Terminal, and Haines Fuel Terminal, also managed by Fort Wainwright, have been infrequently utilized for training activities, and very few surveys or identification of archaeological sites have occurred in these areas. CEMML archaeologists surveyed small portions of GRTA in 2011 through 2013. Three prehistoric sites (XMH-01359, XMH-01494, and XMH-01509) are known from this training area. One site, XMH-01494 was determined ineligible in 2013 (Esdale et al. 2013b). Six sites were discovered at Tok Fuel Terminal by John Cook in the early 1980s. Three of these sites have been found ineligible for the NRHP (TNX-00006, 00007, 00008). These were relocated in 2013 (Esdale et al. 2013b). In 2015 and 2016, surveys of the landform found an additional seven sites. One eligible traditional cultural property is also known from this training area. One ineligible historic site is known from Haines Fuel Terminal (SKG-00043), but no surveys have been completed in this area since 2001.

2017 Cantonment

NAGPRA and ARPA Activities

No activities related to NAGPRA or ARPA took place on the cantonment in 2017.

Section 106 Activities

Because a 100 % survey of Fort Wainwright's cantonment has been completed, most activities are covered under Fort Wainwright's Operation and Management Programmatic Agreement (FW-PA-1601) with the SHPO (see Cook 2017). However, a bank stabilization project on the Chena River in the Fort Wainwright golf course boundaries required significant ground disturbance. Because the last survey of the area was over 10 years ago (2005) and did not include systematic examination of the river bank, a CEMML crew of three people tested the bank area for archaeological sites in May of 2017 (Figure 2). The bluff edge was examined for eroding cultural material and one shovel test was excavated (Figure 3). No artifacts were found during the survey or inadvertently during the undertaking.

Section 110 Archaeological Surveys

No new archaeological surveys were conducted on the cantonment in 2017.

Newly Discovered Archaeological Sites

No new archaeological sites were found on the cantonment in 2017.

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 2012 (Figure 4). These surveys include 12500 acres of training lands and undisturbed areas (13525 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.

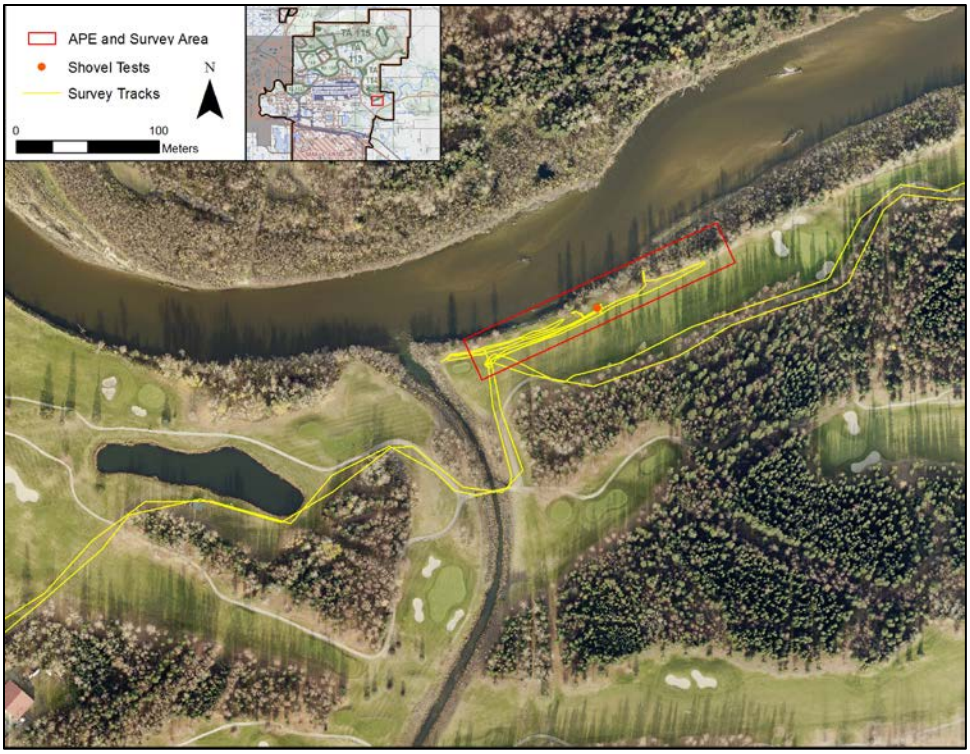

Figure 2. Map of Golf Course bank stabilization project.

Figure 3. Bank stabilization project area.

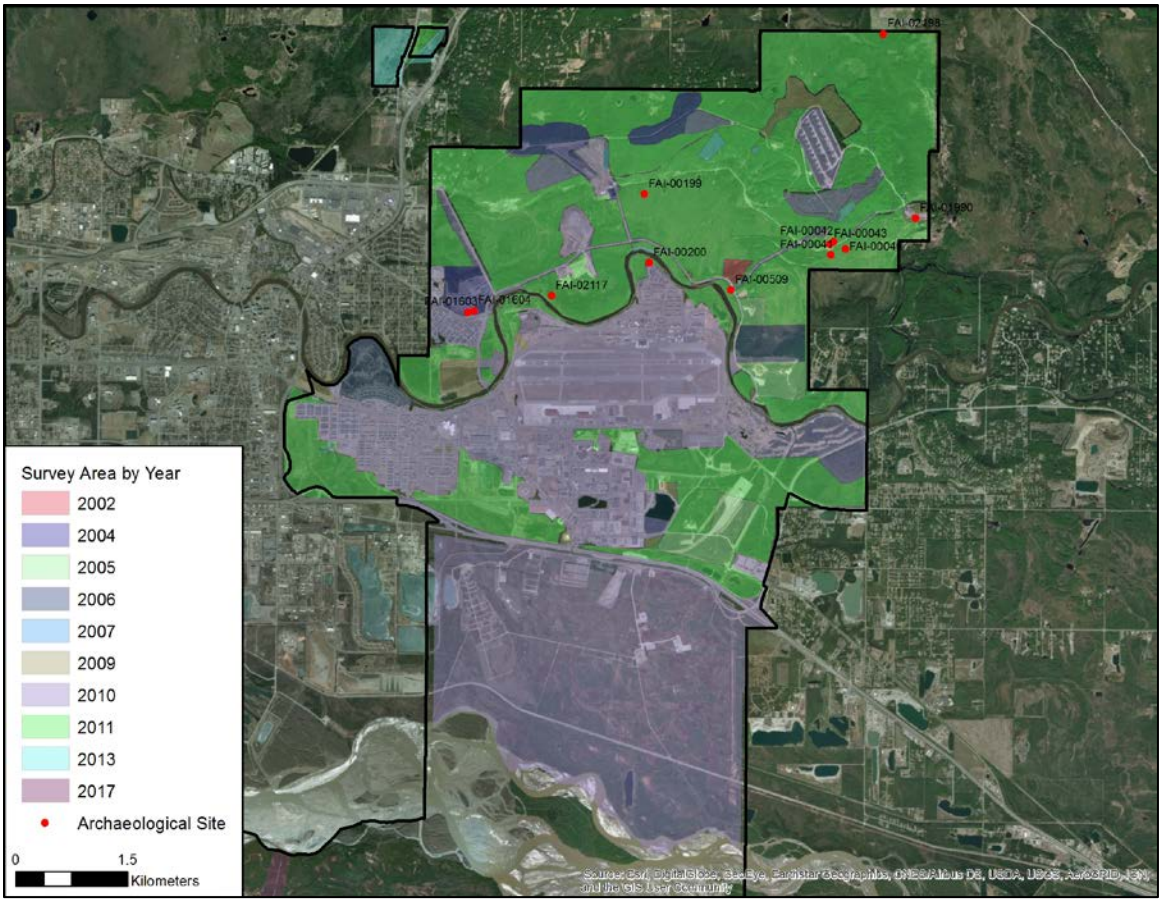

Figure 4. Archaeological surveys and sites on Fort Wainwright's cantonment.

2017 Tanana Flats Training Area

NAGPRA and ARPA Activities

No activities related to NAGPRA took place in TFTA in 2017. Under ARPA Permit 2016-2 and FW-MOA-1409, Texas A&M University continued excavations at the late Pleistocene and Holocene McDonald Creek site located northeast of Blair Lakes. By the end of the 2017 field season they had excavated 15 m^2 to glacial outwash gravels and an additional 18 m^2 to the top of the earliest cultural layer (Graf et al. 2018). They have discovered three cultural components dating to the Northern Archaic Period (5,500 years ago), the Paleoarctic Period (12,000 years ago), and the initial peopling of the Americas (13,800 years ago). This site is significant on a national level for helping to explain the late Pleistocene (Ice Age) dispersal of modern humans in Beringia and the settling-in process of North America's first arctic peoples.

Section 106 Activities

Only one activity requiring Section 106 consultation took place in 2017. Range control scheduled work for the winter to clear a winter trail in TFTA from the bridge over the Tanana River to the Clear Creek Assault Strip (Figure 5). This route was planned after several years of archaeological surveys and with close attention to the location of archaeological sites. The SHPO concurred with a finding of No Historic Properties Affected on 14 November, 2017.

Section 110 Archaeological Surveys

In advance of potential future projects in TFTA by Range Control, a total of 7177 acres of land were surveyed for archaeological sites and historic features during 2017 (Figure 6). Surveys in 2017 were in support of Joint Pacific Alaska Range Complex (JPARC) Winter Road Scoping (2982), the Clear Creek Assault Strip Potential Development Zone (94 acres), and Bonnifield Trail Clearing (4191 acres). The Bonnifield Trail was surveyed by helicopter, being a long linear feature through wetlands. No historic structures were found along the trail. The remainder of the survey locations were covered by pedestrian transects with shovel testing in upland locations (Figure 6).

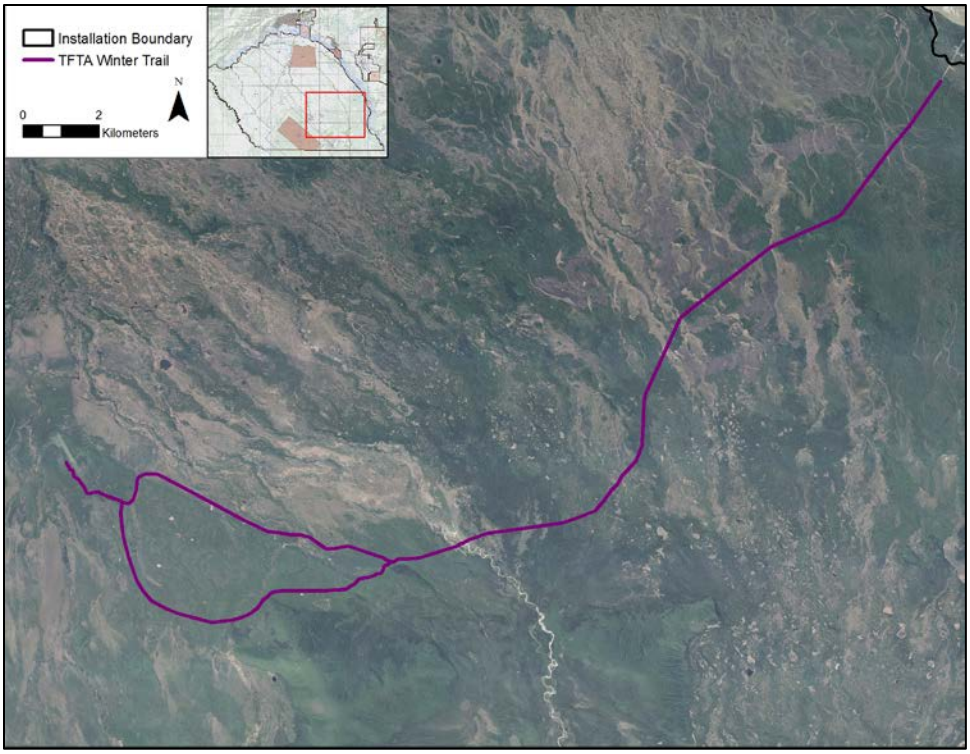

Figure 5. Section 106 activities in TFTA, 2017.

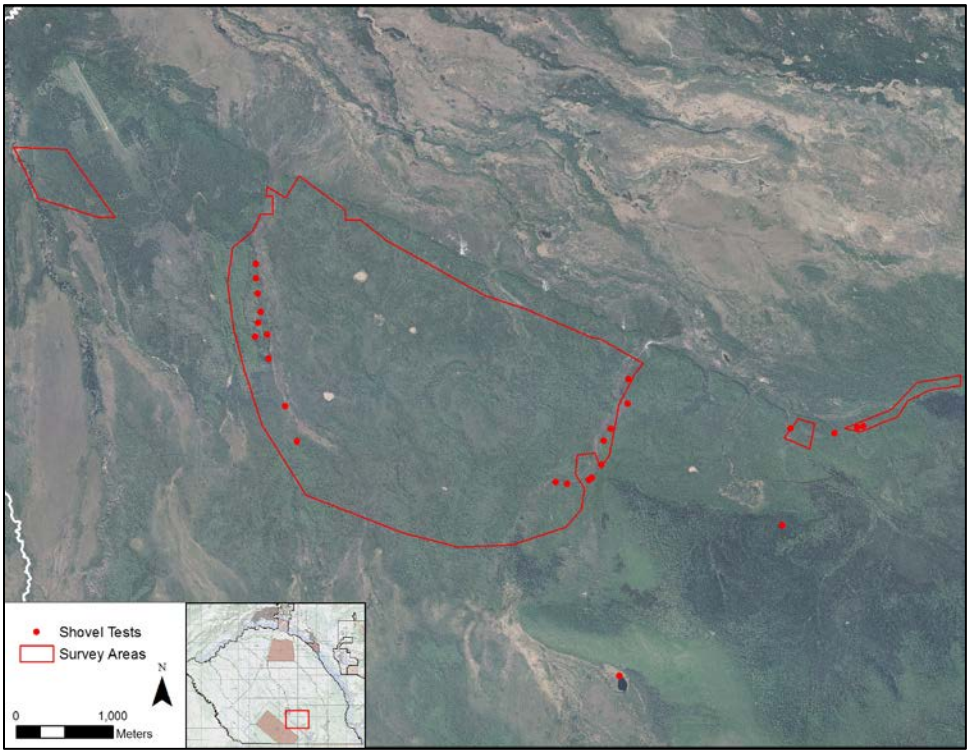

Figure 6. Archaeological surveys in TFTA, 2017.

Newly Discovered Archaeological Sites

No new archaeological sites were found during TFTA surveys in 2017. The Bonnifield Trail, however, was given an AHRS number.

FAI 02497
Bonnifield Trail
Starting Location: 64.778074, -147.708145
Ending Location: 64.333039, -147.918409
Determination of Eligibility: Not evaluated

The Bonnifield Trail is a historic trail connecting Fairbanks with the Gold King Creek mining area, 73 km south by southwest from Fairbanks and 60 km east of Clear, on the north slope of the Alaska Range (Neely 2001, 2003). A 52.5 km section of this trail is located on Fort Wainwright-managed lands in Tanana Flats Training Area. The trail is regularly cleared of brush and is primarily used as a recreational access route during the winter months. This trail starts at the southern edge of the Tanana River, south of Fairbanks, and heads nearly straight south to the Wood River, following the eastern edge of Salmon Loaf Butte and the western edge of Clear Creek Buttes (Figure 7). The Bonnifield region reported gold discoveries in 1903, and the pack trail was officially surveyed in 1909. The trail was named after local prospector, John Bonnifield. Much of the transportation of goods into and gold out of the Bonnifield region took place during winter months, when the Tanana Flats area was frozen enough to support a sled road (Neely 2003). The trail is still used as a transportation route into the district for recreational users, primarily in the winter months.

Summary of Archaeological Surveys and Sites

Between 2002 and 2017, CEMML archaeologists conducted systematic archaeological survey on 15,066 acres of land in TFTA (Figure 7). This accounts for approximately 2.3% 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 known from the training area and one historic trail). The majority 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 found in TFTA, 17 are eligible for the NRHP and 149 have not been evaluated. Two sites have been found not eligible.

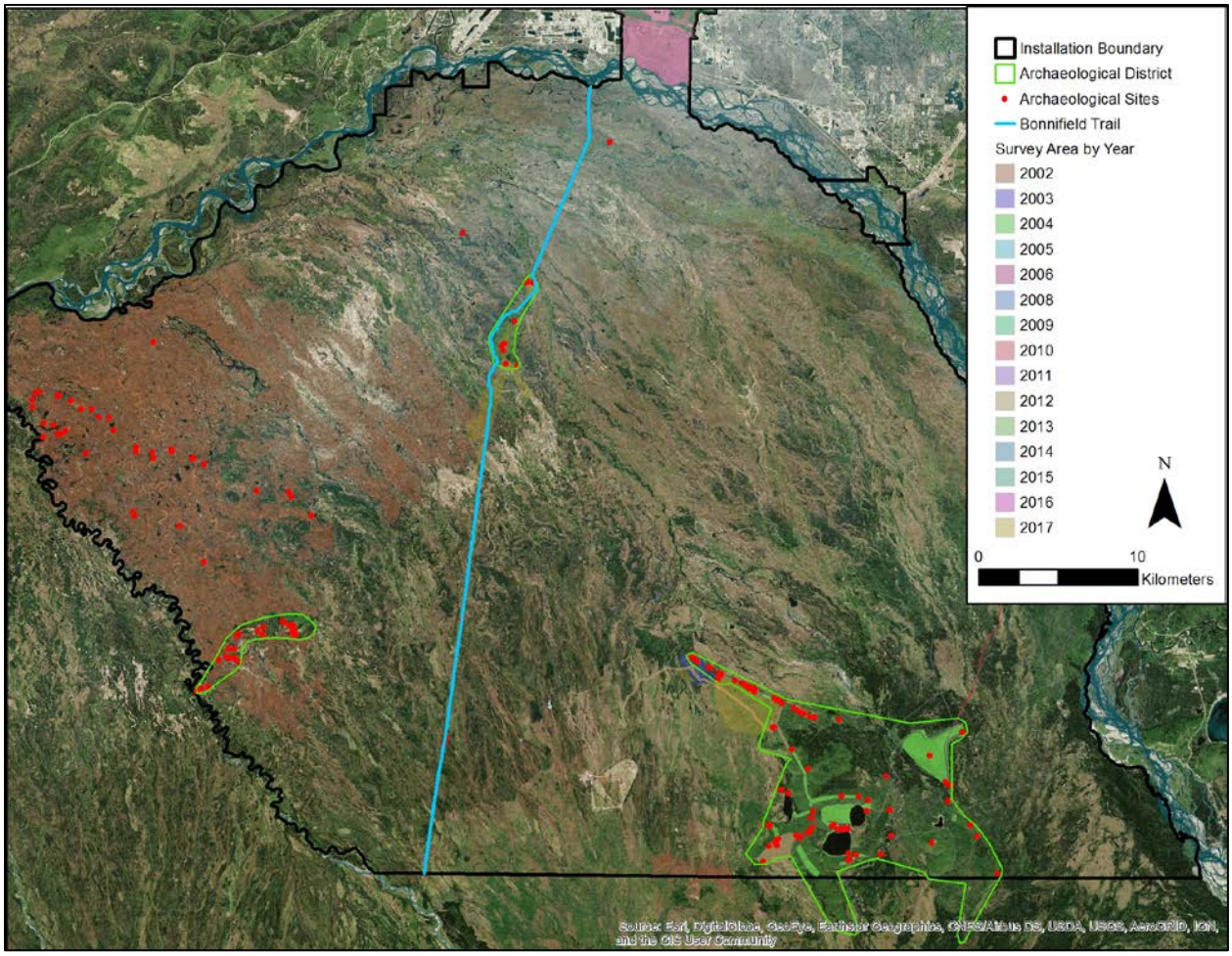

Figure 7. All archaeological sites, surveys, and districts in TFTA.

2017 Yukon Training Area

NAGPRA and ARPA

No activities related to NAGPRA or ARPA took place in the YTA in 2017.

Section 106 Activities

No new undertakings requiring Section 106 actions took place in the YTA during the 2017 field season.

Section 110 Archaeological Surveys

A total of 1582 acres of land in YTA were surveyed for archaeological sites during the 2017 field season by CEMML crews. These surveys were in support of Range Control Potential Development Areas and future forestry management. All highlighted areas in Figure 8 were covered by pedestrian transects, and shovel testing occurred in upland locations. Surveys covered the Tire Village area off of Transmitter Road (72 acres), Hunts Creek (73 acres), a potential trail area on the south fork of the Chena River (313 acres), and Potential Development Zones off of Brigadier Road (1124 acres).

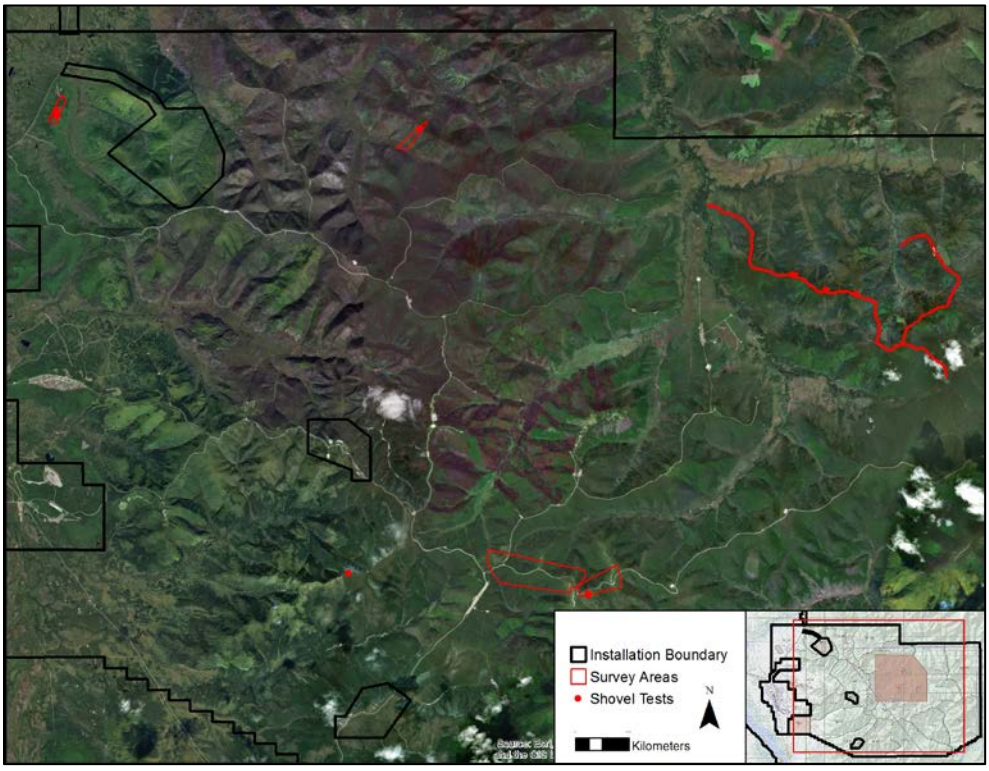

Figure 8. Archaeological surveys in YTA, 2017.

Newly Discovered Archaeological Sites

No new archaeological sites were found in the YTA in 2017.

Summary of Archaeological Surveys and Sites

Between 2002 and 2017, CEMML archaeologists have conducted systematic archaeological survey on 53,098 acres of land in YTA (Figure 9). This accounts for approximately 20.8% of available survey areas (not including impact areas). The road system and major training locations have been examined and surveys are expanding into areas of future Range Control development. A total of 21 archaeological sites have been found in the YTA. Fourteen of these have been found not eligible for the NRHP and seven sites have not yet been evaluated.

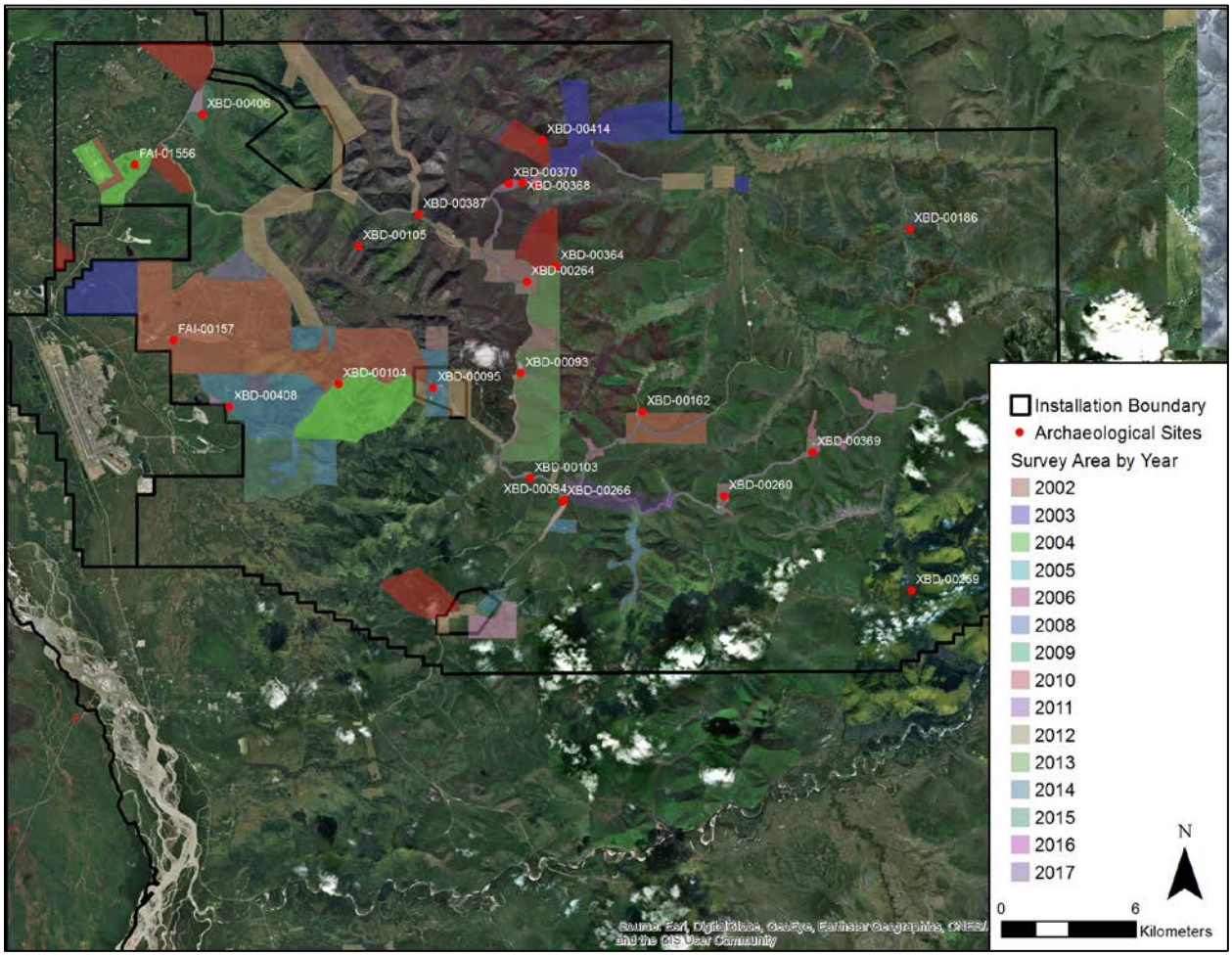

Figure 9. All archaeological sites and surveys in YTA.

2017 Donnelly Training Area

NAGPRA and ARPA Activities

No activities related to NAGPRA took place in the DTA in 2017. Under ARPA Permit 2016-1 and FW-MOA-1619, University of Michigan completed a second year of research excavations at the late Holocene Caribou Nob site (XMH-00917) located east of Banjo Lake off of 33-Mile Loop Road. By the end of the 2017 field season they had excavated 5 m^2 to glacial outwash gravels to bring the total to 14 m^2 excavated across the landform. The site dates between 2000 and 1400 years BP. Over 1700 artifacts have been discovered including flakes, flake fragments, and tools made from rhyolite, agate, and black and red chert. In addition, over 2500 pieces of calcined bones were found centered in and around a hearth feature. Analyses of cultural materials are ongoing.

Section 106 Activities

Much of the eastern portion of DTA has been thoroughly surveyed for cultural resources over the past decade. Because of that, Army undertakings and trainings are often found in previously surveyed areas and Section 106 consultation is covered by USAG Alaska's Operations and Maintenance Programmatic Agreement (O&M PA) (FW-PA-1601, Cook 2017). Two new projects in areas outside those covered by the O&M PA took place in DTA in 2017 (Figure 10. Figure 10). Section 106 consultation took place for Phase IV of the Granite Creek Trail and for CRTC Target Installation. Findings of No Historic Properties Affected were received SHPO concurrence on 11 August and 7 June, 2017 respectively.

In addition to archaeological surveys, one mitigation project was continued in the 2017 field season. Excavations at XMH-01303 under FW-MOA-1505 covered 9 m^2 of deposits. This research is continuing in 2018 and will be provided to the SHPO in a separate excavation report.

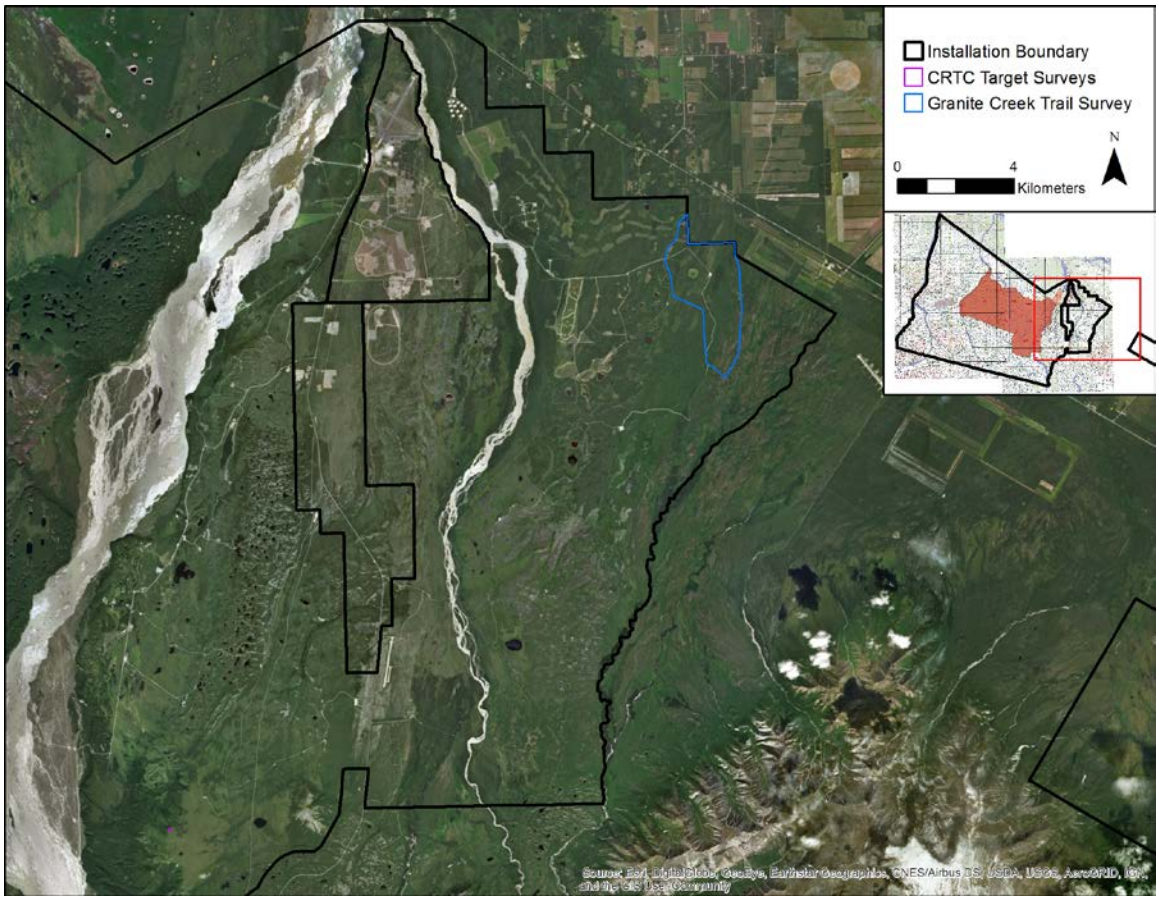

Figure 10. Section 106 activities in DTA, 2017.

Section 110 Archaeological Surveys

A total of 6944 acres were surveyed for archaeological sites by CEMML in DTA West during the 2017 field season (Figure 11). In DTA West, the Fairbanks-Valdez Trail (517 acres) was surveyed by helicopter in preparation for 2018 brushing (Section 106 letter to follow in 2018 report). No historic sites were found and no upland locations or knobs were found for shovel testing. The Hayes Lake Trail and Timber Areas (6427 acres) were also surveyed by helicopter with landings at upland locations for shovel testing. No archaeological sites were discovered. Both of these survey areas are shown in Figure 11.

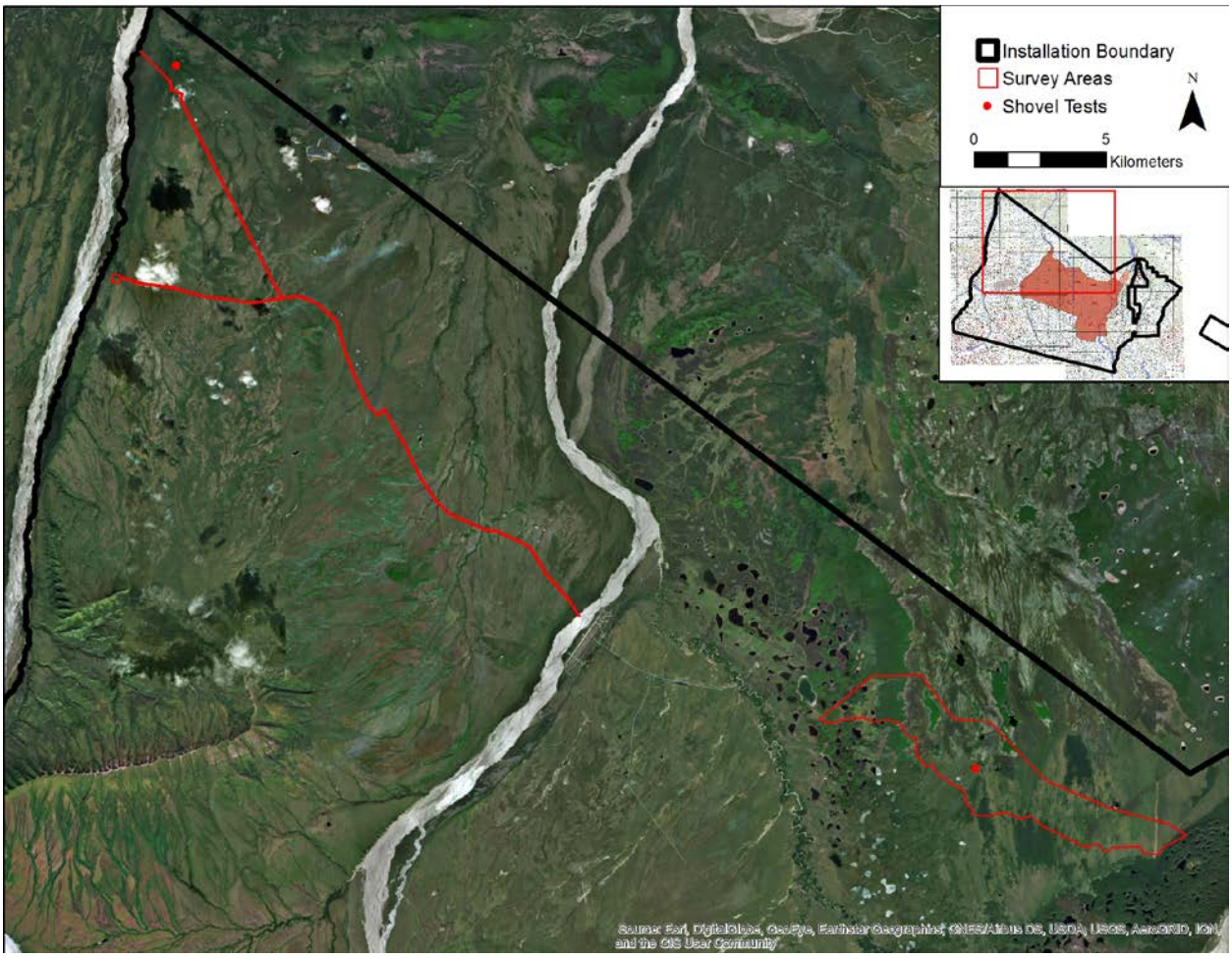

Figure 11. Archaeological surveys in DTA West, 2017.

In DTA East, a total of 3527 acres were surveyed by pedestrian transects, and shovel testing occurred in upland locations (Figure 12). Surveys occurred for CRTC Targets in TA 532 (1 acre), TA 530/531 around the southern portion of the Old Richardson Highway and Donnelly Dome (636 acres), in the upper Granite Creek Trail area (1949 acres), and in the TA501/502 PDZ area (941 acres). Six new archaeological sites were found during these surveys.

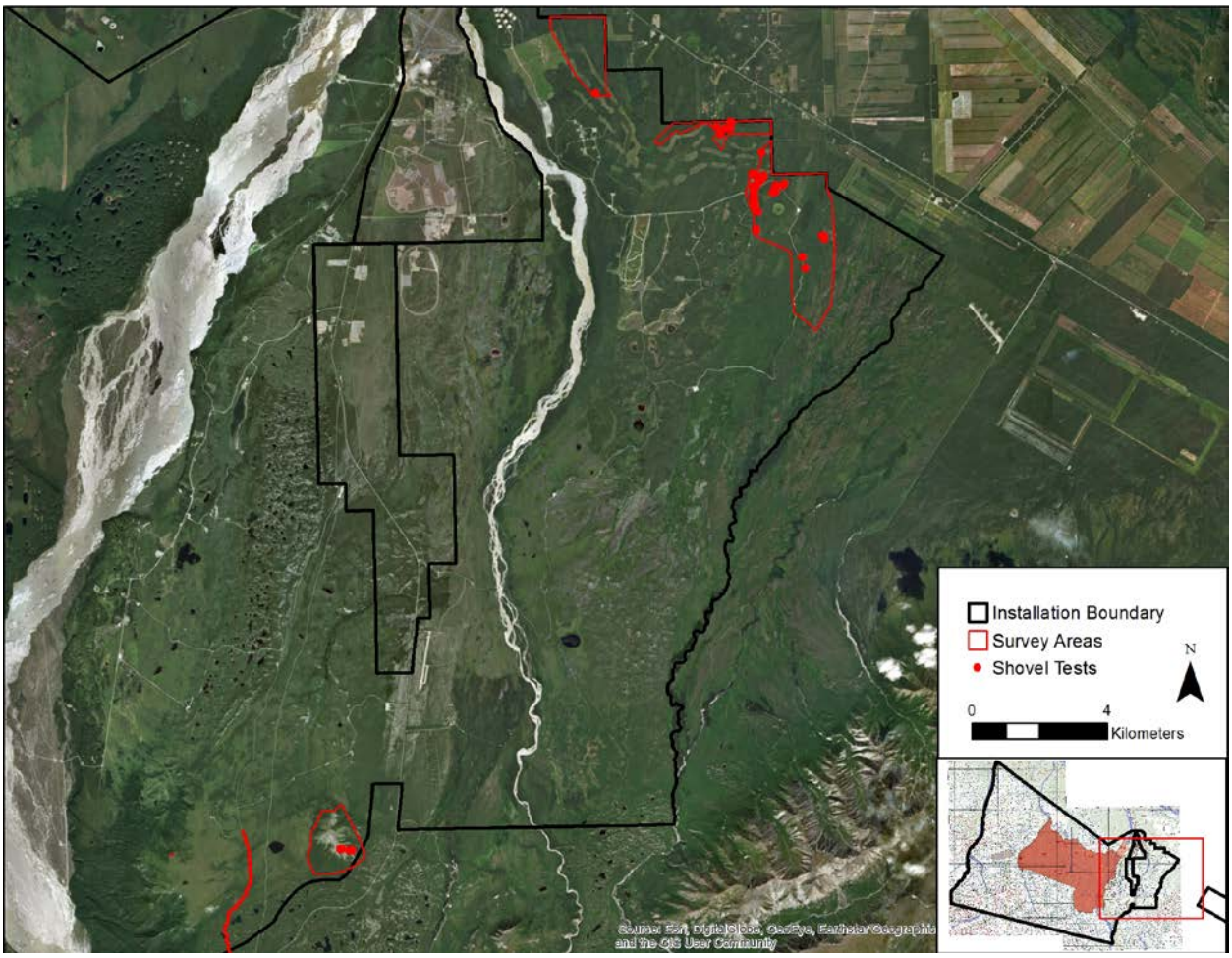

Figure 12. Archaeological surveys in DTA East, 2017.

Newly Discovered Archaeological Sites

Six new archaeological sites were found and DTA and were added to the AHRS in 2017 (XMH-01524, XMH-01525, XMH-01526, XMH-01527, XMH-01554, and XMH-01555) (Figure 13). AHRS cards are found in Appendix A.

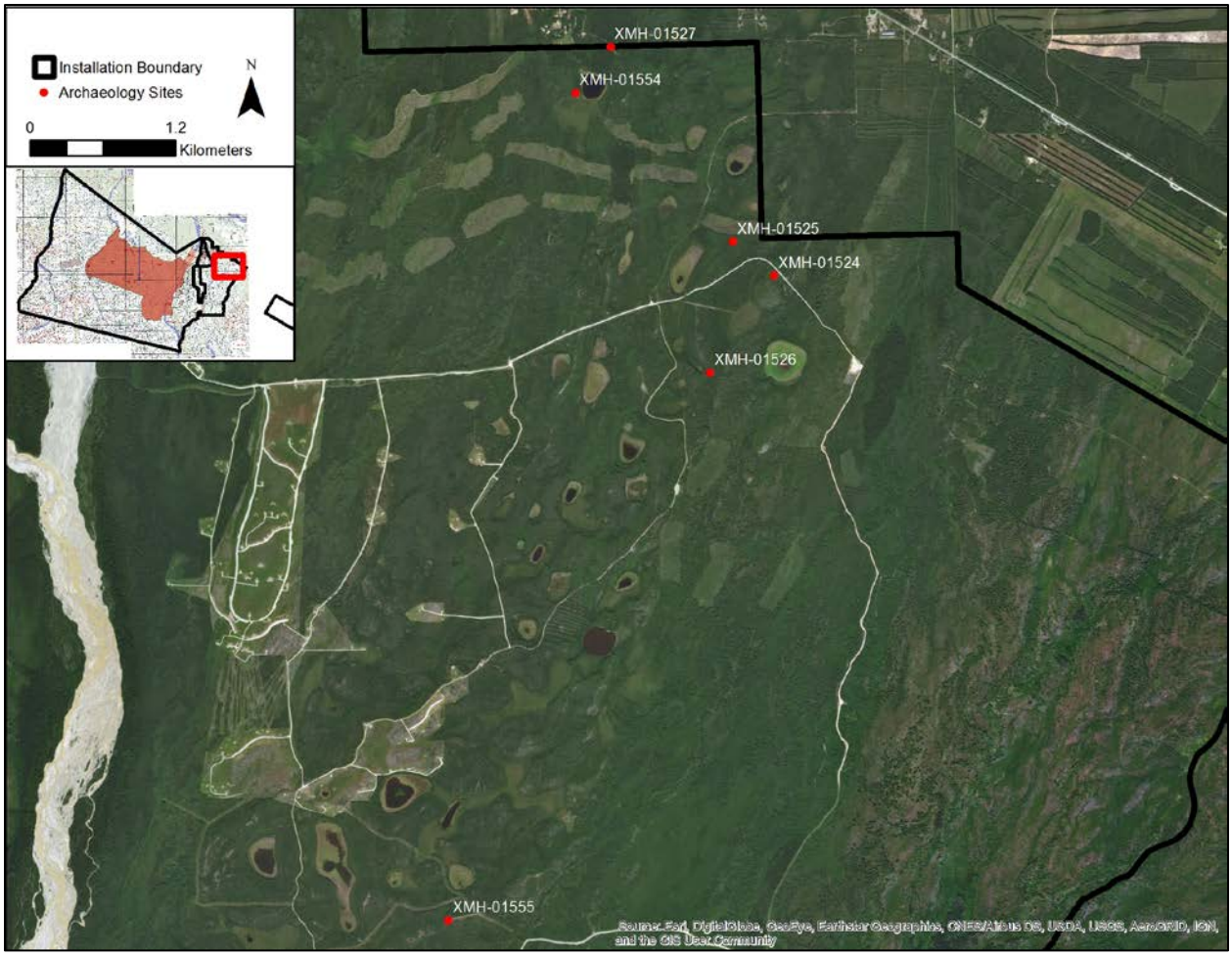

Figure 13. DTA new sites, 2017.

XMH-01524
Latitude: [redacted]
Longitude: [redacted]
UTM: [redacted], Zone 6 (WGS 84)
Determination of Eligibility: Not evaluated

XMH-01524 is located 14 km south east of Delta Junction and 70 m south of Granite Creek Trail on a small hill (Figure 13). The viewshed is completely blocked by aspen, spruce, and birch. Other vegetation on site includes willow, low scrub, lichens, and grasses (Figure 14). Surface visibility is 5%. The closest water source is currently Sue Lake, 718 m to the south, although a dry lake bed 383 m to the southwest would have been closer when full. An old possible shovel test is the only disturbance noted. A chert flake was found in one of two shovel tests at a depth of 10-15 cmbs (Figure 15, Table 1). A nail was placed as datum at the site coordinates. Cultural

material was found just below the 10 cm thick organic layer and weak B horizon (Figure 16, Figure 17). The shovel test ended at glacial gravels, 35 cmbs.

Figure 14. XMH-01524 site overview.

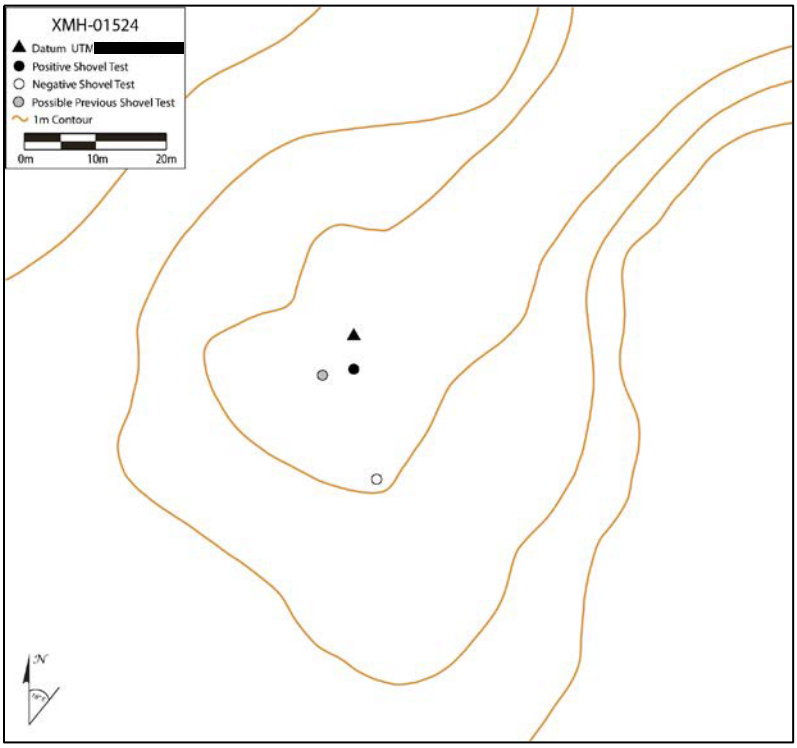

Figure 15. XMH-01524 site map.

Table 1. XMH-01524 accession log.

Accession #	Provenience	Quantity	Artifact Type	Raw Material
UA2017-125-1	HT8, 10-15 cmbs	1	Bifacial thinning flake	Grey chert

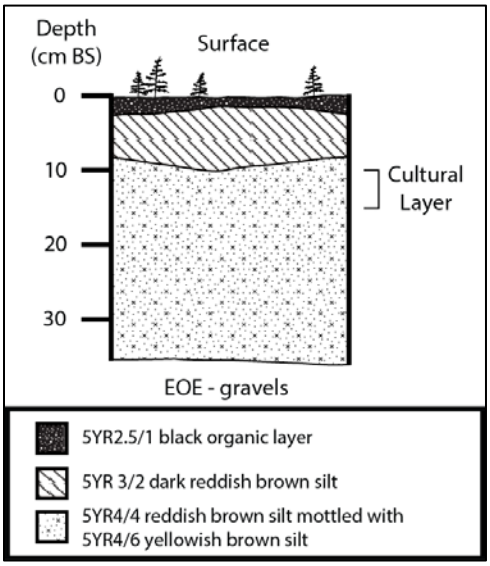

Figure 16. XMH-01524 site stratigraphy.

Figure 17. XMH-01524 test pit.

XMH-01525
Latitude: [redacted]
Longitude: [redacted]
UTM: [redacted], Zone 6 (WGS 84)
Determination of Eligibility: Not evaluated

XMH-1525 is located 14 km southeast of Delta Junction on the north end of a long moraine, 400 m east of 33-Mile Loop Road (Figure 13). XMH-01526 is found on the south end of the same feature, 1 km away. The 45° viewshed is open to the northwest overlooks a clearing 30 m away. Site vegetation consists of aspen, spruce, low scrub, moss, lichen and grass (Figure 18). There is no exposed soil on the surface. The closest water sources are Mary Lake to the southwest and South Pat Lake to the north, both 500 m away. There are no disturbances on the site, but there is a large 450 x 100 m cleared area 30 m to the north.

A shovel test excavated during survey recovered one grey chert flake fragment from 0-9 cmbs (Figure 19, Table 2). No other shovel tests were excavated. The cultural material was discovered in the upper sediments at the site. A 4 cm thick organic horizon overlies a thin 2-15 cm B horizon of silt. The test pit ended at glacial gravels (Figure 20, Figure 21).

Figure 18. XMH-01525 site overview.

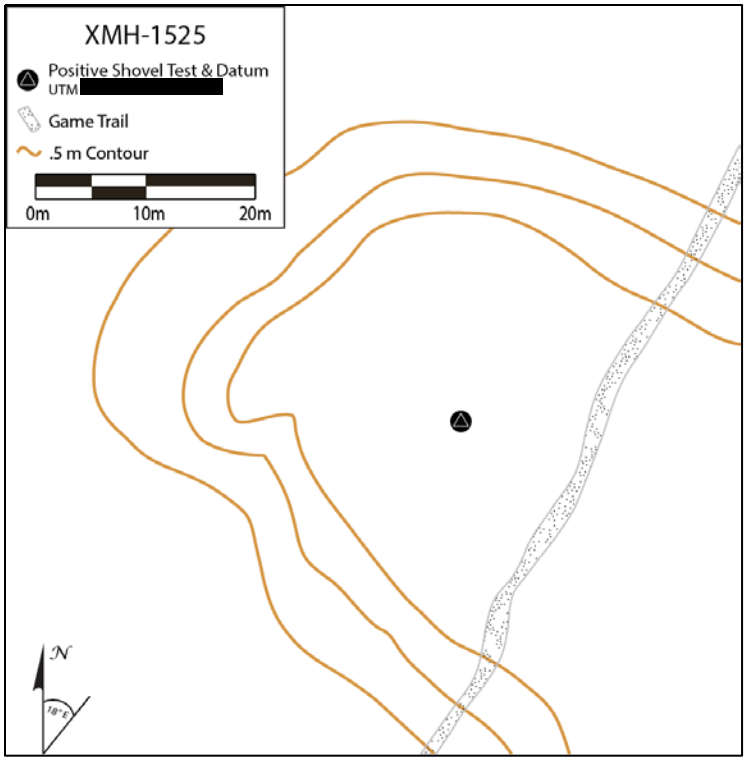

Figure 19. XMH-01525 site map.

Table 2. XMH-01525 accession log.

Accession #	Provenience	Quantity	Artifact Type	Raw Material
UA2017-126-0001	HT17, 0-9 cmbs	1	Flake fragment	Grey chert

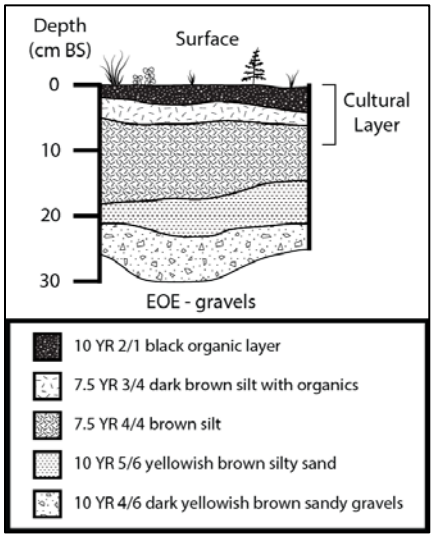

Figure 20. XMH-01525 site stratigraphy.

Figure 21. XMH-01525 test pit.

XMH-01526
Latitude: [redacted]
Longitude: [redacted]
UTM: [redacted], Zone 6 (WGS 84)
Determination of Eligibility: Not evaluated

XMH-1526 is located on a small knoll at the south end of a long moraine, 14 km southeast of Delta Junction (Figure 13). XMH-01525 is located 1 km away, at the north end of the same feature. The knoll is 20 m in diameter and has a 100° viewshed of the Granite Mountains to the southeast. Site vegetation includes birch and aspen saplings, spruce, low scrub, grass, and lichen, with 50% of the surface visible (Figure 22). Sue Lake, 450 m to the east, is the closest water source. An active ATV trail ends at the site, with another active trail running east-west 40 m to the south. Trash and bullet casings are also present.

A small flake scatter was identified on the surface during survey, consisting of 1 grey, 1 red, and 5 dark grey chert flakes (Figure 23, Figure 24). The artifacts were not collected and no shovel tests were excavated.

Figure 22. XMH-01526 site overview.

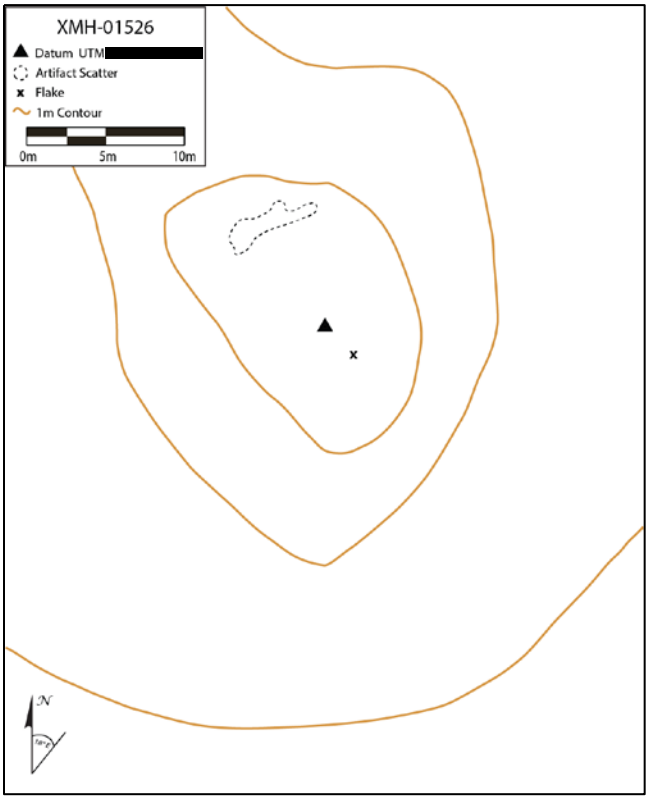

Figure 23. XMH-01526 site map.

Figure 24. Flake on surface at XMH-01526.

XMH-01527
Latitude: [redacted]
Longitude: [redacted]
UTM: [redacted], Zone 6 (WGS 84)
Determination of Eligibility: Not evaluated

XMH-1527 is located on the apex of a hill, 12 km south of Delta Junction, and 1 km west of Fleet Street (Figure 13). The Granite Mountains, Alaska Range, and Donnelly Dome are visible to the southeast. The remainder of the viewshed is blocked by spruce, birch and aspen. Low scrub, moss, grass and lichens are also present (Figure 25). Surface visibility is 25%, due to active ATV trails disturbing the vegetation. The closest water source is Dalon Lake 280 m to the southwest. Disturbances on site include several active ATV trails, re-vegetated push piles, and a recent fire ring.

Three chert flakes were found in a single shovel test, 0-15 cmbs (Figure 26, Table 3). One flake is made from grey chert and the other two were fashioned on red and white chert. The red color may possibly be a result of heat treatment. A physical datum was placed 1 m east the shovel test. Deposits are shallow in this location. Weakly weathered silt overlies glacial gravels to 20 cmbs. A thin organic cap is found at the top of the profile (Figure 27, Figure 28).

Figure 25. XMH-01527 site overview.

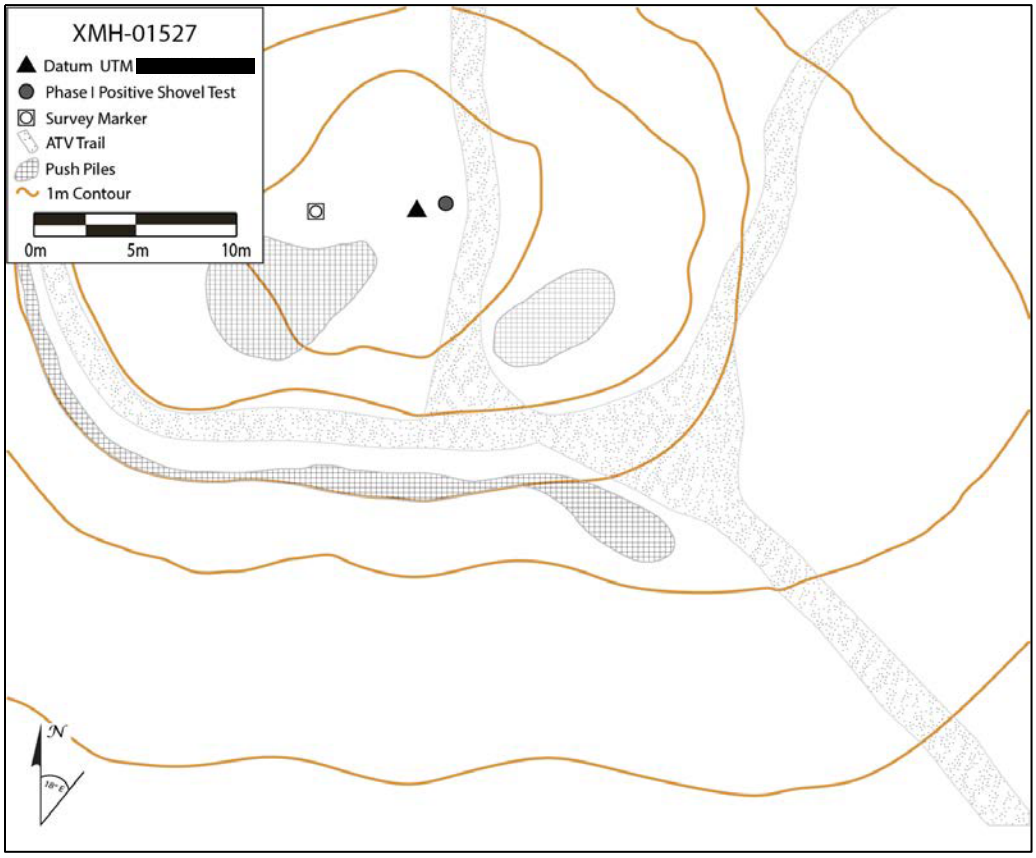

Figure 26. XMH-01527 site map.

Table 3. XMH-01527 accession log.

Accession #	Provenience	Quantity	Artifact Type	Raw Material
UA2017-127-0001	HT53, 0-10 cmbs	2	Flakes	Grey, red and white chert
UA2017-127-0002	HT53, 10-15 cmbs	1	Flake fragment	Red and white chert

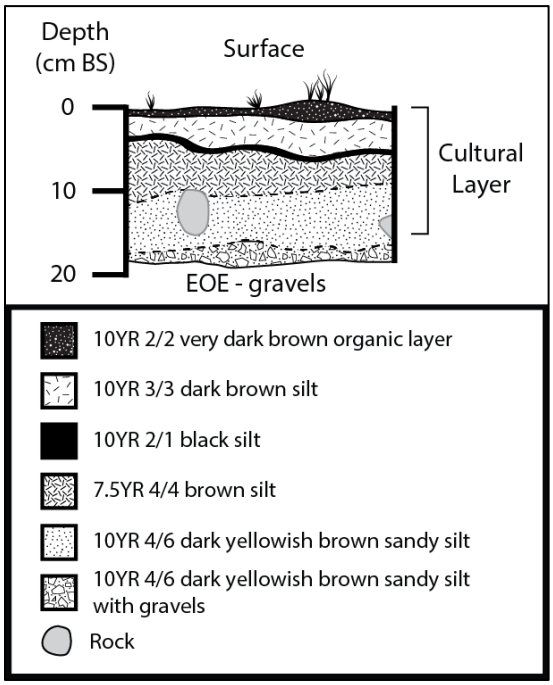

Figure 27. XMH-01527 site stratigraphy.

Figure 28. XMH-01527 test pit.

XMH-01554
Latitude: [redacted]
Longitude: [redacted]
UTM: [redacted] Zone 6 (WGS 84)
Determination of Eligibility: Not evaluated

XMH-01554 is located on a northwest-southeast trending moraine 12 km southeast of Delta Junction and 1.5 km west of Fleet Street (Figure 13). The moraine and site overlook Dalon Lake, 50 m to the northeast. The 180° viewshed includes Dalon Lake to the northeast, the Granite Mountains to the southeast and Donnelly Dome to the south. Spruce, aspen, willow, small scrub, and grasses cover the ground except in the faint ATV trail, which leaves 1% of the surface visible (Figure 29). The ATV trail and a game camera 10 m south of datum are the only evidence of recreational use.

Two shovel tests were excavated during survey, yielding 1 grey chert flake from 5-15 cmbs (Figure 30, Table 4). The positive shovel test was used as datum. Approximately 45 cm of silt overlies glacial gravels in this location (Figure 31, Figure 32). A thin, 1 cm, organic horizon caps a thin A horizon and weakly developed B horizon. The artifact was found within the B horizon of the soil profile.

Figure 29. XMH-01554 site overview.

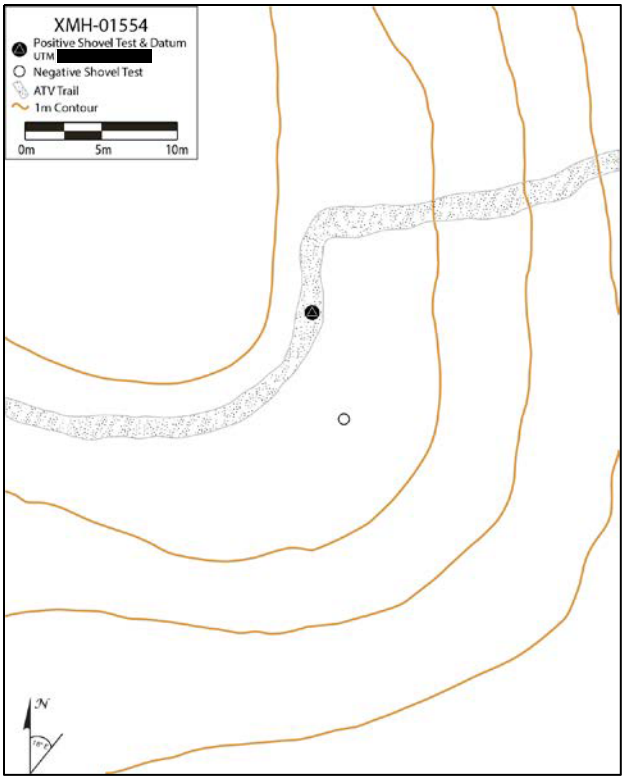

Figure 30. XMH-01554 site map.

Table 4. XMH-01554 accession log.

Accession #	Provenience	Quantity	Artifact Type	Raw Material
UA2017-128-0001	HT57, 5-15 cmbs	1	Flake fragment	Grey chert

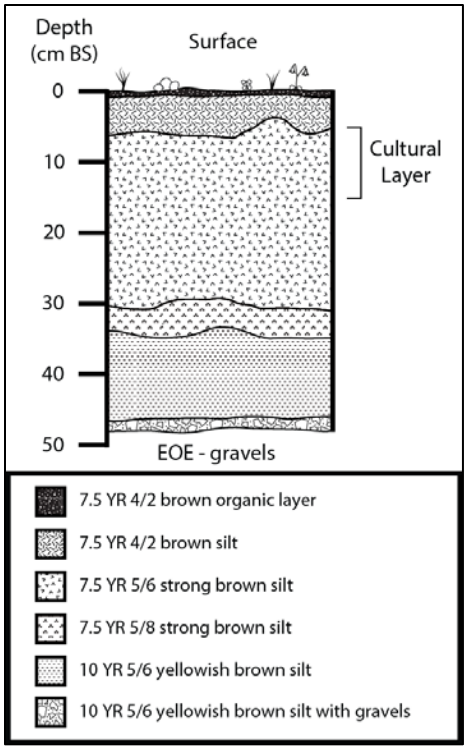

Figure 31. XMH-01554 site stratigraphy.

Figure 32. XMH-01554 test pit.

XMH-01555
Latitude: [redacted]
Longitude: [redacted]
UTM: [redacted], Zone 6 (WGS 84)
Determination of Eligibility: Not evaluated

XMH-01555 is located on a long glacial moraine, 16.5 km south of Delta Junction and 1.2 km east of 33-Mile Loop Road (Figure 13). The moraine runs northeast-southwest, and elevation drops steeply on the most eastern edge to the surrounding area. Donnelly Dome and the Granite Mountains are visible to the southwest, with the Granites extending to the southeast. Site vegetation consists of mostly low scrub, moss and lichen with an 85% surface exposure (Figure 33). Additional vegetation from sloped areas of the site include spruce, birch, alder and young birch. The nearest access to water is two small unnamed lakes, one 285 m to the northeast and the other 530 m to the northwest.

During survey, five small lithic scatters were recorded across the surface of the site (Figure 34). Material types range from tan, gray, green and banded cherts, to light gray or purple rhyolite and gray basalt. Artifacts include 19 flakes, a large chopper, microblade fragment, microblade core, microblade core fragment, a biface fragment, and a biface tip (Table 5, Figure 35). All the tools except the chopper were collected. No shovel tests were excavated at the site.

Figure 33. XMH-01555 site overview.

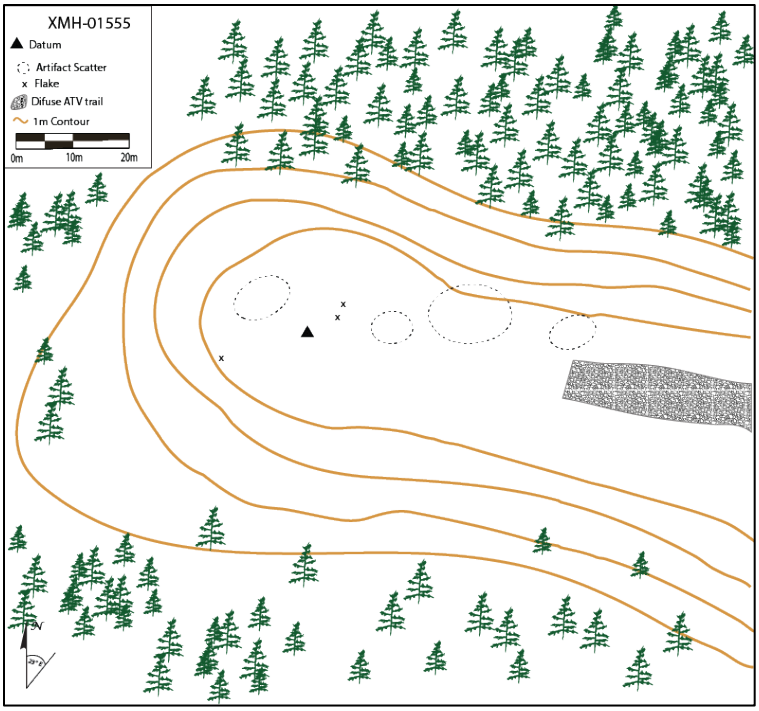

Figure 34. XMH-01555 site map.

Table 5. XMH-01555 accession log.

Accession #	Provenience	Quantity	Artifact Type	Raw Material
UA2017-129-0001	surface	1	Microblade core fragment	Grey chert
UA2017-129-0002	surface	1	Medial microblade fragment	Black chert
UA2017-129-0003	surface	1	Biface tip	Grey banded chert
UA2017-129-0004	surface	1	Microblade core	Dark brown chert
UA2017-129-0005	surface	1	Biface fragment	Grey banded chert

Figure 35. Artifacts from XMH-01555, microblade core preform, microblade core, and biface tip (left to right).

Summary of Archaeological Surveys and Sites

A total of 105,265 acres of land have been surveyed in Donnelly Training Area between 2002 and 2017 (Figure 36). This accounts for 16.6% of the total land area. Most of the survey has been conducted in DTA East and only portions of TA 501, 502, 508, 530, 531, and 532 remain. Army trainings and development activities continue to expand in DTA East. A total of 475 archaeological sites have been found in the DTA. Two sites are historic and 473 are prehistoric. Of the total sites, 54 have been found eligible for the NRHP, 67 are not eligible, and the remaining 354 have not yet been evaluated.

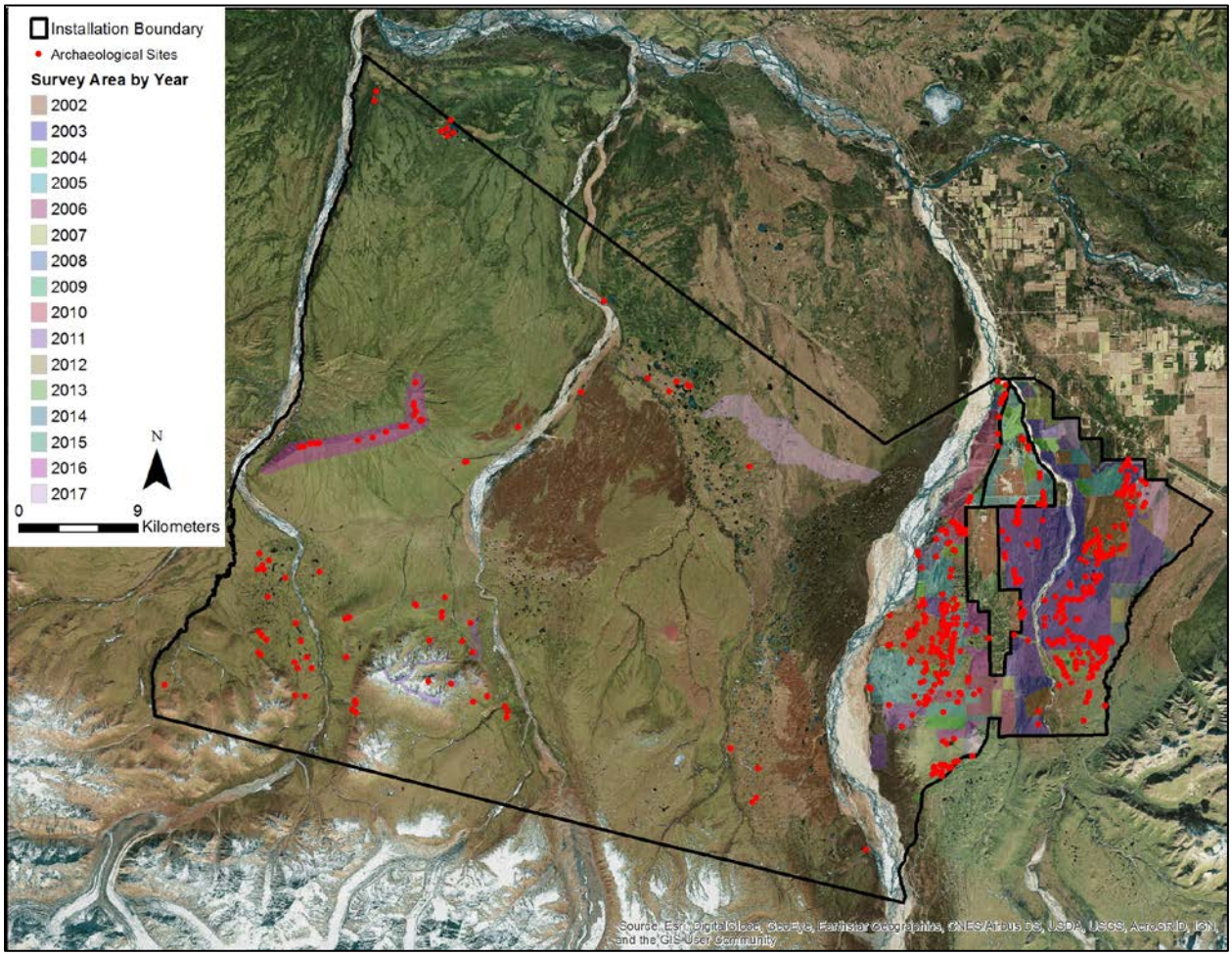

Figure 36. All archaeological surveys in DTA by year.

2017 Gerstle River Training Area

NAGPRA and ARPA Activities

No activities related to NAGPRA or ARPA took place in GRTA in 2017.

Section 106 Activities

No section 106 surveys were conducted in GRTA in 2017.

Section 110 Archaeological Surveys

No new archaeological surveys were conducted in GRTA in 2017.

Newly Discovered Archaeological Sites

No new archaeological sites were found in GRTA in 2017.

Summary of Archaeological Surveys and Sites

To date, 279 acres of land have been surveyed in GRTA representing 1.3% of the total land area (Figure 37). Army training is not common in this area, and surveys are tied to small trail projects and timber sales. There are three prehistoric sites located in GRTA. One has been found ineligible for the NRHP and two have not yet been evaluated.

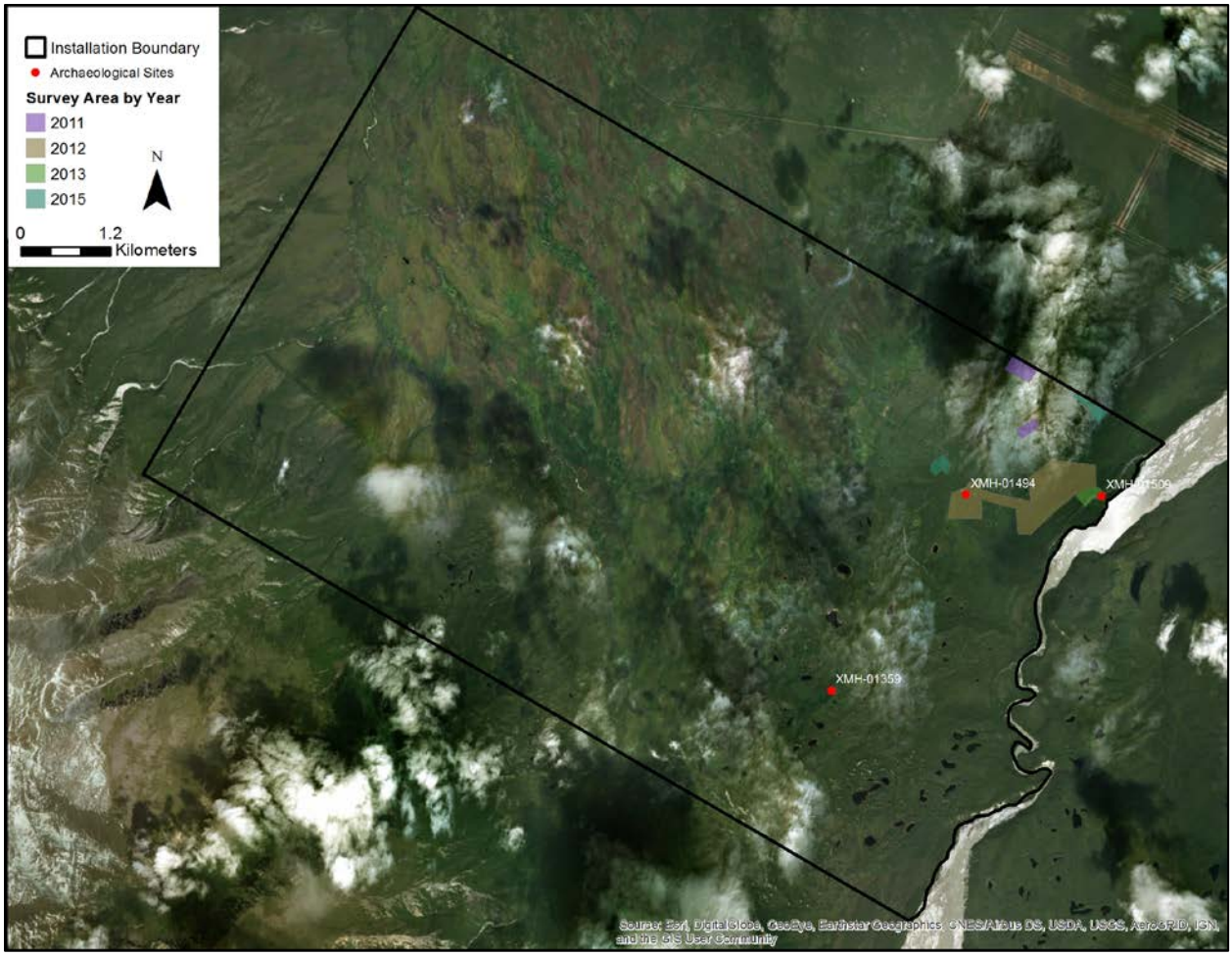

Figure 37. All archaeological surveys in GRTA by year.

2017 Black Rapids and Whistler Creek Training Areas

NAGPRA and ARPA Activities

No activities related to NAGPRA or ARPA took place in BRTA and WCTA in 2017.

Section 106 Activities

No section 106 surveys were conducted in BRTA and WCTA in 2017.

Section 110 Archaeological Surveys

No new archaeological surveys were conducted in BRTA and WCTA in 2017.

Newly Discovered Archaeological Sites

No new archaeological sites were found in BRTA and WCTA in 2017.

Summary of Archaeological Surveys and Sites

To date, 1589 acres of land have been surveyed in BRTA and WCTA representing 47.9% of the total land area (Figure 38). There are 11 prehistoric sites located in these training areas. Four sites have been found ineligible for the NRHP and seven have not yet been evaluated.

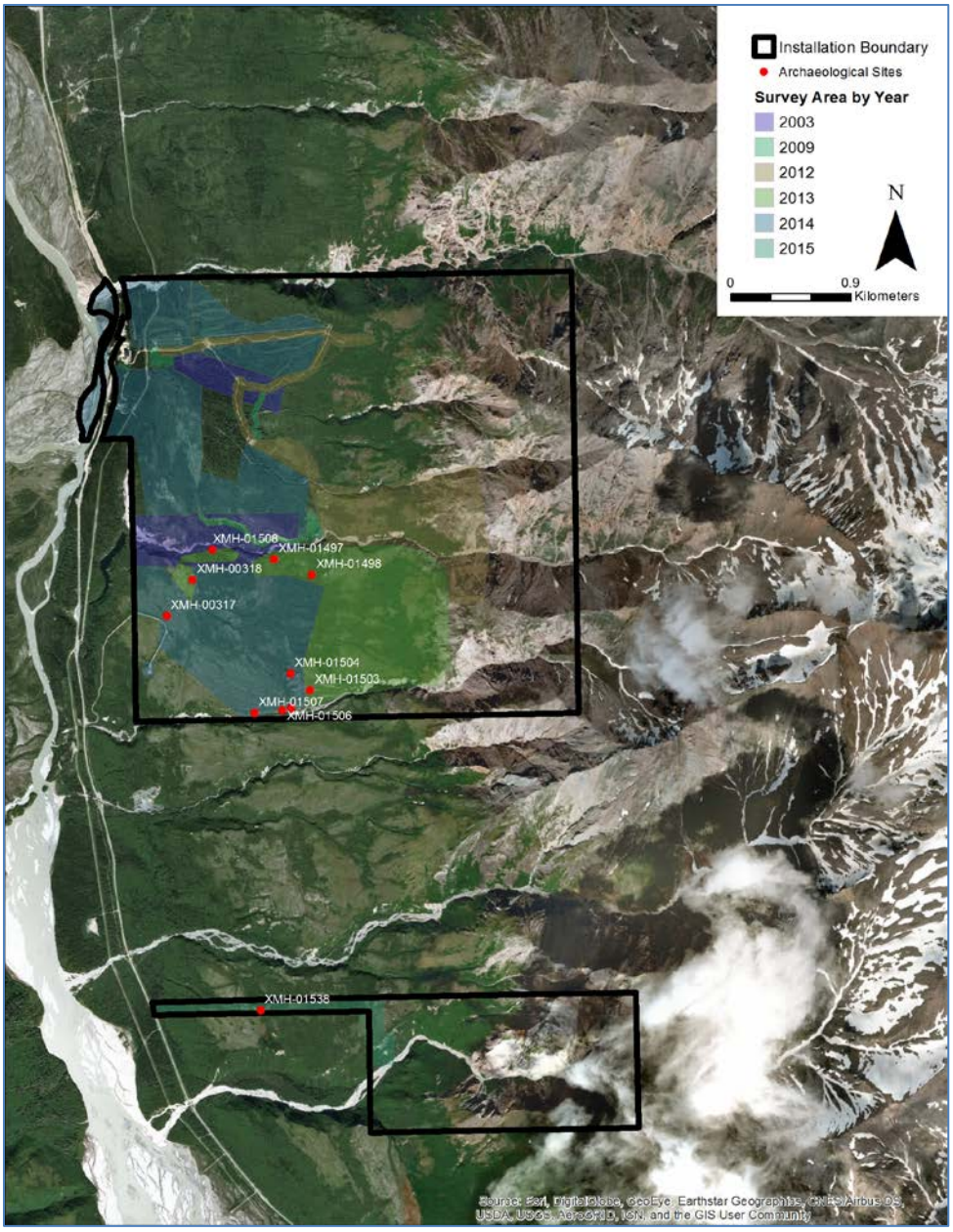

Figure 38. All archaeological surveys in BRTA and WCTA by year.

2017 Tok Terminal

NAGPRA and ARPA Activities

No activities related to NAGPRA or ARPA took place at Tok Terminal in 2017.

Section 106 Activities

There were no undertakings requiring Section 106 consultation at Tok Terminal during 2017. The terminal is property is undergoing restoration in the area where fuel tanks were located during the cold war. Archaeological surveys are planned for 2018 in support of this project.

Section 110 Archaeological Surveys

No new archaeological surveys were conducted at Tok Terminal in 2017.

Newly Discovered Archaeological Sites

No new archaeological sites were found at Tok Terminal in 2017.

Summary of Archaeological Surveys and Sites

To date, 41 out of 72 undisturbed acres of land (56.9%) have been surveyed at Tok Terminal (Figure 40). Another 140 acres of land are managed by Fort Wainwright, but these areas have been heavily disturbed by past activities related to the fuel terminal. There are 10 prehistoric sites located in these training areas. One site has been found ineligible for the NRHP, two sites have been found eligible, and seven sites have not yet been evaluated.

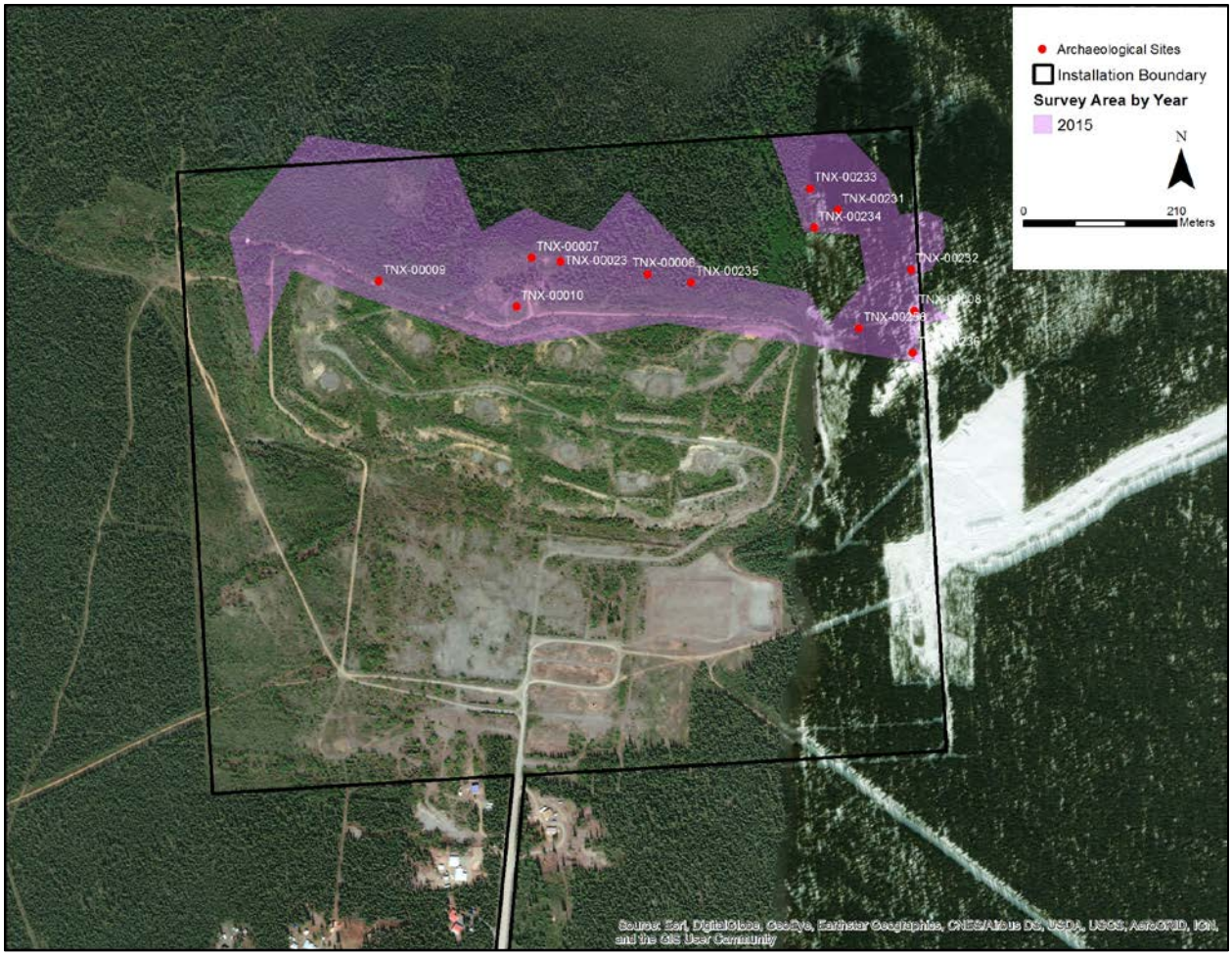

Figure 39. All archaeological surveys in Tok Terminal by year.

Summary

In summary, three section 106 consultations for Army undertakings in addition to activities covered under the O&M PA took place in 2017, one in TFTA (Tanana Flats Winter Trail) and two in DTA (Phase IV Granite Creek Trail and CRTC Targets). In addition to these projects, consultation took place for the 2015&2016 Fort Wainwright Annual Archaeological Report, the 2016 BAX Monitoring Report, and the Archaeological Districts on Fort Wainwright Report. Annual reports of ARPA activities were received from Texas A&M University (FAI-02043 Annual Report) and University of Michigan (XMH-00917 Annual Report). All reports and letters were distributed to local tribes and consulting parties and reports were posted on Fort Wainwright's website (https://www.wainwright.army.mil/index.php/about/environmental/cultural-resources/section-106-consultation).

Over 19,000 acres of land on Fort Wainwright were surveyed in 2017 (Table 6). These surveys were mainly in support of future trail development and timber sales. Six new archaeological sites were found and the Bonnifield Trail was surveyed and given an AHRS number (Table 7).

Archaeological fieldwork not presented in this report includes excavations at XMH-01303 and fieldwork for site DOEs. The fieldwork and analyses associated with the XMH-01303 excavations will be provided in a separate report. DOE fieldwork and eligibility recommendations will be provided in a Supplemental Volume to the Archaeological Districts on Fort Wainwright Report in 2019.

Table 6. Archaeological surveys on Fort Wainwright.

Training Area	2017 Acres Surveyed	Total Acres Surveyed	Percent Surveyed
Cantonment	1	12500	100
TFTA	7177	15066	2.3
YTA	1582	53098	20.8
DTA	10471	105265	16.6
GRTA	0	279	1.3
BRTA & WCTA	0	1589	47.9
Tok Terminal	0	56.9	19.3
Total	**19231**	**188863**	**12**

Table 7. Archaeological Sites on Fort Wainwright.

Training Area	2017 Sites	Total Sites	Eligible	Not Eligible	Not Evaluated
Cantonment	0	11	1	10	0
TFTA	1	169	17	2	150
YTA	0	21	0	14	7
DTA	6	475	54	67	354
GRTA	0	3	0	1	2
BRTA & WCTA	0	11	0	4	7
Tok Terminal	0	10	2	1	7
Total	**7**	**700**	**74**	**99**	**527**

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Appendix 1: 2017 AHRS Forms

Alaska Heritage Resources Survey

Alaska Office of History and Archaeology

For further information contact the Alaska Office of History and Archaeology at (907) 269-8721

Compiled: Wed Sep 26 13:19:11 AKDT 2018

This document contains restricted information. Unauthorized circulation is prohibited by law!

AHRS Number:	**FAI-02497**	**Mapsheet(s):**	3 found; see bottom of card
Acreage:	**Date Issued:** 03-20-2018	**MTRS(s):**	42 found; see bottom of card
Resource Shape:		**Location Approximate:**	Yes
Point Representation:	Lat: 64.58825031, Long: -147.81312535	**Assigned To:**	Julie Esdale/Casey Woster CEMML

Site Name: Bonnifield Trail
Associations:
Fort Wainwright/US Army
Informal Association(s):

Site Description:
This is a 52.5 km section of the historic Bonnifield Trail located on Fort Wainwright-managed lands in Tanana Flats Training Area. The trail is cleared of brush and primarily used as a recreational access route during the winter months. The Bonnifield Trail is a historic trail connecting Fairbanks with the Gold King Creek mining area. The Bonnifield region reported gold discoveries in 1903, and the trail was officially surveyed in 1909 and consisted of a pack trail. Much of the transportation of goods into and gold out of the Bonnifield region took place during winter months, when the Tanana Flats area was frozen enough to support a sled road.

Site Significance:

Location:
This trail starts at the southern edge of the Tanana River, south of Fairbanks, and heads nearly straight south to the Wood River, following the eastern edge of Salmonloaf Butte and the western edge of Clear Creek Buttes (52.5 km).

References: none

Document Repository References: none

AHRS Record Attachments: none

Danger(s) of Destruction:

Present Condition: Normal state of weathering, undisturbed by vandalism, construction or abnormal weathering such as flooding or earthquakes (A)

Associated Dates: 1909
Period(s): Historic

AHRS Resource Nature: Site (A site is a location of significance)
Resnat Subtype: Default Site
Resource Keywords: Trail, Transporation, Mining, Recreation, Military

Historic Function(s): Transportation
Current Function(s): Transportation
Cultural Affiliation:

Property Owner: US Army Garrison Alaska/BLM

Alaska Heritage Resources Survey

Alaska Office of History and Archaeology

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Compiled: Wed Sep 26 13:19:11 AKDT 2018

Other Number(s):
Source Reliability: Professional reports, records and field studies (A)
Location Reliability: Location exact and site existence verified (1)

Determinations of Eligibility: none

National Register Nominations: none

Mapsheet(s):

FAIRBANKS D-2 (FAID2), FAIRBANKS C-2 (FAIC2), FAIRBANKS B-2 (FAIB2)

MTRS(s):

F006S002W23, F006S002W26, F006S002W35, F005S002W26, F005S002W25, F005S002W24, F005S002W13
F005S002W12, F005S002W01, F004S002W36, F004S002W25, F006S002W14, F006S002W11, F006S002W02
F005S002W35, F002S001W27, F002S001W22, F002S001W15, F002S001W14, F002S001W10, F002S001W11
F002S001W02, F001S001W35, F002S001W28, F002S001W03, F003S001W19, F003S001W18, F003S001W17
F003S001W08, F003S001W09, F003S001W05, F003S001W04, F002S001W33, F004S002W13, F004S002W24
F003S001W30, F003S001W31, F004S001W06, F004S001W07, F004S001W18, F006S002W34, F007S002W03

Alaska Heritage Resources Survey

Alaska Office of History and Archaeology

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Compiled: Tue Oct 24 14:15:53 AKDT 2017

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AHRS Number: XMH-01524 **Mapsheet(s):** MT HAYES D-4 (XMHD4)
Acreage: **Date Issued:** 03-21-2014 **MTRS(s):** F011S011E24
Resource Shape: Point **Location Approximate:** Yes
Point Representation: Lat: [redacted] **Assigned To:** CEMML/Esdale, J.

Site Name: H17-1
Associations:
Informal Association(s):

Site Description:
H17-1 is S of Granite Creek Trail on a low hill 40m wide. The viewshed is completely blocked by aspen, spruce, and birch. Other vegetation on site includes willow, low scrub, lichens and grasses. Surface visibility is 5%. The closest water source is currently Sue Lake 718m to the S, although a dry lake bed 383m to the SW would have been closer when full. An old possible shovel test is the only disturbance noted. A chert flake was found in a shovel test from 10-15cmbs, while another shovel test was negative. A nail was placed as datum at the above coordinates.

Site Significance:

Location:
H17-1 is on a hill 70m S of Granite Creek Trail, in Donnelly Training Area, 14km SE of Delta Junction.

References: none

Document Repository References: none

AHRS Record Attachments: none

Danger(s) of Destruction:

Present Condition: Normal state of weathering, undisturbed by vandalism, construction or abnormal weathering such as flooding or earthquakes (A)

Associated Dates:
Period(s): Prehistoric

AHRS Resource Nature: Site (A site is a location of significance)
Resnat Subtype: Default Site
Resource Keywords:

Historic Function(s):
Current Function(s):
Cultural Affiliation:

Property Owner: BLM/Army

Other Number(s): H17-1
Source Reliability: Professional reports, records and field studies (A)
Location Reliability: Location exact and site existence verified (1)

Determinations of Eligibility: none

National Register Nominations: none

Alaska Heritage Resources Survey

Alaska Office of History and Archaeology

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Compiled: Tue Oct 24 14:15:53 AKDT 2017

AHRS Number: XMH-01525 **Mapsheet(s):** MT HAYES D-4 (XMHD4)
Acreage: **Date Issued:** 03-21-2014 **MTRS(s):** F011S011E14
Resource Shape: Point **Location Approximate:** Yes
Point Representation: Lat: [redacted] **Assigned To:** CEMML/Esdale, J.

Site Name: H17-2
Associations:
Informal Association(s):

Site Description:
H17-2 is on the N end of a long moraine with H17-3 on the S end 1 km away. The 45° viewshed open in the NW overlooks a clearing 30m away. Site vegetation consists of aspen, spruce, low scrub, moss, lichen and grass. There is no exposed soil on the surface. The closest water sources are Mary Lake to the SW and South Pat Lake to the N, both 500m away. There are no disturbances on the site, but there is a large 450x100m cleared area 30m to the N. A shovel test excavated during survey recovered 1 grey chert flake fragment from 0-9cmbs. No other shovel tests were excavated.

Site Significance:

Location:
H17-2 is on a moraine 400m E of the 33 Mile Loop Road extension going to Fleet St in Donnelly Training Area, 14km SE of Delta Junction.

References: none

Document Repository References: none

AHRS Record Attachments: none

Danger(s) of Destruction:

Present Condition: Normal state of weathering, undisturbed by vandalism, construction or abnormal weathering such as flooding or earthquakes (A)

Associated Dates:
Period(s): Prehistoric

AHRS Resource Nature: Site (A site is a location of significance)
Resnat Subtype: Default Site
Resource Keywords:

Historic Function(s):
Current Function(s):
Cultural Affiliation:

Property Owner: BLM/Army

Other Number(s):
Source Reliability: Professional reports, records and field studies (A)
Location Reliability: Location exact and site existence verified (1)

Determinations of Eligibility: none

National Register Nominations: none

Alaska Heritage Resources Survey

Alaska Office of History and Archaeology

For further information contact the Alaska Office of History and Archaeology at (907) 269-8721

Compiled: Tue Oct 24 14:15:53 AKDT 2017

AHRS Number: XMH-01526
Acreage:
Resource Shape: Point
Point Representation: Lat [redacted]
Date Issued: 03-21-2014
Mapsheet(s): MT HAYES D-4 (XMHD4)
MTRS(s): F011S011E23
Location Approximate: Yes
Assigned To:

Site Name: H17-3
Associations:
Informal Association(s):

Site Description:
H17-3 is on a small knoll at the S end of a long moraine with H17-2 at the N end 1km away. The knoll is 20m in diameter with a 100° viewshed of the Granite Mountains in the SE. Site vegetation includes birch and aspen saplings, spruce, low scrub, grass, and lichen, with 50% of the surface visible. Sue Lake, 450m to the E, is the closest water source. An active ATV trail ends at the site, with another active trail running E-W 40m to the S. Trash and bullet casings are also present. A small flake scatter was identified on the surface during survey, consisting of 1 gray, 1 red, and 5 dark gray chert flakes. The artifacts were not collected.

Site Significance:

Location:
H17-3 is on a small knoll 340m E of Granite Creek Trail in Donnelly Training Area, 14km SE of Delta Junction.

References: none

Document Repository References: none

AHRS Record Attachments: none

Danger(s) of Destruction:
Recreation, Military Activities
Present Condition: Normal state of weathering, undisturbed by vandalism, construction or abnormal weathering such as flooding or earthquakes (A)

Associated Dates:
Period(s): Prehistoric

AHRS Resource Nature: Site (A site is a location of significance)
Resnat Subtype: Default Site
Resource Keywords:

Historic Function(s):
Current Function(s):
Cultural Affiliation:

Property Owner: BLM/Army

Other Number(s):
Source Reliability: Professional reports, records and field studies (A)
Location Reliability: Location exact and site existence verified (1)

Determinations of Eligibility: none

National Register Nominations: none

Alaska Heritage Resources Survey

Alaska Office of History and Archaeology

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Compiled: Tue Oct 24 14:15:53 AKDT 2017

AHRS Number: XMH-01527
Acreage:
Date Issued: 03-21-2014
Resource Shape: Point
Point Representation: Lat: [redacted]
Mapsheet(s): MT HAYES D-4 (XMHD4)
MTRS(s): F011S011E11
Location Approximate: Yes
Assigned To:

Site Name: H17-4
Associations:
Informal Association(s):

Site Description:
H17-4 is on the apex of a hill on the edge of military land. The Granite Mountains, Alaska Range, and Donnelly Dome are visible to the SE. The remainder of the viewshed is blocked by spruce, birch and aspen. Low scrub, moss, grass and lichens are also present. Surface visibility is 25%, due to active ATV trails. The closest water source is Dalon Lake 280m to the SW. Disturbances on site include several active ATV trails, re-vegetated push piles, and a recent fire ring 50m to the SE. Three chert flakes were found in a shovel test from 0-15cmbs during survey. One is grey chert, and two are red and white chert, possibly heat treated. A physical datum was placed 1m W of the positive shovel test.

Site Significance:

Location:
H17-4 is on a hill 1km W of Fleet St in Donnelly Training Area, 12km S of Delta Junction.

References: none

Document Repository References: none

AHRS Record Attachments: none

Danger(s) of Destruction:

Present Condition: Normal state of weathering, undisturbed by vandalism, construction or abnormal weathering such as flooding or earthquakes (A)

Associated Dates:
Period(s): Prehistoric

AHRS Resource Nature: Site (A site is a location of significance)
Resnat Subtype: Default Site
Resource Keywords:

Historic Function(s):
Current Function(s):
Cultural Affiliation:

Property Owner: BLM/Army

Other Number(s):
Source Reliability: Professional reports, records and field studies (A)
Location Reliability: Location exact and site existence verified (1)

Determinations of Eligibility: none

National Register Nominations: none

Alaska Heritage Resources Survey

Alaska Office of History and Archaeology

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Compiled: Tue Oct 24 14:15:53 AKDT 2017

AHRS Number: XMH-01554 **Mapsheet(s):** MT HAYES D-4 (XMHD4)
Acreage: **Date Issued:** 10-24-2017 **MTRS(s):** F011S011E14
Resource Shape: Point **Location Approximate:** Yes
Point Representation: Lat: [redacted] **Assigned To:** CEMML/Esdale, J.

Site Name: H17-5
Associations:
Informal Association(s):

Site Description:
H17-5 is on a NW-SE trending moraine overlooking Dalon Lake 50m to the E. The 180° viewshed shows Dalon Lake to the NE, the Granite Mountains to the SE and Donnelly Dome to the S. Spruce, aspen, willow, small scrub, and grasses cover the ground except in the faint ATV trail, which leaves 1% of the surface visible. Dalon Lake is the closest water source. The ATV trail and a game camera 10m S of datum are the only evidence of recreational use. Two shovel tests were excavated during survey, yielding 1 grey chert flake from 5-15cmbs. The positive shovel test was used as datum.

Site Significance:

Location:
H17-5 is on a moraine overlooking Dalon Lake 1.5km W of Fleet St., in Donnelly Training Area, 12km SE of Delta Junction.

References: none

Document Repository References: none

AHRS Record Attachments: none

Danger(s) of Destruction:
Recreation
Present Condition: Normal state of weathering, undisturbed by vandalism, construction or abnormal weathering such as flooding or earthquakes (A)

Associated Dates:
Period(s): Prehistoric

AHRS Resource Nature: Site (A site is a location of significance)
Resnat Subtype: Default Site
Resource Keywords:

Historic Function(s):
Current Function(s):
Cultural Affiliation:

Property Owner: BLM/Army

Other Number(s):
Source Reliability: Professional reports, records and field studies (A)
Location Reliability: Location exact and site existence verified (1)

Determinations of Eligibility: none

National Register Nominations: none

Alaska Heritage Resources Survey

Alaska Office of History and Archaeology

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Compiled: Tue Oct 24 14:15:53 AKDT 2017

AHRS Number: XMH-01555 **Mapsheet(s):** MT HAYES D-4 (XMHD4)
Acreage: **Date Issued:** 10-24-2017 **MTRS(s):** F012S011E03
Resource Shape: Point **Location Approximate:** Yes
Point Representation: Lat [redacted] **Assigned To:** CEMML/Esdale, J.

Site Name: W17-1
Associations:
Informal Association(s):

Site Description:
Site is located on a long glacial moraine that runs NE-SW on the most E edge before the elevation drops to the surrounding area. Donnelly Dome and the Granite Mountains are visible to the SW, with the Granites extending to the SE. Site vegetation consists of mostly low scrub, moss and lichen with an 85% surface exposure. Additional vegetation from sloped areas of the site include spruce, birch, alder and young birch. The nearest access to water is 2 small unnamed lakes, one 285m to the NE and the other 530m to the NW. During survey, 5 small lithic scatters were recorded across the surface of the site. Material types range from tan, gray, green and banded cherts, to light gray or purple rhyolite and gray basalt. Artifacts include 19 flakes, a large chopper, microblade fragment, microblade core, microblade core fragment, biface fragment and biface tip. All the tools except the chopper were collected.

Site Significance:

Location:
W17-1 is on a moraine 1.2km E of 33 Mile Loop Road in Donnelly Training Area, 16.6km S of Delta Junction.

References: none

Document Repository References: none

AHRS Record Attachments: none

Danger(s) of Destruction:
Recreation
Present Condition: Normal state of weathering, undisturbed by vandalism, construction or abnormal weathering such as flooding or earthquakes (A)

Associated Dates:
Period(s): Prehistoric

AHRS Resource Nature: Site (A site is a location of significance)
Resnat Subtype: Default Site
Resource Keywords:

Historic Function(s):
Current Function(s):
Cultural Affiliation:

Property Owner: BLM/Army

Other Number(s):
Source Reliability: Professional reports, records and field studies (A)
Location Reliability: Location exact and site existence verified (1)

Determinations of Eligibility: none

National Register Nominations: none