



31 January 2018

Tim LaMarr, Central Yukon Field Manager  
U.S. Bureau of Land Management, Fairbanks District Office  
222 University Avenue  
Fairbanks, AK 99709-3844  
*Sent via email*

**Re: State of Alaska consolidated scoping comments regarding proposed controlled access road for the Ambler Mining District Industrial Access Project.**

Dear Mr. LaMarr:

The Alaska Departments of Fish and Game (ADF&G), Environmental Conservation (ADEC), Health and Social Services (DHSS) and Natural Resources (ADNR) appreciate the opportunity to provide comments and recommendations for consideration in the scoping phase of the environmental impact statement (EIS) for the Ambler Mining District Industrial Access Project (AMDIAP). The EIS is being prepared to inform the federal agencies' permitting decisions, including the Bureau of Land Management (BLM) decision to issue a right-of-way across BLM lands, the U.S. Army Corps of Engineers (USACE) decision to issue Section 404 permits for wetlands within the proposed road corridor, and the U.S. Coast Guard decision to issue Section 10 permits for any proposed bridges across navigable rivers. As the proposed project is predominately on state lands, the State has a vested interest in the federal scoping and alternatives analysis as these federal decisions will affect the permitting decisions the State will need to make after the final route is determined.

The State encourages the BLM to ensure the EIS provides the necessary clarity to the public on how human health, wildlife, and the state's lands and waters are protected by both the State and federal regulatory agencies. We request the EIS fully describe and take into consideration the State's regulatory authorities which mitigate project impacts. This will ensure the public is fully informed and that all relevant, reasonable mitigation measures that could improve the AMDIAP are identified. To that end, we have provided summaries of the state's authorities as they may relate to the AMDIAP as described in the federal SF299 application.<sup>1</sup> Also included here please find information regarding known studies and data in the area, updates to past studies, and suggestions for further information needs.

**Proposed Project**

The SF299 permit application submitted to the federal agencies by the Alaska Industrial Development and Export Authority (AIDEA) is for an industrial access road, not open to public use, extending west from the Dalton Highway to the south bank of the Ambler River.

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<sup>1</sup> To date, no state agencies have received any permit applications for the AMDIAP.

## **Consistency with Congressional Intent**

The application is consistent with the 1980 Alaska National Interest Lands Conservation Act (ANILCA) Section 201(4)(b), where Congress expressed its intent that there be access for surface transportation purposes across the Western Kobuk River unit of the Gates of the Arctic National Preserve from the Ambler Mining District to the Alaska Pipeline Haul Road (i.e., the Dalton Highway).

The BLM has long recognized this intent; in its 1989 Final Environmental Impact Statement (FEIS) for the Pipeline Utility Corridor Resource Management Plan the BLM identified the need for a “Ambler Mining District Transportation Corridor” across BLM lands *to facilitate BLM’s responsibility under ANILCA Sec. 201 (4)(b) to provide a right-of-way from the Ambler Mining District (AMD) to the Dalton Highway.*<sup>2</sup> In the resulting 1991 Record of Decision (ROD), the BLM Alaska State Director directly addressed the intent of Congress for access across the BLM-administered public lands adjacent to the Dalton Highway by determining:

*...as required by section 201 (4)(b) of the ANILCA, the need for access to the Ambler Mining District is hereby recognized and will be provided upon application by the state of Alaska, and that subsistence hearings under section 810 of the ANILCA may be required during the processing of the application. Additionally, the need for access to other State-owned lands to the west of the Prospect unit<sup>3</sup> is recognized and the BLM State Director will entertain an application for a right-of-way for access to these lands...<sup>4</sup>*

The state calls on the BLM to continue to recognize in the AMDIAP EIS its responsibility to provide access across BLM lands to meet Congressional intent to provide access from the Ambler Mining District to the Dalton Highway.

## **Recent Ambler Mining District Studies**

The State would like to recognize the effort of the Alaska Department of Transportation (ADOT) in 2009 to 2012 to identify possible public transportation systems to the west and south from the mining district as well as a road corridor east to the Dalton Highway. Routes evaluated to the west included a 257-mile road and rail system to the Red Dog Port; a 245-mile road and rail system to Cape Blossom; and a 340-mile road and rail system to Cape Darby. To the south, routes included a 365-mile road connecting to the Elliot Highway and a 420-mile rail road corridor to the Parks Highway.

The ADOT studies found a road corridor to the Dalton Highway from the Ambler Mining District to have the least potential environmental impact based on a wide range of criteria, including those related to salmon/sheefish rivers, caribou habitat, wetland impacts, wild and scenic rivers, threatened and endangered species/critical habitat areas, and corridor length.

The state requests the BLM make a good faith effort to incorporate the ADOT analysis to the extent practical in the alternative identification and analysis of the AMDIAP EIS. This prior transportation analysis by ADOT can reasonably be expected to provide relevant information and significant efficiencies to the BLM and cooperating agencies in their alternative analysis in the EIS.

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<sup>2</sup> Italicized language from the *Utility Corridor Proposed Resource Management Plan and Final Environmental Impact Statement*, prepared by the Bureau of Land Management, signed by the Alaska State Director on 27 September 1989.

<sup>3</sup> The Prospect Unit was identified in the FEIS as within Townships 22, 23, and 24N, Ranges 14, 15, and 16W, Fairbanks Meridian

<sup>4</sup> Italicized language from the *Utility Corridor Resource Management Plan/Environmental Impact Statement Record of Decision* prepared by the Bureau of Land Management, signed by the Alaska State Director on 11 January 1991.

As a cooperating agency, ADNR, on behalf of the state agencies, anticipates further discussion on these issues to ensure the EIS is thorough and balanced, uses verifiable information and repeatable data, and that it includes a reasonable and viable range of alternatives that take congressional intent and ANILCA's unique purpose into consideration.

The State of Alaska remains a strong proponent of timely decision-making and a collaborative working relationship among state and federal agencies for the remainder of the EIS process, as well as any subsequent permitting of the proposed project. We look forward to working with the federal agencies toward that end. Should you have questions regarding these comments, or if our office can be of service in facilitating resolution on any outstanding issues, please don't hesitate to contact me at (907) 334-2185.

Sincerely,



Marie Steele, Large Project Coordinator  
Office of Project Management and Permitting

**ecc: BLM**

Karen Mouritsen, BLM Alaska Acting State Director  
Tina McMaster-Goering, AMDIAP EIS Project Manager

**State of Alaska**

John Crowther, Director State & Federal Relations, Office of the Governor  
Heidi Hansen, Deputy Commissioner, Alaska Department of Natural Resources  
Mark Wiggin, Deputy Commissioner, Alaska Department of Natural Resources  
Gary Mendivil, Office of the Commissioner Alaska Department of Environmental Conservation  
Ryan Anderson, Assistant Commissioner Alaska Dept. of Transportation and Public Facilities  
Brent Goodrum, DMLW Director, Alaska Department of Natural Resources  
Kris Hess, Deputy Director DMLW, Alaska Department of Natural Resources  
Marty Parsons, Deputy Director DMLW, Alaska Department of Natural Resources  
Don Perrin, Acting Director, Office of Project Management  
Jennifer Douglas, Assistant Attorney General, Alaska Dept. of Law  
Hazel Nelson, Substance Division Director, Alaska Dept. of Fish & Game  
Lisa Olsen, Subsistence Division Operations Manager, Alaska Dept. of Fish & Game  
Bruce Dale, Wildlife Conservation Division Director, Alaska Dept. of Fish & Game  
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Richard VanderHoek, State Archeologist, Alaska Department of Natural Resources  
Susan Magee, State ANILCA Coordinator, Alaska Department of Natural Resources  
Sarah Yoder, State HIA Coordinator, Alaska Dept. of Health and Social Services

**Cooperating & Participating Agencies**

Melissa Reardon, Project Manager, U.S. Army Corp of Engineers  
James Helfinstine, Project Manger, U.S. Coast Guard  
Patrick Savok, Chief of Staff, Northwest Arctic Borough  
Noah Naylor, Planning Director, Northwest Arctic Borough

Joe Durenberger, Project Manager, National Park Service  
Betty Chon, Project Manager, Federal Highway Administration  
Sarah Cohn, Project Manager, U.S. Fish and Wildlife Service

**NANA**

Lance Miller, Vice President Natural Resources, NANA Regional Corporation  
John Lincoln, Vice President of Lands, NANA Regional Corporation

**DOYON**

James Mery, Senior Vice President Lands and Natural Resources, Doyon Limited  
Sarah Obed, Vice President External Affairs, Doyon Limited

**AIDEA**

John Springsteen, AIDEA Executive Director  
Mark Davis, AIDEA Chief Infrastructure Development Officer  
Jeff San Juan, AIDEA Infrastructure Development Finance Officer

**Attachments:**

**Attachment I:** State of Alaska consolidated scoping comments regarding proposed controlled access road for the Ambler Mining District Industrial Access Project

**Attachment II:** OHA Summary of Deeping Testing Methodology

## **Attachment I**

### **The State of Alaska Consolidated EIS Scoping Comments Regarding The Proposed Controlled Access Road for the Ambler Mining District Industrial Access Project (AMDIAP) 31 January 2018**

The Alaska Departments of Fish and Game, Environmental Conservation, Health and Social Services, and Natural Resources provide the following comments to assist the BLM and the Cooperating Agencies during the scoping phase of the EIS for the Ambler Mining District Industrial Access Project (AMDIAP). These comments are based on each agencies' individual review of the relevant portions of the SF299 application materials; no state permit applications for the AMDIAP have been received. It is also possible that AMDIAP may require state authorizations and approvals in addition to those identified here; these comments are provided to assist BLM in preparing the draft EIS.

As proposed, AMDIAP would be a two-lane, gravel industrial access road from the Dalton Highway to the Ambler Mining District. It would require bridges, materials sites, maintenance stations and other infrastructure. The proposed AMDIAP corridor crosses primarily state lands (61%) and ANCSA Corporation lands (15%), NPS lands (12%), and BLM-managed lands (12%). The BLM-managed lands are primarily located near the Dalton Highway within the preexisting Dalton Highway Utility Corridor right-of-way (18.7 miles). The remaining BLM-managed lands (3.1 miles) are to the western end of the corridor and are pending conveyance to NANA or the State of Alaska.

#### **I. ALASKA DEPARTMENT OF NATURAL RESOURCES**

The Department of Natural Resources manages all state-owned land, water and natural resources, except for fish and game, on behalf of the people of Alaska. When all land conveyances from the federal government are completed, the people of the state will own land and resources on 104 million acres. The state owns approximately 60 million acres of tidelands, shorelands, and submerged lands and manages 40,000 miles of coastline. The state also owns the freshwater resources of the state, a resource that equals about 40% of the entire nation's fresh water flow.

#### **ADNR ANILCA PROGRAM**

In 1980, Congress passed the Alaska National Interest Lands Conservation Act (ANILCA), a public law establishing more than 100 million acres of federal land in Alaska as new or expanded conservation system units (CSUs). ANILCA requires federal land managers to balance the national interest in Alaska's scenic and wildlife resources with recognition of Alaska's economy and lack of infrastructure and its distinctive rural way of life. ANILCA specifically directs federal agencies to

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solicit and consider the views of the state when making land use decisions. The mission of the State of Alaska ANILCA Program is to monitor federal implementation, to advocate for the special provisions of ANILCA that are unique to Alaska and to ensure that state interests are appropriately considered by the federal agencies.

### **The Alaska National Interest Lands Conservation Act**

Congress recognized the Ambler Mining District as one of the areas in the state with the highest mineral potential, which if developed, could provide job opportunities and allow for economic growth in the state. To ensure those valuable resources would not be stranded by the creation of CSU's or other federal lands, Congress provided for the authorization of surface transportation across federal lands from the Haul Road through the Gates of the Arctic National Preserve (GAAR), to the Ambler Mining District.

In evaluating the 2016 SF299 application, the Department of the Interior (BLM) determined that the crossing of GAAR triggers the ANILCA Title XI process for the segment of the route located outside GAAR. However, since the affected BLM lands are public lands managed under the Federal Land Policy and Management Act of 1976 (FLPMA) and not a CSU under ANILCA, the state believes the authority for BLM to issue a right-of-way for the segment of the proposed road that crosses BLM managed lands comes from FLPMA.

While the BLM's FLPMA ROW must be evaluated under NEPA and the environmental impact statement must include a no-action alternative pursuant to 40 CFR 1502.14(d) and 43 CFR 46.415(b)(1), in ANILCA Congress specifically directed the Secretary of the Interior to allow access from the Pipeline Haul Road (i.e., the Dalton Highway) to the Ambler mining district. Nonetheless, the AMDIAP EIS and alternatives analysis will help to inform BLM's selection of the exact location and appropriate terms and conditions for the BLM ROW across BLM lands.

### **ANILCA Section 810**

In evaluating whether to issue a right-of-way for an 18.74-mile segment of proposed road located on BLM-managed public lands, as defined by ANILCA, ANILCA Section 810 requires BLM to address impacts to subsistence uses and needs when permitting the use of federal public lands.

ANILCA Section 810 requires consideration of the following criteria on federal public lands.

- the effect of such use, occupancy, or disposition on subsistence uses and needs,
- the availability of other lands for the purposes sought to be achieved, and
- other alternatives which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes.

If BLM concludes in its initial analysis that subsistence uses would be significantly restricted, additional notice and hearing requirements apply and BLM must consider whether:

- such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands,
- the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and
- reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions.

### **ADNR DIVISION OF MINING, LAND, & WATER**

The Division of Mining, Land and Water (DMLW) within the Department of Natural Resources manages all state-owned land except for Mental Health Trust property and units of the Alaska State Park System. The Division has jurisdiction over all of the State's water resources. In preparing these comments, DMLW reviewed the list of potential permits compiled by AIDEA.

#### **Land Use Authorizations**

Under AS 38.05.850, the DMLW Northern Region Office (NRO) has the authority to issue both public and private easements. AS 38.05.285 requires the use of state land shall conform to the constitution of the State of Alaska and the principles of multiple use consistent with the public interest. For this project, a road easement authorization per AS 38.05.850 will be required. When an easement application is submitted to DNR, NRO will evaluate the proposed activities for consistency with authorized activities or constraints on state lands. The adjudication process will include agency/public notice, response to comments, and decision appeal provisions. As part of the adjudication process, NRO will evaluate multiple-use considerations and restrictions, as well as economic benefits. Any restriction of general public use will need to be carefully weighed against other proposed multiple-use considerations, and will only be approved if it is deemed sufficiently in the public's best interest.

#### **Material Sales**

A material sale permit will be required to access or mine gravel sources on state lands. DNR statues AS 38.05.550-565 address material sites and sales, including site designation and material sale contract requirements. Mining and reclamation plans will need to be submitted for review and approval by DMLW for material sites located on state and non-state lands (AS 27.19). For new material sites which require material site designation, a best interest finding (BIF) and public notice per AS 38.05.550, AS 38.05.035(e), and AS 38.05.945 are required. Best interest findings are also subject to appeal provisions.

### **State-Owned Submerged Lands**

DMLW NRO authorizations include construction and use of bridges or other improvements across state-owned submerged lands associated with navigable waters (issued under AS 38.05.850).

### **RS 2477 Public Use Right-of-Way**

For any RS 2477 public use right-of-way crossing or in the vicinity of the proposed road corridor, allowances for continued public use of these routes, and in particular, design of public crossing routes across the road corridor to access state lands will need to be addressed in any state land use decisions.

### **Construction Camps and Staging Areas**

Land use permits for construction camps or staging areas on state land are required under statute AS 38.05.850.

### **Water Use**

Construction and maintenance of the proposed road will most likely require the use of water or the temporary diversion of water. Temporary Water Use Authorizations (TWUA) are required for water withdrawals (including dewatering activities), diversions, impoundments, ice roads, and in source uses (11 AAC 93.035 (a) (b) and 11 AAC 93.220).

### **ADNR OFFICE OF HISTORY AND ARCHEOLOGY**

State law requires all activities requiring licensing or permitting from the State of Alaska, or conducted by State agencies for public construction and improvement, to comply with the Alaska Historic Preservation Act (AS 41.35.070). For review of a State project under the Alaska Historic Preservation Act, if OHA's review indicates that significant cultural resources will be adversely affected by a project, the proposed project may not commence until the department has performed the necessary investigation, recording, and salvage of the site, location, or remains.

OHA/SHPO's role includes assisting with site avoidance, and the development of measures to minimize the potential effects of a project (e.g. use of different equipment or materials, or the presence of an archaeological monitor). In cases where avoidance or minimization is not feasible, or not sufficient enough to avoid adverse effects, OHA assists with the development of mitigation measures to offset the negative impacts to the resources affected with something positive. Mitigation approaches are dependent on the project circumstances and can range from site intensive data recovery projects (archaeological excavation) to the creation of educational or



interpretive products for the public and/or affected communities. An archaeological monitor may be required as a condition of OHA's concurrence, or a stipulation in an agreement document. The reasoning behind such a request varies, but is primarily made where the likelihood of encountering cultural material is considered to be high, and avoidance is impracticable or cannot be ensured.

### **Section 106 Consultation**

Consultation with the Alaska State Historic Preservation Office/Office of History & Archaeology (SHPO/OHA) is required for projects with State and/or Federal involvement for the purpose of avoidance, minimization, or mitigation of adverse effects to significant cultural resources. Federal involvement (licensing, permitting, funding etc.) with the project requires compliance with Section 106 of the National Historic Preservation Act (54 USC 306108). For the purposes of Section 106 review, the SHPO has a consultative role. The lead federal agency official must consult with SHPO, that is, they must seek, discuss, and consider SHPO's views.

### **Probability Modeling**

Archaeological site probability modeling is very useful for making the best use of resources when surveying large tracts of land for cultural resources. This modeling should explicitly attempt to address how past humans may have used of the region at different times and with different resources. Hypothesis testing should be employed, coupling the archaeological and paleoenvironmental data, to generate testable locations of where people may have lived at different times, and to get at how people lived in the past and why they utilized the locations on the landscape that they did. It is hoped that the survey planners stay abreast of the biological, ethnographic and other studies being conducted concurrently that can provide data to refine these exploratory and explanatory models.

Coupled with the model information on high and low probability areas given to the crews should be explanations of why areas are modeled high probability. Crew chiefs need to know what makes an area high probability in order to better plan survey of that area.

Probability modeling is a commonly used tool for finding the kinds of archaeological sites that we are already aware of. But in Alaskan archaeology we are regularly finding site types that we previously were unaware of: ice patches in alpine areas utilized by prehistoric caribou hunters; raised beach terraces in southeast Alaska with mid or early Holocene archaeological sites, etc. Consequently, part of any survey should include use of some type of random sampling, possibly stratified random sampling, to test a variety of location types, in an attempt to ensure that unknown site types are not missed.

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Attention to stratigraphic markers in guiding archaeological field testing provides verifiable interpretation and repeatability of data. Soil profiles show what soil horizons are in the region, and may include paleosols and volcanic ash falls as well as periods of high and low sediment deposition. Examining locations across the project area that have exposures of deep aeolian sediments will develop an understanding of the types of soil profiles that will be encountered on the project and the possible depth of sediments that can be expected, helping ensure that early cultural horizons which are deeply buried will not be missed. This examination should take place at the start of the field season so the crews have this information to guide their later testing, and in locations that are near sources of high aeolian sediment, to get good stratigraphic separation and help show how deep of testing may be required.

### **Paleoenvironmental Data**

Without coupling of the archaeological data with paleoenvironmental data, the archaeological data is left largely un-interpreted, generating little explanation of lifeways or human-environmental interaction. Recent concern with climate change encourages us to compare our archaeological data to past climatic conditions and fluctuations, to better understand how human societies have dealt with past climate change. Because of this need for paleoenvironmental data, lake core and bog core data should be utilized. If not already available, bog cores should be taken in the project area. These cores will generate chemical signatures and ages for tephra, past vegetation types and frequency through microfossil and pollen data, and sediment source and wind regimen through particle analysis, etc.

### **Additional Information**

Provided for reference as Attachment II is a summary of the deep testing methodology for archeological surveying which can be employed when there is a potential for deeply buried sites to be missed by conventional testing methods or when project activities have the potential to disturb deeply buried significant cultural horizons. This information may be helpful in providing mitigation strategies to the EIS or in the Section 106 process.

## II. ALASKA DEPARTMENT OF FISH AND GAME

The Alaska Department of Fish and Game (ADF&G) is the State of Alaska’s principal manager of fish and wildlife resources and their habitats, regardless of land ownership. ADF&G is mandated under state law to “manage, protect, maintain, improve, and extend the fish, game, and aquatic plant resources of the state in the interest of the economy and general well-being of the state . . .” (AS 16.05.020).

ADF&G has reviewed AIDEA’s SF299 Consolidated Right-of-Way Application to construct an all season industrial road from the Dalton Highway at approximately MP 161, west to the Amber Mining District, a distance of approximately 210 miles. The ADF&G Divisions of Habitat, Sport Fish, Commercial Fisheries, Subsistence, and Wildlife Conservation provide the following comments.

### Anadromous Fish (salmon, sheefish, etc.)

The Kobuk River supports chum salmon spawning above the proposed large bridge location as well as in the major streams that the road will cross west of the Kobuk crossing (Mauneluk, Kogoluktuk, and Shungnak rivers; and Beaver Creek). Chum salmon are an important subsistence resource in the area as well as source of income through their commercial harvest. Downstream, approximately 462,000 chum salmon were harvested in the Kotzebue Sound commercial fishery in 2017. Table 1 presents recent aerial survey chum salmon counts for the Kobuk River.

**Table 1. Kobuk River aerial survey chum salmon counts, 2001-04, 2006, 2008-09, 2014.**

Stream <sup>a</sup>	2001	2002	2003	2004	2006	2008	2009	2014
Kobuk Drainage								
Kobuk to Pah River	2,790		5,501	7,493	8,525 <sup>b</sup>	19,421	7,468	
Pah River to just below Selby River	1,380	857	828	1,885		5,795	10,852	
Selby River mouth & slough	1,780	2,100	1,110	3,846				2,113
Selby River			427	3,760	500 <sup>b</sup>	1,750	208	
Selby River mouth to Beaver Creek	7,470		1,274	6,215		13,201	26,627	
Above Beaver Creek		490	2,462			3,180		
					<sup>c</sup>			63,540
Upper Kobuk River Total	13,420	3,447	11,602	23,199	48,750 <sup>b</sup>	43,347	45,155	65,653

*Note:* No surveys were flown in 2000, 2005, 2007, 2010–2013, or since 2014.

<sup>a</sup> Three aerial surveys are attempted annually at different intervals for each tributary to assess escapements prior to the peak, at the peak and after the peak of the run. Indices listed in this table are the largest survey observed for each tributary during the given year.

<sup>b</sup> Poor survey conditions or incomplete, early or late survey.

<sup>c</sup> Unclear which segment these fish were observed in.

In the Yukon River drainage summer chum salmon also support vital commercial and subsistence fisheries, with drainage-wide run sizes in the millions. A radio-telemetry study was conducted on summer chum salmon within the Yukon River in 2014 and 2015. The percent of tagged fish that returned to the Koyukuk River to spawn ranged from 22 to 27 percent. Thus, the Koyukuk River appears to be the largest single contributor to the summer chum salmon run on the Yukon River. The chum salmon tagging study showed fish regularly entering the John River, but the other rivers in the proposed road corridor have not been consistently monitored as part of these studies.

The Koyukuk River drainage Chinook salmon run is smaller than the chum salmon run, contributing potentially 3-5% to the overall drainage-wide run, however this species has been defined as a *Stock of Concern* (see SOA Sustainable Salmon Policy 5AAC 39.222) for many years and is highly prized among subsistence users throughout the drainage and into Canada. Therefore, ADF&G recommends AIDEA identify any spawning and rearing locations of this particular stock within the proposed corridor.

Besides work done by ABR, Inc. in 2012 at proposed stream crossings,<sup>1</sup> and the work the Division of Habitat Division performed out of Bettles in 2014,<sup>2</sup> there have been very few baseline projects related to fish (distribution, growth rates, habitat, etc.) in the region. Little is known about the spawning and migration habits of the whitefish species that travel into the Koyukuk River. However, each year tens of thousands of whitefish are taken by subsistence fishermen in the communities along the Koyukuk River. Yukon River Chinook salmon runs are improving in the Yukon River drainage and they are beginning to be documented in Iniakuk Lake.

The Shungnak River is not documented as supporting anadromous species of fish; this is believed to be due to a large waterfall near its confluence with the Kobuk River. Juvenile Dolly Varden have been documented in the Shungnak River (Parker 2017), however it is unclear whether they are resident or anadromous forms.

All but one of the rivers that are proposed to be crossed by large bridges are documented as anadromous in the ADF&G *Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes* (Table 2). As such, ADF&G Fish Habitat permits will be required for bridge construction and for any long-term maintenance that will occur in the river or on the riverbanks within the ordinary high-water zone. Table 2 provides suggestions for the documentation that may be needed for evaluating river crossings.

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<sup>1</sup> 2012 Anadromous Fish Surveys within the Brooks East Corridor Survey Area, Alaska, June 2013.

<sup>2</sup> 2014 Fisheries and Aquatic Inventory of The Koyukuk, John, and Wild rivers, Ambler Mining District, June 2015, 2014 Fisheries Investigations along the Proposed Ambler Corridor, November 2015,

**Table 2. Drainages proposed to be crossed by “large” bridges for the AMDIAP, the known anadromous fish resources present in the system, and suggested additional information needs.**

<b>Drainage</b>	<b>Species Present<sup>1</sup></b>	<b>Suggested Information Needs</b>
Koyukuk River	KSs, KSr, CHs, CO <sub>r</sub> , SF, WF <sub>p</sub>	specific spawning locations need documentation (KS, CH), check for spawning (CO, SH)
Wild River	KSs, KSr, CH <sub>p</sub> , WF <sub>p</sub>	specific spawning locations need documentation (KS), check for CH spawning
John River	KSs, CH <sub>p</sub> , WF <sub>p</sub>	specific spawning locations need documentation (KS), check for CH spawning
Alatna River – Malamute Fork	KSs, CHs, CO <sub>p</sub>	specific spawning locations need documentation (KS, CH), check for CO spawning
Alatna River	KSs, CHs, CO <sub>p</sub> , SHs	specific spawning locations need documentation (KS, CH, SH), check for CO spawning
Kobuk River	KS <sub>p</sub> , CH <sub>p</sub> , SF <sub>p</sub> , WF <sub>p</sub>	specific spawning locations need documentation (KS, CH, SH, WF)
Reed River	CH <sub>r</sub> , CH <sub>p</sub>	check for CH spawning
Beaver Creek	CH <sub>p</sub>	check for CH spawning
Mauneluk River	CH <sub>r</sub> , CH <sub>p</sub> , WF <sub>p</sub>	check for CH spawning
Kogoluktuk River	CHs, DV <sub>p</sub> , WF <sub>p</sub>	specific spawning locations need documentation (CH), check for DV spawning
Shungnak River	not in AWC	DV <sub>p</sub> , anadromy unknown as there is a waterfall that may impede upstream passage

<sup>1</sup> KS - king (Chinook) salmon, CH - chum salmon, CO - coho salmon, WF - whitefish, SH - sheefish, r - rearing, s - spawning, p - present.

Once material and water withdrawal sites are identified, the Division of Habitat will work with ADNR to determine if a Fish Habitat Permit will be required for the activity. If water is proposed to be withdrawn from a fish bearing waterbody, there will be stipulations placed upon the withdrawal rate and a requirement that the intake be screened with small mesh to avoid impacts to juvenile fish. Additionally, there can be limits placed on the amount of water that may be drawn down under the ice.

**Non Anadromous Fish (lake trout, northern pike, etc.)**

In addition to the large bridge crossings, the AIDEA has proposed 12-15 medium (50-140 foot span) and 3 small (<50 foot span) bridges, along with 24-34 moderate/major culverts (4-20 foot diameter) and 2,869-3,155 minor culverts (3 foot diameter). Many of these culverts will be used to maintain water connectivity, but others will be needed to maintain fish passage. If a water body is fish bearing then ADF&G Fish Habitat permits will be required for their construction and long-term maintenance to ensure unimpeded passage for all species and all appropriate life stages of fish. This may include periodic removal of beaver dams and other woody debris.

The SF299 Application states that “all perennial rivers and streams are assumed to provide fish habitat and crossings would be designed to provide fish passage” and “crossings of well-established ephemeral channels likely to provide fish habitat during seasonal flow periods would also be designed to provide fish passage.” In addition, sampling for fish presence should occur prior to final bridge/culvert design to enable the ADF&G to provide specific advice for work windows and crossing locations.

ADF&G currently has little information on Norutak Lake, a large lake very close to the road along the alternate route. If it becomes a source of water for road construction and maintenance or is a source of freshwater fishing, ADF&G would recommend AIDEA perform baseline fish/water investigations at the lake.

### **Western Arctic Caribou Herd**

The proposed road is within the migration corridor of the Western Arctic Caribou Herd (WAH) which is a significant subsistence resource in the region. Roads and other disturbances have been known to influence migration patterns of caribou (Wilson et al. 2016, Beauchesne et al. 2013, and Leblond et al. 2013), and have the potential to increase the efficiency of predators. (Whittington 2011). In the draft EIS, ADF&G would expect to see direct and indirect impacts from the AMDIAP identified, including:

- An evaluation of current WAH movement corridors and connectivity between seasonal ranges.
- A discussion of mitigation efforts that will be made to minimize disturbances to the WAH during all phases of the road project including surveying, construction, operation and maintenance.
- A discussion of the mitigation efforts and or structures that will be used to maximize caribou movements across the road and minimize avoidance of the road.
- The final road route should consider the best alternatives available to minimize caribou deflection through the utilization of topography, vegetation and the potential for small scale road routing (i.e. bends and curves) as a mitigation tool.
- Consider the relevant potential impacts to caribou by increased predator efficiency in the project area
- Quantify the potential for vehicle caused caribou mortality.

AIDEA proposes to incorporate the abatement and wildlife interaction protocols used on the Delong Mountain Transportation System (DMTS) into operation of this road. The proposed road will be significantly longer than the DMTS (210 vs. 52 miles) and has the potential for more trucks per day during peak operations, therefore we would expect that not all DMTS wildlife protocols would be appropriate or feasible.

### **Access to Public Resources**

The EIS should address potential effects of the 211-mile road corridor on public access to fish and wildlife resources on state and federal land. If the road is closed to public use, the road corridor design should not block access to public lands outside the transportation corridor. It is recognized that there are concerns about potential use of the road by hunters both within the project area and beyond. Discussions of access and the potential for resource competition are recommended subjects for evaluation in the EIS.

### **Additional Subsistence Resources**

The citation given within the SF299 Consolidated Right-Of-Way Application for subsistence harvest information is from the Ambler Mining District Subsistence Gap Data Memo prepared by Stephen R. Braund and Associates (SBR&A). Since its publication in 2012, several applicable subsistence studies have been conducted and published that would be appropriate to include during the EIS process. Recently published comprehensive survey data listed below include mapping of land use areas, which may be a consideration when deciding upon a corridor. The 2012 SBR&A data gap memo compiled spatial data from other reports, and more recent information will expand this data set. The SF299 supplemental narrative included the 8 communities which are closest to the proposed alignment, the following list of applicable research includes all the communities covered in the SBR&A subsistence data gap memo as those which may experience impacts due to the construction of the road.

### ***Comprehensive Subsistence Harvest Reports***

The following reports provide comprehensive survey information not included in the 2012 SBR&A data gap memo including demographic, economic, and sharing pattern information. Additional search and harvest areas were mapped for several different resource categories per community (including salmon, non-salmon fish, large land mammals, small land mammals, birds and eggs, and vegetation). Local and traditional knowledge of wild resources and subsistence practices are presented in these reports to contextualize baseline subsistence information. Local comments and concerns regarding a number of topics were documented, including resource health and availability, climate change, and development.

**Alatna, Allakaket, Evansville, Coldfoot** - Holen, D., S.M. Hazel, and D.S. Koster, editors. 2012. Subsistence harvests and uses of wild resources by communities in the eastern Interior of Alaska, 2011. Alaska Department of Fish and Game, Division of Subsistence Technical Paper No. 372. Anchorage, Alaska. <http://www.adfg.alaska.gov/techpap/TP372.pdf>

## AMDIAP EIS Scoping Comments

31 January 2018

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**Ambler, Shungnak, and Kobuk** - Braem, N.M., E.H. Mikow, S.J. Wilson, and M.L. Kostick. 2015. Wild Food Harvests in 3 Upper Kobuk River Communities: Ambler, Shungnak, and Kobuk, 2012-2013. Alaska Department of Fish and Game Division of Subsistence Technical Paper No. 402, Fairbanks. <http://www.adfg.alaska.gov/techpap/TP%20402.pdf>

**Kotzebue (2014 data year) and Noorvik (2013 data year)** - Braem, N.M., E.H. Mikow, S.J. Wilson, and M.L. Kostick. 2017. Chukchi Sea and Norton Sound Observation Network: harvest and use of wild resources in 9 communities in Arctic Alaska, 2012-2014. Alaska Department of Fish and Game Division of Subsistence Technical Paper No. 403, Fairbanks. <http://www.adfg.alaska.gov/techpap/TP403.pdf>

**Hughes** - Wilson, S.J. and M.L. Kostick, 2016. Harvest and use of wild resources in Hughes, Alaska, 2014. Alaska Department of Fish and Game Division of Subsistence Technical Paper No. 424, Fairbanks. <http://www.adfg.alaska.gov/techpap/TP%20424.pdf>

**Selawik** - Braem, N.M., J.S. Magdanz, D.S. Koster, and P. Fox. 2013. Subsistence harvests in Northwest Alaska: Selawik, 2010–2011. ADF&G Division of Subsistence, Technical Paper No. 389. <http://www.adfg.alaska.gov/techpap/TP389.pdf>

### ***Big Game Harvest Information***

ADF&G data collected after 2007 have a mapping component as well as harvest information. Mapping is not as specific as those found in comprehensive studies (respondents are asked about general areas of harvests within uniform coding units), but does give some insight into land use patterns.

**Ambler, Buckland, Kiana, and Kobuk** - Braem, N.M. 2012. Subsistence wildlife harvests in Ambler, Buckland, Kiana, Kobuk, Shaktoolik, and Shishmaref, Alaska, 2009–2010. Alaska Department of Fish and Game Division of Subsistence, Special Publication No. -003. [http://www.adfg.alaska.gov/specialpubs/SP2\\_SP2012-003.pdf](http://www.adfg.alaska.gov/specialpubs/SP2_SP2012-003.pdf)

**Kotzebue 2012-2013 and 2013-2014** - Godduhn, A.G., N.M. Braem, and M.L. Kostick. 2014. Subsistence Wildlife Harvests in Kotzebue, Alaska 2012–2013. Alaska Department of Fish and Game Division of Subsistence, Special Publication No. -003. [http://www.adfg.alaska.gov/specialpubs/SP2\\_SP2014-003.pdf](http://www.adfg.alaska.gov/specialpubs/SP2_SP2014-003.pdf)

- Mikow, E.H. and M.L. Kostick. 2016. Subsistence Wildlife Harvests in Kotzebue, Alaska, 2013-2014. Alaska Department of Fish and Game Division of Subsistence, Special Publication No. -002. [http://www.adfg.alaska.gov/specialpubs/SP2\\_SP2016-002.pdf](http://www.adfg.alaska.gov/specialpubs/SP2_SP2016-002.pdf)



**Noorvik and Shungna k-** Braem, N.M. 2012. Subsistence wildlife harvests in Noorvik, Shungnak, and White Mountain, Alaska, 2008-2009. Alaska Department of Fish and Game Division of Subsistence, Special Publication No. -003.

[http://www.adfg.alaska.gov/specialpubs/SP2\\_SP2011-003.pdf](http://www.adfg.alaska.gov/specialpubs/SP2_SP2011-003.pdf)

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Bradley, P.T. 2017 Aquatic Biomonitoring at the Arctic-Bornite Prospect, 2016. Alaska Department of Fish and Game, Technical Report No. 17-06, Fairbanks, Alaska.

Beauchesne, D., Jochen A.G., Jaeger, Martin-Hughes St-Laurent (2013). Disentangling Woodland Caribou Movements in Response to Clearcuts and Roads across Temporal Scales. PLoS ONE 8(11): e77514. <https://doi.org/10.1371/journal.pone.0077514>.

Leblond, M., Dussault, C., Ouellet, J. –P. (2013), Avoidance of roads by large herbivores and its relation to disturbance intensity. *Journal of Zoology*, 289: 32–40. doi: 10.1111/j.1469-7998.2012.00959.x.

Whittington, Jesse, et al. “Caribou Encounters with Wolves Increase near Roads and Trails: a Time-to-Event Approach.” *Journal of Applied Ecology*, vol. 48, no. 6, 2011, pp. 1535–1542. JSTOR, JSTOR, [www.jstor.org/stable/41318989](http://www.jstor.org/stable/41318989).

Wilson, R. R., Parrett, L.S., Joly, K., & Dau, J.R. (2016). Effects of Roads on Individual Caribou Movements during Migration. *Biological Conservation*, vol. 195, 2-8.

U.S. Department of Transportation (2011). *Wildlife Crossing Structure Handbook Design and Evaluation in North America*. FHWA-CFL/TD-11-003.

### **III. ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

The Alaska Department of Environmental Conservation (ADEC) policy is to conserve, improve and protect Alaska's natural resources and environment and control water, land, and air pollution in order to enhance the health safety, and welfare of the people of the state and their overall economic and social well-being. ADEC works with federal agency counterparts at the Environmental Protection Agency (EPA), USACE, BLM and others on federal environmental law and how it is applied in Alaska.

The Department's authority overlaps in many areas with the topics being considered in the AMDIAP EIS. An overview of the regulatory authorities of ADEC is provided below to help inform the EIS and the public on how ADEC provides for the protection of human health and the environment in Alaska.

#### **Certificate of Reasonable Assurance for USACE 404 Permit**

Under the federal Clean Water Act, ADEC is required to certify that the USACE 404 permit is protective of the state's water quality standards. This is accomplished through a Certificate of Reasonable Assurance that is issued by the Water Division and is required before the USACE 404 permit can become valid. The Water Division can include specific stipulations that must be met as part of its issuance of the certification. State of Alaska water quality standards can be found at 18 AAC 70 and the permitting requirements can be found at 18 AAC 72 and 18 AAC 83.

#### **Stormwater Pollution Prevention Plan / Stormwater Permits**

Construction activities involved with roadbuilding typically require the development of a Stormwater Pollution Prevention Plan (SWPPP) which identifies all potential sources of pollution which may be reasonably expected to affect the quality of stormwater discharges from a construction site. This SWPPP is required under the federal Clean Water Act.

ADEC also requires construction activities that result in total land disturbance equal to or greater than one acre and result in discharges to waters of the U.S. to seek coverage under ADEC's Construction General Permit for Stormwater Discharges for Large and Small Construction Activities. (2016 CGP, AKR100000). Activities may also fall under the coverage of ADEC's Multi-Sector General Permit (2015 MSGP, AKR0600000) if there are activities involving loading and unloading operations that could result in material spills, outdoor storage of materials that could result in materials contributing pollutants to stormwater, or rock crushing activities that would result in pollutants available for discharge in stormwater runoff.

### **Fugitive Dust**

Fugitive dust is defined as particulate matter that is generated or emitted from open air operations (emissions that do not pass through a stack or a vent). The ADEC Air Quality Division regulations direct a “a person who causes or permits bulk material to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air” (18 AAC 50.045). The majority of complaints ADEC receives are due to road dust. While unpermitted activity suspected of violating ambient air standards can be given violations, the difficulty lies in establishing measurable limits and a measurable correlation between the source and a violation. This requires modeling studies, collecting meteorological data and development of parameters that could be performed across the state. The State of Wyoming regulates fugitive dust by taking instantaneous opacity readings, but this would require having personnel in the field to take these readings. Most EISs require an applicant to address fugitive dust, but it is important to also discuss what agency will be responsible for enforcement of this mitigation measure.

There are a few activities that typically result in pollution that requires a minor air quality permit under 18 AAC 50.502(b):

- Asphalt plant;
- Rock crusher;
- Incinerator; and
- Thermal soil remediation unit

Of these activities, only the rock crusher permit and incinerator are likely to be involved in this project.

### **Spill Prevention and Response/Financial Responsibility**

The Division of Spill Prevention and Response (SPAR) is responsible for protecting Alaska’s land, waters, and air from oil and hazardous substance spills by preventing, responding to and ensuring the cleanup of unauthorized discharges of oil and hazardous substances. For the AMDIAP, the SPAR Division’s main involvement is in the area of spill response. Spill response regulations can be found at 18 AAC 75.

The focus of spill prevention in the context of the AMDIAP rests with federal agencies. Requirements for fuel tanker trucks with a capacity of 3500 gallons or more fall under the responsibility of the Federal Motor Carrier Safety Administration (FMCSA), U.S. Department of Transportation (US DOT). US DOT sets financial responsibility requirements for shippers and requires them to have a written spill response plan for responding to discharges.

In the event of a spill, the responsible party is liable for the costs of spill cleanup. If the cost of the cleanup exceeds the amount of financial responsibility coverage available, the state may be forced to cover the cleanup costs from the “Prevention Account” that receives funding through a surcharge on refined fuel sold, transferred or used at the wholesale level, or the “Response Account” that receives funding through a surcharge on crude oil produced in the state.

### **Construction Camp Permitting**

ADEC’s regulatory authority includes permitting for the following activities associated with construction camps:

- Solid waste landfills (18 AAC 60)
- Drinking water system permit (18 AAC 80)
- Food Service permit (18 AAC 31)
- Wastewater discharge – domestic wastewater (18 AAC 72)

## **IV. Alaska Department of Health and Social Services**

The Alaska Department of Health and Social Services (ADHSS) recommends a robust discussion and analysis of potential health impacts from the proposed ANDIAP during the NEPA process, either as a section within the EIS or as a resource document for the EIS. Such an inclusion of health in the EIS process can be achieved by an Alaska Health Impact Assessment which is a structured planning and decision-making process that analyzes the potential positive and negative impacts of a project on the public’s health. Health impact assessments are performed prior to project implementation.

### **Health Impact Assessment**

A Health Impact Assessment (HIA) is an important tool that can help developers and policy-makers understand both negative and positive health effects of a proposed project. It can help developers enhance positive effects and reduce negative effects of a project in a manner that fits Alaska’s unique environmental, cultural, social, and public health context. When health impacts are understood in advance, they enable opportunities to contribute to improving health status in communities, reducing future health care costs, and lowering potential mitigation costs. HIAs can also provide some assurance to the public that human health has been carefully considered in decision making.

### **HIA Program**

In Alaska, funding and completion of an HIA is strictly voluntary. Neither Alaska law nor federal law mandates the completion of an HIA for any purpose, including for major resource development projects. HIAs for resource development in Alaska are typically done as part of the NEPA process, when a lead federal agency determines that the impacts to human health should be evaluated as part of the EIS process. The HIA Program at DHSS provides guidance on conducting HIAs in Alaska and can work with the lead permitting agency help state and federal agency policy-makers and project applicants understand when an HIA may be helpful and how to integrate an HIA into the EIS process.

If the HIA is planned to be included as an appendix or reference for the EIS, a draft HIA should be available concurrent with publication of the draft EIS. If revisions are required, the revised HIA should be available along with the final EIS.

Additionally, ADHSS has in the past been requested to provide information on the potential health impacts related to climate change during the NEPA process, as federal agencies have begun to incorporate a more detailed discussion of climate change considerations into the EISs. ADHSS recently released an *Assessment of the Potential Health Impacts of Climate Change in Alaska*, a report that provides a broad overview of the potential adverse human health impacts of climate change in Alaska and to present monitoring recommendations, development of measurable and objective indicators, and examples of adaptation strategies. DHSS recommends utilizing this report if agencies need additional human health information related to the potential impacts of climate change in Alaskan rural communities.

### **HIA RESOURCE LINKS**

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<http://dhss.alaska.gov/dph/Epi/hia/Pages/default.aspx>

<http://dhss.alaska.gov/dph/Epi/hia/Documents/AlaskaHIAToolkit.pdf>

[http://www.epi.alaska.gov/bulletins/docs/rr2018\\_01.pdf](http://www.epi.alaska.gov/bulletins/docs/rr2018_01.pdf)



# MEMORANDUM

Alaska Department of Natural Resources

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TO: Marie Steele  
Large Project Coordinator  
ADNR Office of Project Management and Permitting

DATE: January 29, 2018

FROM: Richard VanderHoek, Ph.D.  
State Archaeologist  
ADNR Office of History and Archaeology

TEL: 907-269-8732

SUBJECT: Summary of Deep Testing Methodology for Archaeological Surveys

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The purpose of this memo is to provide a summary of the deep testing methodology for archeological surveying which can be employed when there is a potential for deeply buried sites to be missed by conventional testing methods or when project activities have the potential to disturb deeply buried significant cultural horizons.

## DEEP TESTING

**What is Deep Testing?** Deep Testing can be defined as excavations (by shovel or heavy equipment) extending below the depth of conventional shovel testing and soil coring, which is generally about 3 feet or 1 meter deep.

**When should Deep Testing be done?** Archaeological surveys should include Deep Testing if there is significant potential to damage deeply buried cultural horizons through project actions, or if significant deeply buried sites might be missed by conventional testing methods. Environmental information about the project area, collected during the project literature review, should identify areas of potentially buried soils. Survey crews should be able to confirm these areas have deep soil deposits through shovel testing and soil coring (not reaching known sterile soil/bedrock) to at least one meter (3.28ft) before planning deep testing fieldwork

**Who should conduct Deep Testing?** Ideally, individuals with both broad archaeological knowledge as well as specific regional experience with soils and soil depositional processes will conduct deep testing investigations. While an experienced geomorphologist/geoarchaeologist with extensive knowledge of the appropriate region should conduct the deep testing research, field supervisors and survey crews may be able to competently conduct the deep testing. The deep testing crew should have personnel with the ability to map and examine a large/long stratigraphic soil profile, have an idea of how old those sediments might be, determine if the horizons encompass the span of time that people have inhabited the region, and be able to identify cultural disturbances or materials in profile.

**Why should Deep Testing be done?** Deep Testing represents a good faith effort to determine if a project's ground disturbance could affect buried, significant archaeological sites that might be missed by surface or relatively shallow subsurface testing. The goal of the fieldwork is to identify any soil formation processes and cultural horizons in profile. Cultural horizons buried by significant sediment have a greater potential to be undisturbed and, consequently, could exhibit greater cultural resource preservation and contextual information.

**Where should Deep Testing be done?** Deep Testing should be done in places where location and sediments warrant it, usually locations that have a high probability for archaeological sites and also have a high deposition of Holocene aeolian sediment (wind-blown sediment deposited in the last ~12,000 years).

Please Note: researchers should not rely solely on regional geologic reports and maps to determine the location and depth of any specific location, as these products only give you broad geomorphic and sediment patterns across a region. The decision to deep test a location in the project area should be supported by literature review research, visual inspection of the landform and region, survey shovel testing to 1m depth, and, if possible, soil coring the bottom of the test unit to determine depth and composition of the underlying soils.

For example, if a field crew excavates a test pit on a ridgetop and encounters gravel at 40 cm below surface they would know to stop excavating, because in most of the state the gravel would have probably been deposited on that landform by a glacier before the time people first inhabited Alaska. If the same crew excavates a test pit into a prominent landform with a good view and find deep, well-bedded sands and silts, and an examination of the surrounding area suggests that this region is a vegetated dune field which may have been active during the Holocene, then they would have reason to think that there could be deeply buried cultural horizons at this location. A check with the Principal Investigator and/or the environmental literature review should help support a deep testing recommendation.

**How deep should archaeological survey crews test to satisfy the Deep Testing requirement?** A number of archaeological sites in central Alaska in high sediment deposition environments have lower cultural horizons between 1.5m & 2m below surface, with one site almost 4m deep. Deep testing should be conducted until the possibility of buried cultural horizons is effectively nil, either through hitting solid rock or identifying soil horizons older than potential human activity in the region. Knowing how deep to test requires 1) a knowledge of how long humans have occupied the region (~14,000 years in the Tanana Valley), and 2) the ability to discern the possible age of sediments after examination and testing of field locations.

Deep testing should be conducted to OSHA standards, including width to depth ratio of the trench, the use of hard-hats and safety vests, etc.