ALAGNAK WILD RIVER VISITOR USE PROJECT:

ALAGNAK WILD RIVER RESIDENT USERS STUDY

By

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Dedication

This report is dedicated to the memory of Dan Salmon, who provided needed guidance and inspiration to the principal investigator, Douglas Deur, during the early stages of this research. Daniel Robert Salmon was born August 4, 1958, in Penfield, New York. He moved to Alaska in August 1983 to attend the University of Alaska, Fairbanks where he earned a bachelor's degree in Biology. He discovered Igiugig when he was stationed on the Kvichak River while working for the Alaska Department of Fish and Game. He spent the winter of 1984 trapping along the Kvichak River and learning the subsistence lifestyle; a year later he married an Igiugig Native, Julia Olympic-Salmon and began raising a family. He dedicated the next twenty-two years of his life to Igiugig and the people of Bristol Bay. He was the Tribal Administrator of the Igiugig Village Council (1986-2008), a Lake and Peninsula Borough Assemblyman, on the Iliamna Lake Fish and Game Advisory Committee, and Operations Manager for the Iliamna Lake Contractors. He helped Igiugig Native Corporation institute a Land Use Program, devoted himself to the education of Igiugig's youth, owned a Bristol Bay Drift Boat Permit, performed airport maintenance for the State of Alaska, and oversaw many other community projects. In 2004, Dan received a Denali Commission award for his exceptional commitment to wise resource allocation and for founding a sustainable community. In addition to providing guidance on the research contained in this report, he also served as an interviewee for past National Park Studies of the Katmai region, and his interviews are quoted extensively in this report. In February of 2008, Dan Salmon died in an airplane crash, while flying his Cessna 170 home from Anchorage. He left behind a large family, including five children, grandsons, and a number of friends. His insights will continue to guide future research along Alagnak Wild River.

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EXECUTIVE SUMMARY

This report represents a thematic summary of findings from the Alagnak Wild River Resident Users Study, the final project in a larger series of studies conducted for the National Park Service (NPS) as part of the Alagnak Wild River Visitor Use Project. The National Park service administers the 56 miles of designated Wild River along the Alagnak in collaboration with the Alaska Department of Fish and Game, which manages fish and wildlife populations along the river. The NPS is charged with managing the river's natural and cultural resources, as well as preserving the river's lands and resources for current and future generations. Alagnak River has long served as a home and resource procurement area to Native Alaskan peoples. Though these peoples have relocated to villages nearby in the region, descendents of Alagnak's former occupants as well as their fellow residents from nearby communities have continued to seasonally occupy Alagnak's riparian zone and to hunt, fish, gather plant materials and participate in social activities. In recent years, non-resident visitation of Alagnak Wild River has escalated, especially for recreational fishing, but also for recreational hunting, boating, rafting, and other pursuits. In some cases, these non-resident uses of the river have been reported to conflict with Native Alaskan uses of the river. In an effort to best manage the natural and cultural resources of Alagnak Wild River, as well as to judiciously balance the needs of different visiting constituencies, the National Park Service requires additional information regarding the past and present uses of Alagnak River by Native Alaskans, as well as the observations and perspectives of Native Alaskan river users on non-resident visitation and its possible impacts. Using a variety of principally qualitative data sources, the current report seeks to thematically compile information relating to these themes.

This report describes the transformation of the Alagnak River corridor from center of Native Alaskan habitation to a peripheral resource territory that is still used by descendents of its original inhabitants today. Relying primarily on ethnographic data focusing on the experiences of residents from Levelock, Igiugig, King Salmon, Naknek, South Naknek, and Kokhanok, the document also outlines the use of the Alagnak River as a place of enduring importance within Native Alaskan subsistence traditions. Individual sections provide summaries of hunting, fishing, and berry gathering, as well as trapping and other economic pursuits. In addition, this

document provides an overview of concerns expressed by Native Alaskans regarding the potential impacts of visitors on the river, including: crowding, motorboat use, and their effects on public safety; the displacement of resident users and the possible cultural effects of this displacement; the possible effects of increased non-resident visitation on water quality, fish and game populations; possible increased threats associated with brown bears; and impacts on lands, allotments, and plant resources. This document also provides a an overview of what some Native Alaskans perceive as the positive effects of non-resident visitation, such as employment and land lease opportunities, as well as the availability of NPS cabins for emergencies along the Alagnak River corridor. The veracity of Native Alaskans' claims pertaining to visitors impacts is not critically explored using biophysical methodologies, but this information is organized thematically so as to aid the National Park Service in natural and cultural resource planning for the Alagnak River corridor, to identify further research needs, and to assist that agency in anticipating concerns that may emerge in future consultation with Native Alaskan communities that are historically associated with Alagnak Wild River.

This study has been conducted by Dr. Douglas Deur of the Pacific Northwest Cooperative Ecosystem Studies Unit at the University Washington – a researcher who has directed numerous similar studies for NPS units within the Pacific-West and Alaska regions. As collaborator in this research effort, the NPS resource management staff have provided technical expertise, while NPS Anthropologist, Karen Stickman has served as research collaborator and assistant to Dr. Deur. The current research effort has been conducted in part to guide the development of an ethnographic study, beginning in 2008, entitled "Evaluate Effects of Tourism and Visitor Use on Local Native Communities and Traditional Activities, Alagnak Wild River." The findings from the current overview are to be used in guiding the development of themes, goals, questions, methods, and procedures for executing that study, which will also be directed by Dr. Douglas Deur. Recommendations for the planned study are also included in the current report, and materials that might guide the planned study are provided in multiple appendices.

BACKGROUND AND OBJECTIVES

The Alaska National Interest Lands Conservation Act (ANILCA) of December 2, 1980 set aside lands throughout Alaska for their nationally significant recreational, scenic, cultural, and natural resource values. Among the lands set aside under ANILCA was the Alagnak Wild River. The Alagnak was designated as a Wild River under the provisions of the 1968 National Wild and Scenic Rivers Act, an act of congress intended to protect

> "certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations" (Wild and Scenic Rivers Act, 16 U.S.C. 1271-1287).

A significant portion of Alagnak River, though not the entire river, is included in Alagnak Wild River, including those reaches from its outlet at Kukaklek Lake to a point some 56 miles downstream, as well as the 11 river miles of the Nonvianuk River from its origins at Nonvianuk Lake to its confluence with the Alagnak. Only the lower 18 miles of the Alagnak were not included in the designated Wild River. The upper seven miles of Alagnak River, and all of the Nonvianuk River, are also within Katmai National Park.[1] The Alagnak Wild River was created to protect natural values tied to the riparian area, including fish and wildlife habitat, outstanding scenic viewpoints, historical and archaeological resources along the river, and areas likely to receive considerable public use. The lateral boundaries of the Wild River were established to protect the foreground and middle-ground views that could be seen from the River (NPS 1983: 12). The total 67 river miles of designated Wild River are administered by the National Park Service, which is charged with managing its natural and cultural resources, as well as preserving the river for current and future generations.

Alagnak River has been the focus of an expanding recreational fishery since no later than the 1940s, but the river became especially popular during the late 20th century. Alagnak River's

potential for Wild and Scenic River designation was appreciated several years before ANILCA. Investigations of the Alagnak were well underway by 1971, a mere three years after the passage of the Wild and Scenic Rivers Act. The Bureau of Outdoor Recreation's 1973 "Wild and Scenic River Analysis" that documented the River's potentials and ultimately led to the creation of Alagnak Wild River noted that the River should be included as a Wild River due to its "outstandingly remarkable scenic, fish and wildlife, and recreation attributes" (NPS 1983: 1). In 1980, ANILCA stipulated that a Wild and Scenic River corridor was to be authorized along the Alagnak, consisting of up to 24,416 acres of land, excluding State and private properties; not including the riverbed and Native allotments, Alagnak Wild River encompassed a total 24,038 acres.

From the beginnings of this Wild River proposal, proponents of the Alagnak's Wild River designation recognized that the river corridor had a history of Native Alaskan use. The U.S. Heritage Conservation and Recreation Service (1980: 111), for example, noted that "Natives have used and still use the river, especially the lower reaches, for subsistence activities." Still, as some proponents of this Wild River proposal may not have fully appreciated at the time, the designation of Alagnak Wild River involved the expansion of Wild and Scenic River status to a landscape that had been historically occupied by a significant and enduring Native Alaskan population. Indeed, some archaeological evidence suggests as much as 9,000 years of occupation near the headwaters of the Alagnak, while riverine sites on the Alagnak indicate an almost continuous occupation of the river over the last 2,200 years of human history (see NPS 2006). This long history of human occupation was only interrupted in recent times:

> "The river, not too many years ago, was home to quite a few people. There were villages with churches on it, reindeer were herded in the area… People [from the Alagnak River communities] apparently settled in Levelock, Igiugig, and Naknek but retain strong ties to the river. It is easy to get the impression that native people don't use the river very much—the only local people we saw were Mary and John Tallekpalek, and Charlie Andrews who uses their fish camp site – because his cabin was burned by visitors and then his allotment was again burned by campers. He and his sister have the allotment and they haven't had the resources to build a new cabin…regardless of the impression that the river is sportsfisher's heaven and there is not a native presence except for a few decaying cabins, the river is apparently used" (Morseth 2000).

Residents of a number of Native Alaskan communities trace their origins back to the Alagnak, or to people who have made use of the Alagnak as part of their larger resource territories. People born on the Alagnak when it was still permanent home to Native families are still to be found in these neighboring communities. The Alagnak is, in Morseth's words, "just one of several rivers connected to the Kvichak that make up the cultural landscape for the Indigenous peoples, the majority of whom, in contemporary times are living in several villages on the Kvichak River" (Morseth 1998b). In 1978, when examining the patterns of resource use of the proposed park expansions on the northern fringe of Katmai National Park, Behnke (1978) conducted preliminary fieldwork with residents of Igiugig, Naknek, South Naknek, Levelock, Kokhanok, King Salmon, and Egegik: "Preliminary fieldwork determined that residents of all seven of these communities made some use of these addition lands for wildlife harvest" (Behnke 1978:124). Along the Alagnak River, these uses were varied and, for some families, intensive:

> "Today, residents of Levelock, Alagnak, and Igiugig, and their relatives in other communities, make considerable use of the Alagnak River for fishing, trapping, and hunting. They use gill nets for the subsistence harvest of salmon along the lower portion of the river and fish with hook and line along its length for grayling, trout, char, and other species. People frequently ascend the river to the "forks" where the Nonvianuk River joins the Alagnak and there are a number of cabins which are utilized by travelers along this stretch of river. Occasionally, boats are taken into Nonvianuk or, less often because of the falls, into Kukaklek Lake. "Fall" salmon are sometimes taken in these areas and dried" (Behnke 1978: 157).

A number of these river users maintained a foothold on the Alagnak through the continued ownership of Native allotments. Accordingly, two decades after Behnke's research, Morseth (2000) encountered a number of "local river allottees/users, who grew up along the [Alagnak] river, at Big Mountain or at Forks and continue to have fish camp, hunt, possibly trap, pick berries etc. and have strong feelings and opinions" about the use of the Alagnak today. Curran (2003: 5), too, noted that, amidst the fading traces of Native use on the landscape, there was still plenty of Native Alaskan river use to be found along the Alagnak:

> "Subsistence uses of the Alagnak River are common, and seasonal camps with permanent structures are in use at several of the many Native allotments along the

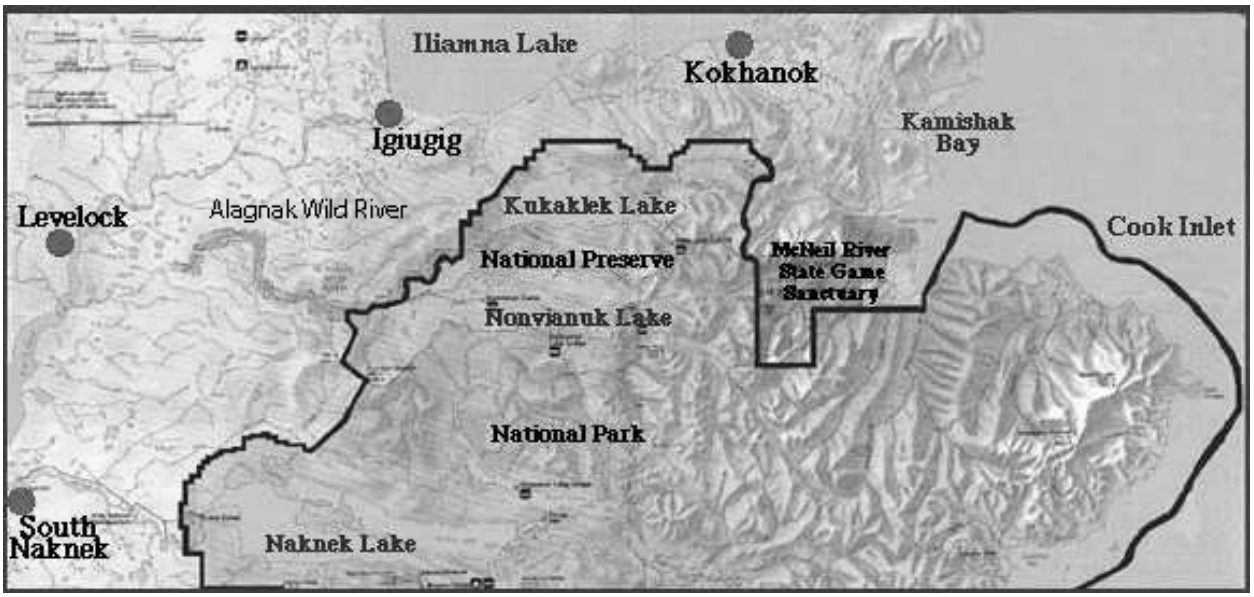
river corridor. Other Native allotments have permanent structures that are no longer in use, or are undeveloped."

A fish camp and cabin on Alagnak River. *NPS Photo, KATM Collections.*

Thus, while the Native Alaskan population had largely relocated off of the Alagnak in the decades preceding ANILCA, and certain traces of its tenure fading from the land, the place continued to be used after its Wild River designation, retaining significance to its former occupants and their kin that endured, despite myriad social, cultural, and economic changes. Use of the river continues to be an enduring part of Native Alaskan social, cultural, economic, and dietary practice today. Families have continued to use fish camps, especially focusing on the harvest of sockeye salmon (*Oncorhynchus nerka*), while continuing to harvest a wide range of other fish, game, as well as berries and other plant materials along the riparian corridor.

It was within this context that the National Park Service initiated work on an Alagnak River Management Plan as part of the General Management Plan process, providing general guidance for the management of the river.[2] Within this Management Plan, released in 1983, management objectives originally developed for Katmai National Park were effectively applied to the Wild

River. These included, but were not limited to provisions to identify and protect the cultural resources of the Wild River, protect the natural values that led to park creation, to participate in research of the area that helps facilitate cultural and natural resource protection, and to allow for visitor participation in hunting, trapping, and fishing (NPR 1983: 15-16). An especially high priority, for both the enabling legislation and the Management Plan was protecting natural values including "a world class fishery, excellent boating, wildlife populations and habitat, and a minimally disturbed natural environment" (NPS 1983: 18). Successfully maintaining the fishery was deemed to be essential to maintaining visitor satisfaction; bear management to minimize human-bear conflicts, and biotic inventories were also identified top management priorities. The Management Plan also contained general proposals to manage cultural resources in a manner consistent with federal cultural resource laws, conduct archaeological surveys, as well as to involve professional archaeologists, anthropologists, historians, and others in considering any action that might affect cultural resources. The NPS proposed developing campsites near the confluence of the Alagnak and Nonvianuk Rivers to minimize trespass on the adjacent Native allotments. In addition, the NPS proposed entering into cooperative agreements with the Bureau



Four Native Alaskan communities with especially close ties to Alagnak Wild River – Kokhanok, Igiugig, Levelock, and South Naknek. *University of Alaska, Fairbanks Oral History Program map.*

of Land Management, Igiugig Natives Ltd. and Levelock Natives Ltd. to cooperatively manage lands owned by these parties that might be used by Wild River visitors (NPS 1983: 19). The Management Plan also promoted a number of mechanisms to minimize potential conflicts with private landowners, including use of cooperative agreements, land exchanges, or use of the Alaska Land Bank program (NPS 1983: 22).

While the NPS had not yet undertaken systematic study of visitor perspectives on Wild River management issues at this time, their interaction with visitors to the area fostered certain conclusions:

> "The current Park Service perception is that visitors to the Alagnak River are primarily seeking excellent sport fishing. Importantly, but secondary, aspects of the experience they are seeking are a clean and minimally altered natural environment, an uncrowded setting, and an opportunity to view or hunt wildlife" (NPS 1983: 17).

This suggested that the interests of residents and visitors were aligned in some respects, and potentially opposed in others, from the creation of the Wild River.

> "Given the current use and the type of experience these visitors are seeking the National Park Service does not propose to limit use. Park management will continue to monitor the quantity of use and the environmental impacts. If further use or impacts warrant a change in the river management plan, a carrying capacity will be established and use may be limited" (NPS 1983: 17-18).

These protections were significant, as non-resident visitation was rapidly increasing in the Alagnak River corridor at this time. Indeed, in 1982, the NPS reported that seven sport fishing lodges were already in operation on the Alagnak, with three located inside the designated Wild River; approximately 850 people visited the outlet of Nonvianuk Lake that year (NPS 1983: 17). As will be detailed later in this report, these levels only continued to increase in the years following the completion of the Management Plan.

As non-resident visitation continued to grow, the impacts of this visitation became more apparent to NPS staff and to Native Alaskan users alike. By 1995, Katmai Superintendent Bill Pierce noted of

the Alagnak that “the major problems we've seen there [are] human bear conflicts, conflicts between motor boats and rafters, and human waste impacts on the banks, and a lot of comments about a decline in the fishery, although we have no documented evidence of that” (Katmai Research Project 1997). Native Alaskan river users identified these same issues, as well as additional concerns regarding visitor impacts, which were brought to the attention of NPS staff through a variety of venues, including but not limited to compliance-driven meetings and correspondence.

As early as 1996, the NPS was involved in intermittent efforts to document Alagnak River users’ concerns regarding the river and non-resident visitor impacts using ethnographic methodologies. Communications with Native Alaskan users initiated by Katmai Cultural Resource Chief, Jeanne Schaaf and NPS contractor, Michele Morseth during the 1996 and 1997 field seasons focused especially on such issues as the perceived effects of crowding and the use of large and powerful motorboats. Some Native Alaskans expressed concerns at this time about NPS management based on a perception that the agency had been “letting people misuse the river” since the Wild River’s inception (Morseth 2000). Similar concerns regarding visitor impacts on the Alagnak were also emerging from the Katmai Research Project (1997), which documented the observations and perspectives of a number of Alagnak River users as part of a larger ethnographic project focusing on the whole of Katmai National Park and Preserve. Later, in the fall of 2000, Michele Morseth conducted approximately five days of reconnaissance field research in Igiugig, interviewing Mary Olympic, Mike and Dahlia Andrew, and George and Annie Wilson regarding Alagnak Wild River. At that time, Morseth found the community to be receptive to the research and eager to participate further. Speaking of Mike Andrew, for example, Morseth (2000) noted that “He thanked me for coming and showing interest in the history of the Alagnak—he seemed to appreciate the park’s efforts to do this and thought it should have been done earlier.” Based on her preliminary fieldwork in Igiugig, Morseth (2000) recommended conducting further interviews with Igiugig, Levelock, and Naknek residents in their communities, followed by field visits along Alagnak River, to ascertain the dimensions of visitor impacts on Native Alaskan communities in the region. In response to the findings from these initial reconnaissance efforts, Morseth and Schaaf proposed the development of a full ethnographic study focusing on the potential impacts of non-resident recreational visitation upon

Native Alaskan use of Alagnak Wild River. Schaaf then submitted an NPS Project Management Information System (PMIS) request, seeking funding for this expanded study.

Simultaneously, with the rise in visitation along the Alagnak, other National Park Service staff were preparing to revisit and update the Alagnak River Management Plan. Under the watch of Superintendent Deb Liggett, Katmai National Park initiated the development of the revised Alagnak Wild River Management Plan through a comprehensive management planning effort involving agency representatives, academic researchers, and stakeholders. While the 1983 Management Plan continued to guide park management of the Alagnak, park staff noted that a new management plan was needed due to the increase in river use over the nearly 20 years since that document had been produced, especially in the form of more visitors, lodges, and boat traffic. Park staff also recognized that various user groups had differing perspectives on the best way to manage the river and its resources, and that a new management plan would have to be devised to strike a balance between those interests (Liggett 2002). On April 20, 2001, a Notice of Intent was published in the Federal Register, outlining the NPS's intent to produce an Environmental Impact Statement for the Alagnak Wild River Management Plan. Included in this National Register notice certain questions from a "preliminary list of planning issues" that are germane to the current study, including:

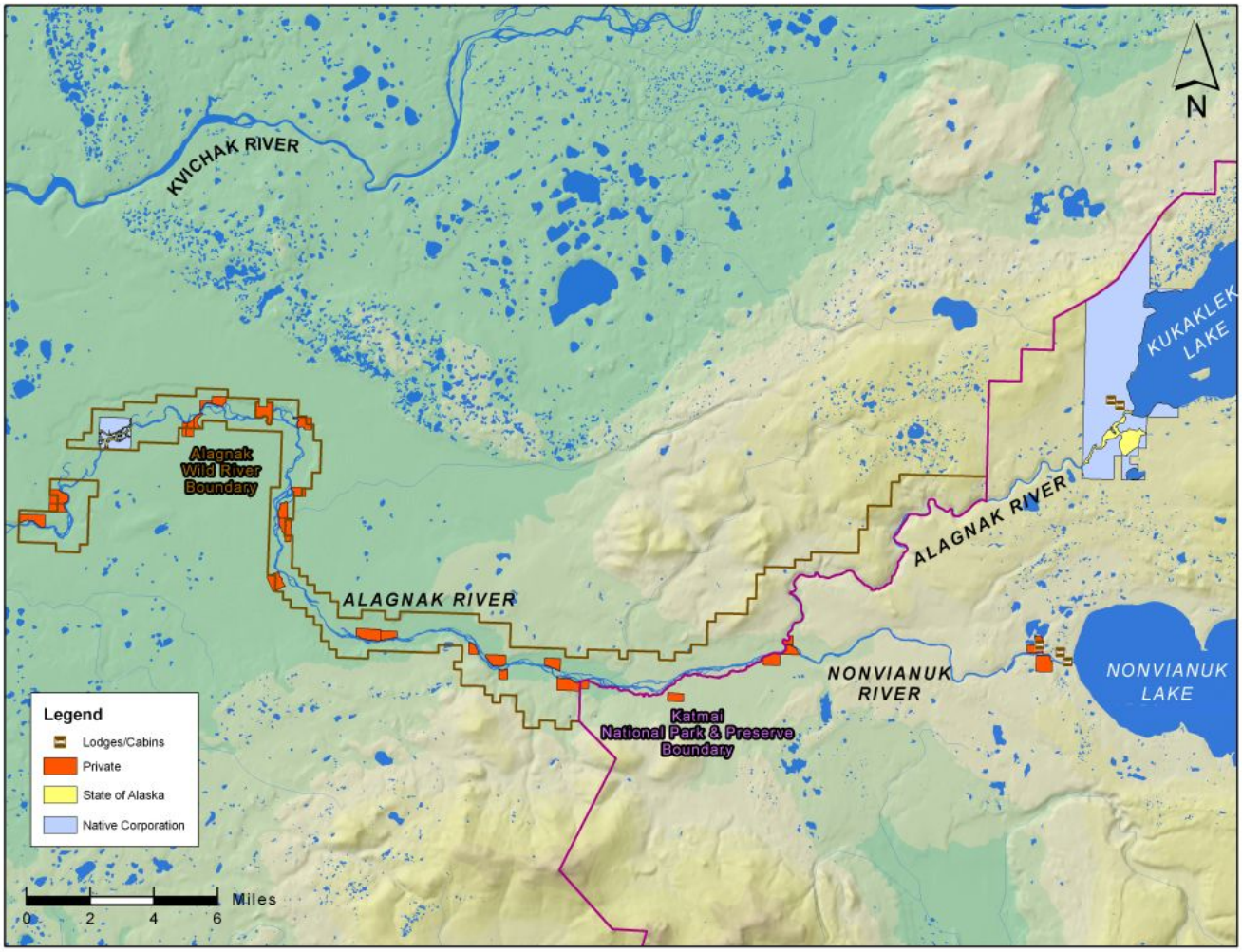
> "How can the important natural and cultural resources best be protected and enhanced, while providing for continued use of the river by present and future generations?" and "What level and type of use is consistent with the purpose for which the river was designated under the Wild and Scenic Rivers Act?" (Tingey 2001: 20326).

In summer of 2001, the National Park Service hosted the first of several meetings seeking stakeholder input on Alagnak Wild River. This meeting served to identify significant river users and some of the basic issues surrounding potential visitor impacts on Alagnak Wild River. During these early "public scoping" efforts, resident users of the Alagnak – many of them being Native Alaskan users – raised certain issues that would set the stage for what was to come. Quoted directly from the park's scoping documents, residents concerns included the following:

- “Disruption of wildlife and habitat
- Preservation of archaeological resources
- Overcrowding of humans
- Over-hunting by non-local peoples
- Disruption of native subsistence activities
- Human waste
- Degradation of Rainbow trout population
- Excessive motor boat use
- Lack of ‘legal’ campsites
- Non-guided tourists treating fish poorly
- Trash
- Too many airplanes
- Bank erosion from boat wakes
- Boat traffic over spawning beds
- Adequate salmon escapement
- Camping impacts
- Campfire impacts
- Tree cutting
- History of bear DLP’s
- Visitor education
- Kukaklek easement correction needed
- How to maintain the pristine and wild character of the Kukaklek branch” (Liggett 2002)

By fall of 2002, the NPS was coordinating with State of Alaska representatives to carry out further stakeholder meetings. During these early meetings, participants acknowledged the need for more data on uses and users of Alagnak Wild River, including qualitative information regarding current uses of the river by local users. NPS staff increasingly realized that, while the Alagnak Wild River and its resources continued to be used by Native Alaskan communities, the NPS had insufficient documentation or systematic knowledge of such use to guide their planning efforts.

The current report was developed in response to that need. As part of this Alagnak River Management planning process, the National Park Service instigated the “Alagnak Wild River Visitor Use Project,” a series of studies aimed at generating data required by NPS managers to identify and assess the concerns of river users. The Alagnak River Visitor Use Project was developed cooperatively between the National Park Service and the Pacific Northwest



A map of Alagnak Wild River, showing private allotments, Native corporation lands, and Wild River boundaries. *Map by Daniel Noon.*

Cooperative Ecosystem Studies Unit (CESU) at the University of Washington, particularly the CESU's Protected Area Social Research unit – a research team made up of individuals with expertise in applying social science methodologies to issues affecting National Parks and other public lands. In 2002, the CESU carried out a purely "observational" study, focusing on the locations of visitor activities along Alagnak Wild River; this research also resulted in a master's thesis by one of the project participants (Zweibel 2003). (During the same year, certain local communities confronted lodge owners on issues of garage disposal along the Alagnak, while NPS consultation with river users related to the revised management plan continued). In 2003, the Pacific Northwest CESU carried out a second study, a recreational survey addressing the

expectations and attitudes of Alagnak Wild River's non-resident visitors (Spang, Vande Kamp, and Johnson 2006). In order to round out the CESU investigations, National Park Service and CESU staff agreed to develop a small study focusing on the use of qualitative ethnographic data regarding Native Alaskan use of the Alagnak River corridor. To carry out this study, the NPS and the PNW CESU recruited CESU Research Coordinator, Dr. Douglas Deur, a specialist in Native peoples' uses of National Parks, to produce an ethnographic overview that addressed: 1) Native Alaskan uses of the Alagnak River corridor and 2) potential management issues that Native Alaskan communities perceive as resulting from non-resident uses of this corridor. In particular, this effort sought to identify and synthesize existing, but as yet untapped, qualitative data. The current report, authored by Dr. Deur, is one outcome of this effort.

The current study aims first and foremost to provide qualitative data on Native Alaskan uses of the river and management concerns to aid the Alagnak River Management Plan process. These data center on both the historical and contemporary uses of the river by Native Alaskans as well as the concerns that this population shares regarding specific management issues. The study has been conducted in such a way that it might provide guidance to both the NPS and Native Alaskan communities associated with the study area as they seek to document cultural and historical uses of the Alagnak and to resolve any natural resource management issues that might arise within the study area. In order to understand the broader context of these issues, the current research posed a number of related questions, such as:

> Which places and resources found along Alagnak Wild River are of particular cultural significance, due to their role in oral tradition, their continued use by Native Alaskan communities, and the like?
>
> What is the significance of Native Alaskan land holdings (specifically, cabins or land allotments) and resource claims along Alagnak Wild River today?
>
> What hunting, fishing, or plant gathering activities are still conducted along Alagnak Wild River by Native Alaskans? Where along Alagnak Wild River are these resources acquired?
>
> For what purposes are these resources gathered (e.g., ceremonial/subsistence uses, for personal or commercial use)?

> Have visitors to Alagnak Wild River had impacts on the places and resources indicated above, either directly or indirectly?
>
> How can these impacts be characterized?

The research has resulted in the production of this final report, which, it is hoped, will help NPS staff more effectively manage lands and resources along Alagnak Wild River that are important to contemporary Native Alaskan communities that are historically associated with this river.

The current effort is also undertaken to forward other park priorities relating to the protection of cultural and historical resources on lands managed by the NPS. The enduring use of the Alagnak by Native Alaskans, coupled with the long history of Native use predating management of the Alagnak Wild River, has presented NPS managers with certain compliance mandates and a need for additional information on these themes generally, independent of the Alagnak Wild River Management Plan process.[3] Regrettably, little specific information on Native use of the Alagnak could be obtained from published ethnographic sources, and archaeological documentation has been thin compared to some other portions of Katmai National Park and Preserve (Norris 1996). As Hussey reported of the entire Katmai region in 1971, documentation of Native use was scarce, and there was a need for considerably more original research on the topic:

> "The fact that anthropologists are in disagreement concerning certain aspects of the prehistoric occupation of the Katmai region points up the fact that additional archaeological and ethnological work is needed in the monument and vicinity" (Hussey 1971: xvii).

A generation later, only a fragment of this proposed work had been undertaken, and little of this work had been undertaken along the Alagnak. In Katmai National Park and Preserve's Historic Resource Study, *Building in an Ashen Land*, Clemens and Norris (1999: 144) conclude that focused ethnographic research on the Alagnak was required:

> "Regarding the Alagnak River, which is a relatively recent addition to the National Park Service system, little historical information has been collected. In light of what may well be a long chronicle of protohistoric and historic activity in that area, it is recommended that an ethnographic research study be undertaken."

The current study represents a step in the direction of improved ethnographic documentation for the Alagnak, and it is hoped that this report will aid the NPS in filling the significant data gaps identified by Hussey, Clemens, and Norris.

The current study is also likely to have some value in developing future interpretation regarding the Alagnak. Generally, interpretation of Alagnak Wild River has been sparse relative to other portions of Katmai National Park and Preserve. Still, there have been some notable developments in recent years. In 1995, the Alaska National Parks and Monuments Association assisted in the development of a new periodical newspaper, called *The Alagnak*, which provided visitor information as well as summaries on the cultural and environmental history of the wild and scenic river corridor (Norris 1996: 257). More recently, Susan Kedzie-Webb, Jeanne Schaaf, Mary Olympic, and John Branson collaborated to produce an interpretive booklet with high production values for visitors, entitled *Alagnak Wild River: An Illustrated Guide to the Cultural History of the Alagnak Wild River* (NPS 2006).[4] In addition to advancing the objectives of cultural resource protection through visitor education, that document also represents an important milestone generally in the very small literature addressing cultural uses of the Alagnak Wild River corridor. The current report might aid in the further development of these kinds of interpretive media.

Importantly, the current research has also been conducted in such a way as to advance a more extensive research project on the same general themes. Part-way into the current research, NPS staff learned that the ethnographic study of visitor impacts on resident users and uses of the Alagnak originally proposed by Morseth and Schaaf years before, "*Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River*," had been approved for funding with a budget and scope that far exceeded the current project. At that time, all parties agreed that the two projects would become linked. Therefore, the current study has been designed, in part, as a thematic compendium of information that can both serve to assist NPS managers in resource planning efforts along Alagnak Wild River, as well to assist researchers for the pending "Evaluate the Effects of Tourism" project in the optimal planning and execution of their study.

Dr. Douglas Deur of the Pacific Northwest Cooperative Ecosystem Studies Unit will also serve s Principal Investigator for this planned study. A revision to the original CESU Task Agreement or the current study, in turn, called for carrying out certain planning tasks for the "Evaluate the Effects of Tourism" study as part of the current effort, and recommendations pertaining to the pending study are contained in this report. Specific documents – most of them emerging from the current study – that might aid in the execution of this future study are included in the appendices at the end of this report.

METHODS

To achieve the multiple goals of this study, the Principal Investigator, Dr. Douglas Deur reviewed a diverse range of materials pertaining to historic and contemporary uses of Alagnak Wild River by Native Alaskan communities. Most significantly, he conducted a systematic review of existing qualitative ethnographic documentation of recent use along the Alagnak from archival sources, including a review of files obtained from the National Park Service that included transcripts, notes and audio recordings from past ethnographic interviews relating to the study area. He also conducted a review of published literatures addressing the people and resource practices associated with Alagnak Wild River, as well as a review of agency "gray literatures" relating to the study area. Expanding on this research, Dr. Deur held a number of focused meetings on project themes, both in person and by telephone, with Native Alaskan residents of Igiugig, Naknek/South Naknek, Levelock, and King Salmon.

During this research, Dr. Deur has worked in direct consultation with NPS staff, including Jeanne Schaaf (Chief of Cultural Resources for Lake Clark and Katmai National Parks and Preserves) and Karen Stickman (Cultural Anthropologist for Lake Clark National Park and Preserve). In addition, he has been in periodic communication with other NPS staff, who have provided their thoughts and general guidance regarding project goals, methods, and sources. These individuals have included Troy Hamon (Chief of Resources for Katmai National Park), Mary McBurney (Subsistence Manager, Lake Clark and Katmai National Parks and Preserves), and Karen Gaul (former Cultural Anthropologist for Lake Clark and Katmai National Parks and Preserves). Dr. Don Callaway (Regional Anthropologist, Alaska Regional Office) and John Branson (Historian, Lake Clark and Katmai National Parks and Preserves) provided valuable assistance in locating and obtaining transcripts and notes from past ethnographic studies that have addressed the Alagnak. Daniel Noon (NEPA Compliance Coordinator, Katmai National Park and Preserve) also assisted in the production of certain maps for the current report.

Beginning at the onset of the current study, Dr. Deur conducted a literature review of published materials addressing Native Alaskan communities that are associated with Alagnak Wild River. This review involved a detailed overview of relevant ethnographic, archaeological, and historical

sources. Specifically, this review involved the identification, documentation, and critical review of published references to traditional uses of, and beliefs and values regarding, Alagnak Wild River and adjacent or comparable resources and landscape features among the Native Alaskan communities of the Alaska Peninsula. Particular attention was focused on four communities: Igiugig, Levelock, Naknek/South Naknek, and King Salmon, with supplementary information gathered on Kokhanok. This investigation illuminated uses of Alagnak Wild River for social, economic, cultural, and subsistence purposes by residents of these communities. In addition, he gathered information on topics that set the context for this analysis, included but not limited to the demographic history and migrations of historical communities in the Alagnak region, and their incorporation into modern Native Alaskan communities in recent times. Dr. Deur also conducted a review of archival and other primary data, addressing the same general themes as those outlined above. This research was carried out using State and federal archival collections, including (but not limited to) the unpublished literatures and data sets of the Alaska Department of Fish and Game, interview transcripts and audio recordings available through the University of Alaska, Fairbanks, and transcripts, ethnographic field notes, meeting notes, and other materials found in the collections of the Alaska Region office of the National Park Service and Katmai National Park. Potentially useful materials housed within national collections, such as the Smithsonian Institution, were consulted only through the use of microfilms and other remotely accessible media.

While original planning for this research effort called for conducting a limited number of original ethnographic interviews for this poorly documented anthropological setting, it quickly became apparent that the interests of the NPS would better served by an alternative approach. The reasons for this conclusion were many. Importantly, archival investigations undertaken for this project revealed the fact that numerous ethnographic interviews with Native Alaskans regarding the Alagnak Wild River had been conducted previously; while transcripts, notes and, in some cases, audio recordings were available from these prior interviews, their contents had not been reviewed, organized thematically, or otherwise employed in support of the Alagnak Wild River planning efforts. Available transcripts, notes, and some audio recordings were available for a number of projects, including interviews conducted in the study communities by National Park

Table 1: Interviewees Who Have Provided Information Regarding Alagnak Wild River in Five Past NPS Studies

Igiugig

Randy Alvarez (2002)
Dallia Andrew (1995, 2000)
Mike Andrew, Sr. (1995, 2000)
Michael Andrew, Jr. (2002)
Mary Ann Olympic (1995, 2000, 2002)
Dan Salmon (2002)
Anne Wilson (1995, 2000)
George Wilson, Sr. (1995, 2000)
George Wilson, Jr. (2002)

Levelock

Ella Mae Charley (1998)
Evan Chukwak (1998)
George Setuk (1998)
Alex Tallekpalek (1998, 1999)
John Tallekpalek (1998)
Mary Tallekpalek (1998)

Kokhanok

Gabby Gregory (1999)
Mary Nelson (1997)
Danny Roehl (1997)

South Naknek

Carvel Zimin, Sr. (1998)

Dates following each name represent the dates of formal interviews. The names of interviewers are as follows:

2002 Study	– Don Callaway (NPS), Interviewer
2000 Study	– Michele Morseth (NPS contractor), Interviewer
1999 Study	--Michael Hilton (UCLA), Interviewer (not directly quoted in this report)
1998-99 Study	– Don Callaway (NPS), Bill Schneider (UAF), and Pat Partnow (UAF), Interviewers
1997 Study	– Judith Morris, Interviewer
1995 Study	– Don Callaway (NPS) and Bill Schneider (UAF), Interviewers

Service staff, NPS contractors, and/or University of Alaska, Fairbanks staff in the course of researching the northern portion of Katmai National Park and Preserve. Specifically, in the course of past National Park Service studies, conducted between 1995 and 2002, a number of residents of Igiugig, Naknek/South Naknek, Levelock, Kokhanok, and King Salmon have participated in ethnographic interviews regarding their past and present uses of Katmai National Park. In the course of these interviews, a number of individuals have mentioned the use of lands and resources specifically within Alagnak Wild River. These interviewees were conducted as part of five principal studies, including: three studies on the topic of historical uses of Katmai National Park conducted in 1995 by Don Callaway (NPS) and Bill Schneider (University of Alaska, Fairbanks), in 1997 by Judith Morris (Alaska Department of Fish and Game), and in 1998-99 by Don Callaway and Bill Schneider with the assistance of Pat Partnow (University of Alaska, Fairbanks); a reconnaissance level study of Igiugig residents' use of Alagnak River by Michele Morseth (an NPS contractor) from 2000; and a study of transportation options used by Igiugig residents to access Katmai and Alagnak Wild River by Don Callaway (NPS), conducted in 2002. A review of transcripts, field notes, and audio recordings from interviews with no fewer than 50 individuals from those studies, conducted as part of the current study, revealed that 19 individuals had made specific references to Alagnak Wild River – some in the course of multiple interviews, for 26 interviews in total. The names of these interviewees, as well as the dates of the interviewees and the names of the interviewers, are provided in Table 1. In addition, interviews were conducted in the communities of Igiugig, Levelock, South Naknek, and Kokhanok as part of a sixth ethnographic study, the "Katmai Research Project." These interviews, involving with an undisclosed number of unnamed interviewees, were conducted in 1997, principally by Joanna Endter-Wada and Douglas Levine with the guidance of Judith Morris. Field notes obtained from this research project suggest that no fewer than 15 individuals participated in focused interviews regarding the study area. As with the other NPS interview materials, interview notes from the Katmai Research Project were reviewed and their contents have been reviewed for recurring themes and salient data. Additional ethnographic summaries of Native Alaskan uses of Alagnak River that are based on original ethnographic and/or historical research, such as those found in Behnke (1978), Stirling (1982), and various Alaska Department of Fish and Game reports, were integrated thematically with these unprocessed ethnographic materials.

Specific observations of interviewees regarding land and resource use, as well as examples of recurring or representative statements of opinion have been excerpted and incorporated thematically into the current document. Cumulatively, this report makes an effort to provide a faithful accounting of all of the major themes and perspectives mentioned by interviewees in the course of these six separate past ethnographic efforts. In turn, these selected quotations have been clarified, contextualized, and augmented with materials derived from published and unpublished anthropological literatures.

In order to augment these existing interviews, fill data gaps, and seek guidance on the conduct of the study, Dr. Deur participated in a series of both personal meetings and telephone conferences with representatives from each of the study communities.[5] These meetings typically involved individuals associated with village councils, and various inter-village entities operating in the Bristol Bay region (such as the Bristol Bay Native Association, the Bristol Bay Native Subsistence Council, and the Bristol Bay Advisory Council). Dr. Deur also consulted with teachers at the Igiugig and Levelock Schools, who advised on potential student involvement in pending research on Alagnak Wild River. Lake Clark National Park and Preserve Anthropologist, Dr. Karen Gaul, had initiated collaborative efforts on this project in 2006, assisting occasionally in these community outreach efforts as Deur initiated telephone conferences with key individuals from each community. In 2007, following Gaul's departure from the NPS, Karen Stickman was hired as her replacement and provided considerable assistance to the Principal Investigator as a research collaborator and assistant. Expanding on Gaul's effort, Stickman resumed communication with communities regarding the current project, and was able to coordinate meetings between herself, the Principal Investigator, and participating Native Alaskan communities, as well as to gather information from participating communities that might guide planning on Alagnak Wild River, and to seek community input on the planned ethnographic study, *"Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River."* Information and perspectives shared in the course of these informative meetings are incorporated into the current document, and cite the meeting notes kept by Karen Stickman (quoted in Stickman 2008). A total of 26 individuals who participated in conference calls or

focused meetings for the purposes of this research are identified at the end of this document, in the "Sources" section.

The current document represents the outcome of a thematic study, with a well defined geographical and topical scope. While some effort is made here to place the experience of Alagnak Wild River into its larger historical and cultural context, it is not the intention of the current study to provide a complete historical overview of all Native uses of the Katmai region. The NPS has existing historical studies, some no less than monumental in scope (consider Hussey's 1971 *Embattled Katmai*) that seek to illuminate this larger history. It is important to acknowledge that we have made an effort to incorporate the views and opinions of river users in this document as it is believed that a systematic effort to record these views and opinions will aid the National Park Service in its mandate to manage the River. By including this kind of subjective data, it is in no way an endorsement of these views and opinions, or an implicit judgment on their accuracy. While some effort has been made to place these comments in the context of measurable changes in visitor traffic and natural resource conditions, no effort has been made to filter past interview content based on its reflection of the "ground truth" on the Alagnak. The "ground truth" of these claims has been the focus of ongoing research by the Natural Resources division of the park in particular, and it is our hope that this document will aid in their efforts. In this report, we have made an effort to be inclusive, drawing together much of what has been documented in written form regarding contemporary users' views and concerns regarding Alagnak Wild River. While some of the issues raised by past interviewees may be beyond the management authority of the NPS, and more properly addressed by State of Alaska agencies for example, they are still included here. This is done advisedly, recognizing that NPS resource managers nonetheless will benefit from an awareness of these issues as part of the larger range of management challenges emerging on Alagnak Wild River.

The principal investigator, Dr. Douglas Deur, has carried out similar research in conjunction with the National Park Service at a number of other park units. In this past research, as well as the current research effort, Dr. Deur and the National Park Service employed the ethical guidelines established by the American Anthropological Association and the Society for Applied Anthropology. These ethical guidelines also will provide the standard for the current research.[6]

THE PHYSICAL SETTING OF THE ALAGNAK REGION

The Alagnak Wild River is located on the Alaska Peninsula, flowing generally westward some 79 miles from upland lakes and forests through lowland tundra, from Lake Kukaklek to Kvichak Bay. This free-flowing river drains a basin of some 2,237 square miles, from its headwaters to its confluence with the Kvichak River, near Bristol Bay. Fifteen miles below Lake Kukaklek, Alagnak River joins the Nonvianuk River, which flows a mere eleven miles long from its source, at Nonvianuk Lake, to its confluence with the Alagnak. Above this confluence, the upper reaches of both the Alagnak and Nonvianuk Rivers are rocky, relatively high-gradient, and possess a single, well-defined channel. In this portion of the Alagnak River Basin, the river flows over exposed Tertiary volcanic and sedimentary bedrock. Below the confluence, the river enters low-gradient tundra, where it becomes highly braided, with many islands, pools, riffles, and meanders distributed across an active floodplain. The Alagnak is also called the "Branch River" locally, an apparent reference to its frequent meandering, which results in new branches, intermittent channels, and other meander features. As the Alagnak enters its tidally-influenced lower reaches, close to its confluence with the Kvichak River, the Alagnak becomes deeper, with one well-defined channel and wide gravel bars (Spang, Vande Kamp, and Johnson 2006; Curran 2003; Dumond and VanStone 1995; Riehle and Detterman 1993).

The Alagnak River, with riparian vegetation and braided channels, as it appear from the air. *From Curran 2003.*

Precipitation ranges from almost 80 inches annually in the headwaters of the Alagnak, to roughly 25 inches annually along much of the river corridor. Cold winter temperatures usually are accompanied by persistent snow cover in the upland mountains and ice cover on the river for several months out of the year. Vegetation along the Alagnak ranges from taiga, to spruce-birch woodland, to lowland tussock-tundra Dominant tree and shrub species includes white spruce (*Picea glauca*), willow (*Salix barclayi*, *Salix alaxensis*), Siberian alder (*Alnus viridis* ssp. *fruticosa*), paper birch, and dwarf birch (*Betula nana*, *Betula kenaica*), while dominant groundcover species includes Labrador tea (*Ledum palustre*), Bog blueberry (*Vaccinium uliginosum*), Horsetail (*Equisetum arvense*), sedges (*Carex* spp.), Bluejoint reedgrass (*Calamagrostis canadensis*) Dwarf fireweed (*Epilobium latifolium*), Lichens (*Cladina*, *Cladonia*, *Cetraria*, and *Nephroma* spp.) and others (Carlson and Lipkin 2003). A list of structurally dominant species identified by Carlson and Lipkin (2003) is provided in the "Berries and Other Plant Materials" section of this report.

All five species of Pacific salmon live in the Alagnak River, as do whitefish, pike, trout – all of these species occupying different portions of this structurally diverse river during different life phases. Mammals are relatively abundant within the riparian zone, such as brown bear, moose and caribou, and a variety of furbearers including beaver, lynx, mink, otter, fox, wolverine, and wolf. A diversity of waterfowl, shorebirds, raptors, passerines, and other birds also abound in the riparian margin, contributing to its overall resource value (USFWS n.d.). In recent years, certain game species have been in rapid decline on the Alaska Peninsula. Caribou numbers, in particular, have been declining rapidly, including the Northern Alaska Peninsula herd, the Southern Alaska Peninsula herd, the Nushagak herd, the Mulchatna herd and the Unimak herd. In the last three years, caribou numbers have declined to a point that the Alaska Department of Fish and Game and the United States Fish and Wildlife Department have instigated hunting closures for some of these herds and approved expanded predator management near the calving grounds of others. These recent changes are not reflected in the 1995-2002 interviews that principally inform this document. The impact of these changes on hunting in the study area remains unclear.

THE HISTORICAL CONTEXT OF USE AT ALAGNAK WILD RIVER

To summarize the exact identities of the aboriginal inhabitants of the Alagnak River region is no small task. There are a variety of reasons for this observation. For one, the region was largely overlooked by classic ethnographic treatments. Conducting an archaeological study in the Katmai region in 1954, Wilbur Davis found that all major works regarding Alaskan "Eskimos" made reference to the Alaska Peninsula and its aboriginal inhabitants, but that these works were consistently plagued by generalities, superficialities, and considerable speculation on the pre-contact identity of its inhabitants based on limited evidence (Davis 1954: 4). The ethnographic work of the last half century has done relatively little to illuminate the pre-contact condition of the Alagnak Region, though considerable archaeological research by such prominent scholars as Don Dumond has helped remedy these shortcomings, and ethnographic research regarding more recent community life provides tantalizing clues as to precontact life on the Alagnak.

Simultaneously, the Alagnak River corridor sat at a dynamic cultural borderland. The cultural position of the Alagnak was somewhat unusual – situated within a cultural boundary zone between two Yupik-speaking groups, the Aglurmiut (or "Aglegmiut") and Kiatagmiut, and the Alutiiq-speaking "Peninsula Eskimo" or "Aleuts," who were closely related to the Koniag of Kodiak Island. Many accounts concur on the point that the Alaska Peninsula at one time prior to contact was occupied largely by Peninsula Eskimo, presumably Alutiiq-speaking people, with winter villages on the coast as well as in the interior in such locations as Savonoski, on the upper Naknek drainage, and a constellation of smaller settlements lining the riparian corridors of the Peninsula.[7] However, the designation of discrete pre-contact ethnic boundaries is complicated by the circumstances of the contact period. In particular, during roughly 1800 AD, warfare broke out in the Kuskowim River region. Commonly called the "bow and arrow war," this conflict resulted in the displacement of the Aglurmiut from the lower Kuskowim River. The Aglurmiut forcibly took up residence along the mouth of the Naknek, the Nushagak, and other major Bristol Bay rivers soon thereafter. Russian sources seem to indicate that earlier inhabitants of this coastline retreated inland and established permanent villages in the upper

reaches of the Naknek (Dumond 1986; VanStone 1967: 117-19; Oswalt 1967: 4; Nelson 1899: 516-17; Wrangell 1839: 121ff.). Thus, in 1839, Wrangell reported that "The Agolegmyut, at the mouth of the Nushagak and Naknek rivers, number about 500 souls…" (Wrangell 1970: 14).[8]

Both Aglurmiut and Kiatagmiut were further drawn into the area through their involvement in the fur trade under Russian influence (Dumond and Van Stone 1995; Ackerman and Ackerman 1973). Peninsula Eskimo inhabitants of the northern Alaska Peninsula coast appear to have been displaced at this time, retreating to interior locations within the Peninsula, and possible to coastal villages on the Peninsula's southern flank. For a time, relations were hostile between the two groups. Speaking of the Naknek drainage to the immediate south, Dumond reports that

> "In 1953 a Severnovsk native alleged that in very old days the two peoples [Pacific Eskimo and Aglurmiut] had fought each other with bow and arrow. In those same olden days, he said, the people of the lower Naknek River [Aglurmiut] never went upstream, and the Severnovsk people [Pacific Eskimo] never went downriver but repaired to the Pacific coast rather than to Bristol Bay to hunt sea mammals" (Dumond and Van Stone 1995: 3).

Emerging from this unusual history is an atypical cultural geography within the Alaska Peninsula. The cultural position of the Alagnak is somewhat unusual – a resource-rich riparian area situated within a cultural boundary zone. Elsewhere on the Alaska Peninsula, these "cultural boundaries" tended to be resource poor and relatively uninhabited, making them ideal as intermediate territory between ethnic groups (Yesner 1985). In the Alagnak area, however, the close geographical juxtaposition of these different groups insured that these different communities were drawn together at productive riparian sites, sometimes peacefully and sometimes not. The Alagnak likely became a geographical nexus, one of several on the Peninsula, where these different communities converged and associated anew, at around the time of European contact.

Due to this history, the drawing of interethnic boundaries as they existed at the time of contact is problematic and perhaps a futile exercise. The boundaries between Native Alaskan territories are even depicted in contradictory form within the same authoritative volume, *Handbook of North*

American Indians, Volume 5: Arctic, by the Smithsonian Institution. Within this Handbook, Van Stone (1984b: 225) depicts the whole river, from its outfall from Kukaklek Lake to its tidewater mouth, as being within the territory of the "Mainland Southwest Alaska Eskimo," specifically the Aglurmiut people. Certainly, after several generations of contact, the Yupik-speaking cohort in this multi-ethnic zone became numerically and culturally dominant. Yet, Clark (1984) depicts the majority of Alagnak Wild River, including all areas upstream from the river's north-flowing "Braided Section," as being Aluutiq-speaking "Pacific Eskimo." This too would have been accurate at around the time of first direct Russian contact. The differences between these two maps are telling, and reflect the dynamism and mobility of the human communities of this region from the earliest periods of recorded contact.

Other accounts sometimes allude to the inhabitants of the Alagnak River region as "Kiatagmiut" - a term often used in general and vague ways to the Southwestern Yup'ik groups of the northern interior Alaska Peninsula. Strictly speaking, the Kiatagmiut were the Inuit population centered on the Nushagak River on the northern side of Kvichak Bay. And while the Pacific Eskimo inhabitants of the northern Peninsula were culturally connected to those of the southern Peninsula and Kodiak Island regions, these groups were also distinct from one another. Partnow (1993: 6) notes that

> "Although archaeological evidence indicates that immediately prior to contact the Eskimoan language speakers of the northern Alaska Peninsula and Kodiak shared a nearly identical material culture, Russian documents show that the indigenous peoples were well aware of their linguistic differences and had a sense of political and territorial distinctiveness."

In an attempt to summarize this dynamic cultural geography, most published accounts (e.g., Dumond 1995, 1981; Harritt 1986) depict the contact-period lower Alagnak River Basin as Aglegmiut and the upper Alagnak River Basin as being "Peninsula Eskimo." The former peoples, these sources generally note, emphasized coastal resources such as marine mammals and fish, while the interior communities had a subsistence strategy that combined salmon fishing and caribou hunting in a manner that is still echoed in the practices of modern day river users.

Despite these differences, it is also clear that the two populations had frequent contact (Davis 1954).

Adding to the complexity of this picture, the Alagnak River region has been characterized over time by considerable dynamism and sometimes dramatic geological hazards. This dynamism appears to have had repeated, perhaps dramatic influences on the distribution of human settlement and land use throughout the region, with periods of apparent outmigration and return migration in areas plagued by volcanic disturbances (Dumond 2004; Black 1981). As Dumond (1979) has determined, these disruptions never served to completely extirpate the human occupants of the region, but relatively frequent eruption cycles may have influenced the availability of subsistence resources on the Alaska Peninsula that demanded temporary relocations. In particular, the localized availability of certain resources, such as caribou or salmonid fish, has varied considerably over time as culturally significant species are extirpated from, and then recolonize, habitats variously affected by volcanism (Pavey, Hamon and Nielsen 2000). Certainly, to varying degrees, the volcanic and seismic history of the region also has served to wash away or submerge portions of the human imprint on this landscape, including archaeological and historical sites and resources, in a way that has continued to challenge archaeological researchers (cf. Hilton 1998; VanderHoek 1998; Dumond 1979).

Despite these ambiguities, the ethnographic and archaeological evidence are in firm agreement on certain points, especially as they relate to the settlement and subsistence patterns of the Alaska Peninsula's inhabitants prior to European contact. Archaeological evidence generally supports the notion that "Southwestern Eskimo" peoples (whether they spoke Yupik or Aluutiq is unclear) inhabited the Alagnak River region long before European contact. Archaeological evidence suggests a very long chronology of a mixed subsistence pattern, involving riparian fishing technologies alongside terrestrial hunting technologies. While the communities of the region appear to have often had a coastal focus, there is evidence of extensive seasonal use of interior for fishing and hunting stations. Settlements were situated as to accommodate this combined subsistence pattern, with significant villages situated in riverine and estuarine contexts.[9] Villages found in the interior tended to be located at salmon-rich sites that also served as key points along the portages crossing the Alaska Peninsula (Petroff 1884: 136).

Assessing and comparing the variety of subsistence strategies found on and around the Alaska Peninsula, archaeologist Don Dumond established a typology to encompass all of these strategies. In this typology, many past and present users of the Alagnak River area generally fit into Dumond's pattern for "Coastal Hunters, Fishermen, Caribou Hunters" of the Open Coast, which "includes those people who establish major hunting settlements on the unfreezing coast, located [on the coast with seasonal access to sea mammals, shelter from winds and accessibility by boat]; who fish seasonally; and who make seasonal excursions inland to take substantial amounts of caribou" (Dumond 1987: 33). Using a potentially relevant typology developed for cultural contexts along the Bering Strait by Dorothy Ray, subsistence in the Alagnak River corridor at contact was similar to what Ray (1983: 175) termed the "Caribou Hunting Pattern" – a category that involved a specialization in caribou and salmon procurement in the interior, with periodic seal and beluga hunting in estuarine contexts (see also Harritt 1986).

The earliest sites at the head of the Alagnak River, dating from roughly 9,000 years ago, show evidence of a mixed economy centering on hunting, gathering, and probably fishing (J. Schaaf pers. comm., 2008; see NPS 2006). Salmon fishing appears to have been a mainstay of local economies for millennia. Norton Tradition sites, found on the major rivers in the Alaska Peninsula, tend to suggest a pattern of village life centering on the harvest of salmon and a number of other secondary resources. As Dumond (1977) noted "In these sites, notched pebbles generally interpreted as fish sinkers are especially common, suggesting that migrating salmon provided a staple resource (Dumond 1977: 113). On the Brooks River, south of the Alagnak River, Cressman and Dumond (1962: 2-3) conducted excavations that suggest "a widespread subsistence pattern, summer interior fishing and hunting, of the order of 4,000 years ago" that dominated daily life in this region (see also Dumond and Van Stone 1995; Dumond 1998, 1986, 1981, 1977). The limited archaeological documentation available for the Alagnak River corridor suggests a pattern of use and occupation that fits this larger pattern. Riparian sites are especially commonplace. As summarized by Curran (2003: 4),

> "Humans probably have occupied permanent, semipermanent or temporary encampments near the banks of the Alagnak River for thousands of years…Park archeologists have identified several dozen prehistoric sites near the banks of the

> Alagnak and Nonvianuk Rivers, including many along the upper and middle reaches of the study area. Although some sites are found on terraces 2 to 3 m high a few hundred meters from the river, most are within about 50 m of the present-day river. Sites are generally absent from the highest terraces (such as the 15–20 m high, right-bank terrace from RK 50 to 60). The condition of structures and physical artifacts at the sites suggests that they are less than 2,000 years old…despite the discovery of sites as much as 8,000 years old within the surrounding region"

European influence on the northern Alaska Peninsula came relatively late and was intermittent, compared to locations on the Peninsula's southern shore. The people of the Alagnak River region first encountered Russian-American Company employees sent from Kodiak Island to explore the Alaska Peninsula and Bristol Bay area in the final two decades of the 18th century (Van Stone 1972). Though Native Alaskans established trade relationships with the Lebedev-Lastochkin Company and later the Russian-American Company, and there was some relocation of seasonal settlements to the proximity of trading posts, the Russian presence had relatively slight effects on the overall patterns of settlement and subsistence in this region. As Van Stone noted, the "trapping-trading economy may have reduced the actual amount of the time which the Eskimos spent in their villages, but not enough to cause a major shift in the settlement pattern" (Van Stone 1971: 143).

The epidemics that the Russians introduced, however, brought significant changes to the Alagnak River region. Epidemics within the Native communities of the Alaska Peninsula are first mentioned in the Russian records as early as 1832, at the beginning of two major smallpox epidemics that swept through these communities by the end of that decade (Van Stone 1967: 99). In the decades that followed, the communities of the Alaska Peninsula were decimated by repeat waves of influenza, smallpox, pulmonary diseases, tuberculosis, and a number of other unspecified "epidemics." There is some suggestion in the literature that Russian missionaries and mission outposts served as the inadvertent vectors the arrival of many of these early epidemics in the Alaskan Peninsula region over the course of the 19th century (Van Stone 1967: 100).[10] Not only did a significant proportion of the Native community die, from all accounts, but also the survivors of these epidemics often had reduced fertility rates, resulting in multi-generational demographic effects of each successive epidemic. For comparative purposes, it is worth noting

that Dumond (1986) places the population of the Naknek area in the year 1800 at between 600 and 700 people, but concludes that "between that date and AD 1900, approximately two-thirds of the population was eliminated, chiefly as a result of a heightened incidence of respiratory disease" (Dumond 1986: 1). During each successive epidemic, survivors from the different Native communities of the Alaskan Peninsula often regrouped into multi-ethnic villages. By the 1850s, the "Peninsula Eskimo" of the Alagnak River region appear to have been partially absorbed into the neighboring Aglurmiut population (Woodbury 1984). The two groups maintained some sense of distinctiveness, but increasingly the old identities and animosities began to give way to a shared Native identity associated with a particular geographical region rather than affiliation with pre-contact ethnolinguistic groups. Simultaneously, cultural affiliations with Yupik speakers from further to the north, as well as the emergence of early cannery employment on Bristol Bay (arriving in 1895 on the Kvichak and by 1900 on the Alagnak), brought a stream of outside Native groups into the vicinity of the Alagnak:

> "The Alagnak River was not only used by Yup'ik people from the Kvichak River but also from the Nushagak and even Yukon and Kuskokwim drainages, a testament of its rich subsistence resources during the historic period. In addition, availability of commercial fishing jobs at Kvichak canneries also attracted subsistence users from as far away as the Yukon River" (NPS 2006: 19).

The question of ethnic identity in this region following the changes of the mid-19th century is complex, reflecting the migrations and admixtures of formerly distinct populations that have formed the modern communities. A number of studies have demonstrated strong ties between the communities in the study area, due to shared kinship, inter-village migration, participation in Russian Orthodox and other church activities, as well as shared subsistence tasks and commercial employment at canneries and elsewhere over the course of the late 19th and early 20th centuries (e.g., Partnow 1993, Morris 1986). While residents of the area are often categorized as ethnically "Eskimo" they commonly refer to themselves as "Aleut" By the time that ethnographic information was being recorded in a systematic way, the three populations that made up the human community in this portion of the Alaska Peninsula – Kiatagmiut, Aglurmiut, and Peninsula Eskimo – had become so integrated, and their sense of distinctiveness blurred in this cultural boundary zone, that they adopted a shared identity as "Aleut" (Partnow 1993;

Morris 1986: 29-30; Townsend 1979). Likewise, Behnke and the researchers of the Katmai Research Project found that the communities directly related to the Alagnak and the northeastern Katmai area identified as "Aleut" while still being of significant Yupik ancestry and keeping Yupik certain traditions alive:

> "The aboriginal populations of the Katmai region included three Eskimo speaking groups, the Kiatagmiut, Aglmiut, and Peninsula Eskimo. Many… of these people who live in the Katmai proposal call themselves "Aleut" (Behnke 1978: 163).

> "The majority of people in Igiugig are Alaskan Native [and] most Igiugig residents identify themselves as Aleut. The older and middle generations speak "Native," which I assume is Yup'ik. All the villagers I spoke with were quite comfortable in English, although their vocabulary and comprehension is limited [compared to their use of Yupik]" (Katmai Research Project 1997: 2).

Some elders in the modern communities speak Yupik, but a few have been reported to speak Aluutiq in recent decades. Simultaneously, it is clear that there is a significant Tanaina Indian ancestry in the communities of the study area that has been largely eclipsed by Yupik and Alutiiq identity and ancestry (Townsend 1979, 1965). And clearly, in the years following European contact, intermarriage with Russian men had significant consequences for Native communities during the Russian period, just as intermarriage with Scandinavian fishermen, reindeer herders and other settlers in the late 19th and early 20th century affected social mores and relationships in the American period (cf. Mishler and Mason 1996). Good general summaries of these communities, with their complex multi-ethnic origins, have been written by past researchers attempting to disentangle the cultural history of the Alagnak River region, and perhaps these statements might serve as general guideposts in understanding the character of the region today:

> "Kvichak River Natives are culturally Yupik Eskimo, although they call themselves Aleut—the designation the Russians used. Traditionally they moved seasonally, pursuing lake and riverine resources most of the year, at times moving closer to the ocean to harvest seals and beluga, and harvesting small and large land mammals when they were available. In the 1800s the people of this area established permanent villages and built churches and became tied into the market economy. They participated in the fur trapping industry, first trading with the Russian American Company and later the Alaska Commercial Company [in

> Nushagak]. When the fur industry collapsed and the fishing industry exploded they participated in that. And at the same time they continued to live seasonally—harvesting different resources depending upon the time of year" (Morseth 1998).

> "There has been a great degree of intermarriage and mixture between ethnic and racial groups in the area historically. This dates back into the 18th and 19th centuries when intermixture occurred between Native peoples and the Russians. Large numbers of Scandinavians and other Europeans came to Bristol Bay to take part in the commercial fishery beginning around the turn of the century and many of these married Native women. Many people who consider themselves "Aleut" or Native have Scandinavian surnames, speak only English, have light-colored skin, and partake in all phases of American culture, as well as harvesting wildlife for food" (Behnke 1978: 163).

20th Century Alagnak Villages and their Demise

While we can provide a general outline of Alaska Peninsula history as it unfolded in the 19th century, there is little ethnographic documentation of community life on the Alagnak River prior to the 20th century. This reflects in no small part the dramatic events of the first two decades of the century, which served to mobilize the population and obscure much of its earlier history. Documentation of the pace and the processes contributing to depopulation of the Alagnak River corridor is relatively scarce, but the historical record makes it clear that the region experienced several major shocks during the late 19th and early 20th centuries. By the 1880s and 1890s, a modest number of families began to relocate, though most only seasonally, to the new salmon canneries appearing along Bristol Bay. The construction of canneries in the Bristol Bay region in the late 19th century had impacts upon patterns of settlement and subsistence that neither Russian traders nor the Russian Orthodox Church had fostered in the preceding century:

> "of far greater significance for the acculturation of all peoples…..than either Christianity or the fur trade was the commercial salmon industry that began to develop in Bristol Bay during the 1880's…..The commercial fishery was responsible for bringing about major seasonal fluctuations of population which brought Eskimos from even the remotest villages to the area" (Van Stone 1971: 22).

Moreover, by 1900, the Alagnak River, itself, became the site of two canneries, built by the North Alaska Salmon Company. Situated near the junction of the Alagnak and Kvichak Rivers, these two canneries were known as the Lockanok and, a short distance upstream, the Hallerville cannery (NPS 2006: 21; MacDonald 1951). Though the Hallerville cannery was short-lived, the Lockanok cannery operated until 1936, drawing Native labor from throughout the region, and fostering relocation of certain families from the Alagnak to the vicinity of modern-day Levelock. Levelock was apparently well-known to certain residents of the Alagnak at this time, as a place with kinship ties to Alagnak River communities, which was sometimes used as a fish camp by certain Alagnak River residents. Speaking of the 1920s, one interviewee recalled, "Levelock had served as a summer fish camp. People from Branch River moved over" (Katmai Research Project 1997: 20). Meanwhile, the discovery of gold in the Nome area brought a brief gold prospecting boom to the area starting in roughly 1900 and lasting for a few years thereafter. Men from outside of the region flooded into the Alaska Peninsula. During the Nome gold rush, the Alagnak was briefly prospected and a store was established along its banks (Townsend 1965: 168).

The Novarupta eruption of 1912 – one of the largest single volcanic eruptions of the 20th century worldwide – was the next shock to follow, dislocating both human communities and the game on which they depended. Ash fall and depressed game numbers fostered a modest migration out of the Alagnak area toward coastal communities such as Naknek. (It is clear that families from Alagnak had ties of kinship and friendship with these communities already. One interviewee recalled "When [these interviewees] lived at Branch River they went to dances held in Nanek, Ewkok and Savonski…They wore clothing which consisted of parkas, pants and boots" [Katmai Research Project 1997].) Some interviewees spoke of people moving out at this time, in part because of depressed numbers of fish, caribou, and other subsistence resources. Soon thereafter, as with many communities on the Alaska Peninsula, the Alagnak River communities experienced the disastrous impacts of the influenza pandemic of 1918-20. Mortality rates were high throughout the region, similar to the epidemics that had raged through the region 80 years before. Many people living along the Alagnak reportedly died during this period, and burials along the Alagnak attest to the high mortality rate of this final major epidemic along the Alagnak. Some survivors consolidated in villages along the Alagnak, but with what

Orphans of the influenza pandemic gathered in Naknek, ca. 1918. Photo from the National Geographic Society. Katmai Expeditions, 1913-1919. *Photo No. UAA-HMC-0186*

appears to have been a more diffuse settlement pattern than had been the case previously, with houses strung some distance along the river. Many other survivors relocated to other communities. Former Alagnak residents regrouped in places such as Igiugig, Levelock, and Kokhanok, alongside residents of those communities, as well as displaced residents from other small villages nearby, from such places as Kaskanak Flats, Newhalen, Big Mountain and Kukaklek Lake. Some ethnographic interviewees made reference to relocating off the Alagnak after the death of family members, apparently during this time:

> "[An interviewee] said he was born on the Branch but moved to Kukaklek when he was just a little baby. He said his father died when he was a baby on the Branch. His mother moved their family to Kukaklek" (Katmai Research Project 1997: 15).

Any residual divisions that might have existed between Yupik-speaking Aglurmiut and Kiatagmiut and the Alutiiq-speaking Peninsula Eskimo appear to have broken down at this time, as communities dominated by one or the other group were decimated and the survivors grouped

into undifferentiated multi-ethnic settlements. Yupik speaking survivors appear to have been numerically dominant in this area during this contraction. In turn, Yupik speakers appear to have become the dominant cultural influence within most of the Alagnak region's communities, even as residents of those communities appear to have possessed a significant amount of Pacific Eskimo ancestry and continued to identify as "Aleut" – the term Russians applied to the Pacific Eskimo.

These shocks of the early 20th century served to destabilize the communities of the Alagnak, so that even those families that chose to stay on the Alagnak appear to have become more mobile, joining dislocated family and friends for seasons at a time, working at canneries and other employment. This is echoed somewhat in the accounts of certain individuals, describing their families' whereabouts from the time of the influenza pandemic through the mid-20th century:

> "Mostly I growed up here Alagnak River, up the lake, Kokhanok. Move, they move around quite a bit them days… our relative, like our cousin or uncles, they marry to their sister or his brothers, we have to visit them for so long and return back. Them days they used to go by dogs. They never used to travel so much, maybe year after year go see your relative is how they growed up long time ago" (D. Andrew in Andrew and Andrew 1995).

> "The way I understand it [my parents are] from Branch River, then they move up to Kukaklek. I don't know what [year] that was. Back in 20s maybe...or earlier. Originally they're from Alagnak area...then I was born up in Kukaklek…I don't remember that place...I was [too young]...when I started remembering I remember here, Kokhanok. When we moved down back in earlier part of 1940s. '47 or '8 somewhere. Then I moved, we moved down to same place...back in 50s I guess. Then we moved back [to] Kvichak River, stayed there for about four five years then we moved to Igiugig. Stayed there for about good ten, twelve years or so. Then, from there I move up here [Kokhanok]" (Gregory 1998).

Meanwhile, the number of families living permanently along the Alagnak was whittled to a small fraction of its original numbers: "There were three families living at Branch River during this time (mid-1922)" (Katmai Research Project 1997: 20). Over the next two decades, this pattern had changed very little. Speaking of the early 1940s, Mike Andrew recalled, "That time used to

have like four or five families in Alagnak. There was hardly people down there. I could remember." (M. Andrew in Andrew and Andrew 1995).[11]

Yet the Alagnak retained its importance, even to those families that had to relocate seasonally for employment. Even as people relocated to cannery jobs, they maintained their permanent residences along the Alagnak. Speaking of the early 1940s, Mike Andrew recalled,

> "we come home [to the Alagnak] after everything, when the cannery is closed. Everybody pack up, buy little bits what they need from the cannery for winter coming. And come home on the bay, come upriver and you go all day before you make it home. We start it morning, and all day you're driving the boat. That time, that boat was slow. Not like today. They were slow. I could remember they used to have Palmer 270s, 12 horsepower, that's all. They put in the fish boat when they come with that kind of motor. They had long time, I could remember… Down Alagnak River, not this Kvichak. Down Alagnak River. That time we were living down there [most of the time on the Alagnak], in 1942" (M. Andrew in Andrew and Andrew 1995).

Women working at the Naknek Packing Company Cannery, 1954. *Anchorage History of Museum and Art, Photo No. AMHA-b85-27-1012.*

The population of the Alagnak was small and although families persisted in the area, these families were increasingly spread out along the river, rather than being concentrated within clustered villages:

> "everybody had separate houses, five, six miles apart. Next neighbor you have to go eight miles before you go to next house…there was some more family like my mom, my sister and all that, brother, and the grandpas. They're all separated now, different houses. That's the way I could remember when we lived Alagnak. They had places so far apart, seven eight miles away before you come to next house…we just like this long ago…… that time we hardly have anybody living close to us. 'Cause that time we stay separate, like we have a house like this, family. There's no other families…Long time they live so far apart. Not in one place like this" (M. Andrew in Andrew and Andrew 1995).

As a young person, Mike Andrew was told that this diffuse pattern of settlement was best suited to the diffuse geographical requirements of hunting and fishing:

> "Everybody separate. Why do they do that? I could remember, folks told me they separate, one family stay one house so they could go hunt wild. And another family they go other place to hunt, too. Instead of one place they all know where to get the wild, like a moose and caribou, porcupine, beaver. They all knew where to get it. So all them families they travel" (M. Andrew in Andrew and Andrew 1995).

Interviewees sometimes recalled that the isolation of the Alagnak, coupled with the isolation caused by this diffuse settlement pattern, sometimes resulted in restricted opportunities for social interaction and learning:

> "There were hardly boys around me that time. I was, they're all a long ways away from me. So the only thing I learned by my mom, so showed me how to hunt a while, so I was happy to learn" (M. Andrew in Andrew and Andrew 1995).

Yet, this diffuse string of houses together still represented a community, which came together frequently for subsistence tasks and social purposes. To demonstrate this point, Mike Andrew

recalled the Christmas holiday along the Alagnak – a time when families traveled from house to house along the river, singing and feasting:

> "what I'm talking about, this story here, we are Alagnak River, that time people lived like five, six miles away. And you gotta stop, sing our Christmas, Russian Christmas song and when they finish they give us food. And when they done, they go to next house, another seven, eight miles. And sometimes by the time we come home, it get dark like out here, they come where we start, go back home same day… We travel by dog team. I stay in the sled. I was too little. With my mom. Cause my brother older. He's driving the sled. We have like three, four families travelling together. They go house to house, sing. Everywhere we come to, they donate the food and stay awhile. Any kind of wild beaver, porcupine, fish, red salmon, smoked fish, white fish, moose, caribou, what you can get wild, they put on table….all the people, you could eat from that food. There they do it every house you come to they serve all the people" (M. Andrew in Andrew and Andrew 1995).[12]

By the mid-20th century, the modest resident population on the Alagnak began to contract once again, as several families relocated so that their children could go to school. "People moved so they could go to school – no school there" (M. Andrew in Andrew and Andrew 2000). "[An interviewee] was born on the Branch River. They moved to Igiugig so their three sons could go to school" (Katmai Research Project 1997: 12). Likewise, Evan Chukwak recalls that he and his wife had to move away from the Branch in 1957 or 1958 so the children could attend school:

> "was living over at Branch River and…kids going to school, have to bring it over. They didn't have no school over there" (Chukwak 1998).

These families often opted to move to villages nearby where they had kinship ties, relocating to villages such as Igiugig, Levelock, Kokhanok, and South Naknek. A few families resisted relocation for a time:

> "when I get old enough to go to school, [my father asked] me if I wanted to go school. I said, "I'm too bashful to stay with someone." So that's why I didn't went to school. I had nobody to stay with, 'cause my folks stay on Alagnak River. They don't want to go over there, so I didn't went to school. And we lived down there a long time before we moved [away] (M. Andrew in Andrew and Andrew 1995).

Ultimately, however, the migration was complete. Mandatory formal education for Native Alaskan children accomplished what multiple epidemics, a catastrophic volcanic eruption, and economic forces could not. The people of Alagnak now lived exclusively in places like Igiugig, Levelock, Kokhanok, King Salmon, Naknek and South Naknek.[13] By the end of the 1960s, there were no more families living permanently on Alagnak River.

Despite this relocation off of the Alagnak, people have maintained their connections to the river in diverse ways. Some maintain a sense of attachment that is rooted in the shared and personal histories of their community. Speaking of Levelock, for example, researchers from the Katmai Research Project noted that,

> "The Branch River is very important to this community as many individual allotments are located here and numerous families moved to Levelock from former settlement sites along this river" (Katmai Research Project 1997: 7).

Some clearly think of the Alagnak as their "true home" even as they live in another community. Mary Olympic, for example, "considers that area to be her real home and is very familiar with the area" (Morseth 2000).[14] The Alagnak River families and their descendents also maintain connections through a network of social relationships connecting communities such as Igiugig, Kokhanok, Levelock, King Salmon, Naknek and South Naknek, portions of which predate European colonization. Accordingly, Behnke noted:

> "The residents of Levelock, Igiugig, and Kakhonak, are related socially and geographically. They also have relatives over on the Nushagak River, as well as in the Naknek River communities. Frequent visiting and family movements occur between these places and considerable boat, snowmobile and air travel connect them" (Behnke 1978: 148-149).[15]

Also, clearly, the families that relocated off of the Alagnak have continued to use the river for resource procurement, including subsistence hunting, fishing, and gathering. For example, speaking of Igiugig, Morris (1986: 37) noted that,

> "There were no viable communities on the Branch River or at Kaskanak in the mid-1980s, though Igiugig residents continued to use these locations for resource harvest."

These families still retain ties to the Alagnak area and its resources despite their displacement. A number of families still utilize their cabins, working around scheduling conflicts associated with work and school to participate in social and subsistence activities on the river. Despite the absence of a permanent resident population, the seasonal residents have maintained basic amenities and attempted to hold together the fundamental elements of community life. Some families have continued hosting church services there, allowing devout families to stay for long periods of time: "us guys [stay there] all the time, all summer. Stay over there. We got church, too, at Charlie's place… Mmm, Branch River. [Alagnak], yeah. Good place… (M. Tallekpalek in Tallekpalek and Tallekpalek 1998). With these kinds of efforts, some semblance of community has persisted along the Alagnak, long after the permanent community disbanded. The degree to which the relationship between these Alagnak families and Alagnak River persists has varied. Some individuals suggest, like Mike Andrew, that they "grew up on the Alagnak River" even when they technically lived elsewhere (Morseth 2000). Communities most proximate to the Alagnak, including Igiugig and Levelock, appear to maintain the closest ties to the Alagnak: "Levelock is the one that uses the river the most. That's probably where their families are from" (quoted in Stickman 2008). For others, the use of the Alagnak has tapered off considerably in recent decades: "The last time I was there was in the mid 80's" (quoted in Stickman 2008). Some suggest that the people who most actively used the area are dying off quickly: "There's not too many elders left, you got to talk to them right away if you want to, they're passing on" (quoted in Stickman 2008).

Allotments on the Alagnak

For many families, the most important foothold that they maintain along the Alagnak are their Alaska Native allotments. These lands belong to Native Alaskan individuals, are the locations of cabins along the river, and continue to be inherited between generations. The Alaska Native Allotment Act of 1906 (34 Stat. 197) allowed Native Alaskans of 21 years of age or older to

acquire title to up to 160 acres of land. The law was fashioned after the General Allotment Act of 1887 (commonly known as the Dawes Act), which called for the establishment of allotments for American Indians within the contiguous United States (Case and Voluck 2002). Starting in the early 20th century, a number of families made claims for allotments along the Alagnak, even as the population was beginning to decline along the river. These allotments set the basic geographical pattern that is seen today in both allotments and Native cabins and campsites along the river.

For some families, allotments represent a symbolically potent foothold on their former home river. The Allotment serves not only as a base of operations for subsistence, but a place where families pass on their knowledge of, and attachments to, the Alagnak from generation to generation. For example, Evan Chuckwak reports that since moving to Levelock from Alagnak he still takes his children and grandchildren up the Alagnak every fall for hunting, fishing, and camping: "We do that every fall…Before the school start" (Chukwak 1998). They stay at his camp was below Katmai lodge – at the time of his interview in 1998, he had planned to give his allotment to his grandchildren, so that the family might be able to continue using the camp into the future.

The Alaska Native Allotment Act was superseded in 1971 with the passage of the Alaska Native Claims Settlement Act (ANCSA), though claims for allotments still pending at that date were carried forward for subsequent consideration. In the 1980s and 1990s, some families were still requesting allotments on Alagnak River, while others were still waiting for existing allotments to be patented. Speaking of one interviewee, Katmai Research Project participants noted,

> "He said on the Branch they were having difficulty getting deeds, surveys, and all of the transfer stuff taken care of. He said it was a problematic area but they were trying to work with the Park Service on the issue. He also talked about how land claims that had not been filed on by individuals by 1981 became 14C corporation lands. It was then dealt with by the corporation, as individuals with claims had to apply to the corporation for the deed, and it was awarded or sold. He talked about how much land over on the Branch is owned by the corp[oration], or individuals" (Katmai Research Project 1997: 10).

> "Many people's allotment claims on the Branch River have yet to be settled after over 20 years. They don't know if they can use the land. If they build on it, and then find that it isn't theirs, they lose the building" (Katmai Research Project 1997: 11).

At least one allotment has been issued along the Alagnak in the last decade (Jeanne Schaaf, pers. comm. 2008). This combination of existing and pending allotments continues to raise questions regarding appropriate uses of certain lands along the Alagnak, and not surprisingly, ethnographic investigations have consistently suggested that "confusion exists over people's allotment claims in the Branch River area" (Katmai Research Project 1997: 4).

Settlements and Other Places along the Alagnak

The exact location and identity of settlements described by interviewees are difficult to ascertain on the basis of available ethnographic documentation. This reflects, in part, the turbulence of the 20th century, when settlements were in varying states of collapse and, in part, the fact that this has not been the subject of past, focused ethnographic inquiry. Still, interviewees consistently describe at least one large village on the Alagnak, commonly called "Alagnak" or "Alagnak Village" at the beginning of the 20th century. The primary village site is reported as being on the south side of the river, across from Coffee Point near Barbara Peterson's allotment (Olympic 2000). "Over 100 people lived at [the] village, downriver from [the] present site of church" (M. Andrew in Andrew and Andrew 2000). This is apparently the same village that is recorded in SHPO reports as being on the

> "South bank of the Alagnak River 18 miles upstream (east) of its confluence with the Kvichak River. Sec. 29, T12S, R42W, SM….there is an "Abandoned village with several barabaras, remains of log church and graveyard with wooden Russian Orthodox crosses in various states of disrepair" (in Stirling 1982:24).

A number of interviewees traced their families back to this village. There is some suggestion that this "Alagnak Village" was thought of as the "second village" and that an even older village was located upstream, probably near Nick Apokadak's allotment. On the basis of fragmentary

evidence, it appears that either this older settlement relocated or the two settlements consolidated into the Alagnak Village during the course of the great influenza pandemic of 1918-20. These distinctions are not clear in available ethnographic documentation, and more data on this point is clearly needed (Olympic 2000).[16]

The Tallekpalek fish camp still sits at Alagnak village, and the community's Russian Orthodox church is reported to still have been standing in 1990s reports (Morseth 2000, 1998). The Russian Orthodox church – apparently the first church in the Alagnak corridor – was constructed out of logs at the Alagnak village. Later, this church was replaced by a lumber structure located some distance away, apparently near the Tallekpalek family cabin. Later, this church was relocated upriver to its current location, being pulled by sled dogs - "maybe four teams" (Olympic 2000).[17] Mary Tallekpalek reported in the late 1990s that "The church was moved to Forks and then to the village where she is the last person living" (Morseth 2000).

A number of other settlements appear in the ethnographic and historical record. Some report a small cluster of homes called "Sleepy Town" downstream from the forks. Mary Tallekpalek reports that "There used to also be a camp/seasonal village at Rocky [Point] Bluff called Sleepy Town (Morseth 2000). Another settlement, sometimes called Branch River village, was located about 3 miles upstream from the Kvichak River confluence. This was the last settlement to be permanently occupied along the Alagnak, but was largely abandoned as a permanent settlement by the 1960s (see NPS 2006: 21). Stirling reports, "old village sites at the mouth of Kukaklek Lake, a few miles below the confluence of the Alagnak and Nonvianuk rivers, and ten miles above the Alagnak River's mouth" (Stirling 1982: 2). He bases this in part on the accounts of Royce Perkins, a biologist with the Alaska Department of Fish and Game, who floated the river in 1971:

> "There are three native "settlements" on the Alagnak River. One of them [probably Alagnak Village], on the south bank appears to be permanently occupied by several families and many dogs. However, this perhaps is only in use seasonally. A second, smaller, cluster of houses lies on the north bank [probably "Sleepy Town"] and probably is used as a fish camp, although at one time it was likely used year-round. The third group of buildings is at the mouth on the north bank. This is the site of the village of Branch River, Abandoned several years ago. Four of five large frame houses now stand deteriorating" (Stirling 1982:5).

A number of structures, foundations, graves, and other features still stand along the Alagnak at historical settlement sites. In addition, remnants of early canneries still line the lower reaches of the rivers in the region, including the Alagnak, in such locations as the confluence with the Kvichak River. As will be discussed in more detail later in this document, Clemens and Norris (1999) documented six historic trapping cabins and other subsistence sites along the Alagnak River. Only with further ethnographic and historical research, and considerable cross-checking with the NPS archaeological records for the Alagnak, will the complete pattern of historical settlement be illuminated.

In addition to the identities of settled places, interviewees recall a considerable amount of detail regarding the names and identities of many other places along the river. Mary Tallekpalek's camp on the Alagnak was called "Didocton." Alaska Department of Fish and Game research reports the placename "Qeclkluq" or "cold spring water" for a site upstream from the Lower Alagnak Cabin Complex. The Grant's Creek confluence is identified as "Tuntuviagtuliaq" or "Place with Moose" (Krieg et al. 2005). The exit point from Nonvianuk Lake is called "Parutuli," a name that was not translated. Other placename recording efforts have yielded additional names. Mary Olympic (1995) reported that the area across from the Alagnak Village ("Coffee Point") was called Sluryaraq, or "area where one slides." Some Native Alaskan interviewees also reported descriptive English names that they have used in recent times along the river. These names included "Lucky Hill" for a hill at Nick Apokedak's allotment, "Grassy Point" for a location along the river by the Estrada allotment, "Horseshoe Bend" near Wassillie Andrew's allotment (a.k.a. the "Andrew Cabin Complex"), "Moose Valley Creek" – a creek that enters the Alagnak by the Peterson allotment, "Blueberry Island" below the falls, "Coffee Point" across from the old village, and a number of places of ambiguous provenience including "Yellow Hill" and "Middle Cabin Creek" (Morseth 2000).

Cabins on the Alagnak

For those families that relocated off of the Alagnak, but returned seasonally, there was an enduring need for shelters along the river corridor. Some maintained existing family buildings on the Alagnak while, over time, others constructed new cabins that were suited to the needs of families making temporary stays along the river. Some families described cutting spruce logs in the area to construct their cabins historically. Michael Andrew, for example, recalled of his family's Alagnak cabin:

> "we used to go a long ways to get there, like when we hunt moose. From our home, we go, cause we used to have our cabin made out of logs. Logs, out of spruce, them trees. We used to make cabin. And we put a stove…we make it by the river… we all got together and made that cabin; from that cabin when we hunt moose we go from there, we go, use our tent, leave the cabin. But when we come home we stay there. We used to make out of logs, we make a big cabin. And we have to pack it, pack it by sleigh. Timber, pack it, I could remember we used to pack lots when we made cabin that time. Boy it's nice to have a cabin. That kind that, not made of lumber - log cabin…Trapping cabin, we call it…Yeah, Alagnak river, that's where we got [a cabin], when we go" (M. Andrew in Andrew and Andrew 1995).

Families that had maintained old homes along the river often replaced these with cabins on the same location, or elsewhere along the Alagnak. Mary Olympic, for example, reports that her family had a cabin on the Alagnak through the early 20th century, apparently without interruption since relocating off the river, but that she and her husband built a new cabin near Coffee Point in 1950 or 1951 (Olympic 2000). The construction of these cabins on old family homesites has continued into recent times:

> "Has a Branch allotment, not very far up, at the second bluff. They started building a cabin up there last year. They are going to finish it this year. Its just a place that the family can go to get away. [Their] family lived there, their house and smokehouse are still there" (Katmai Research Project 1997: 17).

Non-Natives, especially those non-Natives with personal ties to the Native Alaskan community also constructed cabins along the Alagnak in the 20th century. For example, George Wilson, Sr. recalls of his father,

> "Dad came up in 1919 to Nushagak, when he was 19 years old, from Nebraska. And he left Nebraska when he was 12, I think; 12 or 13, went to Colorado, Wyoming, then to Oregon, then to Seattle. And he got on the sailing ship and came up, came to Nushagak, there. And that's where he stayed. Never did go back to the lower 48. He liked it up here, enjoyed the people, the Natives, and the way of living, trapping. He built cabins all over these rivers here. He had cabin up in Nonvianuk Lake, too. And on the Branch. And then Yellow Creek. And over in Nushagak River, he built cabin. That's how he trapped you know, go in and find a place he liked, built a cabin and trapped there for quite a few years" (G. Wilson in Wilson and Wilson 1995).

For Native and non-Native cabin owners, these structures served as the base of operations for a range of seasonal subsistence tasks and social activities. In the absence of a permanent community, the cabins became the new hubs of human activity along the River in the mid-20th century. By providing a predictable and comfortable base of operations for these activities, cabins provided safe shelter for children and allowed even elderly members of families to continue participating in travel and subsistence pursuits outside of the villages, and to perhaps revisit places that had been of importance to them during their times on Alagnak River many years before. These cabins allow for long-term stays that would not have been possible without adequate shelter, and Katmai Research Project participants noted,

> "The harvesting trips of Levelock residents seemed to be of longer duration than the harvesting trips of other village residents. This is in part due to the fact that many households or kin groups keep cabins on the Branch River which are used for overnight stays as well as season stays" (Katmai Research Project 1997: 7-8).

Families have established their "fish camps" at these cabins, during peak salmon runs. In the past, during the summer, men fanned out to a range of hunting sites on and around the river corridor from their cabins, often returning by nightfall, while women could gather berries and

other resources in the riparian margins. At the end of seasonal visits, these families returned to their homes in the villages, such as Igiugig, Levelock, or Kokhanok, with the goods that they had gathered. With children and elders all potentially present at the cabin, subsistence tasks that involved the entire family were possible, as was the intergenerational transmission of cultural knowledge pertaining to the resources and practices associated with the Alagnak. A small number of families still undertake these extended stays today.

For other families, these cabins served primarily as a base of operations for trapping. George Wilson Sr., for example, reported that he began trapping the Alagnak shortly after World War II and had built cabins on the river to support his trapping operation by 1948. By 1951, the family had three separate cabins along the Alagnak that were used regularly as bases of operations while visiting their traplines through the Alagnak River area. In some cases, cabins used in one season for family subsistence tasks was used at other times as a trapping outpost. Mike Andrew, for example, reported that there was a "winter camp," apparently used for trapping, that was long used at the location of Evan Chukwak's allotment. This camp included a cabin, a cache, a smoke house, an outhouse and fish racks – all typical elements of the cabins of the period (G. Wilson in Wilson and Wilson 2000).

In time, as transportation became more efficient, short visits to the Alagnak from village residents became more feasible, as will be discussed in the pages that follow. Even during short hunting forays to the Alagnak, these cabins became an important stopping point, a source of shelter in inclement weather, and a processing site for game. Similarly, for 20th century families on the move between widely spaced work sites or subsistence areas that were beyond the Alagnak River corridor, the Alagnak cabins also provided welcome temporary accommodations. John and Mary Tallekpalek, for example, described their family's cabins and camps on the Alagnak, which the family returned to regularly over the mid-20th century. They reported that they often stayed in the family cabin on the Alagnak during periods when they worked in the canneries, especially when traveling to and from wage employment with the canneries and associated commercial operations. By returning to the cabins on the way home, especially, these brief stays on the Alagnak ensured that the family still could participate in an abbreviated subsistence harvest despite their other obligations, and would return home with fish, game, and

plant materials in addition to cash and purchased goods (Tallekpalek and Tallekpalek 1998). In this way, the cabins helped some families maintain a degree of continuity in what was a generally transitory social, economic, and demographic milieu.

While these cabins continued to be used through much of the 20th century, some fell into disuse and some were demolished. Erosion along the banks of the Alagnak has occasionally demanded the relocation of cabins, a practice that probably has considerable antiquity. Participants in the 2008 meetings reiterated this point: "They've got a problem with erosion on the Branch River…my brother…had to move his cabin" (quoted in Stickman 2008). As shall be discussed later, some have suggested that this erosion has accelerated in recent years as a growing number of motorboats ply the Alagnak - an issue of considerable concern to Native Alaskans still using the River.

The use of certain cabins along the Alagnak for these relatively short visits, in the course of hunting, may have intensified after certain cabins were removed from the newly expanded park boundary in the years after 1980. Dan Salmon (2002) discussed, for example, his extended family using the Gregory cabin on Alagnak Wild River, apparently after the removal of a cabin at the outlet of Nonvianuk Lake.

At one time, cabins were numerous along the Alagnak, especially on its middle to lower reaches.[18] Writing in the 1990s, Clemens and Norris (1999) identified eleven groupings of cabins that were extant in the Alagnak River Basin at that time, six of which are on the Wild River corridor. The six cabin groups inside the Wild River corridor include:

1) Peterson Cabin
2) Guide Camp Cabin
3) Apokedak Cabin Complex
4) Estrada Cabin Complex
5) Andrew Cabin Complex
6) Lower Alagnak River Cabin Complex

Elsewhere in the Alagnak River basin, but outside of the Wild River corridor, Clemens and Morris also identified the Marlette Cabin, the Neilsen Cabin, Murray Cabin, the Agate Point Tent-Cabin Complex, and the Hammersly Cabin Complex.

The cabins within the Alagnak Wild River corridor deserve particular attention here, and will be the subject of more focused inquiry in the planned ethnographic study. The Peterson cabin sits on the right bank of the Alagnak River and is owned by Barbara Peterson. Known locally as a "trapper's cabin," this structure is built in the middle of the Native Allotment owned by Peterson. The Guide Camp Cabin sits near the north end of the Barbara Peterson allotment, and is reported to be associated with a charter guide camp. The Apokedak Cabin is described as a "historic cabin and cache," sitting on the Native Allotment of Nick Apokedak; members of this family are still well represented in Levelock and participated in community meetings pertaining to the current project (quoted in Stickman 2008; Clemens and Norris 1999). The Estrada Cabin Complex is reported to be located on the Native Allotment of Agnes Estrada. The log cabin is a prominent "landmark" along the River's right bank, and has served as a trapping and hunting cabin for decades (Bodeau 1991: 187-88). Evidence of earlier structures is apparently visible on site, and a long period of occupation at the site is suggested by rectangular housepits as well as past archaeological surveys for "prehistoric and historic resources" (Clemens and Norris 1999). The Andrew Cabin Complex is reported to sit on the Native Allotment of Wassillie Andrew. This cabin sits roughly two miles downriver from the Estrada Cabin Complex, on the right bank of the River. The "Lower Alagnak River Cabin Complex" consists of a cabin and various outbuildings, as well as "a complex of historic and prehistoric items." This cabin is located near the lower end of Alagnak Wild River and, unlike the other cabins identified here, is not situated on a Native Allotment (Clemens and Norris 1999). Surveys of cabins undertaken by the National Park Service in 2003-05 have clarified the locations and distribution of cabins along the riparian corridor.

A Statistical Snapshot of the Study Communities Today

What follows is a cursory overview of the communities that are the focus of the current study, with statistical information principally regarding the communities as they were represented in the year 2000 U.S. Census.

Igiugig

The village is at the mouth of the south shore of Kvichak River, where it exits Lake Iliamna. Morris (1986: 37) notes of Igiugig that "The community site was formally a portage point for a reindeer station established at Kukaklek Lake during the early 1900s," though the community predates this period. Igiugig's population was 53 during the 2000 census. In the 2000 census, Igiugig residents identified themselves as being 71.7% Native Alaskan or Native American, 16.98% White, 11.32% from two or more races, and 1.89% Hispanic. Approximately 30% of Igiugig residents who reported the language they speak at home in the 2000 census indicate that they speak a language other than English – in this case Yupik. The population of the community is slightly skewed toward women, with 7.67 men for every 10 women.

In addition to relying heavily on subsistence hunting and fishing, the community is dependent on commercial fishing for cash income, with some families holding commercial fishing permits and others working in the canneries. The median household income was $21,750, with subsistence hunting, fishing and gathering representing a significant source of non-cash income. Using financial data only, approximately 6.9% of the population is below the poverty level, and all of these individuals are aged 65 or above.

Kokhanok

Kokhanok is a largely Native Alaskan settlement, located on the south shore of Iliamna Lake. Like the other communities in this report, Native Alaskan residents include descendents of Yupik and Aleut, but some of Kokhanok's residents also identify as Athabaskan Tanaina. Approximately 18% of Kokhanok residents who reported the language they speak at home in the 2000 census indicate that they speak a language other than English – in this case Yupik.

Kokhanok's population was 174 during the 2000 census. In the 2000 census, Kokhanok residents identified themselves as being 86.78% Native Alaskan or Native American, 8.05% White, 4.02% from two or more races, 1.15% Hispanic, and 1.15% from other races. The population of the community is slightly skewed toward men, with 14.2 men for every 10 women.

Economically, Kokhanok residents are highly dependent on subsistence fishing and hunting, with comparatively little industrial or tourist-based economic development. The median household income was $19,583 in the year 2000, with subsistence hunting, fishing and gathering representing a significant source of non-cash income. Using financial data only, approximately 42.6% of the population was below the poverty line.

Levelock

Levelock is a predominately Native Alaskan settlement, located along the Kvichak River, roughly 10 miles inland from Kvichak Bay. Levelock was home to 122 individuals according to the 2000 census. In the 2000 census, Igiugig residents identified themselves as being 89.34% Native Alaskan or Native American, 16.98% White, 5.74 % from two or more races, 4.92% White, and 2.46% Hispanic. Approximately 15% of Igiugig residents who reported the language they speak at home in the 2000 census indicate that they speak a language other than English. The median household income was $18,750, with subsistence hunting, fishing and gathering representing a significant source of non-cash income. Using financial data only, approximately 24.5% of the population lives below the poverty level, including 50% of residents 65 and over. Levelock is a community with an especially direct tie to the study area. Speaking of Levelock, the researchers of the Katmai Research Project noted,

> "Many local people have historical ties to the Branch River area and Levelock residents continue to use the area. Levelock residents also have historical and contemporary ties to the Katmai Preserve area, especially Nonvianuk Lake. The village corporation owns land along the Branch River and some people have Native allotment lands there as well" (Katmai Research Project 1997: 3).

King Salmon

Located on the Naknek River, King Salmon is a hub of governmental offices, as well as shipping and transportation operations serving the larger Alaska Peninsula. The National Park Service, the Alaska Department of Fish and Game, and the U.S. Weather Bureau have maintained offices in King Salmon, while the U.S. Army Air Force maintained a base in the community from early in World War II through 1993. The community has regular scheduled air service, and serves as a transportation hub for both recreational and commercial fisheries in the Bristol Bay region. While there is a significant Native Alaskan presence in King Salmon, the community is relatively diverse, reflecting this range of functions. King Salmon's population was 442 during the 2000 census. In the 2000 census, King Salmon residents identified themselves as being 66.29% White, 28.96% Native Alaskan or Native American, 3.17% from two or more races 1.13% African American, 0.45% Hispanic, 0.23% Asian, and 0.23% from other races. Of those King Salmon residents who reported the language they speak at home in the 2000 census, roughly 5% indicate that they speak a language other than English.

The median household income was $54,375 in the year 2000. Dependence on subsistence resources is highly variable within the community, reflecting larger social and economic variation. Approximately 12.4% of the population was below the poverty line, but none of these individuals were reported to be age 65 or over.

Naknek

Naknek is located on Naknek River estuary, where the river enters Kvichak Bay, itself a branch of Bristol Bay. Naknek's economy is largely driven by the salmon industry. Salmon canneries appeared in the Naknek area beginning in 1894, with the arrival of the Arctic Packing cannery, and the community experienced a boom in salmon cannery employment that lasted through the first half of the 20th century; in recent years, the community has had to respond to a shift to offshore salmon processing, and has increasingly served as a service center for the Bristol Bay fishing fleet.

Naknek's population was 678 during the 2000 census. In the 2000 census, King Salmon residents identified themselves as being 51.47% White, 45.28% Native Alaskan or Native American, 2.36% from two or more races, 0.74% Pacific Islander, 0.29% Hispanic, and 0.15% Asian. Of those Naknek residents who reported the language they speak at home in the 2000 census, 4% indicate that they speak a language other than English. The median household income was $53,393 in the year 2002. As in Kind Salmon, dependence upon subsistence resources varies considerably within the community, reflecting overall variability in the social, cultural, and economic circumstances of residents. Approximately 3.7% of the population was reported to be below the poverty line, but none of those reported were age 65 and older.

South Naknek

South Naknek is a largely Native Alaskan community located on the opposite, south bank of the river from Naknek. While physically separate from the larger community of Naknek, and there is no bridge between the two communities. Still, the two communities are fundamentally linked, with South Naknek residents visiting Naknek regularly for social and economic activities, and high school students attending Naknek High School – flying between the two communities in an airplane.

South Naknek's population was 137 during the 2000 census. In the 2000 census, Igiugig residents identified themselves as being 83.94% Native Alaskan or Native American, 13.14% White, 2.19% Hispanic, 1.46% African American, 0.73% Asian, and 0.73% Pacific Islander. Of those South Naknek residents who reported the language they speak at home in the 2000 census, only 2% indicate that they speak a language other than English. The median household income was reported to be $22,344 in the year 2000, with subsistence hunting, fishing and gathering representing a significant source of non-cash income. Using financial data only, some 27.1% of the population live below the poverty line, including 41.7% of those under 18 but none of these individuals are reported to be 65 or older.

RESOURCES OBTAINED IN AND AROUND THE ALAGNAK REGION

As many authors have noted, riparian resource procurement has been central to the subsistence strategies of communities north and east of Katmai (Dumond 1995; Behnke 1978). Historically, Alagnak River provided Native Alaskans with a full spectrum of the riverine resources required to sustain themselves. Interviewees especially commented on the availability of fish along the river corridor, including whitefish, pike, trout, and all five species of Pacific salmon, but also the diversity and abundance of mammals, including brown bear, large ungulates such as moose and caribou, and a variety of furbearers including beaver, lynx, mink, otter, fox, wolverine, and wolf. A diversity of waterfowl, shorebirds, raptors, passerines, and other birds also abound in the riparian margin, contributing to its overall resource value, along with a diversity of riparian vegetation that has provided Alagnak River users with food, materials, and medicines (see also, USFWS n.d.). The resources of the Alagnak were so rich, in fact, that they appear to have supported a year-round population in the riparian corridor – a point confirmed by recent archaeological investigations in the Wild River. Certainly, this kind of year-round occupation is documented in the nearby and similar Naknek drainage, where Dumond found that "the presence of both salmon remains and caribou waste suggests that occupation occurred there, all in all, for substantially the full year" (Dumond 1981: 172). Similarly large winter villages appear on the Alagnak by no later than approximately 2,300 years before present, attesting to the establishment of large and relatively settled populations on the riparian corridor (NPS 2006).

Together, the of the Alagnak resources provided for a rich and diverse subsistence tradition, centered on the riparian corridor. Large and small game, furbearers, fish, berries and other plant materials, and an abundance of fresh water all fostered the development of settlements along the River's banks. Moreover, the relative paucity of development and commercial exploitation along the banks of the Alagnak over the last century insured that the river corridor's value became magnified in contrast to other rivers that were not so isolated. To this day, Native Alaskan interviewees suggest that the Alagnak River corridor is among the best fishing and hunting areas to be found in their region. Interviewees such as Mary Tallekpalek have noted that

the Alagnak has provided a relatively untrammeled river, even as other systems suffered. Not only has this ensured that the fish runs have been historically robust, but that all of the "secondary resources" utilized coincidentally with the fish harvest have been robust as well. As Mary Tallekpalek noted, on other rivers,

> "We can't set the net on, on the big tide, and full of junk all the time. No fish. Branch River better: whitefish and pike and trout. Anything! Ptarmigan….rabbit, beaver" (M. Tallekpalek in Tallekpalek and Tallekpalek 1998).

This is similar to how other interviewees have explained the fecundity of the Alagnak. "When we was down there they set [traps and also caught] fish and caribou, moose, beaver" (M. Andrew in Andrew and Andrew 1995). When there they "dry fish up…Hunt ducks. Hunt geese. Hunt beavers…Minks. Ducks" (Chukwak 1998). Summarizing subsistence practices in the Katmai region shortly before the time that Alagnak Wild River was designated, Behnke (1978) noted,

> "Moose, caribou, waterfowl, ptarmigan, rabbits, grayling, pike, lake trout, rainbow trout, char, smelt, whitefish, and the five species of salmon are among the major resources harvested by residents of this region for food. Spruce hens, porcupines, firewood, numerous plants and berries, salt-water fish, and several species of fur-bearers are also harvested. Sea mammals have not been of major significance, although seals and beluga are occasionally utilized by residents of Egegik, South Naknek, and Levelock. Brown bear are also occasionally taken for subsistence purposes, primarily for the fat, which is eaten with fall-dried salmon, by residents of the Kvichak villages" (Behnke1978: 138).

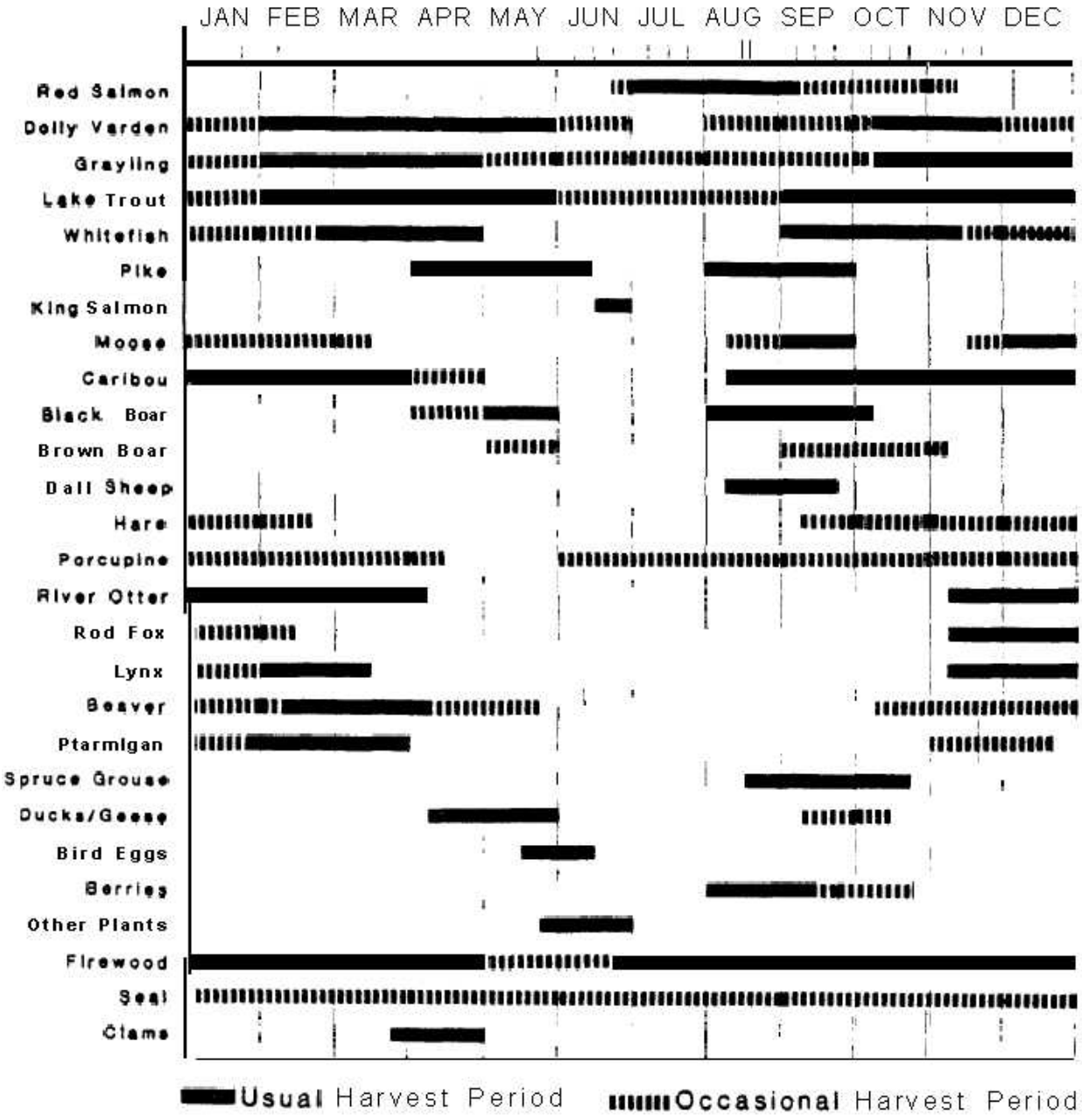
The use of these resources has persisted to varying degrees within each of the study communities, often in spite of the availability of introduced foods and other alternatives, providing ample incentives to return to the Alagnak each year.[19] The food products from the Alagnak have not only been of importance to those who hunt, fish, and gather there, but are also used within the study communities by the many people who do not participate in the harvest but with whom these food items are shared.[20] Each of the major resources reported to be gathered along the Alagnak within living memory will receive attention in turn, in the pages that follow.

While it appears likely that the Alagnak was occupied year-round, this does not imply that the inhabitants of the river were completely sedentary. Quite the contrary, in order to make the most of the resources available, the people of the Alagnak had to move about considerably within and beyond the riparian area. A complete picture of seasonal movements and resource use patterns along the Alagnak is still unavailable, pending further archaeological research on the river corridor. Nonetheless, we may look to other documented examples of the "seasonal round" that might be applied to the Alagnak. A workable model is available from Van Stone. When considering other 19th century Yupik-speaking people of the riparian interior, Van Stone (1984) outlined a basic seasonal round:

> *Summer* - in June, groups begin moving to permanent villages along rivers; salmon harvesting proceeds
>
> *Fall* - salmon runs end in the late summer/early fall, and groups being hunting caribou and fur-bearers inland from their riparian villages.
>
> *Winter*- in October, groups return to the permanent villages. Limited fishing continues, including some salmon, but also trout, whitefish, blackfish, grayling, and others.
>
> *Spring* - by late winter, supplies sometimes ran low. Hunting and trapping of fur-bearers on the riparian corridor and adjacent tundra. Limited caribou hunting. In late spring, seals and belugas follow salmon upstream and were hunted. Smelt and migrating birds were also gathered.

Of course, these patterns began to change during the time of European contact, slowly at first, as the fur trade and other economic activities created new scheduling conflicts for subsistence users of the Alagnak. The rapid succession of shocks associated with the emergence of commercial fishing, the eruption of Mt. Katmai, and the influenza pandemic, however, ushered in a new era. Salmon canning and fishing duties reached their peak in the summertime – the conventional peak in the subsistence fishery, resulting in scheduling challenges that rearranged the social and geographical dimensions of the traditional fishery.[21] The emergence of a mixed economy in the years that followed, coupled with the steadily declining resident population along the Alagnak insured that the river served less as the residential core of sprawling resource territories, but instead began to function as a resource outpost of particular historical and cultural importance

within the resource territories of communities some distance away. Subsistence resource use persisted, and even thrived, but the timing and significance of subsistence hunting, fishing and gathering was changing.[22]



Resources harvested by communities associated with Alagnak Wild River, and seasons of harvest. *From Morris (1986).*

Despite these changes, for the Native Alaskan users of Alagnak River, it was the summertime - during the peak salmon runs – that was the time of peak use within the riparian corridor:

> "June starts salmon time which continues into early August. They put up fish both here and on the Branch, depending on where they are. Wherever they are they stay put as smoking and putting up fish takes lots of work. They put up both kings and sockeyes. June is also a time to gather more eggs. In May they gather eggs down the river on the flats, in June they gather eggs up the lake on the islands" (Katmai Research Project 1997: 13).

For those who have cabins or campsites on allotments rather than solely accessing the Alagnak during brief motorized trips, subsistence visits has occurred over weeks or months. In recent years, sockeye salmon fishing tapers off by late July. By September, white fish fishing commences. Caribou and moose are hunted into the fall. When possible, some families prefer to stay on the Alagnak until the freezes of October. Of course, motorized transportation raises the potential for short, impromptu trips to the Alagnak. In recent years, a trip to the Branch River often,

> "is spur of the moment. To go out on an extended trip, you just say, "I think I'll go to Branch tomorrow." Eventually two or three skiffs get together and go. Who ends up going is just decided based on people's interest" (Katmai Research Project 1997: 5).

On the basis of reconnaissance fieldwork in the late 1990s, Michele Morseth compiled notes on Native Alaskan seasonal uses of the Alagnak River, as shown in Table 1. More details on these species, and the seasonality of their use, are also included in the thematic sections that follow.

Table 2:

Notes on the Seasonality of Native Alaskan Uses of the Alagnak River Corridor

	June	June	July	July	Aug	Aug	Sept	Sept	Oct	Winter
White Fish	**fished w/nets**						**fished with nets & later, after freeze-up, through ice**			
Pike										**ice-fishing on Branch**
Trout									**after recreational fishermen are gone**	
Sockeye		**smoked & dry fish at fish camps**								
King Salmon			**strips dried at fish camps**							
Chum/ Pink				**dried, mostly for dogs**						
Silver						**limited catch, frozen**				
'Redfish'							**spawned out fish caught and dried**			

(*adapted from Morseth 2000*)

Hunting

Alagnak Wild River was an important subsistence hunting area for residents of the Alagnak River historically, and has continued to be a subsistence hunting area for residents of the communities where these same families reside today. Several interviewees have noted that the Alagnak is especially known as a place to hunt big game: "That's the main hunting area for moose and caribou" (quoted in Stickman 2008). Even after families relocated off of the river over the course of the 20th century, relocating to communities such as Kokhanok, Igiugig, and Levelock, some still return each year to hunt in the Alagnak River area. To provide one example, interviewees from the 2002 NPS ethnographic research project note that the residents of Levelock are, in some instances, originally from Igiugig, and continue to use lands and resources along the Alagnak River and other places from which they were displaced historically, suggesting a conservatism in the choice of hunting territories that persists in to the present day:

> "They utilize it -- they go up that way into…Branch River…But they also come up to Igiugig, you know…some of the people from Levelock used to live here in Igiugig a long time ago, and they used to utilize this area a lot" (Alvarez 2002: 41).

In the ethnographic notes, transcripts and recordings from past interviews, moose is by far the most commonly mentioned game animal along the Alagnak. The Alagnak appears to represent one of the principal moose hunting areas for communities throughout the region, including the coastal communities of Naknek and King Salmon. Speaking of residents of Naknek and their subsistence practices as they existed in the 1970s, Behnke noted,

> "Moose hunting is usually conducted in three general areas: near the Naknek River and its tributaries; on the Branch River; or to the south in the upper King Salmon River-Becherof Lake area" (Behnke 1978:143).[23]

The emphasis on moose along the Alagnak may reflect the riparian habitat preferences of moose, coupled with the riparian orientation of most subsistence harvests along the Alagnak.

> "The Alaska Peninsula habitat types of most importance to moose include stream bottoms and other brushy areas, where willow are available. High snowfall pushes moose down out of higher elevations in the winter" (Behnke 1978:126-127).
>
> "Moose are often hunted in these areas and at the same times as caribou or are taken incidentally to caribou in winter hunting. Moose harvests tend to be concentrated along major waterways, however, where moose tend to be more predictably and easily located, killed, and packed out, particularly in the open-water season" (ADF&G 1985: 430).

While Alaska Department of Fish and Game reports and other sources make it abundantly clear that caribou has been hunted extensively in and around the Alagnak River corridor in recent decades, there was almost no mention of caribou hunting specifically along the Alagnak in the ethnographic sources consulted for this project (see, e.g., Deur 2008; Holen et al., 2005; Fall 1993; Morris 1986; ADF&G 1985). This likely reflects the fact that the Alagnak River corridor is not prioritized as a caribou hunting territory relative to other productive caribou hunting areas

nearby that are more open and accessible by land transportation. The land between Alagnak Wild River and Big Mountain is a readily-accessible caribou hunting area for residents of Igiugig and other communities of the region, for example, but it would be unlikely that a hunter would set out for the Alagnak River corridor specifically to hunt caribou (Morris 1986). Moreover, the Alagnak river communities, prior to relocation off of the river, clearly relied on caribou extensively for subsistence, but it is likely that they commonly traveled off the riparian corridor into the open terrain surrounding the river corridor to hunt this species.

One of the most common ways that moose have been hunted along the Alagnak is to drift the river by boat, hunting the riparian margin. This method of hunting has been reported by a number of individuals:

> "Residents of Levelock and Igiugig hunt moose along the Kvichak River and up the Branch (Alagnak) River by boat in the fall. One method of hunting on the Branch River is to drift downriver in the evening, watching for a moose to come out on a riverbank" (Behnke 1978: 148).
>
> "He said when they go moose hunting there they most often motor way up the creek, spend a night or two and then float down the creek quietly so as not to spook the animals. He said if you are lucky you can get your moose right on the bank and it is easy to process and transport" (Katmai Research Project 1997: 16).

Likewise, interviewees such as Ella Charley note that their families used to go to the upper Alagnak and then drift down in a boat, hunting moose and other game as they traveled (Charley in Charley and Setuk 1998). Some also report using a combination of skiffs and pedestrian hunters to catch moose along the Alagnak:

> "For moose they go to the Branch River or up to Yellow Creek. For moose, it is good to hunt along with a skiff. You can use the skiff to chase them down along the shore and down trails where they came down to the water. The person on land can wait down the trail for the moose to come. So you work together" (Katmai Research Project 1997: 5).

This kind of summertime hunting has understandably become more challenging as the Alagnak has become more populated with recreational users. For this reason, moose

hunting often appears to be delayed until the fall, so long as the river is still ice-free and therefore navigable by boat.

Winter hunting is also reported, though it appears to have been less frequent than summer and fall hunts. Moose are also taken in the winter using snowmachines along the lower river, though it is unclear what proportion of this hunt is undertaken within the Wild River:

> "Moose are taken in the winter and occasionally in the spring by snow machine travelers, particularly around the villages and in the lower portions of the Alagnak River. Winter moose are frequently taken incidentally to trapping" (Behnke 1978: 148-149).[24]

While a primary moose hunting area, the Alagnak was not always a predictable place to find moose. As Behnke notes,

> "People from Levelock say that in the past, when moose were scarce all along [Alagnak] river, they would go up to the forks and hike into the hills south of the river toward the American Creek drainage where a few moose could be found" (Behnke 1978:157).

Apparently for this reason, moose hunting along the Alagnak was often arduous, involving long days, often over the course of a week, to catch a moose. As Evan Chuckwak recalled,

> "Long time ago, we have to go way up [river] to get, hunt moose…take us about a... week to get the moose. Some time you lucky, you get in one day…So, sometime it took us fourteen hours a day. One week" (Chukwak 1998).

Adding to this unpredictability, it is important to note that moose populations have varied considerably over the years. Moose appear to be a relatively recent game species in the repertoire of resources harvested at Alagnak:

> "Moose apparently began to populate the Alaska Peninsula from the North about 1900, and occupied all suitable habitat by the early 1950's. During the 1960's their populations in the central Peninsula peaked and began to drop, declining one-half to one-third in that time" (Behnke 1978: 126).

Some interviewees suggest that moose populations have been generally declining in recent decades, due to hunting pressures, and a rebound of wolf and bear in the absence of air hunting of these species (Salmon 2002). Some also report seeing bears tracking moose on the Alagnak.

Certain areas along Alagnak River are said to be especially good for hunting moose and other game, such as "Lucky Mountain" – a possible explanation for that placename. The brushy and forested areas between the Alagnak River rapids and the confluence with Nonvianuk River were said to be good for moose hunting, and often used historically as well (Olympic 2000). The lower Alagnak, outside of the study area, is also said to be a good hunting area for moose. Some interviewees, such as Dan Salmon (2002) also spoke of the forks as a popular hunting area.

In addition to moose, some interviewees spoke of hunting bear – apparently both brown and black – along the Alagnak River corridor historically. Gabby Gregory's family apparently hunted bear there in the 1920s and 1930s, for example. The use of bear meat has declined significantly in recent decades, reflecting changing dietary preferences. Nonetheless, recent discussions with Native Alaskan residents of the region reveal ongoing knowledge and use of bear meat: "we liked to get that in the fall, not in the summer. When young ones come along, we leave them alone" (quoted in Stickman 2008).

People also have hunted and trapped small game for food use along the Alagnak. Some report catching beaver, porcupine, and ptarmigan for food use along the Alagnak (M. Andrew in Andrew and Andrew 1995). Ptarmigan in particular was mentioned as a food resource along the Alagnak. As Evan Chuckwak recalled,

> "used to have, long time ago you used to have [you know, both sides] Branch River…[Alagnak] River. Used to be white ptarmigan all over place. On both sides… After that, no more. I don't [spend] that much time open any more [once] porcupines go away" (Chukwak 1998).

At one time, perhaps especially before the widespread use of moose along the Alagnak, small game may have represented a much larger component of the overall subsistence hunt on the river:

> "They would trap in the winter on the Branch River and he would live at a fish camp in the summer. Before reindeer herding came into the area (and then caribou and moose), they lived on small game like ptarmigan, rabbits, porcupine, beaver, and geese and ducks. They would hunt beaver in the springtime, or whenever they were hungry. They would collect eggs when they needed something different. They could get ptarmigan eggs, if they could find them, but the nests were hard to find" (Katmai Research Project 1997: 6).

Even as the proportion of small game in the diet was decreasing, it was still important as a supplementary food source. A number of these small animals were still hunted and eaten while men were in the process of hunting moose: "When out on foot you have to eat anything. Porcupine. Ptarmigan" (Chukwak 1998).

Marine mammals were also reported as the target of past subsistence hunts along the Alagnak. Residents of the Alagnak apparently hunted seal and maybe seal lion from kayaks in Alagnak River historically (M. Tallekpalek in Tallekpalek and Tallekpalek 1998). Seals have been taken in the lower to middle river in more recent times, apparently in locations that are now within the Wild River boundary:

> "my first game when I went out hunting, it was summer time. I went out with my skiff and the motor by myself. And I caught…we call it fresh water seal. So I chase that seal 'til I caught it. And I shot it, take it home" (M. Andrew in Andrew and Andrew 1995).

Residents of all of the study communities also hunt beluga whales along the Alagnak, principally at the river's estuarine mouth (Chythlook and Coiley 1994: 17). Beluga are hunted in the spring using skiffs, harpoons, rifles, and nets, but are especially hunted in the fall, at around the end of the commercial fishing season. While most of this hunting falls outside of the Wild River, beluga use of the estuary appears to be influenced by upriver fish population dynamics. Like

seal meat, beluga meat is reported to be cached through the year and is widely shared within and between communities.

It is in the use of these marine mammals that the ethnographic documentation gives us the best glimpse of persistent hunting values and cosmology within the study communities. Mike Andrew described a "first seal ceremony" that his family orchestrated when he was a boy, apparently while at a cabin on the Alagnak:

> "So [that seal] was my first animal, that time. I was young boy then. So I caught it, first seal, wild. Then I took it home to mom. Then they see it and I call them down what I caught. They come down, they was all excited. It was my mom and my step-dad. Say, "What you caught?" Let them come down to boat, skiff, and see what I caught. Oh, they were going to come down. It was a seal, fresh-water seal. Then they take him up the bank.
>
> "That time, when you get first animal, when you, when we are young, our folks won't eat it. They took that seal, the animal, we had burn fire, bon fire. Take it, burn his nose to the fire and bring him back. Why they do that? I always kind of feel sorry for that animal I caught, 'cause they never told me before. But that time, they told me. After you burn it, bring it back, say "Give us more luck next time." So that was something I didn't know, they told me that day. Then when we caught it, when they skin that first animal I caught, the seal, they won't let me eat it. They cut him up, cook it. They give it to everybody. Share with it, 'til that's next time, say I keep my second one if I catch next time. They just let the other people eat that seal. So they kind of serve it to all the families. So that's the way my folks, they train the young people. That's the way I was trained" (M. Andrew in Andrew and Andrew 1995).

The symbolism and cultural significance of these actions was not discussed in the course of that interview, but it is clear that that certain pre-European practices and values have persisted in these communities. The degree to which this is the case, and might influence subsistence choices or responses to non-resident hunters and fisherman, remains ambiguous, but seems a fruitful point for further inquiry that might be explored in the planned "Evaluate the Effects of Tourism" study.[25]

The position of the Alagnak within the geographical range of village subsistence territories deserves some attention in light of the information outlined above. Some interviewees report

that they have relatively fluid hunting territories, reflecting their efforts to opportunistically follow game while avoiding competition. These practices clearly influence the frequency and distribution of hunts in the Alagnak River corridor:

> "I asked [an interviewee] about the Branch and he said he goes over there but not as much as the other places because' a lot of people use that area… he goes wherever he thinks or knows there is game. The areas of importance change from year to year as the river and the game always change" (Katmai Research Project 1997: 18).

Some also suggested that the Alagnak was an area visited along a circuit of places visited by hunters. If they had found game before arriving on the Alagnak, there was no reason to continue on; if they did not, they would proceed to the Alagnak River area to hunt; if they found nothing there, they might pass through the Alagnak en route to tertiary or quaternary-level choices along the circuit.[26] Cabins and campsites along the Alagnak have often been used as bases of operations during these hunts, then, even if no hunting is done along the Alagnak. Reflecting this pattern, Dan Salmon indicated that the Alagnak was regularly visited as part of a circuit of subsistence hunting areas visited each year by ATV among Igiugig residents:

> "Many travel down to the Branch using the river in the summer and the over-winter trails during the winter and access the areas in the forks of the Branch River where it goes to Nonvianuk and Kukaklek" (Salmon 2002: 5-6).[27]

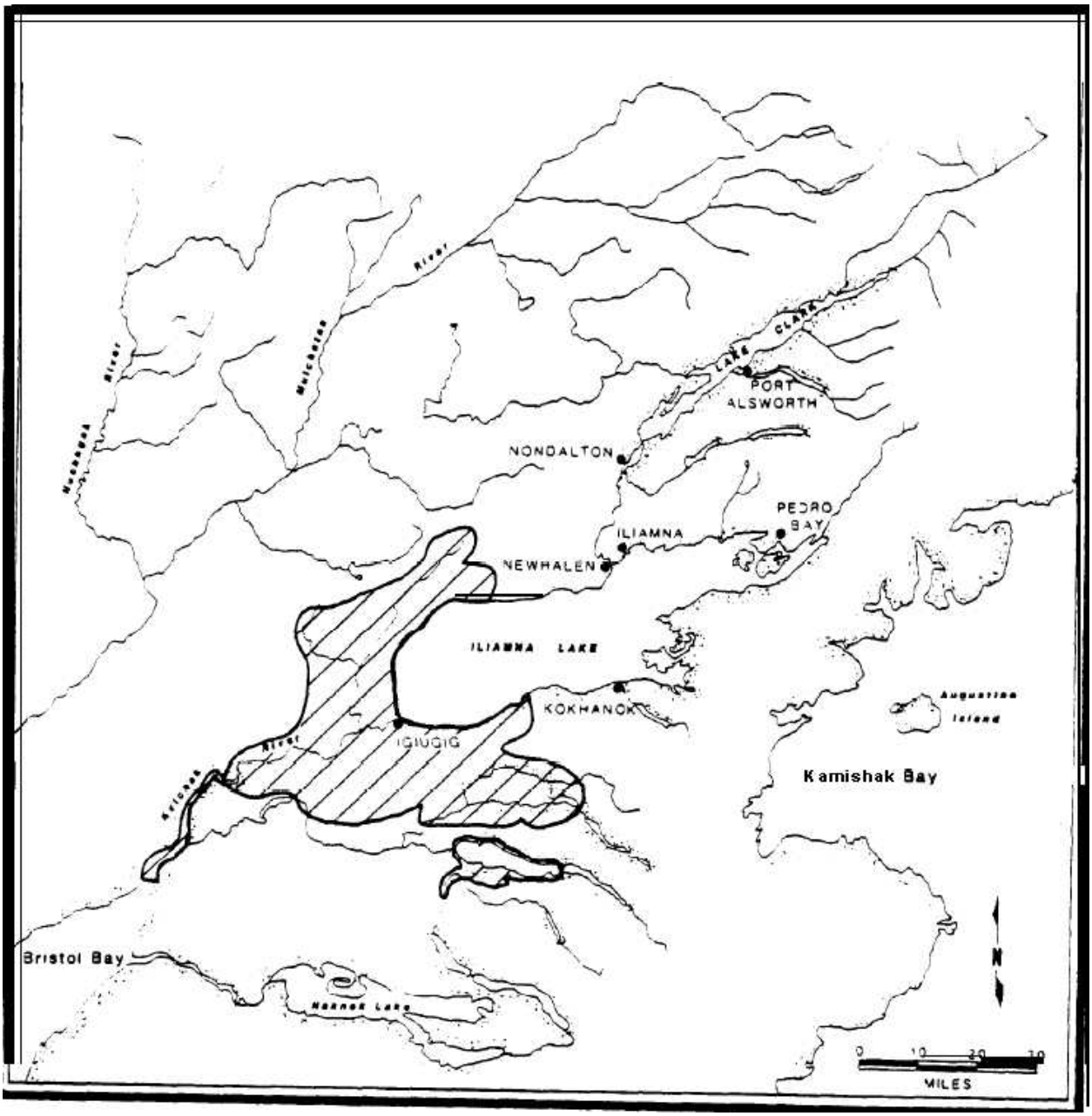
The position of the Alagnak within the geographical range of village subsistence territories certainly has received some attention in a number of past Alaska Department of Fish and Game reports, and this material deserves brief summation here, to put the resource-specific analysis that follows in its proper context. Alaska Department of Fish and Game records generally place the Alagnak Wild River corridor squarely within the subsistence use areas of Igiugig and Levelock (ADF&G 1985: 430-31). The areas of subsistence use for these communities generally overlap, even as they exhibit a tendency to concentrate harvests on their respective eastern and western ends of the river corridor. Specifically, with their emphasis on big game harvests, ADF&G data leads to the conclusion that the communities

> "have broadly overlapping areas of use. This is primarily because of wide-ranging hunting for highly valued species such as caribou, which is only infrequently and unpredictably available close to most villages" (ADF&G 1985: 430).

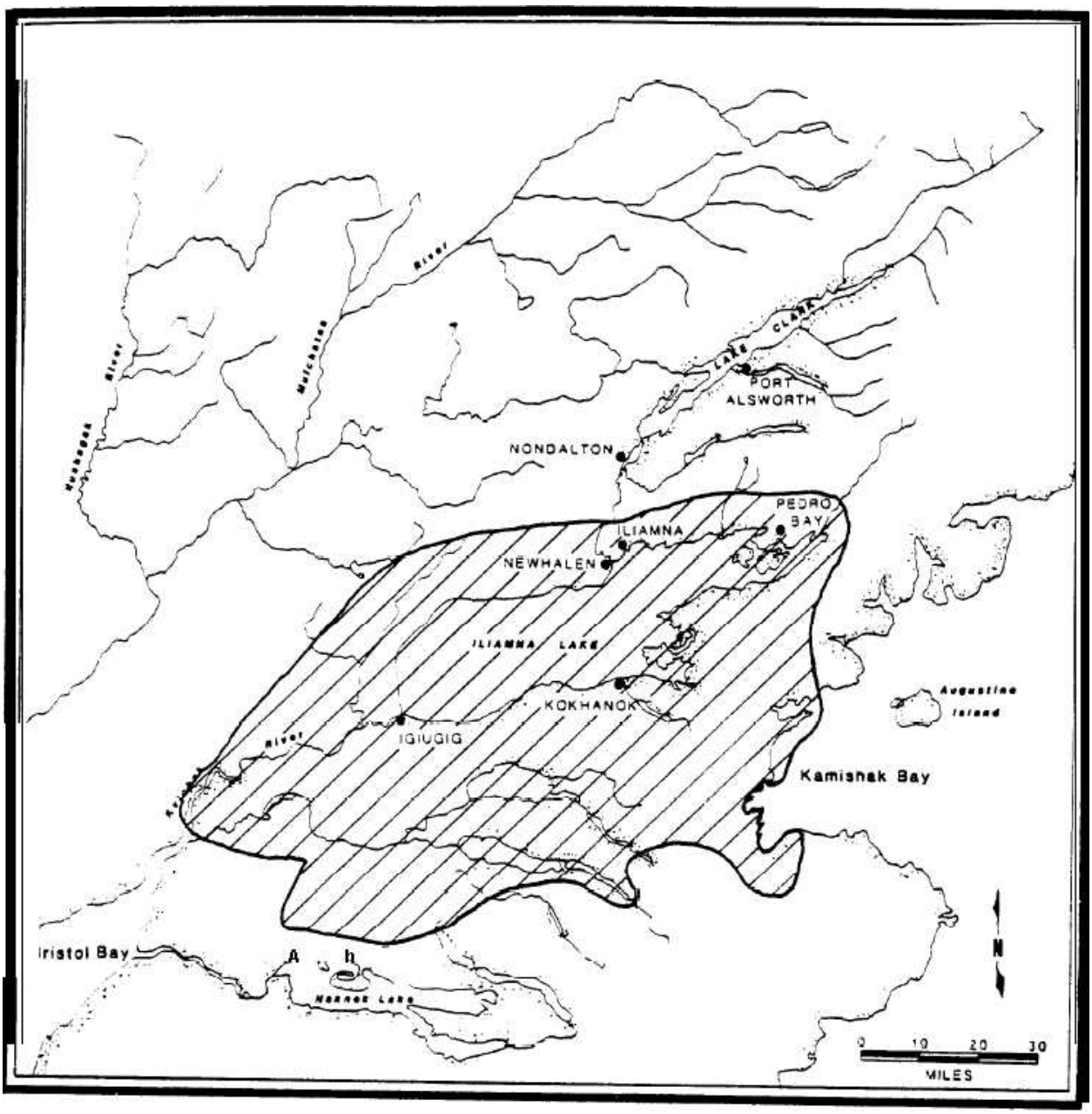
One might also suggest that this overlap in the geography of resource procurement reflects longstanding ties of kinship between these communities, and a tendency to use the Alagnak that is rooted in the shared heritage of some of their residents within the Alagnak River communities. As Behnke noted of the region immediately northeast of Katmai National Park and Preserve, "Social relations also contribute to overlapping areas of resource use, since people with relatives in other villages often hunt or trap with them" (Behnke 1978: 138).

Alaska Department of Fish and Game reports also place the Alagnak River corridor squarely within the subsistence territory of Kokhanok, apparently due to the same factors that explain the subsistence territories of Levelock and Igiugig. This agrees with the observations of Behnke (1978: 157) who indicated that the northeastern expansion area of Katmai "is within the traditional subsistence area of the residents of Levelock, [Alagnak], Igiugig, and Kakhonak, who were dependent on the salmon and big game of the area." Alaska Department of Fish and Game reports generally place the Alagnak within the resource procurement territories used by residents of Naknek/South Naknek and King Salmon, but only within the fringes of the resource territories of these two communities, which tend to focus their efforts south and west of the study area (ADF&G 1985: 432, 453-54).

In addition, Alaska Department of Fish and Game records generally suggest that the subsistence hunting territories used by residents of Aleknagik, Clarks Point, Togiak, Manokotak, Twin Hills, and Dillingham all include areas immediately south of Alagnak Wild River. In recent times, aided by efficient motorized transportation such as motorboats or airplanes, some communities that are more distant will sometimes make visits to the Alagnak River area. (As Behnke (1978: 138) noted, the conventional maps of village subsistence territories often understated the geographical range of harvests due to the fact that airplanes in particular had expanded subsistence hunting into much larger regions than had been utilized historically.) Some hunters are reported to have traveled from as far away as Dillingham and even Kodiak Island:



An example of subsistence territories for Igiugig, from the 1980s. *From Morris 1987.*



An example of subsistence territories for Kokhanok, from the 1980s. *From Morris 1987.*

> "Extremely large areas are covered by hunters and trappers of this subregion because many terrestrial resources are not abundant…A few hunters, mostly from Dillingham, fly across to the Alaska Peninsula to hunt caribou and perhaps moose. A number of the Dillingham hunters fly down the peninsula to hunt waterfowl in the fall" (ADFG 1985: 378, 410-11).

As with the pattern of hunting and other subsistence uses found throughout the region, it appears that the Alagnak River area would be only visited intermittently and infrequently by these communities, and principally when more proximate hunting areas are not found to be productive.

While these maps and data sets are generally developed in reference to big game, especially moose and caribou, it is important to note that this geographical patterning shapes, to some extent, the distribution and use of other resources within the study area. The Alaska Department of Fish and Game commonly notes that fish, berries, wood, and small game such as hares, porcupine or ptarmigan "are generally harvested relatively close to the communities, although long trips may be taken to harvest a certain species or particularly abundant population" (ADF&G 1985: 430, 452). Along the Alagnak Wild River, where campsites and cabins have been in regular use during hunting trips along the riparian corridor, the subsistence use of the Alagnak River region for large game brings with it many of these secondary "residential" uses of resources that are more commonly associated with permanent communities.

Clearly, for some communities that include former Alagnak River residents and their descendents, relocation to distant places has reduced, if not wholly terminated, their use of the Alagnak River corridor for hunting. For example, residents of King Salmon generally expressed the view that the use of Alagnak River by King Salmon residents, including those with family ties to the River, is limited compared to other communities in the region – especially Igiugig and Levelock. This is due to a combination of limited access and hunting opportunities closer to home: "I would guess most of the people here [in King Salmon] don't use that area, maybe for hunting, some years there's no snow and you can't go over there" (quoted in Stickman 2008). Nonetheless, the families of King Salmon do have longstanding ties to the area, and residents of this community still possess considerable knowledge about the area, as well as strong opinions about the long-term viability of fish and game populations.

Fishing

Alagnak Wild River is home to a number of anadromous and freshwater fish, including salmon, rainbow trout, char, grayling, northern pike, Aleutian sculpin, slimy sculpin, Alaska blackfish, three spine stickleback, Japanese lamprey, round whitefish, and nine spine stickleback. However, if the Alagnak River has been known for any one kind of fish historically, it has been its prodigious runs of the five species of Pacific salmon: Chinook or "King" salmon (*Oncorhynchus tshawytscha*), Chum or "Dog" salmon (*Oncorhynchus keta),* Coho or "Silver" salmon *(Oncorhynchus kisutch*), Pink or "Humpback" salmon (*Oncorhynchus gorbuscha*), and Sockeye or "Red" salmon (*Oncorhynchus nerka*). Writing in the 1950s, the U.S. Army Corps of Engineers concluded that the tributaries of the Kvichak, including the Alagnak River, were the foundation of the highly productive Bristol Bay salmon fishery:

> "the Kvichak River tributaries are the most important salmon spawning streams entering Bristol Bay…Practically all of the lake, stream, and river systems are inhabited with large numbers of resident trout and grayling. These waters also support large numbers of anadromous fish composed principally of sockeye and king salmon and are the spawning grounds essential in maintaining the important fisheries of this region" (U.S. Army Corps of Engineers 1954: 68, 119).

The abundance of salmon found in the Alagnak was fundamental to Native Alaskan uses of the river and this has apparently been true for millennia. Salmon fishing formed the foundation of much of the subsistence activity along the Alagnak River through the 20th century, with family fish camps situated to make the most of the summertime salmon runs. Through much of the century, families gathered there every summer to catch and process salmon, gathering enough to feed both the extended family and each family's sled dogs for the year ahead:

> "Summer time, when the fish come that's when they put up lot of fish. We have to split it, hang it and smoke it, put it away… Them days they put up lot of fish cause their dog team in winter time, they got to have lot of fish to feed. And us people, too" (D. Andrew in Andrew and Andrew 1995).[28]

Sockeye were of particular importance along the Alagnak. Sockeye salmon spawn in the headwaters of the Alagnak River drainage, particularly in the diverse riparian and lacustrine habitats associated with Nonvianuk Lake, Kukaklek Lake, and other waterways.[29] Native Alaskan users of the river have long fished for migrating sockeye salmon early in their spawning cycle and, later in the season, they pursued "redfish" - the bright red spawning sockeye salmon. Families caught redfish to dry, often air drying this fish in the fall.

> "red (sockeye) salmon which are beginning to spawn and have turned bright red. These fish are split and hung on racks to dry in the air. They provide a favorite food to a few Native families and are eaten with seal oil, rendered bear fat, or butter" (Behnke 1978: 145).

The Alagnak is said to have been unusually good as a subsistence fishing river for Chinook and Coho salmon, reflecting the structural and habitat diversity of this complexly braided river system. These fish were somewhat more challenging to catch than sockeye, sometimes requiring alternative fishing stations or special kinds of gear. Some families have traveled to the Alagnak specifically to obtain Chinook and Coho salmon, which are apparently not as abundant or as readily caught on other rivers of the region:

> "If they put a net out for kings [on the Kvichak], they usually have better luck on down the river, where the main current is closer to the bank. Kings do not run up the Kvichak River much, in this area they mostly go up the Branch River and the Naknek River. They generally get a few kings in June to make strips, however; you know when the kings are coming because they follow the swallows" (Katmai Research Project 1997: 5).

> "He said they like kings and reds best of all as they dry the best. He said they never got many kings [throughout their fishing range] though and it takes a larger mesh size and special gear to get them. He said a lot of people do not take the extra effort and rely on the ease of getting reds for their fish. He said the people who want kings now often go to Branch and get them with a rod and reel. He said they always used to go to the Branch and get silvers with a rod and reel and now he just does it once in a while for a few fish and for fun" (Katmai Research Project 1997: 19).

Certain places were said to be especially good for catching coho salmon, such as the "Lucky Hill" area and the Wilson cabin that the family referred to as the "First cabin" (Wilson and Wilson 2000). There apparently was no focused fishing for salmonids at the Alagnak River rapids in recent memory, as is sometimes the case in other riverine settings (Olympic 2000). While the exact date varies depending on natural fluctuations in the timing of fish runs, competing economic activities, and other factors, the intensive fishing for salmon generally concludes during the fall.[30]

Fish – salmon especially – has commonly been smoked or air dried on fish racks along the banks of the river. However, over the course of the last century, a variety of methods have been employed to preserve the fish, reflecting the diverse cultural and technological influences that have come together in this place since the time of Russian colonial rule:

Salmon drying racks near Naknek, 1918. *Photo from National Geographic Society Katmai Expeditions, 1913-1919. University of Alaska, Anchorage Photo No. UAA-HMC-0186*

> "Salmon are used fresh throughout the summer and are prepared and stored in several ways. Kings are often cut, filleted, soaked in brine, and then slowly smoked to make "strips". Reds and other species are also smoked in a variety of ways. Methods of smoking and preparing a salmon have been introduced from a range of different cultures, including local "Aleut", Scandinavian, and Europeans. Salmon are also canned, frozen, pickled and salted. Many families eat salmon in a variety of preparations throughout the year" (Behnke 1978: 145).

While salmon clearly dominated the historical fishing practices and subsistence uses of Alagnak River, a number of other fish were caught along the river, including whitefish, pike, trout, and grayling. Rainbow trout clearly played a role in subsistence fishing, and early observers sometimes note trout being combined with salmon at fish processing stations along the Alagnak.[31] Katmai Research Project participants recall building fish traps to catch some of these species:

> "[One interviewee] said he and his grandfather used to make fish traps and used them at -----'s cabin located on the Branch. They regularly harvested ling cod [sic], grayling, whitefish and pike in the trap. The fish were used for both human and dog food" (Katmai Research Project 1997: 17-18).

These species were also obtained in the spring, fall, and wintertime, often when visiting the Alagnak for reasons primarily unrelated to fishing, such as hunting, trapping, or berry gathering. Ice fishing was especially popular for some of this off-season fishing:

> "In the 1950s people were still ice fishing for grayling up the Alagnak River in front of cabins, and one informant remembers ice fishing beginning as soon as the weather was good and the rivers frozen over. Grayling were caught incidentally while ice fishing for rainbow trout and Dolly Varden" (Krieg et al., 2005: 32).

> "we used to go ice fishing, too. We'd chop a hole sometime three feet of ice we'd chop a hole there. You could fish trout or pike or grayling" (M. Andrew in Andrew and Andrew 1995).

> "[Our interviewee] tends to do…ice fishing [on the Branch]. In the spring and fall he sets a net for whitefish which they say are a bit different than those harvested in Igiugig. The ones in the Branch are a bit smaller and shorter than those up by Igiugig" (Katmai Research Project 1997: 9).

Some families traveled to portions of the Alagnak far from their fish camps to pursue these secondary species:

> "Trips are made to good fishing spots to take grayling, char, rainbows, and dolly varden with hook and line. Some fishing is done by local residents far up the Alagnak River. Villagers occasionally ascend the Alagnak River and go up into Nonvianuk and even Kukaklek Lake, pulling boats up through the falls. Fish are also taken through the ice along the Alagnak River and Nonvianuk Lake" (Behnke 1978: 150).

Herring fishing was also reported on the lower Alagnak and Kvichak Rivers during the springtime, a largely maritime fishery conducted outside of the Alagnak Wild River: "The middle part of April they start herring fishing here" (quoted in Stickman 2008).

Subsistence fishing in this region has proven remarkably resilient despite fluctuations in fish populations, competing employment demands, and a host of other factors that have the potential to inhibit the practice. Behnke recorded during the commercial fishing boom of the 1970s that the subsistence salmon fishery had persisted, despite growing pressures to participate in the commercial fishery and other sources of paid employment during the summer months – the traditional peak of the subsistence fishing season. During these times, women and elderly played an especially central role in the fishery:

> "While men are working or fishing commercially in the summer, some elder people and women set gill nets near the village of out at fish camps to take salmon for family use and dog food. A few families use fish camps upriver from Levelock and downriver from Igiugig, as well as on the lower Alagnak River. Salmon are split and smoke-dried, as well as canned, salted and pickled. Some families put up quantities of fish for dog food. In the fall, people also go the fish camp to put up salmon from later runs" (Behnke 1978: 149-150).

Still, interviewees generally suggest that the fish numbers have declined over the last few decades. For example, as Carvel Zimin, Sr. recalled,

> "Branch River is a river we used to go up. And it was a beautiful river. You sit in a skiff there, and if you wanted fish, you just sit there and go like this [gestures] and the fish would jump in the boat. I mean they were thick, you know… it used to be hot fishing, [but now] the fish are gone" (Zimin 1998).

Some attribute these declines, in part, to increased non-resident use and visitation of the river – a point that will be more fully considered later in this document. Similarly, the land-based commercial harvest of salmon in this region of Alaska has declined significantly in recent years. Nonetheless, a modest subsistence fishery persists on the Alagnak (Andrew 2002: 21-22). Some families use ATVs to access the Alagnak River fishing camps, where they harvest silver salmon in the late summer, or fish camps upstream where sockeye are more readily caught (Andrew 2002: 14). Due to the obstacles to summertime travel by ATV or other motorized means, Native Alaskan users of the Alagnak tend to prioritize those fish camps that can be accessed by jet boat along the river (Andrew 2002: 32).

A few families have attempted to expand their participation in the commercial fishery historically, by harvesting fish from the Alagnak for sale to commercial operators on Bristol Bay. For example, Mike Andrew apparently attempted to foster a small commercial catch by Native Alaskan families along the Alagnak, buying a "barge" and bringing it upriver to gather up fish caught there. He pulled the barge as far upstream as he could take it with a fishing boat, and left its maximum upstream point for this kind of towing. This venture apparently did not succeed (M. Andrew in Andrew and Andrew 2000).

Despite the centrality of subsistence fishing within the larger range of Native Alaskan uses of the Alagnak, relatively little specific information was recorded on fishing traditions, other than what is presented here. The Alaska Department of Fish and Game has recorded use statistics for the Alagnak River, as well as producing occasional summary reports that synthesize this data and place it in its larger biological and sometimes social context (e.g., Collins and Dye 2003, Naughton and Gryska 2000, Jaenicke 1998, Dunaway 1994), and this literature may yet augment the picture provided here. So too, the need for additional ethnographic research is indicated. As with many other themes documented in the course of this research, the details of subsistence

fishing on the Alagnak will become much clearer in the course of the "Evaluate the Effects of Tourism" study.

Trapping

Historically, Native Alaskans participated in trapping for food and furs, using deadfall traps along the Alagnak River corridor – a practice that was not remembered by modern interviewees except in stories handed down between generations. Mary Olympic recalls her father showing her how this was done when camping along the Alagnak:

> "my daddy used to show me how to when they get wolverine. Fish camp. At fish camp he make that kind. Heavy, that wooden beam it just [whack!]…That's the way they do trapping long ago" (Olympic 2000).

The emergence of the fur trade over the course of the 19th century introduced new motives and tools for trappers working in this area. The arrival of steel traps in the 19th century significantly simplified and expedited the process of trapping; ironically, access to metal traps and similar tools required participation in the burgeoning interethnic cash and barter economy, which in turn provided additional incentives for trapping. Interviewees shared accounts of men and families visiting Bristol Bay communities to barter or sell furs. By the early 20th century, fur trading operations became more mobile: "they have some buyers come to the village" (M. Andrew in Andrew and Andrew 1995).

As suggested, for many families, trapping was one of the few means – beyond working for the canneries – of gaining access to cash or barter items through this economy, and gaining access to the newly introduced tools, foods, and other items. Dallia Andrew recalled, "My dad used to trap lots. [So] that we could get like food like flour, sugar, when he turned his fur to, when he sell them out and he bring home flour, sugar" (D. Andrew in Andrew and Andrew 1995). Similarly, Michael Andrew spoke of the use of pelts for access to goods that were otherwise hard to obtain in the remote communities of the Alaska Peninsula in the early 20th century:

> "when we were reindeer herders, my folks they used to, when the holidays come, I guess they know their Christmas holidays for American, so they take one caribou, take 'em for stores, or [for the winter caretaker of a cannery]. Trade them with the food like coffee and sugar, flour, tea…They give them coffee, sugar, tea, little bit of everything what they need, matches. And if they have a rifle, give them shells… Sometimes we go down for need fuel gas, maybe oil, motor oil" (M. Andrew in Andrew and Andrew 1995).

While some trapped only for furs, interviewees speak of a dual-purpose harvest, involving both the procurement of pelts and meat during this period, when little fresh meat was wasted:

> "[people were] trapping beaver 'cause we eat the beaver meat in winter time and we sell the skin. Try to make [hides?] sell it to buyers, you know. Long time ago" (M. Andrew in Andrew and Andrew 1995).

As commercial trapping increased along the Alagnak in the early 20th century, individuals had their choice of trapping locations, often visiting prime spots that were long known to the communities of the region. There was no regulation other than traditional prescriptions and proscriptions guiding the procurement of furbearing animals:

> "To begin trapping you would just pick a good spot, like along a creek or river bank. You didn't have to get permission in old time days, when Alaska was a territory. There were only a few people around, only a few white people along the Branch, there was no school" (Katmai Research Project 1997: 19).

Traditional protocols included appropriate treatment of game animals, but also involved active efforts to avoid areas being trapped by other members of the larger community: "[you] know where other people were trapping and…you stayed away from those areas or else asked permission" (Katmai Research Project 1997: 11-12).

Individuals reported trapping fox, beaver, river otter, mink, lynx, coyote, wolverine and wolf over the course of the 20th century. Though the quantity of beaver has varied, the Alagnak is especially depicted as a "good place" for beaver, and families have trapped it there extensively at various times historically (G. Wilson in Wilson and Wilson 2000; Tallekpalek and Tallekpalek 1998). Beaver were sometimes trapped later in the season compared to other species trapped along the Alagnak, and were often trapped well into winter. The entire length of the river was

trapped for beaver historically. The best places to trap beaver, however, were sometimes at the extreme upstream or downstream ends of the river, or in minor tributaries to the river, rather than on the main stem (G. Wilson in Wilson and Wilson 2000).[32] Behnke also recorded evidence of this pattern in the late 1970s:

> "The Kukaklek-Nonvianuk areas are said to have large beaver populations and a number of people from the villages trap beaver in these areas….A number of trapping cabins in this part of the [proposed park expansion] are owned by Levelock, Igiugig, and South Naknek trappers" (Behnke 1978: 151).

A number of individuals recalled that they or their families trapped in the Alagnak River corridor, as well as in other portions of what is today Katmai National Preserve, such as Kukaklek Lake, Nonvianuk Lake, and the Battle Lake area.[33] Some families' trapping territory took in much of the Alagnak system, from the lower reaches close to Levelock, all the way to Nonvianuk and Kukaklek Lakes:

> "My brother-in-law Nick and I…we had a trapline… It would go up from, well, I leave Levelock and I follow the Branch all the way up until I hit the forks, there. And there was the Kukaklek River, we'd go up that. Then we'd portage over, then hit the Nonvianuk River and come back down to one of the cabins down below I had on the Branch, there… it's pretty close to a hundred and forty miles, I'd say. And we had a trapline for years like that" (G. Wilson in Wilson and Wilson 1995).

Others focused primarily on the riparian marshes and islands that were proximate to their family cabins:

> "They would spend entire winters over on the Branch River. They trapped muskrat and otter mostly. He learned to catch them on islands in the river, where they would see tracks coming up out of the water. They would set traps just a few inches under the water, where the muskrat or otter would be walking before coming out of the water. To trap beaver they would use snares" (Katmai Research Project 1997: 6).

Meanwhile, some individuals focused trapping efforts in the forested areas near the Alagnak River rapids, where certain species were known to congregate (Olympic 2000). Wolf was one of the animals sometimes sought in this general area:

> "you need to get into timber, on the Branch River, to find them, he said. To find wolves, there has to be big game, like caribou and moose, around. The caribou are so abundant now, there should be some wolves… They prey on sick and weak caribou" (Katmai Research Project 1997: 6, 17).

Many families who located off of the Alagnak over the course of the 20th century, continued to use the area for trapping, though there may have been subtle changes in trapping territories as a result of transportation challenges and intervening opportunities closer to their new homes. George Wilson Sr. reports that his trapping territory did not change much after relocation:

> "not much but just a little further northeast than where I was. But I still trapped at Branch River for mink and otter and fox. But I got into more lynx now, and wolverine and wolf…Up from the, closer to the mountains. Lot more lynx and wolverine, wolves come out of there all the time, and get a chance to get some of them once in a while" (G. Wilson in Wilson and Wilson 1995).

Especially as motorized transportation became increasingly available, some families maintained expansive traplines, with only a portion of their traplines located along Alagnak River. The Alagnak was then visited in the course of extensive travels between different drainage basins:

> "Traveling up on that Branch, there…we would trap different areas for the beaver season. We'd go from Branch over to the King Salmon River some time. And then up to Kvichak on the Yellow Creek. And then down on the Bear Creek. And I even trapped down the coast, and I trapped up in Koktuli and Mulchatna area there" (G. Wilson in Wilson and Wilson 1995).

Individuals from other parts of Alaska who had trapped elsewhere but moved into such communities as Igiugig, Levelock, and Kokhanok appear to have often adopted the practice of trapping along the Alagnak. For example, in roughly 1948, after George Wilson moved to

Igiugig with his wife Anne, who was from the community originally, he expanded his trapping territories to include the Alagnak:

> "Anne was born and raised here [in Igiugig] and she wanted to come back and spend some time up here and see if I would enjoy it. And I said, "Okay, I'll move up." So '76 we moved up and I started trapping up in this area, here. So, I enjoyed it. And it's been really nice, and I been trapping up there ever since, from out of Igiugig there, out on the trapline. And the cabins, they're not too far. And I go across to Branch when it freezes over. It's just a little farther northeast than where I was trapping [before moving here], but it's still in the same principal area that I did trap in. And we got a lot, still more lynx and wolverine than I did on that lower trapline. I usually go up the Branch, now. I got over in this higher country here, next to Kukaklek. And Nonvianuk, there's a lot of lynx and wolverine come through all the time. And then get a few wolves once in a while. So I enjoy the trapping up here" (G. Wilson in Wilson and Wilson 1995).[34]

While the Alagnak River has been a productive river for trapping, this use of the river is challenging and significantly influenced by weather conditions. Interviewees suggest that the whole river was good for trapping animals, but that it was "rough traveling" (G. Wilson in Wilson and Wilson 2000). During the warmer months, animals can be trapped by boat, but this often involves a lot of walking through marshy riparian areas: "The Branch is a tough area to trap and you have to do a lot of walking down there 'til the river freezes" (Katmai Research Project 1997: 15). Trapping on the river after the freeze-up allows for easier ground transportation on the river ice, but the ice pushes many furbearers away from the river, and reducing the number of trappable sites along the river's edge:

> "as the river start to freeze up, like Alagnak River, it'll, once the river gets full of ice and freeze up, the mink will leave the river, most of them, and go inland in the smaller creeks and then you have to go inland after the animals then. Because the river freezes over, full of ice, and it's hard trapping on the river after it freezes. Only some places you could get some traps out, where the banks still stick out" (G. Wilson in Wilson and Wilson 1995).

George Wilson, Sr. reported that, for many families, the trapping season in the mid-20th century began at around November 10th. In the fall, he suggests, the ground was still too wet and dog sleds could not be used to access the area. Instead, his family took a motorboat up the river and

then walked to their traps, which were set along the river and on islands, ranging from the confluence all the way down to a point roughly 10 miles below what were the most downstream cabins at the time (G. Wilson in Wilson and Wilson 2000). Sometimes, people were dropped off to walk to their trapline, and would then walk all of the distance back to Levelock rather than doubling back through the difficult terrain along the river. Only later in the season, when his family trapped beaver, wolf, and wolverine could they return using dogsleds. This occurred around January, when the ice was predictably solid on the river and could be traversed safely. At this time, people typically traveled further off-river than when they accessed the area by boat, allowing more access to species found in the uplands, such as wolf and wolverine.

The general patterns of trapping established early in the century – including the species, as well as many of the geographical locations – persisted well into the last decades of the century. Thus, Behnke found that in the late 1970s, the Alagnak River was still "recognized as a particularly good area for mink and otter trapping, and traps are also set along its course for fox, lynx, wolf, and wolverine" (Behnke 1978: 150). However, the intensity and geographical extent of the hunt varied with time, reflecting the rise and fall of the fur trade generally. The post-War years witnessed a boom in trapping, as prices for furs soared. A number of families intensified their trapping along the Alagnak, or expanded pre-exiting traplines into portions of the Alagnak Basin that had heretofore been outside of their regular trapping territories:

> "Good prices for fox and lynx in recent years have caused people to travel farther and trap in areas not heavily used a few years ago. Kukaklek Lake, Nonvianuk Lake, and American Creek are all areas trapped by a few residents of Levelock, Igiugig, Kakhonak, Naknek, and South Naknek. Traplines from Levelock run up the Alagnak River, along the Kvichak River, and up creeks and tributaries to the Kvichak, as well as into the tundra and lakes west of the village. Igiugig people trap around the western shore of Iliamna Lake, into the Kaskanak Creek areas; toward Big Mountain, into the Kukaklek Lake Area, and toward the Alagnak River" (Behnke 1978: 150).

There is some reason to believe that this intensified trapping produced incentives for families to trap more in the upper Alagnak Basin. Motorized vehicles were becoming more readily available, just as the river's lower reaches were being harvested with new

intensity. Meanwhile, the upper Alagnak, as well as the Nonvianuk and Kukaklek Lake areas represented relatively remote and untrammeled trapping territory:

> "[our interviewee] started trapping on the Branch River on his own when he was about 15 (1952). He mainly trapped otter, mink, fox, and some wolverine. There were no lynx at that time. They used #3 steel traps. Initially he trapped by his mother and then spread out. He said there was plenty of room, not too many trapping the far end of the Branch" (Katmai Research Project 1997: 20).

By the 1960s and 1970s, trapping was well-established on the Alagnak, as well as in the headwater lakes, involving the extensive use of modern transportation technologies. As Behnke observed in the late 1970s,

> "Beaver, lynx, mink, otter fox, wolf, and wolverine are all trapped along the Alagnak, with trappers from Levelock, Igiugig, Naknek, and South Naknek traveling to different portions of it by snowmachines and aircraft. The families living at Alagnak also do considerable trapping in these areas. The Nonvianuk and Kukaklek Lakes area is utilized by trappers from all these communities and from Kakhonak some access to this area is by airplane, although people from Igiugig, Kakhonak, and Levelock travel there by snowmachine as well" (Behnke 1978: 157).

This easy access by snowmachine and airplane, coupled by high prices for furs during this period made the Alagnak more accessible to non-Native trappers from more distant communities, such as King Salmon. In 1982, Stirling (1982: 21) reported the accounts of a Fish and wildlife Protection Officer, Dick Dykema, who was reported to be "very knowledgeable about trapping in the Alagnak River area and estimates that equal numbers of Natives and whites trap small fur-bearing animals [there]."

However, fortunes quickly reversed, as the prices for furs declined steadily through the 1980s and 1990s. The species that were especially abundant on the Alagnak, such as beaver, foxes, and mink were especially hard-hit by this decline in prices, driving what little trapping still occurred in the region to other locations away from the Alagnak River corridor.[35] Some resident users began to suggest that the populations of these species began to increase on the Alagnak as a result. As Katmai Research Project teams discovered,

> "No one (virtually or actually) is trapping over on the Branch River right now because of the low prices; there are lots of foxes, beaver, and mink because of the reduced trapping activity…There was very little trapping that occurred by residents of Levelock and its economic importance is currently slim to none. I was told there was a much greater degree of activity in the past, but that the decreases in fur prices have greatly affected this community's degree of activity. The types of furbearers found in the vicinity of the lower Kvichak and Branch Rivers are also those furs that are worth the least. The furs that-still remain semi-profitable (lynx, wolf and wolverine) are less abundant than up around Kokhanok and Igiugig" (Katmai Research Project 1997: 6, 7).

Beaver had apparently become scarce along the Alagnak for a period of time in the mid-20th century, but the populations had rebounded by the late 1990s. A small number of families, most being regular river users whose visits were not motivated solely by trapping opportunities, continued to harvest furbearers and benefited from this rebound in wildlife numbers. Beaver, in particular, were said to have rebounded significantly by the late 1990s:

> "Not much beaver, long time. When [we] fished…stay[ed over there] not many beaver. Now we get, get beaver now. …Mmm, I can, enough to get hunt. Lotsa, lotsa beaver…I got limit, he tell me, I skin, me and mama, all the time. I help my brother. I got limit, mama got limit" (M. Tallekpalek in Tallekpalek and Tallekpalek 1998).

> "When [our interviewee] was starting out he trapped the Branch in the late 40s, and traps there to this day. He says he goes down there early in the year for mink as there are lots down there. He said it is changing now though and the beaver are taking over" (Katmai Research Project 1997: 15).

For those few commercial trappers who were left in the Native Alaskan community, these new conditions in the market and in furbearer demographics created new opportunities. Transportation technologies allowed individuals to range over vast and largely unutilized trapping territories, using trappers' cabins that were no longer occupied.

> "There is one very active trapper in the village who travels and traps a great distance in the region. He runs trap lines that span 40 to 50 miles. His trapping excursions take him up toward Big Mountain, over to Kukaklek and Nonvianuk

> Lakes, and down around the Branch River. He is the only individual in the village who keeps several cabins and utilizes them for multi-day trapping excursions. One older couple in the village also takes numerous multi-day harvesting excursions, most often by boat to the Branch River and the lakes that are its source. The rest of the village seems to practice single day subsistence harvesting trips. There are a few younger men in the village who dabble in trapping for recreational activity" (Katmai Research Project 1997: 2).

Trapping persists in the region today, but scarcely resembles the intensive and extensive practices documented in the middle of the 20th century.

Reindeer Herding

A number of Native Alaskan families participated in reindeer herding in the region, from the end of the 19th century to the mid-20th century, as did many of the non-Native men of Scandinavian ancestry who married into the Native community during the early 20th century. Reindeer herding began in the Bristol Bay region by 1905, and arrived in the Alagnak River area sometime after 1909 (J. Branson, pers. comm. 2008). Speaking of the northeastern edge of Katmai National Park and Preserve, Behnke notes that "by the early 1900's, [residents of Igiugig, Levelock, Alagnak, and Kokhanok] were herding reindeer in these areas, a use which lasted until the 1940's" (Behnke 1978: 157). By most accounts, the Kvichak Basin quickly became an important center of reindeer herding regionally.[36]

Interviewees spoke of reindeer arriving in the vicinity of Alagnak River sometime around 1910s, according to the recollections of interviewees. Certain Native men – including Mary Olympic's father – recalled receiving instruction at that time in the care of reindeer and herding techniques (Olympic 2000). Some modern community members still recall this early period in the history of reindeer herding, when reindeer herds roamed widely across the landscape:

> "There used to be reindeer herding years ago…They had marks, ear marks to brand [the reindeer] so you know which ones you own. They just started walking, they walked all over, they didn't worry about it, they just did it" (quoted in Stickman 2008).

Though no reindeer herds were primarily stationed in the Alagnak area, people regularly herded reindeer through the Alagnak River corridor during this period, and some families camped along the River when herding (Tallekpalek and Tallekpalek 1998). A number of interviewees mentioned a reindeer station at Big Mountain and noted that reindeer herds were sometimes routed along or through the Alagnak River corridor in association with the Big Mountain station. Several interviewees noted that their parents had been involved in herding at Big Mountain and that they sometimes camped on the Alagnak while herding to and from that station. A number of families, such as the Andrew and Apokedak families, also maintained herds near the headwaters of the Alagnak along Nonvianuk and Kukaklek Lakes (Olympic 2000; Andrew and Andrew 1995). Some stayed in cabins along the Alagnak during their travels to and from tending the herds in that area:

> "my folks used to have reindeers long time ago, they stay up the Kukaklek, and then Nonvianuk, in Kukaklek watch their herds. When they're done, watching their herds, they came down here" (D. Andrew in Andrew and Andrew 1995).

Moreover, reindeer provided an impetus for wide-ranging movement across the landscape that kept some families from Alagnak River in regular contact with lands and resources, such as those in what is today Katmai National Park and Preserve, that had become too distant for regular subsistence use in the course of their movement to settled villages such as Igiugig and Levelock.

When families herded reindeer through the Alagnak River corridor, as was sometimes done in association with both the Big Mountain and Kukaklek operations, riparian islands were sometimes used as temporary "corralling" areas for reindeer:

> "we have an island. In the summer time the herd pretty much tame. They, when it's too warm, they go in the island, cool off where's the good wind. Get away from the sand flies down there. And stay out there, then towards evening they swim back to the camp in a big herd" (M. Andrew in Andrew and Andrew 1995).

Like trapping, reindeer herding provided a source of cash income during a time when cash was relatively scarce within the largely subsistence economy of the region. Speaking of one interviewee, whose family ran a store that was apparently on or near the Alagnak, researchers from the Katmai Research Project recorded:

> "The old village on the Branch River was called Alagnak in earlier times. [He]said that the reindeer herders went from Igiugig to Levelock. His father…would talk with the herders and see what they wanted to trade for the reindeer. He said they didn't want money as much as they wanted flour, sugar and tea. He said that usually ten to twenty reindeer were traded at one time. [He] said reindeer trading ceased in the late 1930s" (Katmai Research Project 1997: 18).

Similarly, Michael Andrew recalled,

> "Before, they used to travel, go down and back, cause there was reindeer. Sometimes [my father would] drive two, three [herds], go down shopping [with] what they make, [then] go back to Big Mountain" (M. Andrew in Andrew and Andrew 1995).

As was generally the case with Alaska's experiment with government supported reindeer herding, the experiment did not last for long. By the 1930s, the absence of markets for reindeer products, competing claims on herders' time, predation, and a host of other factors began to undermine the reindeer industry. Attempts to limit predators in and around the Alagnak River Basin reportedly had brief but disastrous impacts on wildlife:

> "There were reindeer but the wolves began killing them off. The numbers of wolves got so high that they began poisoning them with strychnine. The poison also killed the birds and other animals that fed off the dead wolves. For some time the country was really barren" (Katmai Research Project 1997: 20).

As families began to move out of reindeer herding by the mid-20th century, some families largely discontinued their regular visits to some portions of their larger territory, such as Kukaklek Lake or Big Mountain for the first time – a trend that arguably reversed only after the widespread adoption of ATVs and, to a lesser extent, snowmachines:

> "I don't remember what year they move, when they [were] losing their reindeer herders. And so many years after the reindeer is getting less so they quit using [those areas]" (M. Andrew in Andrew and Andrew 1995).

By the mid-20th century, interviewees suggest that a modest number of reindeer occasionally were seen roaming the landscape in the vicinity of Alagnak Wild River, but there were no longer organized herding operations. For some families, reindeer were opportunistically hunted during this time.

Berries and other Plant Materials

While plant foods and materials are often overlooked in past ethnographic and subsistence studies, it is clear that berries and other plant materials have also been gathered along the Alagnak River corridor. For some families, berry picking is described as a supplemental but important activity conducted adjacent to camps while fishing or hunting at Alagnak (e.g., Tallekpalek and Tallekpalek 1998). Simultaneously, some families apparently drifted the river in a boat, picking at select locations as they traveled:

> "When we go look for wild berries, we'd go in a little boat from way down Alagnak mouth, we'd go all the way up to Nonvianuk with our little boat, coming down" (M. Andrew in Andrew and Andrew 1995).

While it is almost certain that other resources were obtained in the course of these trips, these accounts imply that berry harvesting was the principal goal of these float trips.

Mike Andrew recalls people picking a diverse range of berries along the Alagnak and processing these berries into various kinds of cuisine:

> "Cranberries, salmon berries,[37] blue berries, black berries, high bush berries, raspberries. They mix 'em up with Crisco, lard, and little bit sugar. They beat them up. Lot of times they put a little bit fish in it, boiled fish, white fish. You clean the bones out, put 'em in, beat 'em up and put 'em in a big bowl. Boy, that's nice. And we call it Native ice cream, berries all mixed together with the Crisco. Boy that's good" (M. Andrew in Andrew and Andrew 1995).

Raspberries were said to be uncommon in local communities' subsistence territories outside of the Alagnak. These berries were picked preferentially along the Alagnak: "Raspberries are found and picked only on a couple of islands in the Branch" (Katmai Research Project 1997: 13).

Berry picking continues to be an important supplementary source of food in communities associated with the Alagnak, and a symbolically important component of holiday meals and other events:

> "Right today we still do that. I like to pick berries, so I help. Me and Dallia, we travel for berries, put it away. Not a long time ago - we still do it right today. We still get them while there's for holidays we do same thing. What we are teached when we are young, we still do it right today" (M. Andrew in Andrew and Andrew 1995).

Summer and fall were the principal times to gather historically. Still, fall has been the primary season for many of these harvests recently as people avoid peak non-resident visitation on the river and seek to time berry harvests to correlate with fall fishing: "September is a time to pick more berries, and fish for silvers down on the Branch" (Katmai Research Project 1997: 13).

Families reported that certain kinds of places were especially good for picking berries. George and Anne Wilson recalled a place they called "Blueberry Island" that was a short distance below the falls and was especially good for blueberry picking. Another possible "Blueberry Island" was recorded by Morseth (2000) immediately downstream from the Clarence Wilson cabin (T13S, R41W, Section 31). They also recalled that islands in the river were often good for picking raspberries, and that they often visited these riparian berry grounds as a supplementary activity to fishing or the moose hunt (Wilson and Wilson 2000). Outside of the riparian corridor, berries are said to be generally scarce or of poor quality due to the absence of moisture. Exceptions may be found in the relatively well-watered uplands near the head of the Alagnak River Basin, which are also visited by people who traverse the Alagnak River corridor:

> "they pick [berries] up by Kukaklek, Battle and Nonvianuk Lakes, up by the mountains were there is more snow and the ground stays moist. They said down

> here around Igiugig it gets too dry in the summer and the berries are not very good. They have been traveling to these places for a long time [for berries], and when they go they travel up the Branch in a skiff and camp for a few days when they are there" (Katmai Research Project 1997: 12).[38]

While references to plant foods other than berries is scarce in the available ethnographic documentation, it is clear that the Alagnak River corridor contains a number of other edible leaves, shoots, roots, and other plant materials that are likely consumed by Native Alaskan users. The Tallekpalek family provided hints of this kind of use, noting that they gathered and ate "gutaqan" or "Alaska spinach," an unidentified plant with edible leaves – perhaps dock (*Rumex* spp.) – in the springtime while on the Alagnak. This leafy green vegetable was usually cooked and eaten with grease (Tallekpalek and Tallekpalek 1998). Further research would probably reveal a broader diversity of plant foods used historically on the Alagnak.

In addition to plant foods, it is clear that Native Alaskan communities have utilized wood from along the Alagnak River corridor for a variety of uses. Evan Chuckwak and Ella Mae Charley referred to people gathering firewood along the Alagnak River corridor (Charley in Charley and Setuk 1998; Chukwak 1998). Mike Andrew also makes reference to gathering spruce wood for the construction of temporary shelters, and possibly for firewood to be used while living along the river. Trees cut for firewood included, minimally, spruce and birch. People apparently did not want to cut wood close to their cabins historically, so they traversed the banks well beyond their homes in search of wood (Charley and Setuk 1998). People also gathered driftwood along the banks of the river for firewood, as driftwood was said to have special properties:

> "They said that they use driftwood for their steam and smokehouse in the warmest summer months of June and July, when it is very dry, as it throws no sparks and thus diminishes any fire danger. They said they use spruce and birch at other times of the year and it doesn't matter if it sparks cause the ground is moist. They said they were taught to do this" (Katmai Research Project 1997: 13).

Some families apparently continued to gather firewood along the Alagnak River by dog sled, even after moving away to communities such as Igiugig and Levelock:

> "We've gone to Branch River. We used to go up river and haul wood. Uh, many times. Go up there with a big, what do you call it, big saw. Cross-cut saw…Or five-foot saw. Stay up there all day. I would just muck around, play around just, as long as I could go with dad on the sled. We saw down two, three trees and haul wood back. Go to Branch River, I remember going to Branch River with the dogs couple of times. Over, uh, Branch River Village…we used to go Diamond Jay [and] Coffee Creek, down river…by Charley Jensen's or a ways past there. Yellow Creek, almost to Yellow Creek" (Charley in Charley and Setuk 1998).

People also continued to stockpile firewood for use at their trapping cabins along the River after moving away to other communities:

> "we put a stove like a drum stove, we make it. And put lots of wood. Before we hunt, like in the fall time, we all got together, pile some wood before the hunting season come. Because when we hunt, we don't want to work, we just want to go hunting instead of getting wood or anything. All the families they get together and find wood, what we got coming for the season. It work out nice" (M. Andrew in Andrew and Andrew 1995).

In addition to cutting trees for firewood, some interviews mentioned cutting trees for poles in the forested area near the Alagnak River rapids, and that some apparently had even discussed the prospect of cutting Christmas trees there:

> "Lots of Christmas trees they call 'em…they was supposed to get some Christmas trees from there [by the rapids] but they didn't need it. They said they got a long Christmas tree, good for build a house" (Olympic 2000).

Interviewees made references to the distribution of trees being different now that was the case historically, and implied that this had contributed to changes in the pattern of wood gathering and use along the Alagnak (e.g., Charley and Setuk 1998). It is unclear whether these changes were attributed to natural or cultural effects. While these references were ambiguous, this point could be explored in future research.

Certainly, the current study, as well as the planned "Effects of Tourism" study involve a consideration of visitor impacts upon terrestrial riparian resources, and Native Alaskan interviewees allude to trampling, social trails, and other forms of disruption to vegetation as a

point of recurring concern. For these reasons, a closer look at cultural uses of vegetation along the Alagnak River corridor is warranted than beyond what is possible based on existing ethnographic documentation specifically addressing the Alagnak. In order to produce a more satisfactory overview of plant communities and their relevance to questions of visitor impacts and Native Alaskan uses, we must attempt to correlate existing botanical literature addressing the Alagnak with the more general ethnobotanical literature. In the first systematic study of vegetation along Alagnak Wild River, Carlson and Lipkin (2003) have attempted to identify no less than 90% of the total vascular plant species along the River. Gathering specimens within nine major sampling areas along Alagnak Wild River, Carlson and Lipkin (2003) also identified "dominant associated species" that are structurally and/or numerically dominant within the various plant communities documented in the field. These dominant species are listed below in Table 3.

Table 3:
Plant Species Identified as Dominants in Carlson and Lipkin (2003)

Common Name	Scientific Name
Marsh tea	*Ledum palustre*
Black crowberry	*Empetrum nigrum*
Willow	*Salix barclayi, Salix alaxensis*
Bog blueberry	*Vaccinium uliginosum*
Bog cranberry	*Vaccinium vitis-idaea*
Tundra Rose	*Dasiphora* (*Potentilla*) *fruticosa*
Marsh Cinquefoil	*Comarum* (*Potentilla*) *palustre*
Horsetail	*Equisetum arvense*
Birch	*Betula nana, Betula kenaica*
Siberian alder	*Alnus viridis* ssp. *fruticosa*
White spruce	*Picea glauca*
Sedge	*Carex* spp. (*Carex aquatilis, C. canescens, C. pluriflora*)
Bluejoint reedgrass	*Calamagrostis canadensis*
Narrow leaf bur-reed	*Sparganium angustifolium*
Pendantgrass	*Arctophila fulva*
Bog yellowcress	*Rorippa palustris*
Seep monkeyflower	*Mimulus guttatus*
Dwarf fireweed	*Chamerion* (*Epilobium*) *latifolium*
Lichens	(*Cladina, Cladonia, Cetraria,* and *Nephroma* spp.)

For the current study, and as a guide for use in the planned ethnographic study, this list has been reviewed for reference points within the ethnobotanical literatures regarding western and south-central Alaska, as well as northwestern North America generally. While the applicability of these findings specifically to Native Alaskan users of the Alagnak has yet to be tested, it is clear that the number of culturally significant plants identified as community dominants in the Carlson and Lipkin survey is remarkable.

Individual sedge, birch, and lichen species were grouped together in the analysis that follows, in part because 1) some of the species identified are uncommon, 2) members of structurally similar genera are often used interchangeably by Native Alaskan and other traditional users, and 3) the ethnobotanical literature tends to group these together without differentiation by species. Of the plants that remain, only one (*Arctophila fulva*) does not appear in a cursory review of the ethnobotanical literature, though many grasses of the same family have documented uses; one other plant, *Mimulus guttatus*, appears in this ethnobotanical literature only in reference to communities outside of Alaska. Thus, the percentage of dominant plants with documented cultural uses ranges from somewhere between 95% (18 of 19) on the high end to roughly 81% (21 of 26) on the low end, depending on whether one accepts family- or genera-level identifications in the ethnobotanical literature as verification of cultural use. The uses of each of these plants, as described in the ethnobotanical literature, are addressed below.

Marsh tea ***Ledum palustre***

Marsh tea is an especially important medicinal plant, used widely in Native Alaskan communities. The leaves of this plant are used to produce a tea that is reported to have medicinal properties (Anderson 1939: 715; Porsild 1953: 31; Ager and Ager 1980: 37; Jones 1983: 60). A number of medicines are also produced from the leaves and stems of this plant, occasionally in mixtures of several plants. Marsh tea medicines, taken internally, are especially common for digestive ailments and colds; poultices and other external medicines are also reported (Anderson 1939: 715; Oswalt 1957: 32; Lantis 1959: 5; Smith 1973: 325; Ager and Ager 1980: 37; Jones 1983: 60; Kari 1985: 16). In some communities, this plant also has a role

in sweathouse traditions (Kari 1985: 16). The wood has sometimes been reported as a source of firewood when other options are not available (Wilson 1978: 190).

Black crowberry ***Empetrum nigrum***

Throughout their native range, black crowberries are commonly eaten fresh or preserved and stored for later use. Historically, crowberries were stored in animal oils and/or fish eggs. Today, these berries may also be canned or sweetened and cooked into jams, pies, and other food products. They are also popular with ice cream or akutaq (Anderson 1939: 715; Porsild 1953: 21; Heller 1953: 79; Guedon 1974: 28; Ager and Ager 1980: 37; Jones 1983: 92; Nelson 1983: 55; Kari 1985: 12; Keim et al. 2006). Black crowberry is also widely reported as a plant of medicinal importance in certain Native Alaskan communities. The leaves, stems, and berries have all been reported as ingredients in a diverse range of internal and external medicines (Kari 1985: 12; Leighton 1985: 38).

Willow ***Salix* spp.** **(*Salix barclayi, S. alaxensis*)**

Willow (*Salix* spp.) is widely used in Alaska for fuel wood, drying racks, basketry materials, and a host of other applications. The Felt-leaf willow (*Salix alaxensis*) has been reported as a supplementary food, with its leaves, leaf buds, fresh shoots, and inner bark all being eaten seasonally (Heller 1953: 59; Ager and Ager 1980: 34; Jones 1983: 7; Keim et al. 2006). These plant parts are reported to be rich in Vitamin C, and are sometimes eaten with animal oils. The less common Barclay's willow (*S. barclayi*) is not addressed separately from the general discussion of "willows" in most ethnobotanical accounts, which tend to identify willows only at the genus level (e.g., Kari 1991: 54-55).

Bog blueberry ***Vaccinium uliginosum***

Bog blueberry is a very important plant within the traditional diet of western and south-central Alaskan communities, and is gathered in large quantities wherever it occurs (Anderson 1939: 715; Heller 1953: 107; McKennan 1959: 36; Wilson 1978: 184-86; Ager and Ager 1980: 37; Jones 1983: 78; Kari 1985: 9). These berries are commonly eaten fresh, but are also often preserved and used through the year.

Bog cranberry ***Vaccinium vitis-idaea***

Bog cranberry (or "lingonberry") is a popular food berry in western and south-central Alaska, as it is elsewhere in its range. Traditionally, the berries have been eaten fresh, or mixed with animal oils, fish, or fish eggs to produce meals and desserts (Anderson 1939: 715; McKennan 1959: 36; Jones 1983: 86; Kari 1985: 9; Keim et al. 2006). Berries are sometimes picked in large quantities and stored in pits or caches for later use (Guedon 1974: 28; Leighton 1985: 64). In the last century, the berries have been commonly used in jams, pies, and preserves, and are sometimes frozen or canned for later use (Heller 1953: 109; Porsild 1953: 22; Nelson 1983: 55; Kari 1985: 9). Some communities make a beverage from the berries as well (Porsild 1953: 22). Bog cranberry is also mentioned in a few sources as a medicinal plant, and the berries are often used in cough and cold medicines (Kari 1985: 9). Far from the study area, the berries have been reported as "beads" or a source of dye, while the leaves have sometimes been mixed into tobacco (Leighton 1985: 183).

Tundra Rose ***Dasiphora* (*Potentilla*) *fruticosa***

The Tundra rose receives occasional mention in ethnographic accounts as a medicinal plant, both in Alaska and elsewhere (e.g., Kari 1985: 8). In addition, the leaves of this plant are sometimes reported to be used in a tea, made in some Native Alaskan communities (Anderson 1939: 715; Porsild 1953: 31). Outside of Alaska, this plant has sometimes been depicted as being of ceremonial significance.

Marsh Cinquefoil ***Comarum* (*Potentilla*) *palustre***

The leaves of this plant are sometimes used as a tea in Native Alaskan communities (Ager and Ager 1980: 36). Medicinal uses of this plant have been reported outside of the region.

Horsetail ***Equisetum arvense***

In Alaskan contexts, horsetail has been especially well-documented as a food source. The nodules or "tubers" growing on the root sections are reportedly eaten by some Alaskan groups (Ager and Ager 1980: 33; Kari 1985: 9). The fresh shoots are also eaten by some groups. The plant has a role in medicinal preparations, especially outside of Alaska, and its rough stem - rich

in silicates - is used by many Northwest Coast groups as a form of "sandpaper" for producing fine woodwork or tools.

Birches ***Betula* spp. (*Betula nana, B. kenaica*)**

The wood of birches is commonly used for firewood, the manufacture of tools or temporary structures, and myriad other applications. In some ethnographic accounts, Dwarf birch (*Betula* nana) is noted as an important source of tinder or wood for smoking food, especially when other options are not available (Wilson 1978: 184; Ager and Ager 1980). The bark or leaves of this tree are also identified as the source of medicines, a use that is common with other species of birch found outside of the study area (Lantis 1959: 5). This bark is also sometimes used in baskets. The relatively uncommon Kenai birch (*Betula kenaica*) appears to be used in similar ways wherever it is available (Kari 1991).

Siberian alder ***Alnus viridis* ssp. *fruticosa***

The wood of alder is commonly used for firewood, the manufacture of tools or temporary structures, and myriad other applications. Siberian alder (*Alnus viridis* ssp. *fruticosa*) has been a popular wood for smoking fish and other foods (Ager, and Ager 1980: 35; Kari 1985: 5). The smoke, some note, helps to repel mosquitoes as well (Wilson 1978: 188). The wood has been used in the production of bows and other durable tools (Kari 1985: 5). The interior bark of the tree is also sometimes used to produce a reddish-orange dye for hides, a function paralleled by the use of red alder (*Alnus rubra*) in southeast Alaska and coastal British Columbia (Anderson 1939: 715; Wilson 1978: 188; Ager, and Ager 1980: 35; Kari 1985: 5). Also, throughout much of its range, this tree has been used for a diverse range of medicinal applications. Within Alaska, the bark and leaves of this tree have been used as poultices (Ager, and Ager 1980: 35), in inhalants (Wilson 1978: 188), in steamhouses and in internal medicines (Kari 1985: 5).

White spruce ***Picea glauca***

Of all of the plants found in the study area, perhaps none has been so widely documented in the ethnobotanical literature than the white spruce (*Picea glauca*). The wood has been utilized in diverse ways, including in the manufacture of structures, tent frames, caches, canoes and kayaks,

paddles, shovels, wedges, sleds, hide tanning racks, fishing traps and fish drying racks. Thin or split roots have sometimes been used for cordage, baskets, mask straps, tray and bucket handles, or fishing lines and nets, while thick roots have sometimes been used to produce spoons, dippers, bowls, fishing floats, and other implements. The boughs or needles have served as padding on sitting areas, the floors of tents and other temporary structures, as well as serving as bedding for dogs. The sap is sometimes used as a sealant or caulk, especially in the manufacture of canoes and kayaks, while the bark is sometimes used for the roofs and siding of sweathouses and other small or temporary structures. Rotten wood has sometimes served for smoking food, or has been mixed into sled-dog puppy feed to add bulk. White spruce wood is also commonly used for firewood (Wilson 1978: 188; Nelson 1983: 49-50; Kari 1985: 2).

In Alaskan contexts, the sap is often eaten or chewed like gum, while the cambium is eaten, especially in times of scarcity. This tree is also the source of a number of medicines. The sap, sometimes mixed with grease, is used in salves and poultices. Decoctions made of the resin or needles, sometimes mixed with birch, bog tea, or other ingredients, have a variety of medicinal uses as well. These have been used for both internal and external medicines. In some communities, the needles have been used to cover scents to insure the success of the hunt and have also been burned to deter mosquitoes. The resin or branchlets of this plant also have been documented to be used in ceremonial applications, especially those that are tied to traditional healing methods. Trees and boughs have been reported to have spiritually protective values (Anderson 1939: 716; Oswalt 1957: 28-29; Smith 1973: 325; Wilson 1978: 188; Nelson 1983: 49-50; Kari 1985: 2).

Sedge ***Carex* spp. (*Carex aquatilis, C. canescens, C. pluriflora*)**

Sedges (*Carex* spp.) are of broad significance within the traditional plant practices of North America. Sedge rhizomes and leaves are among the more common components of baskets, mats, twine, and other woven products throughout the continent. The stems of many sedges are also edible. In Alaska, the stem bases of Sitka sedge (*Carex aquatalis*) have been eaten by some communities, while on the Northwest Coast, this plant has been used for the production of sturdy baskets and basket handles (Heller 1953: 129; Kari 1991). Other sedges identified in the study area (i.e., *C. canescens, C. pluriflora*) are not typically addressed separately from other sedges in

the ethnobotanical literature, which often addresses sedges only at the genus level (e.g., Kari 1991: 105).

Bluejoint reedgrass ***Calamagrostis canadensis***

In other North American contexts, a number of traditional uses of bluejoint reedgrass have been documented. This grass has been used for bedding, for the lining of cooking pits, and other purposes; its close relative, *Calamagrostis rubescens*, has been used for such diverse purposes as shoe linings, sanitary napkins, berry basket liners, and stirring "whips" for processing berry mixtures (Turner et al., 1990: 140; Leighton 1985: 33).

Narrow leaf bur-reed ***Sparganium angustifolium***

The Narrow leaf bur-reed is sometimes used as a supplementary food by some Native Alaskan groups; the stem is peeled and the soft inner shoot eaten, while the roots can also be eaten (Keim et al. 2006). A closely-related bur-reed, the Broad fruit bur-reed (*Sparganium eurycarpum*) does appear frequently in literatures from elsewhere in North America. The Broad fruit bur-reed (*Sparganium eurycarpum*) has edible roots or tubers that are consumed by some Native American tribes, while its greens are also used as lining for cooking pits (e.g., Turner, et al. 1980: 57).

Pendantgrass ***Arctophila fulva***

Pendantgrass is not identified by name in the literature consulted for this study. However, grasses are seldom identified beyond the family level (i.e., *Poaceae*) and a number of accounts allude to the cultural significance of grasses of this family, of which pendantgrass is a part. Grass serves as a multipurpose material, being used to create mats, insulation, thatch, cooking pit liners, trail markers, and occasional basketry materials. Grasses of this family are documented as being a part of several medicines. Burned slowly, they are sometimes used for mosquito repellant (Osgood 1966: Kari 1991: 102-04).

Bog yellowcress ***Rorippa palustris***

Watercresses of the genus *Rorippa* are widespread in North America, and widely used by Native peoples. Especially common is *Rorippa nasturtium*-aquaticum, which is used as both a green

leafy vegetable and as a medicine in Native American and Native Alaskan communities. Bog yellowcress (*Rorippa palustris*) has been documented as a condiment in Native Alaskan contexts, sometimes added to soups (Wilson: 1978: 185). Elsewhere in North America, the Bog yellowcress is used as a medicinal plant (Vestal 1952: 29).

Seep monkeyflower *Mimulus guttatus*

The Seep monkeyflower (*Mimulus guttatus*) and other monkeyflowers of the genus *Mimulus* have been used as both green leafy vegetables and as medicines in a number of North American contexts, but seldom receives mention in the literatures addressing Native Alaskan communities (e.g. Chestnut 1902: 387).

Dwarf fireweed *Chamerion* (*Epilobium*) *latifolium*

The leaves, stems, shoots, and occasionally the flowers of dwarf fireweed (*Chamerion latifolium*) have been eaten by a number of Native Alaskan communities (Porsild 1953: 25; Heller 1953: 33; Wilson: 1978: 192; Jones 1983: 26; Keim et al. 2006). Fireweed can be eaten either raw or cooked, and is often eaten with animal oil, blubber, or other animal products. This plant is reported to have a high vitamin content, and its consumption is sometimes said to be motivated by health considerations. It is also sometimes used in teas. This plants taller relative, *Chamerion angustifolium*, is widely used in the production of cordage, medicines, mosquito repellants, and other items - these uses have been most frequently noted in literatures addressing the Northwest Coast of North America, but also include some western and south-central Alaskan examples (e.g., Kari 1985: 16).

Lichens (*Cladina, Cladonia, Cetraria,* and *Nephroma* spp.)

Lichens have diverse uses within traditional Native Alaskan diet, medicine, and material culture. Lichens, for example, have been used for temporary bedding, padding, insulation, cleaning agents, and in a number of other utilitarian applications that appear to be underreported in published sources. Lichens of the genus *Cetraria* (including *C.* crispa and *C. cucullata*) are used as condiments in some Native Alaskan contexts, while *Nephroma arcticum* has been identified both as a food and a medicine (Wilson 1978: 187-88). Areas rich in lichen, such as *Cladonia* spp., are also noted to be good caribou grazing sites and are often preferred hunting sites

(Rousseau 1947: 152). Similarly, mosses, such as *Sphagnum* spp., can be used as insulation, a cleaning agent, or bandages, while also having medicinal properties.

Other Reasons for Using the Alagnak

In addition to the meat, fish, berries, and other materials gathered in the Alagnak River corridor, interviewees made reference to other objectives for visiting Katmai that warrant mention here. A number of interviewees noted that the visits to Alagnak River provided opportunities for non-utilitarian social gatherings and personal reconnection with places of personal importance. Some spoke of gathering with friends and family to play games and tell stories on the Alagnak:

> "In the evening we used to play "gooslee", it's almost like rummy, lots of fun to watch them. They would get going and tell their stories, I listen. Sometimes I get tired and fall asleep. I like Mike Andrew, he got good stories [that he told there]" (quoted in Stickman 2008).

A number of individuals also discussed the importance of the Alagnak as a place that was important for just "getting away" from the routine of everyday life and even participating in resource gathering that was recreational in nature:

> "These cabins and others like it are used, or have been in the past for summer fishing—both for day subsistence and sport fishing, and for weeks long fish camp to put up smoked red salmon, they are used for fall hunting of moose, fall fishing for "red-fish" or spawned out salmon and a few people continue to trap and use the cabins for trapline shelters. But they are also used as places for getting away from the busy village life—the life of TV, telephone, electricity etc. For older people they are where they really feel good, it is a place where they can think about people who no longer are living, about the way people used to live when there didn't seem to be so many problems. They can relax and feel at peace" (Morseth 2000).

> "Sport fishing (rod and reel fishing) is usually a day trip. If you go for a longer period, you take your grub box. They will use their cabin on the Branch River as a base for sport fishing, but mostly it is a place to get away from the village, away from electricity, telephones, and television" (Katmai Research Project 1997: 5).

> "I asked him why people traveled to fish camp in the old days and why it stopped and at first he said it was just a tradition that was being lost. He also said they

> went to fish camp [on the Alagnak] for a change and to get out of the village" (Katmai Research Project 1997: 17).

The Alagnak River was also a place where people imparted essential subsistence skills and knowledge to their children – skills and knowledge that are, themselves, regarded as having their own intrinsic value. The River corridor arguably performed this function long ago, when people still inhabited the River year-round: "Young men would learn from their Uncles how to hunt, trap and fish and they would learn in areas that their family knew and had used" (Morseth 1998). The importance of Alagnak River as a place for teaching these skills arguably changed and perhaps became more pronounced after relocation off of the Alagnak. Far from the daily routine of village life, families that had gathered to participate in seasonal resource harvests could imparting this knowledge with atypical focus. Speaking of their time living along the Alagnak River, Mike Andrew recalled:

> "That's when my folks, my mother, my mom taught me how to use this snare to catch a rabbit. And they first show me how to put snare out. So I learned. After year I'd go out there and do it myself. I was doing good. I caught a rabbit to eat, was really good" (M. Andrew in Andrew and Andrew 1995).

The use of the Alagnak as a place for imparting subsistence skills to young people has persisted into recent times:

> "I lived in Branch River for a while. And I teach all my, my two boys how to dragline trapping you know. And I teach 'em the way my grandpa teach me, and I teach them. So they'll know" (A. Tallekpalek 1998).

Similarly, as younger generations have sought to revive cultural traditions that have declined, the Alagnak River arguably has been revisited by those wishing to "reconnect" with practices, places, and resources that are of renewed cultural significance, and of dynamic symbolic importance today. Behnke seemed to anticipate some of these changes when writing in the late 1970s that,

> "Today there is generally much less reliance on subsistence resources than there was twenty or thirty years ago, but this varies seasonally, annually, and between villages and families. Among many Native families, there is still considerable traditional knowledge about the environment and resources and for them, the whole subsistence realm is more complex and multidimensional than it is for many non-Native families. Although much of this tradition and knowledge is being missed by the younger generation who lack the language and experience in subsistence matters, there seems to be resurgence of interest in their heritage among many young people. Subsistence activities and land are central to this heritage, along with oral history and language. It is difficult to say what the outcomes of these various trends are likely to be, but many Native residents feel that it is desirable to maintain diversity and choice for future generations" (Behnke 1978: 164).

In many other Native Alaskan and Native American contexts, anthropologists have documented ways in which the landscape plays essential roles in the intergenerational transmission of cultural knowledge, and serves as a mnemonic of cultural information (e.g., Basso 1996). The cultural roles of the landscape change as the human community changes and yet, by their mere endurance, elements of the landscape are often the focal point of cultural knowledge and values that pass from generation to generation, and give contemporary peoples tangible connections to their ancestors of long ago. In the interview transcripts and recordings, we see subtle hints that Native Alaskan users of the Alagnak Wild River also regard certain landmarks along the Alagnak River corridor in this way – as a place, for example, where certain landmarks recall stories of personal and group significance from the past, which are instructive in navigating practical and philosophical conundrums today. The nature of these personal and group attachments to the landscape remain unclear in the available ethnographic documentation, but may become clearer in the course of future ethnographic research.

TRANSPORTATION

Interviewees discussed a wide range of transportation options that have been used historically on the Alagnak. Most fundamentally, foot travel was common historically along the Alagnak River corridor – not only for those who lived full- or part-time along the Alagnak, but also for those who visited the river from more distant villages. As noted earlier, George Wilson, Sr. discussed members of his family walking home from the Alagnak to Levelock after they were done checking their traplines. People also used to walk home toward Levelock packing meat from the Alagnak: "wherever you got the moose – make [a] line from where [the moose was] killed toward home" (G. Wilson in Wilson and Wilson 2000).

Some modern community members still recall running dog teams to and from the Alagnak prior to the widespread adoption of motorized vehicles (quoted in Stickman 2008). This was a popular method for accessing the Alagnak for families that had relocated to other communities outside of the Alagnak Basin. Mike Andrew spoke of the challenges of traveling this distance by dog sled:

> "if you travel like one day from early in the morning, you travel with a load, if it's nice weather you want to make it home. You run eleven hours on the sled. Steady travelling 'til you get home. But if your weather's getting to be bad, you try to make it home on that day, you go early in the morning 'til night, then we'd be home" (M. Andrew in Andrew and Andrew 1995).

Certain locations along the Alagnak were known to be good crossing points for dogsleds, and some locations also appear to have used repeatedly as "dog portages" where dogs could cross, apparently when the water was not wholly frozen (Olympic 2000).

Boats have been especially popular as a means of accessing the Alagnak. "It is easy to travel up the river, much easier than over land," some report (Katmai Research Project 1997: 12). The tradition of boating is rooted in the distant past, when families used hide boats to traverse the river, a period that is still recalled in the oral traditions of the study communities (Olympic 2000). By no later than the 19th century, some families used poles and sails to tack up the river with small unmotorized boats (Olympic 2000).[39] Families often boated to the Alagnak in the

summer to work at the fish camps or in fall to initiate trapping. As will be discussed in following sections of this report, a number of families also have commonly drifted much of the river by boat, hunting or participating in other subsistence tasks as they have traveled. In many cases, boats have been used only to deliver gear to and from the camps or cabins at the beginning and end of the season; people sometimes return the boats to their homes and then travel by foot or other ground transportation to and from the Alagnak from Levelock (G. Wilson in Wilson and Wilson 2000).[40]

The Alagnak was said to be an especially inviting place to travel by boat, as the river was ice-free for long periods of time: "year-around we could boat if we wanted, the river stays open just about year round" (G. Wilson in Wilson and Wilson 1995). Interviewees generally agreed that times of moderately high water were especially good for boat travel to hunting and fishing sites, as this inundated side channels, marshes, and other areas that were not navigable for the rest of the year:

> "Spring is the best time on the Branch River, when it is flooded, because you can go places easier in the skiff. Late fall is really shallow, but it is good trout fishing and duck hunting on the Branch River that time of year, and all of the sport hunting and fishing is over" (Katmai Research Project 1997: 5).

At the same time, access in and out of the mouth of the Alagnak required careful timing, as the estuarine lower end of the river is said to be unnavigable during low water: "you have to think about weather and tides and the time of day that you will leave. You cannot get up the Branch River [from the Kvichak confluence] when the tide is out" (Katmai Research Project 1997: 5).

Mary Olympic recalled accounts of people fording the Alagnak River falls in their aniak skin boats and other traditional craft:

> "They go down but they have to put the aniak [skin boat] over the falls…They have to pack 'em over, other side…My dad and them do that a couple of times, maybe three times when they go down. Go working down at Naknek. Go down with the aniak, or canoe, qayaq" (Olympic 2000).

This practice of fording the falls continued well into the era of motorized boats.[41] Behnke (1978: 150) notes of Igiugig that "Villagers occasionally ascend the Alagnak River and go up into Nonvianuk and even Kukaklek Lake, pulling boats up through the falls." Today, people can climb up the rapids in a motorized skiff without fording the river, "but you need lots of water to do that" (Olympic 2000).

Some travel by boat into the upper river, above the falls, but this is uncommon due to the hazards and the amount of gas required to make the journey. Interviewees generally report that boats can travel up the Alagnak River above the confluence with Nonvianuk River, when water conditions are just right: "Usually motor boats don't go up there but they do occasionally, most of the use however is from rafters coming down from the lake" (Morseth 2000). "Some people simply don't travel upstream from the general area of their cabins, noting that it takes a lot of gas…It is also rocky and you have to know the channel" (Katmai Research Project 1997: 17). Travel by boat as far as the lakes is a slow and expensive journey: "It takes a lot of gas to run a skiff up to Nonvianuk" (Katmai Research Project 1997: 4).

Travel by foot, dog sled, and boat have gradually been eclipsed by the growing availability of motorized land transportation in the post-World War II era (Deur 2008). Generally, land transportation options provide more rapid access to cabins and other use areas along the Alagnak than has been the case with boats:

> "He said to get up into the lakes by skiff you must travel down the Kvichak and up the Branch which takes, 3 to 4 days, on a snogo or ATV with good conditions you can be there in 2 to 4 hours depending on where you are going" (Katmai Research Project 1997: 14).

In recent decades, all-terrain vehicles and snowmachines have especially been used for hunting along the Alagnak and its headwater lakes, - a shift in transportation methods that has been widespread throughout the Alaska Peninsula and, indeed, much of rural Alaska. The use of these motorized land vehicles is said to guarantee a hunter's success and shorten the length of time required for the hunt:

> "Before we travel four or five days sometime y'know before you even get a caribou or a moose, y'know. I used to go over there, Branch River and camp. Way, way up there next to the mountains up there, by that mountain…a whole bunch of us would take off. [Now we don't have to do that]" (Setuk in Charley and Setuk 1998).

By the 1970s, snowmachines were a well established component of subsistence traditions tied to the Alagnak: "Snowmobiles are used for hunting caribou, moose, and small game, as well as for trapping and getting to good fishing spots" (Behnke 1978: 140). However, the arrival of all-terrain vehicles during this period served to revolutionize transportation in the Alagnak region. Families now had motorized transportation options year-round:

> "when, earlier in the fall…no snow, I use the four-wheeler or three-wheeler. And then after I get snow, it's harder to travel by four-wheeler. And it's a lot easier with the snowmachine. So I use the snowmachine. And that's how I trap" (G. Wilson in Wilson and Wilson 1995).

Moreover, as some interviewees noted, changes in the climate appear to have resulted in reduced snowpack and an increasing frost-free period. Some families reported having to largely forego the use of snowmachines in recent years, opting for ATVs or airplanes for up to 11 months of the year in the Alagnak areas: "in periods of no freeze-up it's real difficult…[a four-wheeled ATV] gives you the most options to get to most places the most amount of time in a given year" (Salmon 2002: 9) Snow machines and dog sleds, hey suggest, are no longer viable transportation options in the region due to absence of long-term snowpack over multiple consecutive years.[42] Some Igiugig residents have discussed the option of building a road between their community and Alagnak Wild River., in part as a response to the difficulties of transportation and the unpredictability of the climate.

Airplane access to the Alagnak was briefly mentioned by interviewees, but this was relatively uncommon compared to other modes of transportation. Clearly, by the 1970s, the use of airplanes by the study communities was ubiquitous:

> "Presently, there are about 30 airplanes owned by residents of the six communities nearest the Katmai proposal [Igiugig, Naknek/South Naknek, Levelock, Kokhanok, King Salmon, and Egegik], including those owned by air-taxis. Many of these are used by their owners and their friends for hunting, fishing, and trapping in the general region, including portions of the proposal. Some Naknek and South Naknek women even have their husbands fly them to particularly good berry-picking areas" (Behnke 1978: 142).

However, the relative importance of airplanes appears to have declined in the Alagnak region, as is true in many portions of rural Alaska, due to the cost of maintaining airplanes and the relative ease and efficiency of all-terrain vehicles.[43]

For a much more complete overview of the evolution of transportation options in this region and its impact on the use of the northeastern portion of Katmai National Park and Preserve, including Alagnak Wild River, readers should consult *ATV Use by Residents of Igiugig and Kokhanok, Alaska in Katmai National Park and Preserve: A Thematic Overview* (Deur 2008).

Trails and Travel

The Alagnak River, itself, was a transportation corridor of great importance in the area, and continues to serve this function in some ways today. Not only does the river serve as a corridor for those living or participating in subsistence tasks along the river, but a number of people travel through the corridor, en route to hunting and trapping areas at Nonvianuk and Kukaklek Lakes, for example. Carvel Zimin, Sr. recalls that the Alagnak was at one time a major travel corridor for area residents traveling into the mountains and lakes near the head of the river: "Igiugig would come over and Levelock went up the Branch River and into Nonvianuk" (Zimin 1998). George Wilson also noted that a trail used to run along much of the river corridor, which was used by people traveling up and down the river checking their traplines (in Wilson and Wilson 2000). This trail appears to have been the foundation for a later snowmobile trail, which was reported prior to the designation of Alagnak Wild River, ascending the river corridor and apparently connecting the river with Igiugig, Levelock, and Kokhanok. "Snowmobile trails connect Kokhanok, Igiugig, and Levelock and go from Levelock to Naknek. They also go up Branch (Alagnak) River" (Behnke 1978: 140). While there is some suggestion that a

"snowmachine trail" follows the riparian margin, the river, when frozen over, also has served as a transportation corridor for people traveling by ATV or snowmachine:

> "The river is used as a snowmobile route once it freezes well as are its sloughs and tributaries. It gives access to a large area for hunting and trapping in the winter" (Behnke 1978: 150).

Indeed, the Alagnak is some Levelock residents' access point to the entire Katmai National Park and Preserve:

> "they utilize, they go in, they enter from Branch River…I know they used to travel a long time ago with dog teams…they do drive up here in the wintertime, but the Branch" (Salmon 2002).

The river is said to "freeze rough," apparently due to the currents and water level changes occurring at freeze-up. For this reason, it is said that the river is best traveled only after there has been both freezing and snow, so that the rough areas are structurally sound and more level (G. Wilson in Wilson and Wilson 2000). Travel along the river is said to be especially dangerous to travel during the early part of the freeze-up:

> "the Branch River when it freezes over, it raises about…8 feet or more of solid ice, slush. And then the water drains out from underneath and it leaves a lot of places really dangerous, walking on the river. And so we go inland [because] it's hollow some place, you know. The ice will fall out. It freezes over, then the water drains out from underneath there…And then it just freeze over really thin with ice and then the water start draining out from underneath. In a lot of places it's just thin ice with nothing underneath but dried up snow. And it'll fall, sometime 8, 10 feet down. It's hard to get out…if you don't watch yourself" (G. Wilson in Wilson and Wilson 1995).

Places with rapidly flowing water, such as the rapids and certain other portions of the river are also prone to having poorly-consolidated ice that will easily fracture under sleds, feet, or motorized vehicles:

> "you don't want to drive on that river when its frozen. It's dangerous. Down at the lower end it's fine, but you get up to the upper end, where the water's really

> circulating, the rapids, and it's not good traveling in the wintertime" (Salmon 2002).

The narrows below Kukaklek are said to be dangerous on ATVs or snowmachines for similar reasons.

A winter trail was also said to cross overland between the Alagnak and Kvichak Rivers; this trail was used by dogsled and reindeer herders historically, and has continued to be used with motorized vehicles more recently (M. Andrew in Andrew and Andrew 2000; Olympic 2000). It is unclear whether this is the same trail as an "old trail" mentioned by interviewees, which was used to access the Alagnak by dogsled and sometimes used for reindeer herding, arriving on the river near "Coffee Point" across from the old village; few details were provided regarding this trail's specific path (Andrew and Andrew 2000). One of the trails mentioned appears to have terminated near the "Horseshoe Bend" portion of the Alagnak. Another trail apparently was used primarily by dog sleds to access the forks:

> "He said with dogs he would also travel up to the fork in the Branch River. He said traveling up that way you could get up a little higher near timberline and find moose" (Katmai Research Project 1997: 16).

As noted in Deur (2008: 60-64) there are certain seasonal obstacles to transportation for modern users of the Alagnak and portion of Katmai National Preserve. For residents of Igiugig, Peck's Creek represents an imposing seasonal boundary. The creek is broad and marshy, effectively blocking any motorized ground transportation from the area when the ground is not frozen. Summertime use of the Alagnak, then, relies principally upon water transportation. For the residents of Kokhanok, the Gibraltar River poses a less formidable obstacle, being impassable by ATV or other ground transportation during high water events.

THE EMERGENCE OF TOURISM ON THE ALAGNAK

While it is clear that non-resident recreational use of the Alagnak has increased significantly since 1980, there is a much longer history of recreational use on the river. The historical context of recreational use is briefly outlined here, so as to set the stage for the observations of visitor impacts that follow.

The earliest written records of guided recreational hunting and fishing trips on the Alagnak date to the 1930s, and by the early 1940s, the Alagnak was starting to receive modest media attention as a trophy fishing destination:

> "Big game guide Bud Branham stated that he had guided hunters and sport fishermen on the Alagnak as early as 1937. New York sportsman and writer, Dan Holland, writing in the April 1941 issue of Field & Stream magazine, probably made the first mention of the Alagnak River as a great trophy rainbow trout stream" (NPS 2006: 29).

During World War II, however, the river first became the focus of regular recreational fishing and hunting trips, as soldiers stationed at the King Salmon Air Force base. Men with short-term leave from the base appear to have explored the rivers of the northern Alaskan Peninsula extensively, and determined that the Alagnak was an appealing place for trout fishing in particular.

In the years immediately after World War II, the use of the Alagnak appears to have waned briefly, but within a decade, a number of non-resident recreational hunters and fishermen were staring to return to the Alagnak using small airplanes and other motorized vehicles. By the 1960s, the river was once again receiving attention statewide, and even nationally, as a trophy fishing river: "The Alagnak River, and its tributaries the Nonvianuk and Kukaklek rivers, had been popular with fishermen since the 1960s" (Norris 1996: 205). By the 1960s, lodge operations were beginning to appear in the region. Edwin Seiler opened the Enchanted Lake Lodge, just south of Nonvianuk Lake, in 1965. Dean and Diane Paddock established the Last

Frontier Lodge on the Naknek River in 1971 with much publicity, and established a fishing cabin along the Alagnak River shortly after starting business.

Perhaps not ironically, it was during this same period that the Alagnak's potential as a Wild and Scenic River was first being explored. The potential for Wild and Scenic designation appears to have been rooted in the observations and efforts of a small number of agency staff who were at that time witnessing the rapid rise in recreational use along the river. Royce Perkins, a biologist with the Alaska Department of Fish and Game, floated the river in 1971 and proposed that the river be set aside for recreational uses such as rafting, canoeing, and fishing in his trip report to that agency (quoted in Stirling 1982: 5-6). At this time, Perkins reported that there was already heavy tourist traffic on portions of the river, such as the confluences.[44] Airplane visitation was already commonplace on portions of the river, he noted, and recreational fishermen were having notable success in catching their limit along the river.

Two years later, formal review of the Alagnak's potential for Wild and Scenic status began. "In July, 1973, the U.S. Bureau of Outdoor Recreation began studies of the Alagnak River for its possible designation as a wild and scenic river" (Stirling 1982: 6). In that year, Native Alaskan families hosted representatives of the Bureau who were surveying the river as part of this effort. David Dapkus, a planner for the Bureau, reported that the crew reported that his crew "Camped (July 27) at a large Native fish camp about 10 miles above the mouth of the river. A Native family was there and kindly offered a cabin for us to use" (quoted in Stirling 1982: 7). In their report, the Bureau of Recreation field crew generally expressed the view that the Alagnak should be managed "primarily for fisheries resources, and subsistence and recreational uses" and reported as much in their report to the Bureau (Stirling 1982: 7). By the end of that year, the Bureau of Outdoor Recreation had concluded that Alagnak River was eligible to become a Wild River under the Wild and Scenic Rivers Act:

> "The Alagnak River and its major tributary the Nonvianuk River meet the criteria for inclusion in the National Wild and Scenic Rivers System in that the river and its immediate environment possess outstandingly remarkable scenic, recreational and fish and wildlife values. The river is of sufficient length to provide a meaningful high quality recreation experience" (U.S. Bureau of Outdoor Recreation 1973: 291-292).

Meanwhile, non-resident hunting and fishing pressure was increasingly steadily along the Alagnak. The use of airplanes especially revolutionized the recreational use of the Alagnak. Speaking of the 1970s, Behnke noted that "Almost all access by recreational moose and caribou hunters is by aircraft in this area. Aircraft can be landed on lakes river bars, "blow-outs" in the tundra, or on ridge tops" (Behnke 1978: 131). The increasing use of airplanes was placing the Alagnak within reasonable hunting and fishing range of many communities around Bristol Bay, and as far east as Anchorage:

> "People from other communities in the Bristol Bay area, as well as from Anchorage and other Alaskan communities, come to the central Alaska Peninsula to fish and hunt, some of these are people who primarily desire caribou or moose meat, including those from distant Bristol Bay villages who charter aircraft to the area in order to take caribou. Others are primarily interested in recreation or in obtaining trophies…Before the early 1970's, most non-local hunting was done by guided non-residents, but since that time increasing human populations in Alaska and competition for dwindling wildlife resources near urban centers in the state have drawn hunters to the Alaska Peninsula. This area is the most accessible of the better moose, caribou, and brown bear hunting areas in the state" (Behnke 1978: 130-31).

The growing ease of airplane travel also expanded the effects of those few lodges that were established in the region at this time. While these lodges had generally focused non-resident hunting and fishing close to their facilities, in the years that followed, they began to have broader impacts on the region. By the mid-1970s, many of these operators were taking their clients to increasingly remote hunting and fishing sites by airplane and other means. Speaking of the Enchanted Lake Lodge, Norris noted that

> "As early as 1974, lodge guests took part in flights to nearby fishing holes. Due to Seiler's expertise guests were, in effect, able to follow the concentrations of sport fish during the summer. Lodge guests typically flew to such locations as Brooks Camp, American Creek, Alagnak River, Moraine and Funnel creeks, Idavain Creek, and Kulik River" (Norris 1992).

Clients were also being taken to the headwaters of the Alagnak so that they might participate in floating hunting and fishing trips that echoed the Native Alaskan tradition of floating subsistence trips along the river:

> "The Branch River is becoming increasingly popular for float trips and hunters are dropped off in Nonvianuk Lake to float downriver with rafts, watching for moose and fishing. Most of these hunters are not local residents" (Behnke 1978: 143-44).[45]

Moreover, with greater access to vehicles, the military personnel at the King Salmon Air Force Base also continued to have impacts on the fish and wildlife of the Alagnak. Writing in the late 1970s, Behnke noted a complaint about military men that would later be applied to non-resident trophy hunters:

> "Some Naknek and King Salmon residents feel that much game is wasted by military personnel who shoot game because they feel it is an "Alaskan" thing to do, but then do not know how to care for the meat. They cite examples of soldiers dragging moose in to the base behind trucks and horror stories of quantities of freezer-damaged meat being thrown out in the dump in the spring" (Behnke 1978: 133).

Media attention to the Alagnak also continued and expanded during this era, not only in the form of print media, but now with televised images of the Alagnak being broadcast nationwide:

> "From August 24 to 30, 1975 two Bureau of Outdoor Recreation representatives were once again on the Upper Alagnak. In this instance, they were to give technical assistance to ABC sports. This network was shooting a John Denver special about Alaska. Denver was filmed floating on the Upper Alagnak. Six rafts were used on this trip to accommodate Denver and the ABC crews" (Stirling 1982: 15).

The prospect of constructing lodges on the Alagnak was first brought to the attention of Native Alaskan users in the late 1970s. John Tallekpalek recalled,

> "Lodges started...coming around '78, somewhere around that… they started make lodges. And they come in that way. Of course, we were putting up smoked

> salmon and so forth. [They asked] "Could we have lodges over here?" [We said] Go ahead, that, uh, that's your business, not mine…I went to Anchorage to BIA, and I told the BIA not to [allow them to] hunt, only sportfishing. So…we went with the, with the lodges. Only in summertime…No hunting" (J. Tallekpalek in Tallekpalek and Tallekpalek 1998).

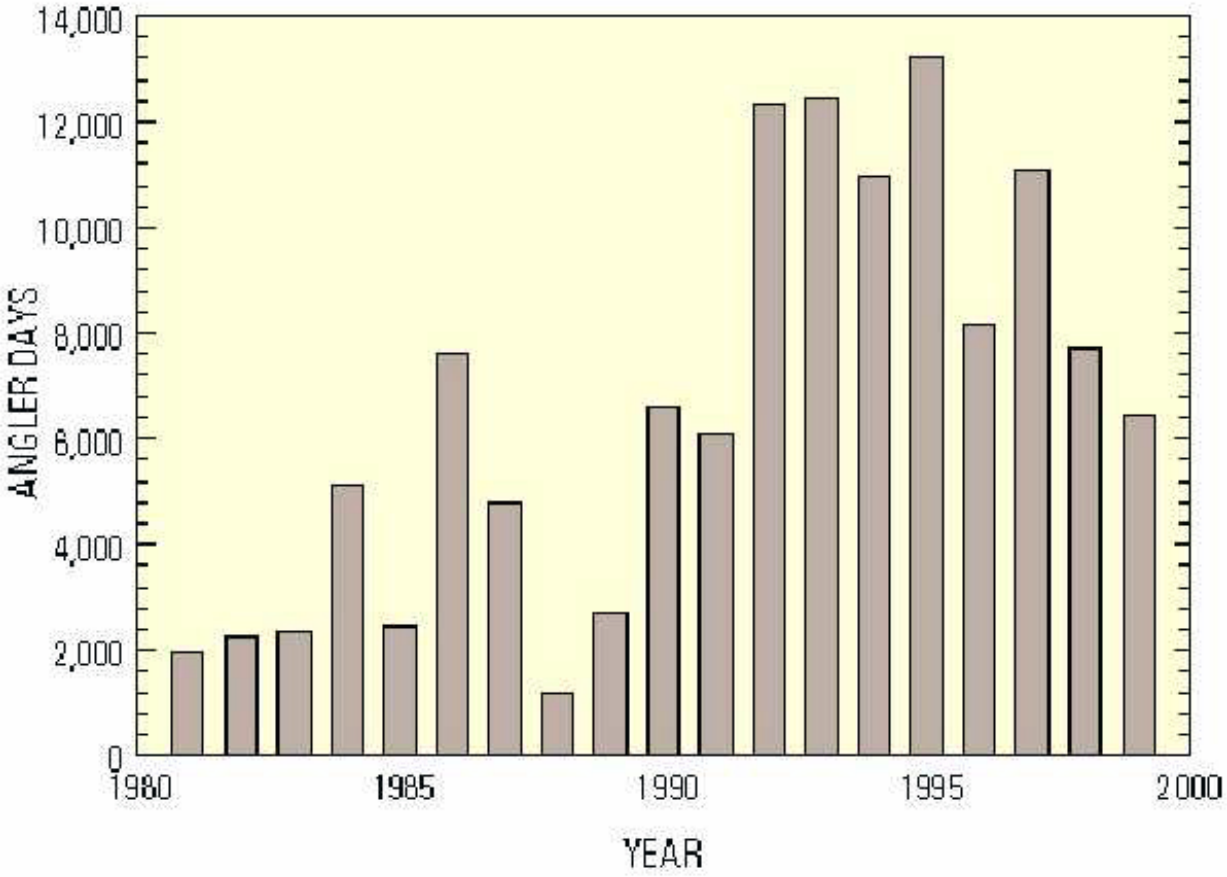
By the time that the Alagnak had received Wild River status in 1980, non-resident visitation numbers were already quite high. In September of 1980, for example, a single backcountry patrol to the upper reaches of the Alagnak, which was by then in NPS management, "noted 72 planes near Nonvianuk Lake and the Nonvianuk branch of the Alagnak River (Stirling 1982:14). By 1982, seven sport fishing lodges were operating along the Alagnak, three of them located inside the Wild River corridor; approximately 850 people visited the outlet of Nonvianuk Lake, while 34 parties floated the River (NPS 1983: 17). These levels of visitation only continued to escalate. Speaking of the mid-1980s, Frank Norris notes,

> "guiding companies began to offer trips to several new areas; some of these areas grew to become some of the park's most popular fishing areas…Overcrowding of the most popular areas, combined with an increasing knowledge of the park's more distant hinterlands, caused the fishing pressure to become more decentralized" (Norris 1992).

The 1990s brought similar increases in recreational fishing, with growth in lodge-based fishing operations as well as a dramatic expansion in the number of charters operating in the Alaska Peninsula region. As Norris (1992) notes, fishing activities within Katmai National Park and Preserve have been distributed unevenly throughout the park, with a very small number areas serving as the focal points of most fishing trips. Alagnak River has certainly been among these few areas, and an increasingly important centerpiece of Katmai fishing visitation, since the advent of the Wild River status. The rise in fishing on the Alagnak during this period should be understood within the context of the expansion of fishing generally at Katmai National Park and Preserve, which intensified its efforts to control the adverse impacts of visitation at this time. As Frank Norris reported in 1992:

> "Between 1985 and 1990 the number of visitors flocking to Katmai's fishing areas continued to escalate. In 1990, activity summaries estimated that more than

11,600 fishermen utilized guiding companies to visit the park. Brooks Camp, a world-famous fishing mecca, attracted 7400 visitors, the most popular destination within the park…Other locations in the park, which attracted fishermen almost exclusively, were experiencing crowding problems of their own. Kulik River, the Naknek lake and river system, American Creek, and the Alagnak River system all attracted more than 500 guiding-company clients in 1989. Five other areas received at least 200 of these visitors; they included Kamishak River, Moraine and Funnel creeks, other Pacific coastal areas, the preserve lakes, and Big River. With the notable exception of the Kulik River, the five most popular areas were the same as those of 1985. Most of the areas which received between 200 and 500 guided visitors in 1989 had been relatively unknown four years before" (Norris 1992).



Total Angler Days, 1980-2000. *From Curran 2003*.

Today, a diverse range of vehicles are used by recreational visitor to the Alagnak. Curran (2003: 4) notes that

> "The Alagnak River is accessible by floatplane, by wheelplane at a private airstrip, and by motorized or nonmotorized boat. Noninflatable motorized boats enter the river from Bristol Bay via the Kvichak River and can travel the entire length of the Alagnak and Nonvianuk Rivers. Shallow river depths upstream from about RK 57 generally restrict motorized travel to jet boats, and reaches upstream of the Alagnak–Nonvianuk confluence are not readily passable to motorized boats at particularly high or low water levels. Inflatable boats, with or without motors, typically enter the Alagnak or Nonvianuk Rivers at Kukaklek or Nonvianuk Lake, respectively, and are usually flown out from middle or lower river reaches."[46]

Visitors also commonly access the River by floatplane, landing at Nonvianuk or Kukaklek Lakes, or on the River itself.

While resident communities utilize the Alagnak River corridor for trapping, hunting, and fishing, visitors from elsewhere come to the Alagnak principally to fish for trout. The remoteness of the Alagnak insures that much of this fishing involves overnight stays, based at lodges or camps. These lodges or camps are typically maintained by guides. Surveys by Naughton and Gryska (2000), conducted on the lower Alagnak, suggest that roughly 80 percent of anglers are guided. Curran (2003: 5) notes that the distribution of campsites and fishing sites is uneven, with concentrations of activity "at commercial lodges operated on a private inholding at RK 81, and RK 34, and RK 38 outside the Wild River corridor at RK 11 and RK 16." The largest of these lodges operating along the Alagnak, Katmai Lodge, has capacity for 24 guests, as of 2003, and staff reside at the lodge through the summer season. The addition of new capacity has been discussed by lodge owners along the Alagnak in recent times (quoted in Stickman 2008).

THE REPORTED EFFECTS OF NON-RESIDENT VISITATION

As indicated earlier in this document, this report makes an effort to provide a faithful accounting of all of the major themes and perspectives mentioned by interviewees in the course of past ethnographic efforts, as well as in more recent meetings addressing Alagnak Wild River. Accordingly, comments from past interviews and meetings regarding possible visitor effects on Alagnak River have been reviewed and analyzed, in order to reveal recurring themes; these themes are outlined in the pages that follow. This effort to provide a faithful account has been consistent, no matter whether the comments from Native Alaskan interviewees are positive, negative, or neutral regarding factors that may be influenced by NPS management, as it is believed that a systematic effort to record these views and opinions will aid the National Park Service in its mandate to manage the River's lands and resources. By including this kind of data, including information on subjective values and opinions, it is in no way an endorsement of these views and opinions, or an implicit judgment on their accuracy. Little effort has been made here to filter past interview content based on its reflection of the "ground truth" on the Alagnak. The "ground truth" of these claims has been the focus of ongoing research by the National Park Service, and it is the goal of the section that follows to aid these efforts. Still, by seeking to fully understand and anticipate concerns raised by Native Alaskan river users, the NPS will gain perspectives on the management and interpretation of lands and resources along the Alagnak River corridor that may be of value for both short- and long-term planning horizons.

It is important to bear the goals of this study in mind when reviewing what follows. This is because, taken together, materials from past ethnographic interviews and meetings regarding the Alagnak reveal a common perception among traditional users that "the place is being overrun," "there is way too many people there and the resource is being damaged," or being "abused, misused, and overused" (Katmai Research Project 1997). To be sure, not all Native Alaskan comments on the rise in tourism along the Alagnak are negative. Some acknowledge that NPS management of the lands and resources along the Wild River section of the Alagnak contributes in various ways to the preservation of things that are of importance to the Native Alaskan

community. George Setuk, for example, noted that the amount of attention that the Alagnak gets from tourists is a double-edged sword:

> "[It] really limits what we always enjoyed. But it, y'know, on the other hand, maybe it's good that it is a park because then there's more protection for our part. But then we don't get to utilize it like we used to" (Setuk in Charley and Setuk 1998).

Some also note that relationships with specific recreational users, as well as lodge employees, are often congenial and even sometimes cooperative. Speaking of the lodge employees, John Tallekpalek reported that "they don't bother us… we put up fish. And if we need something, they give it to us" (J. Tallekpalek in Tallekpalek and Tallekpalek 1998). Another interviewee reported that "the guides give them food and help them out at their fish camp on the Branch" (Katmai Research Project 1997: 9). And, as will be detailed in the pages that follow, the rise in tourism has brought unforeseen benefits, such as access to NPS cabins in the case of emergencies, as well as brining certain economic opportunities to Native Alaskan communities that did not exist previously.

Simultaneously, comments within existing ethnographic documentation are generally critical of the impacts of non-resident visitation. Ella Charley summarized the option of many Native Alaskan users of the Alagnak when she proclaimed, "let 'em find another river to fish in. And let the people go back and enjoy that river, like we used to" (Charley in Charley and Setuk 1998).

Interviewees are consistent in suggesting that the increase in non-resident visitation has had persistent impacts upon patterns of Native Alaskan use along the river. Katmai Research Project researchers provided a representative account from one interviewee:

> "He said, and this was confirmed by others, that the fishermen did affect activities and resources on the Branch River. The size of some of the outboard motors was considered way too big for the river. Once to King salmon arrive, that river gets very crowded with skiffs and fishermen" (Katmai Research Project 1997: 4).

A number of interviewees from other research projects have provided similar accounts, suggesting that Native Alaskan use of the river has changed in response to the growing number of visitors. For example, George Setuk recalled of the Alagnak River that

> "[now it's all] sports fishing. Sports fishing boys, not…like before...when we were younger we used to go like to Branch River. We used to enjoy going to Branch River. We used to go to the village. We used to go up river and go fishing. We used to go picnicking or whatever…now [there is a lot of non-resident] camping. And now you go over there and there's just people and tourists and lodges and everything all over. And it's not the same…Not the same. There's just a big influx of tourists" (Setuk in Charley and Setuk 1998).

Indeed, during the review of ethnographic notes, transcripts, and recordings from past studies, as well as in the recent meetings held as part of this project, only one individual suggested that non-resident visitors were not having tangible impacts on Native Alaskan uses of the Alagnak, and this individual apparently did not, himself, use the Alagnak for resource procurement:

> "[This interviewee] said that the Branch is getting crowded and it is very different from when he left. He said the amount of people is the difference and that he did not think it was changing peoples' use of the areas. [He] is not a harvester in any way so it does not affect him" (Katmai Research Project 1997: 17).

Over the course of interviews and meetings, recorded over a 13 year period between the years 1995 and 2008, Native Alaskan users of Alagnak Wild River mentioned a host of concerns. Several expressed concern about the size of boat motors being used and especially about the impact of these motors on the wake produced by boats. Some suggested that the wakes accelerate erosion along the shoreline and that, in turn, this had potential secondary impacts upon such variables as water quality. Some expressed concern regarding the impact of improper garbage disposal. Here too, some suggested that the disposal of garbage along the corridor attracted brown bears, with a number of potential secondary effects on safety and game distribution. Some suggested that increased bear and human traffic displaced game, including moose, from the river corridor. Some also noted that the increased presence of bears and people, coupled with the trampling of the shoreline, had adversely affected plant gathering practices tied

to the Alagnak corridor – especially berry picking. In some cases, especially the erosion and littering issues were described as being offensive in part because it manifested "disrespect" for an area that locals revere. As will be discussed in subsequent sections, public safety is a growing concern, centering on such issues as potential collisions associated with high-speed motorboats, hazards from a perceived increase in the number of bears, or the potential hazards of hunting in areas with pedestrian traffic. These themes will be addressed in more detail in the pages that follow.

It is important to note that, while the Alagnak River clearly has a history of recreational use that precedes the designation of Alagnak Wild River and the National Park Service has inherited many challenges that come with this history, Native Alaskan interviewees generally have described an increase in non-resident visitation since 1980 and attribute the change in no small part to the Wild River status. "Once they named it "Wild and Scenic River," that changed everything, I don't even go up there anymore" (quoted in Stickman 2008). Similar comments have emerged in earlier ethnographic investigations, making it clear that the Wild River status is perceived as a cause for the river's increased visibility and possible "promotion" as a tourist destination:

> "He said one of the biggest local changes since his youth has been on the Alagnak River and the Wild and Scenic River designation. He said the promotion of this really affects the lifestyle of locals. He didn't know when it came into being but he was quick to say that no one asked the locals if they wanted it to be that way" (Katmai Research Project 1997: 14).

There is also a perception apparent among some interviewees (e.g., Zimin 1998) that the NPS has had a history of promoting tourist development of the area, and that some of this promotion was originally done without thoroughly considering the impacts on subsistence resources and practices. These perceptions, no doubt, color some of the statements made to interviewers and to NPS staff when certain Native Alaskans have voiced their concern regarding the fate of Alagnak River.

A few caveats are in order before entering into a more detailed discussion of Native Alaskan views on non-resident impacts on the Alagnak. First, a number of interviewees spoke of their concerns regarding the environmental health and management of areas outside of the Alagnak Wild River corridor that nonetheless had a bearing on the success and endurance of resources along the Alagnak. The Alagnak estuary, for example, was sometimes mentioned as an area of concern in protecting the fisheries along the entire river, being subject to considerably more use and development than the rest of the river. Thus, some discussion of visitor impacts here takes a Basin-wide perspective, even though it is clear that only a portion of that Basin lies within Alagnak Wild River. Moreover, some interviewees clearly are concerned about the *trajectory* of environmental impacts even if the current levels of environmental impact are not of great concern to them; thus, even if certain contemporary conditions are acceptable (such as water quality), the perceived intensification in river use is believed to be pushing these conditions toward an unacceptable condition. This perspective became clear, for example, when meeting participants spoke of water pollution associated with motorboat use and shoreline waste: "[There are problems like] erosion from the boats from in-river fishing….there's erosion along the banks. In the future this could get worse, especially in an area that's not used to that kind of impact" (quoted in Stickman 2008). Pollution is minor but detectable, one meeting participant noted, but in light of anticipated growth in river usage, "I could see a lot more water pollution in the future" (quoted in Stickman 2008). An effort has been made in the pages that follow, then, to differentiate between impacts that are observed and those that are anticipated based on observed trajectories in river usage.

It is also important to note that visitor impacts along the river have been in flux, and that there have no doubt been changes in the extent and distribution of those impacts over the 13-year period that this report represents. Issues identified in the 1995 and 1998 interviews, for example, may have been resolved or may have been intensified in the intervening years. These changes in perceived impacts over time will be easily clarified once research is underway for the "Evaluate Effects of Tourism" study. Moreover, such changes as new transportation technologies can reshape the extent of visitor impacts. For example, some suggested that the increased use of shallow-draft jet boats is said to allow hunters and fishermen into a wider range of riverine habitats, and to expand the geographical imprint of non-resident visitation within the riparian

corridor. Thus, some Native Alaskan participants in this study suggested that non-resident hunting has dislocated Native hunters through crowding and the displacement of game, with an expanding range of displacement in part reflecting the evolution of the modes of access – such as ATVs and jet boats – that have been used by non-resident hunters to access the Alagnak in the last two decades.

While past interviewees and meeting participants have discussed a number of perceived impacts within the Alagnak River corridor, it is interesting to note their suggestion that the effects of increased non-resident visitation on the Alagnak are seldom directly felt in the villages. For example, interviewees from the Katmai Research Project indicated that

> "Sports fishermen apparently do not adversely affect the immediate village according to one resident. He said, and this was confirmed by others, that the fishermen did affect activities and resources on the Branch River" (Katmai Research Project 1997: 9).

> "the sports fishing guys don't effect Levelock at all; they are never around. But they are thick on the Branch. He said the season is June, July and August and then the lodges close in September" (Katmai Research Project 1997: 9).

It is possible, but as yet unconfirmed, that there have been subtle influences from recreational use of Alagnak Wild River in the villages since that time, perhaps resulting from growing Native Alaskan participation in certain transportation or guiding operations in the region. Here too, much of this dynamic should become clearer in the course of the "Evaluate the Effects of Tourism" study.

All of the impacts described consistently and repeatedly by Native Alaskan study participants are examined thematically and in more detail in the pages that follow. Thematic sub-sections center on the major and recurring themes that emerged within an analysis of past interview and meeting content. Representative quotations are provided where appropriate. These themes might be expanded upon during the "Evaluate the Effects of Tourism" study by a systematic review of notes from meetings of the NPS Subsistence Resource Commission (SRC) and the Resource Advisory Council (RAC).

Crowding and Reduced Resident Use

Interviewees for past studies, as well as participants in recent meetings, have consistently expressed the view that crowding is a significant source of concern to Alaska Native users of Alagnak Wild River. During the Katmai Research Project of the 1990s, interviewees expressed the view that "the place is being overrun" (Katmai Research Project 1997). Similarly, Morseth (2000) reported that a common response to her initial inquiries from potential interviewees was "I don't go up the Branch anymore, there's too many people up there." A number of individuals have gone so far as to express a desire to battle the crowding by have the number of individuals visiting Alagnak River capped: "It's evident to me [that the guided fishing] industry is not going to police themselves, we're going to have to impose restrictions on use" (Katmai Research Project 1997).

Interviewees generally agree that "from June, July, August, September every day there's traffic on that river" (quoted in Stickman 2008). The large number of visitors is said to have changed the seasonality of Native Alaskan use along the Alagnak for those who still do regularly use the river. Many Native Alaskan users avoid in the river during the summer due to the especially high numbers of non-resident users:

> "ever since these tourist camps they got now, I don't go over there very much. 'Cause every place you go 'round the bend, you see people fishing. You go on a little bit and a bunch of people are fishing, camping along the beach, y'know" (A. Tallekpalek 1998).

Katmai Research Project researchers also noted this phenomenon over a decade earlier: "She does not usually go onto the Branch River until fall time because of the activity there" (Katmai Research Project 1997: 6).

The use of the Alagnak for subsistence fishing, some suggest, has been in decline as a result, since the summertime was traditionally a peak for fish camp use. Those residents who feel

compelled to visit the river in the summertime for fishing only venture there late in the season, when non-resident visitor traffic is said to decrease:

> "Not much fish camps there anymore [on Branch River]. People go out on weekends or for a week, we go out more in August and September when there's not as much tourism then" (quoted in Stickman 2008).

Similarly, when speaking of Levelock residents, John Tallekpalek noted that he and his wife were the only people to venture into the Alagnak River corridor to run their fish camp during the peak mid-summer tourist season:

> "They never go over there in the summer when the lodges [operate]. Only me and [Mary Tallekpalek] that stays over there." (J. Tallekpalek in Tallekpalek and Tallekpalek 1998).

The seasonality of hunting apparently has changed in response to these same pressures:

> "[One interviewee] used the Branch all the time for a lot of different animals. He said this has changed some though as the Branch is so busy that he only goes there regularly early and late in the year when the game is not spooked due to all of the boats and people. For moose he now often goes up the Kvichak or up Yellow Creek where there are fewer hunters and people. He said it does not matter where he goes now for caribou as they are easy to get" (Katmai Research Project 1997: 16).

Ironically, the same pressures that are said to have eliminated some portion of river usage among Native Alaskans are also said to result in longer stays for those who still visit the river. In addition to displacing resource users to other areas, certain subsistence tasks are said to simply require more time than was the case previously due to the inaccessibility of game, logistical complications, and other factors:

> "Lengthy harvesting trips can also be attributed to the intensive use the region receives from, sport users. I was told several times that the number of sport users in the area have made it far more difficult for residents to get a moose and that it

> often takes several days. The increase in sport pressure along the Branch River has caused many people to start using other areas for moose hunting. The areas to which there seems to be shift in use include Yellow Creek and Ben Courtney Creek" (Katmai Research Project 1997: 7-8).

Clearly, increased non-resident visitation is not the only factor that has contributed to a decline in the use of the Alagnak River during certain times and in certain capacities. Broader changes in the patterns of land and resource use among these Native Alaskan communities must be factored into any discussion of changing land use on the Alagnak specifically,

> "Years ago they used the area [Alagnak River], this area was in use, it was a good trapping area. Now the elders are all gone, nobody took over and is doing that now. The buildings down there are all falling down and eroding. We still use Branch River for subsistence but not like in the 60's. Back then fur was in demand. Now, the old folks are gone. And we're slowing down on bear meat" (quoted in Stickman 2008).

Nonetheless, Native Alaskan interviewees appear to be consistent in attributing a disproportionate decrease in their use of Alagnak River to the increased utilization of that river by non-resident recreational users. The specific reasons for this perceived displacement is outlined in the sections that follow.

Boats and Public Safety

Clearly, "crowding" can mean many different things – manifesting in a variety of ways and having a variety of potential impacts. For this reason, the ethnographic documentation was reviewed for information that might better define the nature of this crowding and the aspects of it that Native Alaskan river users found most problematic. This review identified a number of secondary potential outcomes of crowding, which are discussed in the sections that follow. However, when specifically discussing the issue of crowding in more detail, interviewees typically focused on the topic of boats. Interviewees consistently reported that the number of boats traveling the Alagnak River was excessive. This was the case in the 1990s, and has not

appreciably changed since that time; speaking of one interviewee for the Katmai Research Project, for example, researchers for that project noted that "He said there are only four lodges down there but the number of boats they have is astounding, one lodge alone has close to twenty boats" (Katmai Research Project 1997: 14). At the onset of research on non-resident visitors' impacts on the Alagnak, Morseth (1998) summarized the perception of boat traffic that she encountered in the mid- to late-1990s:

> "[Interviewees suggest that] the boat engines have gotten bigger and bigger over the years and people are concerned that it impacts the fish, the river banks and creates too much noise on the river…the constant use of many boats is what people object to—it is seen as scaring the fish, scaring the moose and just creating a highway on the river… The local Natives feel displaced by the sheer numbers of fishermen, who don't necessarily for the fish they are after but who take up space, scare the moose, and value other things than the natives" (Morseth 1998).

Interviewees have suggested that their use of the Alagnak requires the extensive use of the waterways for transportation, including boat travel for access to cabins, as well as for hunting, fishing, trapping, and plant gathering. For this reason, some suggest that the effects of crowding on the waterways are experienced disproportionately by Native river users:

> "The use area for subsistence resources by the residents of Levelock seemed to cover the entire Kvichak and Branch River drainages and a good many of their tributaries, including the lakes that form the headwaters of the Branch River. The primary means of travel for most community residents during ice-free times is by water, and waterways serve as primary activity corridors. For this reason, the residents of Levelock are very affected by the water-oriented sport and tourism activity in the area" (Katmai Research Project 1997: 8).

A number of interviewees reported some of the specific challenges and even hazards that emerge from navigating a waterway that has a number of recreational users. Some note that recreational users often stay in the main channel of the river rather than leaving it open for through traffic. For example, in 1995, Mike Andrew, when asked to discuss any changes he had seen over the years on the Alagnak, noted

> "More fisherman. That's a change, there's lots of little boats. Like when we travel to our cabin from here to Alagnak, come to lots of little boats. And we have to slow down, some time, 'cause they fish right in the channel where we go. Alagnak, the channel, some places is narrow, about five, six feet, sometimes. And you don't wanna go on the gravel. And they kind of wave us off. When they wave me, I stop. I tell them, "I can't go in this gravel with my prop. 'Cause they're expensive." And I tell them to reel their hook so let me go by. They take my word. Sometime they pick their hook and raise, let me go by" (M. Andrew in Andrew and Andrew 1995).

Likewise, Dallia Andrew noted that there were significant challenges from navigating both the boats and the fishing lines in the main channel, which sometimes appears to result in direct conflicts between Native and non-resident river users:

> "There's a lot of sport fishermen, all over this river and Alagnak River. Some time you have hard time to go by so many, the lines. We don't wanna hit our prop in the shallow water. They tell us to not a go that way, but we know the channel. Even they tell us we run over their line, our prop's more expensive than, so we just run 'em over their line. Especially when they're out boat fishing. There's a lot of them down Alagnak River" (D. Andrew in Andrew and Andrew 1995).

Extending from these observations, a few Native Alaskan interviewees discussed how crowding and excessive speed, when combined, appeared to result in a hazard of collisions. As noted by interviewees in the Katmai Research Project,

> "They keep a fish camp on the Branch and…they talked about how much things have changed on that river with the sport fishermen. They told me of a friend of theirs from Levelock who was hit in his skiff by a jet boat. They said it did a lot of damage. They said they have almost been hit and that you have to be very careful when you travel on that river because it is so small and twisty and the sport jet boats travel at 40 or 45 miles an hour. He would really like to see a limitation on the size of engine they allow on that river, he said some boats now have 150 and 200 hp, while most of the locals get around with a 20 or 25 hp. He said the size engine they use is totally sufficient and should be the limit. I asked them if they had been displaced from any areas due to sport activities and they said no, but they did have to act differently and be much more careful on the river due to boats and off the river due to bears" (Katmai Research Project 1997: 12).

Some also spoke of collaborative efforts with the National Park Service to address this issue:

> "he said on the Branch it was awful. He said there is someone with a 300 hp motor who is flat out dangerous. He said most everyone else has 25 to 40 hp motors and they are just about blown out of the water. They are working with park service and the corporation to try and get a limit on allowable horse power on the river. He said it is crowded once the king season starts" (Katmai Research Project 1997: 8).

Interestingly, the abundance of visitors in the water may be facilitating an intensification of motorized transportation by resident, Native Alaskan users. Evan Chuckwak (1998) for example, noted that resident users now needed to use jet boats in order to safely navigate a river full of recreational users, as they required the extra speed and maneuverability to circumnavigate boats and other new obstacles.

The frequent noise from motorized vehicles – especially motorboats – was said to detract from the experiences of Native Alaskan hunters. Many, who remember a time before such extensive motorized use of the River, are unaccustomed to the noise and find that it reduces their sense of solitude. This solitude, some suggest, was once an important part of the extended stays on the Alagnak River corridor, with its remoteness from the everyday lifestyle of the villages.

As an antidote to the adverse effects of motorboats, some Native Alaskans suggested that the NPS and other agencies should be principally encouraging "passive recreation" on Alagnak Wild River. Non-motorized recreational opportunities are apparently viewed as being relatively compatible with resident uses of the river. River rafting was said to be a relatively innocuous activity, with a low impact on the water quality or shoreline of the river. (Some note that rafters frequently camp on allotment lands, though, which may the one major source of contention regarding river rafting activities.) Some families in the Native Alaskan community are said to have been involved with river rafting charter operations and some are eager to see these operations expand as an alternative to motorized river use. Still, it has also been clear that rafts and motorboats are a potentially hazardous combination - former Katmai Superintendent, Bill

Pierce, identified "conflicts between motor boats and rafters" as a major problem emanating from increased visitation of Alagnak Wild River over a decade ago, and park efforts to minimize the conflicts has been ongoing (Katmai Research Project 1997).

Wakes and Water Quality

In addition to these direct hazards associated with boat traffic, a number of residents suggested that fish habitat conditions for anadromous fish are being impaired by the indirect impacts of non-resident boat use, especially the wakes created by motorboats. Several individuals expressed concern about a perceived increase in the rate of erosion along the shoreline, which is said to undermine cabin sites, allotments, and other lands of concern. Morseth (2000), for example, noted that river uses felt "Large jet boats…erode the banks, especially on the lower river." Larger, faster boats are especially blamed for this accelerated erosion, as well as secondary impacts such as increases in turbidity and non-point source pollutants from boat motors and refueling (Burgner 1991; Bjornn and Reiser 1991). Interestingly, while NPS staff have engaged in past discussions with Native Alaskan river users regarding potential effects of increased erosion on archaeological sites, this issue did not emerge in any of the interview notes and transcripts, being eclipsed by the larger discussion of accelerated erosion and its perceived impacts on fish and modern-day use areas.

Biophysical analysis of the Alagnak has provided mixed corroboration of these perspectives. The most measurable impact on water quality in the Alagnak River is the erosive effect of waves formed by the wakes of motorboats. The impacts of this process are principally the erosion of shorelines and temporary, localized increases in sediment in the River. High, exposed banks are especially vulnerable and exhibit sometimes rapid (>1m/year) erosion. While the rates of erosion have increased, the processes and geographical dispersal of erosion-prone areas has not, according to Curran (2003: 1), who concludes that

> "this increase in erosion rates has not altered the mechanisms of channel change, which in the past 50 years have included complex, compound channel changes and meander migration" (Curran 2003: 1).

Increased bedload from upstream disturbances can smother, or otherwise affect, the redds of anadromous fish as some Native Alaskan interviewees have suggested, but generally only downstream from sediment sources (Chapman 1988). Turbidity from visitor impacts may occur during periods of peak visitation, but bank destabilization has the potential to create pulses of mass wasting and peak bedload during low-frequency flood events that may occur during other times of the year (Jones and Fahl 1994). Incidentally, food and human waste disposal – two issues discussed later in this document – may have measurable local impacts on water quality, but Curran (2003) has concluded that these impacts are not having a measurable impact upon water quality in the river generally.

Other Impacts on Fish and Fishing

The potential impacts of non-resident visitation on fish and fishing is an issue that is of concern to not only river users, but most Native Alaskans contacted or interviewed in the course of the research outlined here. The Alagnak is a salmon spawning river of importance to the larger Bristol Bay fishery and so, while specific impacts on resources along the Alagnak might affect regular users of that river, impacts on the fish population have the potential to impact those who do not visit the Alagnak. Thus certain residents of King Salmon who did not regularly use the Alagnak, for example, noted that "We're basically concerned about the fish" (quoted in Stickman 2008).[47]

A number of interviewees and meeting participants have suggested that the fish runs are now depressed generally on the Alagnak due to the intensity of the recreational fishing:

> "you go up there now and there's spots on the river, you could drift that river, it used to be hot fishing, the fish are gone. And the sports fishermen are blaming it all on the commercial fishermen… "so-and-so Natives, they got a fish camp here and they're taking all the fish." [No.] It was the sports operations that killed it off" (Zimin 1998).

This perspective is widespread among Native Alaskan representatives who were contacted in the course of the current study, apparently based on both personal observations or, in the case of

those who do not use the river, second-hand information from other Native Alaskan users.[48] Some, however, attribute the perceived decline in fish population to be the result of a combination of factors, of which non-resident recreational use is only a part. Residents of King Salmon, for example, seem particularly concerned about the impacts of commercial fishing at the mouth of Alagnak River. They suggest that this portion of the river is overharvested and that the wake from boats in this lower portion of the river causes shoreline erosion which, in turn, compromises water quality in the estuary. Non-resident recreational impacts are not wholly discounted, then, but are placed in a broader Basin-wide context.

A number of interviewees discussed possible impacts of non-resident visitation upon salmon redds from trampling, turbation, or even intentional manipulation. In past meetings, some individuals have suggested that non-resident fishermen intentionally "stir up" the eggs of salmon and trout, in order to draw fish (Katmai Research Project 1997). Others expressed concern that the relatively recent use of "jet boats" has harmed spawning grounds by churning up the gravel river bottom or even "sucking eggs" into the engines intakes (e.g., Wilson and Wilson 2000).

> "He continued to talk about the jet boats with the big engines and how they travel in very shallow water, disrupting the spawning beds of the king and silver salmon. He said that they were a big reason for decreases in the number of fish" (Katmai Research Project 1997: 13).

In addition to concerns about the impact of overharvesting and habitat impacts, a number of interviewees and meeting participants expressed concerns about the potential adverse impacts of catch-and-release fishing upon the fish. Some suggested that this practice causes increased fish mortality which, in turn, undermines Native Alaskan subsistence harvests:

> "these camps they got here, they catch 'em, what do you do? Hold 'em and let 'em go. And you see a lot of them just drown dead. They were like in Branch River. We used to catch all kinds of fish over there. Trout, rainbows, y'know, steelhead. Now we can't. You're lucky if you get one. Takes you hours and hours to catch, to get anything. Branch River and up the river here used to be good. Now, not anymore…You see lots of trouts, they got them big scars there, some are torn, mouth. And they're dead, some of them, just barely moving" (A. Tallekpalek 1998).

In addition to increasing fish mortality, some suggested that they have observed that catch-and-release fishing undermines the overall health of the fish, so that they remain wounded and apparently undernourished after being caught and then released:

> "sometimes sport fishermen they get trout, whatever, they let go. They wouldn't die right away, but later on it'll die. And some time we catch 'em, they're skinny, still, mouth still got cut from the hook or whatever they did with the fish…" (D. Andrew in Andrew and Andrew 1995).

This theme received frequent mention in meetings and telephone conferences for the current project. As one participant questioned, "How would you feel if I put a hook in your mouth and pulled it out? That's catch and release" (quoted in Stickman 2008). Certain residents in these communities have called for the use of barbless hooks to minimize the impacts of catch-and-release fishing (Morseth 2000). The impacts of catch-and-release fishing have received considerable attention in recent years from Native Alaskan communities and regulatory agencies alike. A modest literature has developed regarding the impacts on the practice, and the Alaska Department of Fish and Game has examined this issue as part of their mandate to manage fish populations on the Alagnak River (Meka 2003).

It is important to note that many of the objections to catch-and-release fishing emanate not so much from a concern regarding the measurable, mechanical outcomes of this method of fishing, but seem to suggest that this practice is a mark of disrespect for the fish that is inconsistent with Native Alaskan mores. As Alex Tallekpalek suggested, for example,

> "[You see people] out there catching the big fish, look at 'em… take picture and then let 'em go. And, uh, pretty soon you see them drifting down the bay, down the river, half dead! Them days, long time ago we never had no problems like that, y'know. People used to catch fish, they divide it. Have to get so many divide to the people. Let the people have what they want. They only need that much" (A. Tallekpalek 1998).

This concept of "disrespect" associated with non-Native harvest methods is a widespread phenomenon in North America, and has been noted elsewhere in Alaskan contexts (e.g., Nelson 1983). During her fieldwork in the late 1990s and 2000, Morseth also found that a number of the Alagnak River users with whom she spoke addressed this relatively intangible concept of "disrespect" for the fish:

> "Many residents of the villages along the Kvichak are in their 50s to 70s [in 1998] grew up along the river in reindeer camps and seasonal family camps, and went to the [Russian Orthodox] church at Big Mountain and along the Branch river. These people continue to live by traditional beliefs about the way wild animals are to be treated, how and when to harvest them, and how the unused remains of these animals should be cared for and returned to their domain. For them the fishermen are not only physically displacing the locals, they are also treating the fish with disrespect—behaving in a barbaric, inappropriate way. Fish with mouth scars, eyes poked out, and other disfigurements are a painful sign of the threat to the relationship between people and the fish, between people and the natural environment that has been cared for, for many generations" (Morseth 1998).

These observations are consistent with those recorded by participants in the Katmai Research Project:

> "The population of Igiugig includes a number of residents in their 50's and 60's who grew up in reindeer camps and small family units along the Branch River and the Kukaklek Lake area. These people tend to hold onto traditional values regarding how wild animals should be treated, how and when to harvest and how the remains of these animals should be cared for once they have been killed" (Katmai Research Project 1997: 7-8).

While available ethnographic documentation is still ambiguous on this point, these signs of "disrespect" may be conceptualized by some Native Alaskan users as a direct cause of reduced fishing success on the River, of an importance similar to the more tangible, mechanical impacts on fish populations that might arise from non-resident visitation. This point, too, deserves further investigation in the planned "Evaluate Effects of Tourism" study in Native Alaskan commentary on recreation fisheries' impacts are to be fully understood.

In addition to expressing concern about factors undermining the health and number of fish, Native Alaskan interviewees discussed direct impacts of non-resident fishermen on their own subsistence operations:

> "He also told me of an instance a few years back when some sport fishermen pulled up his net and put it on the beach. He confronted them and they complained to him that he was taking all the fish. He talked of how they didn't understand that those were the fish that would feed him over the winter, and until next year's fish" (Katmai Research Project 1997: 13).

A few mentioned being actively discouraged from using certain portions of the river by fishing guides, though most of these occurrences appear to have taken place on portions of the Alagnak outside of the Wild River corridor. Some interviewees have suggested that "the guides are very territorial, staking out sections…and prohibiting other people from actually using it" (Katmai Research Project 1997). The head of Alagnak River was mentioned as a place where this is said to have happened. One meeting participant indicated that Kukaklek Lake, and the point where Alagnak River exits the lake, is being used by a large number of non-resident anglers to the exclusion of resident peoples (Stickman 2000).

For some families, the issues outlined here are contributing to a relocation of subsistence fishing operations to other locations. Some appear to be taking up subsistence fishing at different locations along the Alagnak than they did historically. In other cases, some even appear to have relocated to other river basins, such as fishing stations along the Kvichak and Naknek Rivers, where kin have historically established fishing camps. More detail on the processes and patterns associated with this relocation are needed, but should become evident in the planned "Effects of Tourism" study. Some suggest that they still can catch enough fish to subsist, but that these fish are now being caught in different times and different locations than was the case historically. Speaking of the experiences of one interviewee, Katmai Research Project participants found that:

> "They have enough opportunity to get the fish they want to use. The main issue is the amount of traffic on the river, which is due to all of the lodges, but otherwise sport hunting and fishing don't impact her in putting up fish. It does limit their fishing for trout, because they have to go up river. She likes to go to Yellow

> Creek, but there are a lot of people around there now. There is good trout fishing not very far up the river, however, and she goes up with other people once in a while. She doesn't usually go onto the Branch River until fall time because of the activity there" (Katmai Research Project 1997: 11).

Similarly, Ella Charley suggested that the families of villages like Levelock and Igiugig could not use the same portions of the river that they had historically and that subsistence activities had been pushed upriver to avoid certain areas with the heaviest non-resident use:

> "Can't do that now... You can't. No more. Unless you wanna go way up...up to the forks. That's where we used to go. Um, right where they took, Branch River forks…Good hunting up there. Good fishing" (Charley in Charley and Setuk 1998).

Impacts on Game and Hunting

In addition to expressing concern about the possible impacts of non-resident visitation on fish and fishing practices, Native Alaskan interviewees also often expressed concerns regarding the possible impact of such visitation on game and hunting practices along the Alagnak River corridor. A number of interviewees expressed the view that the abundance of non-residents, including non-resident hunters, makes it more difficult to hunt, apparently both displacing game and making hunting unsafe in areas with large numbers of people. These days, they suggest, "it's not good hunting, too many hunters" (quoted in Stickman 2008). The reasons for the poor hunting are said, in part, to be the outcome of the noise and disruption associated with having a number of people along the river engaged in various activities:

> "We used to go up camping and we'd all drift down and get moose or, fall time, y'know. You can't do that no more. They pretty much run the animals out. You know. In the fall time it's pretty rare to get a moose over there now. Unless you go way upriver…Yeah, there's so many boats and jet boats and everything runnin' around over there, y'know. During the summer. It's not funny, and even in the fall" (Charley in Charley and Setuk 1998).

Some interviewees and meeting participants reported negative impacts from chartered hunting operations, as well as chartered fishing operations that provide improved access for hunters, along the Alagnak. Some suggested that even small-scale hunting charters can have a significant effect on the viability of Native Alaskan subsistence hunting:

> "this effects us a lot. There's big game hunters now instead of just the sport fishing. This affects residents, their moose hunting" (quoted in Stickman 2008).[49]

Importantly, regular resident users of the Alagnak report that people with no prior history of using the Alagnak are now coming to hunt there because of increased hunting pressure close to such communities as Naknek and King Salmon:

> "Levelock people are seeing more and more people from the Naknek area out hunting on their corporation lands. There is no trespass officer that time of year. It is mainly people over on Branch River coming up from Naknek; outsiders (from Anchorage and elsewhere) do not have that much access to that area during moose season" (Katmai Research Project 1997: 7).

Some speculated in 2002 that the area might enter into Alaska Department of Fish and Game's "Tier II" category due to these kinds of pressures. Accordingly, some Native Alaskan participants in project meetings have suggested that the NPS and the ADF&G could try to foster forms of passive, rather than "extractive," recreation along the Alagnak to minimize pressure on subsistence resources: "They should cater to photography, rather than taking from the land" (quoted in Stickman 2008).

A number of Native Alaskan interviewees expressed concern about what they view as the wanton killing of game, especially moose. They especially take aim at trophy hunters, who take the heads or horns of game while leaving the remainder of the animal's carcass behind. These practices, and Native Alaskan objections to them, have been reported in a number of interviews

over the last three decades and appear to have been a concern since the beginnings of recreational hunting in the Alagnak region. In the 1970s, Behnke found that:

> "Most local people are highly critical of "head" hunting and those who take moose, caribou, ducks, or fish and throw much of it away later because it was improperly taken care of or stayed in the freezer too long" (Behnke 1978: 163).

Similarly, interviewees of the late 1990s reported seeing such practices along the Alagnak River and reported these as being objectionable. Alex Tallekpalek, for example, recalled,

> "Hunting. Used to be good. In Branch River there used to be good hunting over there. Moose. In the winter time, ever since, uh, you get anything you want in no time. But now since the hunters start coming in, they come down, the rafters, they catch moose. What they do? Cut the heads off, leave the meat… All they take is the head and horns. That's where the meat is. [Someday], oh, sometime the old people, people when they travel they'll see the carcass there, there meat, no head, just meat laying right on the ground. Y'know. A lot of people, they didn't like that, y'know. When the hunters coming and they kill 'em and just leave 'em. Why don't they kill 'em and bring the meat to the people? Let them have the, all that what they caught instead of letting it spoil out there [and letting] the bears eat 'em" (A. Tallekpalek 1998).[50]

Likewise, Ella Charley reported seeing caribou killed for their antlers and the rest of the body left floating the Alagnak River:

> "All they did was take off the horns. That caribou was just drifting down the river. The whole caribou" (Charley in Charley and Setuk 1998).[51]

Such accounts were also shared in recent community meetings for this project:

> "Then there's the head-hunters. Three or four years ago I was hunting for caribou and I counted 10 caribou that was killed, just the upper half was taken, all the rest of the meat was wasted. They just took the antlers" (quoted in Stickman 2008).

These comments, and the anger and frustration expressed by some Native Alaskans at this practice along Alagnak River, may relate in part to broader concepts of "disrespect" as outlined

previously in reference to fish. The practice of taking trophies and leaving the rest of the animal behind to rot or be scavenged appears to be viewed by some as being a cosmological problem, as much as it is a measurable game management problem. Others seem to primarily take issue with the perceived wastefulness of this practice, and suggest methods to reduce the waste even if trophy hunting persists unabated: "They could drop the meat off for the elders here or for dog teams" (quoted in Stickman 2008). As will be discussed in a subsequent section, some also share the view that an increased number of bears along the Alagnak River – caused in part by visitor activities, including leaving animal carcasses along the river corridor – has, in turn, resulted in a reduced number of moose and other game in the area.

A few interviewees also discussed the practical challenges to hunting in an area that has become more populated in recent years, where the users are geographically diffuse and not always in predictable locations. In some cases, this can result, they suggest, in significant hazards to public safety:

> "One time I was there [on the Alagnak River] sighting in my gun and I saw movement. It was drifters, it wasn't a moose. Lucky I didn't pull the trigger! Scary thing, if they think you're shooting at them, they might shoot back" (quoted in Stickman 2008).

Fear of this kind of accident, coupled with a perception that the game is often frightened away from the Alagnak River corridor, has resulted in the relocation of some subsistence hunters to other locations in lieu of the Alagnak.

A number of interviewees also expressed frustration with the growth of hunting and fishing regulation and enforcement along the Alagnak as the recreational use of the river has continued to expand. Some noted how different this was than the historic condition of the river, when the Native Alaskan communities could utilize the river without having to answer to non-Native regulators.[52]

Impacts on Allotments, Lands, and Plant Communities

In the past, interviewees have noted that there seems to have been a strong correlation between those places recreational visitors have wanted to use as campsites and those places that the Native Alaskan communities claim and use: "Surprisingly there are few really good campsites on the river" and most of the obvious choices have a long history of Native use, if not outright ownership as allotments (Morseth 1998). Morseth (2000) noted that the attributes that make an area desirable as a campsite or a pickup site for visitors are often the same attributes that make an area desirable historically as a campsite or allotment site. These include a sandy or rocky beach that is suitable for boat landings, a level bank in a clearing with exposure to breezes that might clear insects, the presence of nearby fishing holes, and possibly the presence of nearby firewood.

With visitors being drawn to attributes that define Native Alaskan use areas, some level of trespass on Native allotments, cabin sites, and camp sites has presented a challenge since the beginnings of recreational use along the Alagnak. Interviewees frequently expressed concern regarding the trespass on and use of allotment lands, as well as inadvertent damage or "vandalism" to cabins and other features on allotment lands. Past researchers report "numerous complaints from the land owners about trespassing on Native allotments" (Katmai Research Project 1997). For example, the Estrada family allotment (01-132) was mentioned as a popular pull-out site for rafters and as a major point of contention. Some interviewees suggested that pilots asked clients to pull out there to catch flights at the end of river trips, but the Estradas were apparently opposed to this use. During her visit to the site in 1997, Michele Morseth reported seeing freshly trampled vegetation, fire pits and toilet paper on the allotment, while the borders had been marked with three "no trespassing" signs (Morseth 2000).

This has been an issue of recurring importance. In its comments on the draft 1983 Alagnak Wild River Management Plan, for example, Bristol Bay Native Corporation suggested that more emphasis was needed on potential visitor treatment and trespass on Native allotments, reflecting the fact that this was already a growing issue. In response, the NPS indicated that

> "The National Park Service will work with local landowners, including Native corporations and Native allotment owners or applicants, to address trespass and

> resource management problems and other issues of concern. The National Park Service will enter into cooperative agreements with the Bureau of Land Management and the effected Native corporations to manage the two public use easements on the Alagnak River. The National Park Service will designate camping areas on public land at several locations to discourage trespass problems on adjacent private property" (NPS 1983, Appendix 1: 1-2).

On this theme, interviewees described an unambiguous history of collaboration with the National Park Service to remedy the issue over the years since this original Management Plan was developed:

> "One important (political) issue was in regard to land ownership and issues of trespass and vandalism along the Branch River. One corporation official told me he was trying to work with the National Park Service to develop a program in which users of the Wild and Scenic River corridor were informed of land ownership patterns and status before they embark upon their trips" (Katmai Research Project 1997: 7-8).
>
> "He said they were trying to work with the Park Service on the issue of informing users of that river on the land status. He said that is a way they can work on solving problems of trespass, vandalism, etc. He said they have an enforcement officer for lands over there but it is difficult because people do not listen and want proof when he stops them and tries to keep them from using private lands. He said that the enforcement officer needs a camera and a map to carry with him. He also said these people and outfitters need to be informed prior to their trips. He said people camp wherever they please" (Katmai Research Project 1997: 10).[53]

A number of interviewees and meeting participants expressed concern regarding the accumulation of litter and human waste – not only on allotment lands, which is of special concern, but along the entire riparian corridor.[54] Like other impacts discussed here, the incautious disposal of these things implies "disrespect" in the view of some Native Alaskans who use the river corridor: "Allotment owners talk about the trash and toilet paper and vandalism and the disrespect of people using private land without asking" (Morseth 1998). A small number of individuals also referred to thefts being a problem in cabins along the Alagnak:

> "He said he used to leave the door open to his house but cannot do so anymore, saying you have to lock everything. [He] said it is bad in the village but it is worse

> over on the Branch were theft is real bad as cabins are always broken into. He said that people cabins are being vandalized and broken into more and more each year as the river gets busier. [He learned of a cabin where] someone over there stole a 100 gallon container of propane and two chain saws. He said that was just the most recent occurrence. He said a lot of the theft is also due to young people from the villages who he described as "lost"….[He] said locks don't even stop people over on the Branch and it is often better to leave things unlocked and take everything home when you leave" (Katmai Research Project 1997: 19).

A number of interviewees and meeting participants made passing references to the perceived adverse effects of all of this use of the shoreline on riparian plant gathering areas. The impacts of visitation on vegetation have also been documented by non-Native researchers traveling the river corridor. Curran noted that "There are no developed foot trails along the Alagnak Wild River corridor, although bears and anglers form informal paths along much of the river" (Curran 2003: 4). Likewise, on the topic of vegetation impacts, Morseth reported that

> "The river could use some documentation on just how much people are hammering vegetation. Judging from the NPS site, trails and bare spots develop quite quickly. Bears…seem to have had the greatest obvious impact on vegetation as seen from the river and they have made trails up banks and in the forest. Once one gets off the river the vegetation destruction by people becomes more apparent…It looks like campers are the biggest offenders but other areas have developed trails—maybe originally from wildlife" (Morseth 2000).

Native Alaskan interviewees especially expressed concern regarding the impacts of visitors' fires on vegetation. Some fires are said to have burned out of control and eliminated the vegetation over larger areas:

> They talked of having tundra fires once in a while and said they are caused by lightning or by the carelessness of rafters or sport hunters or fishers. He said they leave fires going and don't always watch them or put them out when they leave. They said on the Branch they have put out more than one fire they have found unattended. They also said there is an island in the river down there that was completely burned a few years back" (Katmai Research Project 1997: 13).

Some non-resident visitors are said to build fires in tundra areas where the fire leaves a lasting impression; in contrast, Native Alaskan interviewees say of their own practices that "they were

taught never to make fires on the tundra and that it should be done only on the beaches" (Katmai Research Project 1997: 13). Here too, concepts of "disrespect" seem to explain some of these objections, with interviewees objecting to long-term physical impacts of short-term users.

Increased Threats from Bears

While Native Alaskan interviewees generally depicted the Alagnak River corridor as place that was inviting and safe historically, they did make occasional reference to hazards that largely pre-date the period of pronounced non-resident visitation. Among these hazards, bears were said to always be a potential threat on the Alagnak historically, and were mentioned in passing by a number of interviewees. Brown bears were said to be especially menacing along the river during fish runs, which is, regrettably, when the peak Native Alaskan visitation has occurred along the river historically. Speaking of the elders of earlier generations, Mary Tallekpalek recalled,

> "they…was scared to walk, [on the banks] too far… in springtime. Brown bear, too many, Branch River, when you walk around" (M. Tallekpalek in Tallekpalek and Tallekpalek 1998).

This coexistence of Native Alaskans and bears along productive fishing rivers at the time of the salmon runs is a recurring theme throughout many parts of Native Alaska, and communities typically have prescriptive and proscriptive guidance regarding the conduct of human-bear encounters embedded within their oral traditions. Regrettably, little of this oral tradition was recoverable in the existing ethnographic record or in the course of the meetings held for the current study. Comments by Mary Olympic and others do indicate that "brushy" areas along the shoreline were known to be especially hazardous as they restricted visibility and increased the odds for accidental bear encounters. Speaking of the old village on the river, probably Alagnak Village, Mary Olympic recalled,

> "Boy, I really don't like that place. There's just…too many trees, you know, too many bushes, and too many mosquitoes. Bushes in these places I don't like. [When I was young] I tell my mom, "Gee, we should not move [here]. We should go back to Kukaklek. Good place"… we had fun alright. But I just, really don't

> like too many bushes. Can't see no farther. And lots of mosquito, too" (Olympic 1995).

However, interviewees generally expressed the view that the threat from brown bears had increased significantly with the rise in recreation non-resident visitation of the Alagnak Wild River corridor. Threats associated with brown bears along the Alagnak River have been widely documented within literatures addressing the Wild River corridor (see, e.g., Olson et al. 1990; Braaten and Gilbert 1987). The National Park Service has been aware of the increased potential for human-bear encounters as visitation has risen along the Alagnak; indeed, "human/bear conflicts" have emerged as one of the major concerns discussed by park staff and superintendents when discussing the impacts of increased visitation along Alagnak Wild River (e.g., Katmai Research Project 1997).

Several Native Alaskan interviewees expressed concern about the safety of the Alagnak River due to what is perceived as an increase in the bear population generally, and an increased potential for bear-human conflicts in particular. Interviewees suggest that they "have to act differently and be much more careful on the river due to boats, and off the river due to bears" (Katmai Research Project 1997: 12); "it is crazy on the Branch, bears everywhere" (Katmai Research Project 1997: 9). Some families have apparently changed their patterns of river use, and even stopped camping on the shoreline, due to an increased fear of bear encounters. One Katmai Research Project interview recounted his own family's experiences:

> "He said a big change on that river during his life time is the dramatic increase in the number of brown bears along the river. [Another interviewee] said that you now must always worry about protecting yourself. When they travel up the river they no longer make a camp on the shore but instead sleep in their skiff as they are worried about bears" (Katmai Research Project 1997: 13).

Some particularly express concern over taking children to the Alagnak River when there are mothers and cubs present:

> "they get more bears over there now. On Branch River, sometime even around town here. They're a danger, we have to get rid of them. 'Cause the kids, y'know. The family with a bunch of kids playing around…Yeah, it's momma [bear] over

> there letting the baby go in the old Branch River catching all those trouts and rainbows, and moose, kill them and just leave 'em there" (A. Tallekpalek 1998).

This increase is attributed to a number of factors including hunters and fishermen leaving animal carcasses along the banks, such as the carcasses left behind by trophy hunters. In addition, some note that bears are drawn to the food, trash, and human waste that have been increasing along the river's banks in correlation with the general increase in human population along the River. This observation has paralleled a general trend in brown bear populations on the Alaska Peninsula, which have been drawn to human communities and camps throughout the region. As Behnke noted shortly before the designation of Alagnak Wild River, "Productivity is high, and there have been increasing numbers of bears around canneries and communities in the area (Behnke 1978: 128). Some residents report seeing an increase in the number of bears injured or killed after being shot by fishermen, who are unnerved by the presence of so many bears and may also be unaccustomed to fishing in places as bear-rich as the Alagnak.

Some suggested that increased bear and human traffic displaced game, including moose, from the river corridor:

> "right now it's hard to get a moose on Branch River because of so much traffic and so many bears, you know, you've got a combination of the two. And moose, they just don't like all that traffic, and then the bears, there's so many bears eating the dead salmon that…the moose just don't want to be there" (Alvarez 2002: 45).

As a result of the increased number of brown bears, some suggest, there has been a lower calf survival rate in the area, which they suggest has contributed to ADF&G closures of the cow moose season on the Alagnak. Some also suggested that the increased presence of bears and people, coupled with the trampling of the shoreline, had adversely affected plant gathering practices tied to the Alagnak corridor – especially berry picking (Morseth 2000).

Displacement, Intangible Values, and Cultural Transmission

Cumulatively, the various effects of increased non-resident visitation along the Alagnak River discussed above have contributed to less tangible impacts among the Native Alaskan communities that use the Alagnak River corridor. Most noticeable among these in interview notes, transcripts and recordings, as well as meetings with Native Alaskan representatives, is an apparent change in the attitude of Native Alaskans toward the Alagnak River, and a generalized sense of "displacement" within these communities. This has been noted by various past researchers:

> "The increase in the number of sport fishermen in the region also is changing the habits and attitudes of those people who use the Branch River area. The sentiment was expressed to me that residents no longer feel as if it is "their area", a feeling I can describe as psychological displacement from a familiar and commonly used place" (Katmai Research Project 1997: 2).
>
> "The use of this river corridor by sport and tourism activities is an important issue to many village residents since many private allotments are located there. Sport users have increased dramatically in that area and it has caused concern as individuals are beginning to become psychologically and physically displaced" (Katmai Research Project 1997: 7-8).
>
> "People today express that they no longer feel that it is their area…the river is often crowded with people—their allotments might be occupied by campers—or their cabins vandalized when they come up river" (Morseth 1998).

Increased non-resident visitation has brought with it the need for increased surveillance by land and resource management agencies that are mandated to protect the river and its resources, including the National Park Service and the Alaska Department of Fish and Game. In turn, this apparently also contributes to certain Native Alaskans' sense of "displacement' from the Alagnak River. As noted by two different interviewees for the Katmai Research Project:

> "they said their activities have changed around the Branch. They said they feel picked on and that the river is no longer like their river. He said the foods and wants are still the same but outside forces such as sportsmen and regulations have created some changes. They said on the Branch they are always looking over their shoulders, it is not as comfortable anymore. People try and report them to F&G.

> He said he has seen a sport guide poach a caribou but he went to talk to him and did not report him. He wants them to do the same with him but they do not. [The recreational users] feel like it is their river but it is his home" (Katmai Research Project 1997: 14).
>
> "He said the river is much different than when he was young when they used to see very few people and they weren't watched wherever they went. Now there are people everywhere and they are always watching, wanting to turn people in for what they have done for generations" (Katmai Research Project 1997: 14).

In a number of cases, families appear to be displaced to other subsistence areas, creating new pressures on these lands and resources:

> "He said most of the sport hunters are fly-ins, but more and more of them are starting to be locally based. He said it is starting to be a real problem. He said that this is one of the reasons that he is now starting to avoid the Branch. Because there are so many sport users over there he says that is where Fish and Game is. He said it is the proper season but he also stays away just to avoid contact with Fish and Game. He said that Yellow Creek and Ben Courtney Creek are good places to go [instead]" (Katmai Research Project 1997: 16).

Some interviewees suggest that, in time, continued non-resident visitation may result in this general "displacement" become complete, as younger generations return to the Alagnak less and less with their families:

> "[One interviewee] really sees tourism and sport as the major forces of influence for the future. He said in a way the Branch has already been lost to the local people and will only get worse in the future. He said people are still making a lot of use of it but that it is a generational thing and the laws and regulations are like slow fine tuning, slowly displacing people and altering the use and orientation of the younger generation" (Katmai Research Project 1997: 15).

In turn, some have suggested that this "displacement," if unchecked by new policies or other mechanisms, will effectively eliminate certain aspects of these community's traditional cultural practices that are tied to the river. As Morseth's interviewees explained this,

> "In terms of cultural transmission, displacement from the river means that younger generation doesn't learn the river, doesn't learn how to hunt or fish it—doesn't learn its subsistence and cultural value. They learn about sport fishers and the land and river's monetary value—the river becomes removed from its cultural context" (Morseth 1998).

Employment Options

While Native Alaskan interviewees typically focused on the negative outcomes of non-resident visitation on the Alagnak River, some discussed changes resulting from the increased visitation that were neutral to positive. A small number of individuals, for example, mentioned the outcomes of increased service sector employment opportunities along the Alagnak. Indeed, some Native Alaskan families worked for the fishing lodges from the beginnings of the tourist industry in the region. For example, George Setuk recalls:

> "Well, I first help with the Kvichak Lodge. Hauling in lumber for them guys [in] '61 or '62. That, first, see I remember them, back then. 'Cause I helped them haul the lumber up there. Starting in Iliamna, first. And these guys didn't come in 'til later, y'know. Then they started in on the Branch River [in the 1970s]… We didn't have, didn't have any over there until the late, early '70's, probably. Then they start coming up" (Setuk in Charley and Setuk 1998).

Still, he suggests that the lodges have had negligible impacts on the employment situation of the communities in recent times:

> "Not, not a big influx. Only thing that I've seen...is, maybe because of the lodge we have to send people over…our trespass officers in the summertime…they send up people from here for trespass officers, for people trespassing on our property over there. It doesn't, it does not employ any local people. None of 'em. Upriver or Branch River. It, it just doesn't happen. It isn't so" (Setuk in Charley and Setuk 1998).

Other interviewees agreed with this assessment, suggesting that the lodges generally do not pay well enough to entice Native Alaskans to work for them through the summer season:

> "Employment with the sports fishing lodges is not very attractive for most residents. Hours are long and guides are only paid minimal wages. Some villagers felt that it was fine to hire college-age kids who were willing to work for next to nothing. They said the outside guides learn a good fishing hole or two and that keeps the clients happy" (Katmai Research Project 1997: 4).

> "He said the staff at the lodges are paid minimum wage or lower and people around here don't want to work for that" (Katmai Research Project 1997: 8).

Modern Native Alaskan river users do not entirely discount the potential of tourism to provide income, or at least more steady income to their communities. These jobs, however, may not come as much from the lodges as from alternative employment options, such as providing transportation to river visitors, or leading chartered fishing trips. A small number of individuals within the communities have taken such work, but the extent of this employment or general trends and attitudes affecting it, remain unclear from the currently available ethnographic documentation. Certainly, this theme will become clearer in the course of research undertaken for the planned "Evaluate Effects of Tourism" study.

Leasing Cabins, Allotments, and Corporation Lands

A number of interviewees and meeting participants spoke of the opportunities and challenges that have emerged from the leasing of cabins, allotments, and corporation lands on the Alagnak. As mentioned elsewhere in this document, a number of Native Alaskan families hold allotments on the river, while the Bristol Bay Native Corporation, the Village of Igiugig, and the Village of Levelock all hold corporation lands along the Alagnak. For some families with cabins along the Alagnak, the rental of cabins has long served as a source of income. For example, after his retirement in 1965, John Tallekpalek began renting his cabin to sports fishermen and possibly charter operators as well:

> "I learned the…sport fishing came in. And used my cabin over in [Alagnak] River. And I lease it to him. So, the, after a while he was pretty loaded money. I only charge him $5000 a year. Well, after five years, then I raised the price up

> later on and after he makes the money. So, that work out good for me and my wife and… that way we wouldn't run out of money" (J. Tallekpalek in Tallekpalek and Tallekpalek 1998).

This income was especially valuable for retirees, or those who had been dependent on volatile industries such as fishing and trapping for most of their cash income previously.

Especially in the last two decades, individual allottees sometimes lease their land to charter operators or the lodges. Some individuals expressed great enthusiasm for the potential of these allotment and corporation land lease arrangements, at least they did in the 1990s, recognizing that the income derived from the leases could facilitate development of infrastructure and other amenities for the villages:

> "There were also ongoing discussions concerning Native allotments. Numerous opportunities to lease allotments for commercial recreational activities seem to be available, particularly for land located on the Branch River corridor" (Katmai Research Project 1997: 3).

> "Levelock Limited is very involved in the sport fishing industry through leasing land on the Branch River to lodges. Not many people work directly in the industry but individuals do lease private allotments" (Katmai Research Project 1997: 7).

Levelock Native Corporation, for example, has leased land to Katmai Lodge and their members have sometimes served as part of the river patrol employed by the Lodge, providing modest employment for village residents.

Native Alaskan communities' relationships with the lodges, of course, have been mixed. As noted elsewhere in this document, there are occasional conflicts with fishing operations based at the lodge, and the lodges have contributed to the resource pressures alluded to throughout this document; as Morseth found among Native Alaskan interviewees of the late 1990s, "there is a loud and clear message out there though that nobody likes the way [certain lodges] brought more and ever more people to the river" (Morseth 2000).[55] Likewise, there has been much confusion in the past regarding the relationship between lease rights on private allotments and lease rights on corporation lands:

> "[One interviewee] talked about Levelock having their exclusive lease on the Branch with Katmai Lodge. He said that it is causing a lot of internal problems as the corporation has given exclusive use to Katmai Lodge to about 15 miles of the Branch River but inside that area are a lot of individual allotments which are now beginning to service other outfitters by allowing them to stay on their land. He said that …the operator of Katmai Lodge, gets mad at the corporation because he thought he had exclusive use but individuals are allowing other operators to use individual allotments inside that area. The corporation then gets into conflicts with individual shareholders who are leasing out to other users. He says it is all trouble" (Katmai Research Project 1997: 10).

Moreover, some Native Alaskan allottees have apparently sold land in the region to recreational operations and users, a loss of Native land that some interviewees find troubling:

> "[One interviewee] said all allotments on this river are key and have potential for tourism. He said their value will only increase into the future, he hopes there are no more local sales. Yet he talked about electricity, sewer, water, telephone, technologies, all these new things take cash and Natives want the ease and comfort of them. These things require people to have wage employment or sell some of what they have which is land" (Katmai Research Project 1997: 14).

Thus, some interviewees and meeting participants have noted that leasing of Native lands in the areas has ironically created an ongoing tension between community economic development and subsistence needs within certain communities. Some note that the original appeal of income for the village corporations is undermined by the growing awareness of the impacts of increased visitation on the experiences of village residents who continue to visit the river. For example, Levelock Corporation was reported to have leased land for the development of an airstrip to facilitate traffic to Katmai Lodge, which some river users found troubling: "it's kind of a two-edged sword, because what Levelock is doing [by leasing Corporation land and allowing for the airstrip] and the problem they are facing with their subsistence is that they are dealing with too much use" (Katmai Research Project 1997). Likewise, Morseth (2000) found similar concerns being expressed regarding Village of Igiugig lands on Nonvianuk Lake: "Land around the lake is leased to one of the lodges and use there is another contentious issue" (Morseth 2000). It is likely that these tensions will continue, unless the corporations might forge new agreements with lodge

operators and other tenants on Native lands that can strike a balance with the subsistence and other uses of the river by their constituents.

The Use of NPS Cabins

In addition to the economic opportunities presented by non-resident visitation, a small number of interviewees also mentioned that the presence of NPS cabins also represents a welcome amenity emerging from the Wild River status of the Alagnak. These cabins are considered to be important for the safety of families and individuals using the Alagnak for subsistence purposes in the vicinity of the cabins, who might need shelter in the case of emergencies or inclement weather. For example, Mike Andrew recalled,

> "They have a cabin right the mouth of Nonvianuk on east side. Then I went there, to that cabin. They were there and I went up there. Before, we used to travel with the little boat…Before, there was no cabin there. No Park Service. And even the camps, there was no cabin open, only one log cabin. Then when I come, too, a year after, we see cabin. 'Cause I wanted to see that cabin… who owns it. Then there were two people come over. I didn't know they was that two Park Service people there. And I asked them, "Whose cabin over there? I never see that cabin before. I come here several time, but every year I come there was no cabin."… So he told me, he said, "Park Service, they're the ones staying there. They build it." Kinda look over their land, the park, you know. And I start talking to them. "Someday I'll come by here, you guys not around." He said, "We welcome you stop in the cabin if it's open, if we don't lock it." And Park Service, them two guys, said, "We don't lock the cabin. We leave it open for people that come by." I told them "Some time we have emergency, wet, 'cause we travel. Some time we don't have a cabin." So I agree with them, I thank them when they told me they don't lock it. We welcome to stop there if we have to get away from the weather, when we, when you're travelling, you know, 'cause when you have no camp, [He told us to] stay there. I agree with them. It was nice. So when we have a lot of food, if you got food in the cabin, say we're welcome to eat what we could survive with when we travel. So I agree with them right there" (M. Andrew in Andrew and Andrew 1995; see also Andrew and Andrew 2000).

Likewise, the Alagnak River NPS cabins may have served as a “fallback” option for some Native Alaskan users after certain cabins were removed from inside the original park boundary (Salmon 2002).

TOWARD AN EXPANDED ETHNOGRAPHIC STUDY

As noted throughout this document, the current research effort has been conducted in no small part to aid in the development of an ethnographic study, beginning in 2008, entitled "*Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River*," (hereafter "Effects of Tourism" study) and directed by Dr. Douglas Deur, the author of the current report. This research will be primarily ethnographic in orientation, and will seek to fully understand the dimensions of Native land and resource use on the Alagnak prior to the 1980 creation of Alagnak Wild River; the chronology of and processes associated with the rise of non-resident river use; and any effects of these changes on the cultural, economic, social, and dietary practices of river users and their descendents. While at present it is unclear whether the results from the "Effects of Tourism" study will have a bearing on cultural and natural resource planning, the resulting documentation will aid in NPS compliance efforts, may aid in interpretive efforts, and will provide Native Alaskan participants with the opportunity to record their history and have their concerns aired in public reports and a publication. The current study has resulted in this report, a compendium of documentation – most of it pre-existing but largely untapped documentation – to support this effort. In the process of compiling this material, this document has illuminated a number of information gaps, with the hope that this might help in the formulation of research questions that can fill these gaps in the course of the work that lies ahead.

With two projects focusing on the Alagnak being funded back-to-back, the current Resident Users Study and the planned "Effects of Tourism" study, there have been a number of synergistic opportunities. Much of the expensive and logistically complex ethnographic fieldwork that might have been undertaken for the smaller Resident Users Study has been deferred to the considerably larger Effects of Tourism study, allowing for a much more thorough review of preexisting ethnographic data within the former research effort than would have been the case otherwise. Simultaneously, there has been ample opportunity to seek community input on the goals, emphases, and methods of the Effects of Tourism study in the course of the Resident Users Study. As a result, the Effects of Tourism study will be somewhat unique in the extent to which the Principal Investigator and Research Assistant have been able to seek community input

prior to the completion of a formal research plan. A number of meetings and telephone conversations with Native Alaskan village representatives have centered on the question of why and how the planned study will be undertaken. Residents of these communities expressed both surprise and pleasure that the National Park Service and the Pacific Northwest CESU would opt to seek their input on these matters prior to substantive efforts on a work plan. To quote but one community representative who attended the initial scoping meetings, "It's a great thing that the park is trying to incorporate the villages' [perspectives from the beginning] and start working with them" (quoted in Stickman 2008). The discussion, below, is derived in no small part from this preliminary communication with the communities of the Alagnak River region, as well as the findings of the current study.

To date, all communities that are likely to participate in the Effects of Tourism study have expressed, formally or informally, a wish to participate in the study, including representatives of Levelock, Igiugig, Kokhanok, Naknek/South Naknek, and King Salmon. Of these communities, it is likely that the first two, Levelock and Igiugig will have the most direct and active role, but it is also clear that there are certain families or individuals from the other communities who may also wish to participate. King Salmon residents agreed that they wished to participate in the planned Ethnographic Study, but that they would defer to residents of Levelock, Igiugig, and perhaps Kokhanok on most matters in light of the close ties of those two communities to the River, while the degree to which Naknek and South Naknek wish to participate is still uncertain (quoted in Stickman 2008). At present, it is advised that the NPS and PNW-CESU proceed as if all communities will participate in some manner. If, in the course of ethnographic research, preliminary findings determine that this list of communities should be shortened, or even lengthened, such a change can be made at that time.

Most community representatives appear to be advocating broad community involvement in the study. In the course of meetings and telephone conversations related to the current project, residents of Levelock, King Salmon, Naknek, and Igiugig identified a number of elders who they suggested researchers contact for in-depth interviews. The names and contact information for these elders is contained in project notes on file with Katmai National Park (quoted in Stickman 2008) but is not included in this report. Also, community representatives were generally

enthusiastic about the prospect of involving high school students in the research effort – a concept first proposed in the course of communications between Principal Investigator, Dr. Douglas Deur and Igiugig's Dan Salmon. Students could participate in the interview process, or at least be present at interviews, so that they might both learn some of the fundamental skills of ethnographic research while also gaining knowledge from their own community's elders regarding the study area and its uses. Some noted that the project could bring broad community benefits, including vocational training for Native students, and a perpetuation of traditional knowledge that is not always being passed between generations through more conventional means:

> "if we had the High School kids get excited, look at the Branch River, take them up there, they could get to know the area. They have nothing to do sometimes; they try to find a job [but find] no job" (quoted in Stickman 2008).

By participating in the ethnographic research process, students also might be able to meet many of the "cultural awareness standards" established by the Lake and Peninsula School District, which call for participation in cultural activities and documentation efforts. Teachers from the area schools were generally supportive of the concept of student involvement that would involve the schools in some manner, though their involvement would of course have to be structured around the school calendar. [56]

Not only are Native Alaskan village representatives generally supportive of the project's aims, but some have suggested that there is an urgency to the research, owing to the fact that many traditional users of the Alagnak are dying away and the younger generations do not possess the same level of familiarity with the river: "We should be writing down the history while the elders are left" (quoted in Stickman 2008). "All this good stuff has come around a little too late. A lot of people are gone now [i.e., the elders have died]" (quoted in Stickman 2008). "The people on the list [of people interviewed from 1995 to 2002] are all gone, almost all of them now" (quoted in Stickman 2008). Community members generally seem eager to have the elders' knowledge of the river recorded for reference and use by future generations, and this research project will be conducted in such a way that it will facilitate such an effort to preserve traditional knowledge.

This is not to say that there will not be significant challenges facing the researchers for the planned Effects of Tourism study. Some meeting participants posed questions as to how, or if, the National Park Service would respond to concerns expressed in the course of the project. Would their concerns be met with tangible policy outcomes, they asked, or would this be an empty exercise, as some believe past agency investigations of Native Alaskan perspectives have been? Having a clear answer to such a question is probably important, even if it is not the answer that some Native Alaskan representatives would want to hear; NPS staff may wish to consider the venues in which the data from the Effects of Tourism study might inform ongoing planning efforts for Alagnak Wild River. Similarly, some community representatives noted that the National Park Service and the Alaska Department of Fish and Game would have to collaborate and cooperate if the outcomes of this study, and other management efforts along the Alagnak, were to be fruitful. Certainly, the planned study will require ADF&G involvement, and possibly the review of work plans and other documents by certain ADF&G staff to insure consensus on the broad goals of the study. Some meeting participants suggested that community members may be reluctant to participate because of the long and complex political history between the Native communities and the NPS: "Your challenge is going to be getting people to open up. People will be gun shy as far as saying how [the Alagnak] should be used in the future" (quoted in Stickman 2008). Still, if the aims of the study are made clear, and potential Native Alaskan participants understand the values of the project – such as giving elderly river users a voice in planning for the river's future that they may not have otherwise – it is unlikely that this reluctance will be an insurmountable obstacle.

A number of documents pertaining to the planned ethnographic study are attached to this document as appendices. Most important of these, perhaps, is the Cooperative Ecosystem Studies Unit Task Agreement (with Phase 1 budget), which comprises Appendix 4. This task agreement provides a detailed description of project goals, general themes, methods, and timelines. As indicated in this task agreement, the precise emphases of the planned study must still be determined through the development of a work plan, a collaborative process that will involve the Principal Investigator, NPS staff, and Native Alaskan community representatives. Nonetheless, the current report, as well as past meetings with Native Alaskan representatives,

point toward certain potential avenues of investigation that should be considered when generating the work plan.

Clearly, some river users and NPS staff agree that the planned study should investigate certain aspects of "traditional ecological knowledge" pertaining to the Alagnak. Such "traditional ecological knowledge" (TEK) research in nearby, NPS-managed lands, have proven to be illuminating in multiple ways and, significantly, the Research Assistant for the Effects of Tourism study has played a central role in some of this research (e.g., Stickman et al. 2003). It is anticipated that users and seasonal residents of the Alagnak River corridor possess considerable knowledge of anadromous fish and their habitats that may contribute to the management of these resources. The planned study has the potential to obtain information such as long-term variability in fish runs and perceived causes and effects of these changes among multi-generational Alagnak River users, or perceived long-term variability in, and causes of, shoreline erosion, turbidity and other water quality indicators prior to the era of regular non-resident visitation. Other TEK topics are certain to be of interest to the park, such as traditions associated with brown bears and other threatening natural phenomena on the river, as well as methods for minimizing hazards associated with each. In turn, these topics can help set the context for discussions of more recent observations of the same phenomena by Native Alaskan communities during the era of regular non-resident visitation.

The planned study should direct particular attention to the cultural dimensions of the natural resource questions addressed here. The investigation should seek to document how non-resident visitation might affect the seasonality and intensity of Native Alaskan use. The research should seek to illuminate the factors underlying the relocation of subsistence hunting and fishing sites in recent times, in addition to simple economic and logistical concerns; where do people go and what effects might this have, culturally, economically, or environmentally? The research should also seek to explore the extent to which any documented "displacement" from the Alagnak River corridor might be a factor in disrupting the transmission of cultural knowledge between generations. The research might seek to determine whether and how visitor "disrespect" for fish or game is perceived, and whether residents view this disrespect as a contributing cause of the decline in fishing and hunting opportunities along the Alagnak. Do any of these observations

point toward management options that might be effective in addressing Native Alaskan perspectives through a more nuanced responsiveness to cultural concerns? The research will need to explore this question with the input of Native Alaskan river users as well as appropriate NPS and perhaps ADF&G staff.

Generally, the Effects of Tourism study shall involve a much deeper cultural assessment than what has been attempted here. The study will need to explore more broadly questions of pre-contact and early post-contact social relations and demographics; ceremonialism and cultural values related to particular resources or landscapes; and resurgent Native identity and its potential influences on the patterns of land and resource use in the study area. The research might seek to explore whether residents of communities still identify as being "from the Alagnak" in communities such as Levelock, Igiugig or Naknek, even generations after relocation, and to ascertain the scope and implications of this identity. Several past interviewees seem to be aware of many placenames along the river corridor that do not appear to have been thoroughly or adequately recorded (e.g., Wilson and Wilson 2000); placenames therefore may also warrant a more systematic review with residents of participating communities. All of these themes have implications for the management of both natural and cultural resources, and should be of importance in contextualizing the larger discussion of river use and visitor impacts. Sources included in the current report's bibliography provide points of entry into these issues, but a full treatment will require further literature review and, especially, ethnographic interviews with modern users of the river.

The planned study also will require a higher level of precision in identifying geographical locations and historical milestones in the Alagnak story than was attempted in the current research effort. The study needs to sort out, to the extent possible, the precise locations of trails, historical settlements, allotments, and cabins, as well as the chronology of their use. The location and consolidation of past settlements through the 20th century is still ambiguous in available ethnographic documentation, and requires further analysis. Similarly, in the course of the current research, there was no effort to obtain specific records pertaining to allotments or ANCSA records. There may be some value in reviewing the ANCSA records from the participating villages to illuminate the role of the Alagnak in the larger Native land claims

question. The planned study also will require that the researchers develop a more precise chronology for the development of lodges, charter operations, and other tourist amenities on the Alagnak. A database of such historical and geographical data will aid in the analysis of temporal and geographical patterns, and might facilitate mapping and GIS analysis.

Similarly, some Native Alaskan representatives called for detailed geographical information to be produced from the project to facilitate future land use planning and discussion: "One product I would like to see come out of this is a detailed map that incorporates all land owners along with the Park service, all the private land, and Native allotments" (quoted in Stickman 2008). "We want to go in there on our own land and know where that is" (quoted in Stickman 2008). On this geographical theme, some requested a larger, Basin-wide perspective, including discussions of downstream effects of visitation, near the Kvichak confluence or in the Alagnak River headwaters, especially at Nonvianuk and Kukaklek Lakes. No doubt, the study will also need to look at how visitation might affect Native Alaskan lives and practices outside of the Alagnak River corridor, such as in the case of economic or cultural effects that are manifested within the individual villages.

The planned research should draw methodological guidance from other traditional ecological studies that have been conducted in the region (e.g., Stickman, et al. 2003). Central to this study will be repeated ethnographic interviews as well as less formal exchanges including possible participant-observation research. On-site visits will be essential to understanding the importance of the Alagnak and the nature of visitor impacts: as community representatives said to project Principal Investigator and Research Assistant, Douglas Deur and Karen Stickman, "Bring your sleeping bags next time and we'll go to Branch River and then we'll talk" (quoted in Stickman 2008). This sentiment is repeated in a number of earlier ethnographic interviews, in which residents urge that researchers begin with the use of ethnographic interviews and map research, but state that visiting the river with past and present users will be key to truly documenting uses of the landscape (Wilson and Wilson 2000; Morseth 2000).

Community representatives who participated in planning discussions for the Effects of Tourism study indicated that, ultimately, they wanted to see products emerge from this study that the

community can value and use. "One goal is to make sure this is understandable [to community members]" (quoted in Stickman 2008). Conventional technical reports, alone, are not seen as sufficient to meet that goal. Some expressed interest in receiving copies of photos, files, and minor reports that might help them build their own collection of materials pertaining to the Alagnak: "I know [the NPS] is doing archeology digs. Are they done? The history [they're gathering], I would like to see that… I am interested in old pictures too, make copies of them" (quoted in Stickman 2008). For the planned study, community participants in this project generally agreed that they would like to see a "book that communities can use" coming out of the project. They expressed the view that a book-length report, and quite possibly a published book, that provided an overview of cultural uses of the River would be an asset to the communities that use the Alagnak, provided that the book is written in a manner that residents can understand, appreciate, and use to keep their cultural and subsistence traditions relating to the river intact. For this reason, the attached Task Agreement in Appendix 4 includes a publishable product from the research as one of its deliverables.

Finally, the research should be conducted in such a manner that it will help foster enduring positive relationships between Native Alaskan communities that use the Alagnak and the NPS. Some meeting participants were eager not only to engage in government-to-government consultation on this and other projects, but seek an enduring and less formalized relationship between their community and the NPS: "Let the Park Service know we want to invite them, bring in people for a community visit" (quoted in Stickman 2008). Others discussed the importance of the kind of documentation that will be produced in the "Effects of Tourism" study in park interpretation; they stressed the need for interpretative training for resident users of the river, so that residents can partner with the NPS and serve as active presenters of their culture to outside audiences. The planned study might help to develop the themes, content, and procedures for such an effort. Through this process, they suggest, the will help foster visitors' respect for this landscape that has sustained their ancestors for generations, while also forging respectful and enduring relationships with the agency that now manages this unique place. Certainly, the National Park Service would share many of these objectives and benefit from a study that helps to foster positive relationships with each of the communities that still visit, use, and care deeply about the Alagnak River.

SOURCES

Contributing Resident Users

The following individuals provided valuable information and perspectives in the course of telephone calls, meetings, or informal interviews, that were incorporated into the current report:

1)	April Alexie	Levelock
2)	Randy Alvarez	Igiugig
3)	Shirley Andrew	Levelock
4)	Clara Angasan	King Salmon
5)	Nola Angasan	Naknek
6)	Ralph “Bucko” Angasan, Jr.	King Salmon
7)	Steven Angasan	Naknek
8)	Brian Apokedak, Sr.	Levelock
9)	Ida Apokedak	Levelock
10)	Jenny (Mary) Apokedak	Levelock
11)	Peter Apokedak, Sr.	Levelock
12)	Eddie Clark	Naknek
13)	Doug Finney	King Salmon
14)	Roylene Gottschalk	Naknek
15)	Sylvia J. Mejorado	Naknek
16)	Ruth N. Monsen	King Salmon
17)	Dale Myers	Naknek
18)	Dan O’Hara	King Salmon
19)	Patrick Patterson, Jr.	Naknek
20)	Al Ring	Naknek
21)	Bonnie Russ	Levelock
22)	Dan Salmon	Igiugig
23)	Gene Sanderson	Naknek
24)	Gustie Tallekpalek	Levelock

25)	Joni Vay	King Salmon
26)	George Wilson, Jr.	Levelock/Igiugig

In addition, the following individuals have discussed uses of Alagnak Wild River in the course of ethnographic interviews conducted during the period from 1995-2002, and their information has been incorporated into the current report:

1)	Randy Alvarez (2002)	Igiugig
2)	Dallia Andrew (1995, 2000)	Igiugig
3)	Mike Andrew, Sr. (1995, 2000)	Igiugig
4)	Michael Andrew, Jr. (2002)	Igiugig
5)	Ella Mae Charley (1998)	Levelock
6)	Evan Chukwak (1998)	Levelock
7)	Gabby Gregory (1999)	Kokhanok
8)	Mary Nelson (1997)	Kokhanok
9)	Mary Ann Olympic (1995, 2000, 2002)	Igiugig
10)	Danny Roehl (1997)	Kokhanok
11)	Dan Salmon (2002)	Igiugig
12)	George Setuk (1998)	Levelock
13)	Alex Tallekpalek (1998)	Levelock
14)	John Tallekpalek (1998)	Levelock
15)	Mary Tallekpalek (1998)	Levelock
16)	Anne Wilson (1995, 2000)	Igiugig
17)	George Wilson, Sr. (1995, 2000)	Igiugig
18)	George Wilson, Jr. (2002)	Igiugig
19)	Carvel Zimin, Sr. (1998)	South Naknek

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Appendices

Appendix 1

Contact Information for Communities
Participating in the Current and Planned Ethnographic Studies

ALAGNAK RIVER - CONTACTS

IGIUGIG
(POP. 50 – 83% NATIVE ALASKAN)

VILLAGE CORPORATION - IGIUGIG NATIVE CORPORATION
P.O. BOX 4009
IGIUGIG, AK 99613-4009
PHONE 907-533-8001
FAX 907-533-3217
WEB HTTP://WWW.IGIUGIG.COM/

VILLAGE COUNCIL - IGIUGIG VILLAGE COUNCIL
P.O. BOX 4008
IGIUGIG, AK 99613
PHONE 907-533-3211
FAX 907-533-3217
E-MAIL IGIUGIG@STARBAND.NET
WEB HTTP://WWW.IGIUGIG.COM

KING SALMON
(POP. 385 – 30% NATIVE ALASKAN)

VILLAGE COUNCIL - KING SALMON VILLAGE COUNCIL
P.O. BOX 68
KING SALMON, AK 99613-0068
PHONE 907-246-3449
FAX 907-246-3553

KOKHANOK
(POP. 174 – 87% NATIVE ALASKAN)

VILLAGE COUNCIL - KOKHANOK VILLAGE COUNCIL
BOX 1007
KOKHANOK, AK 99606
PHONE 907-282-2202
FAX 907-282-2264
E-MAIL KOKHANOK_VC@YAHOO.COM

LEVELOCK
(POP. 71 – 95% NATIVE ALASKAN)

VILLAGE CORPORATION - LEVELOCK NATIVES LIMITED
P.O. BOX 109
LEVELOCK, AK 99625
PHONE 907-287-3040
FAX 907-287-3022

VILLAGE COUNCIL - LEVELOCK VILLAGE COUNCIL
P.O. BOX 70
LEVELOCK, AK 99625
PHONE 907-287-3030
FAX 907-287-3032
E-MAIL LEVELOCK@STARBAND.NET

NAKNEK
(POP. 614 – 47% NATIVE ALASKAN)

VILLAGE CORPORATION - PAUG-VIK INCORPORATED, LIMITED
P.O. BOX 61
NAKNEK, AK 99633
PHONE 907-246-4277
FAX 907-246-4419
E-MAIL ADMIN@PVIL.COM

VILLAGE COUNCIL - NAKNEK VILLAGE COUNCIL
P.O. BOX 106
NAKNEK, AK 99633-0106
PHONE 907-246-4210
FAX 907-246-3563
E-MAIL NNVCAK@BRISTOLBAY.COM

REGIONAL

REGIONAL NATIVE CORPORATION - BRISTOL BAY NATIVE CORPORATION
800 CORDOVA STREET, SUITE 200
ANCHORAGE, AK 99501-6299
PHONE 907-278-3602
FAX 907-276-3924
E-MAIL HAWKINST@BBNC.NET
WEB HTTP://WWW.BBNC.NET

REGIONAL NATIVE NON-PROFIT - BRISTOL BAY NATIVE ASSOCIATION
P.O. BOX 310
DILLINGHAM, AK 99576
PHONE 907-842-5257
FAX 907-842-5932
E-MAIL TERRYH@BBNA.COM
WEB HTTP://WWW.BBNA.COM

SCHOOL DISTRICT FOR IGIUGIG AND LEVELOCK - LAKE & PENINSULA SCHOOLS
P.O. BOX 498
KING SALMON, AK 99613
PHONE 907-246-4280
FAX 907-246-3055

E-MAIL SATWATER@LPSD.COM
WEB HTTP://WWW.LPSD.COM

SCHOOL DISTRICT FOR NAKNEK AND KING SALMON - BRISTOL BAY BOROUGH SCHOOLS
P.O. BOX 169
NAKNEK, AK 99633-0169
PHONE 907-246-4225
FAX 907-246-6857
E-MAIL RHEBHARDT@NNK.GCISA.NET
WEB HTTP://WWW.THEBOROUGH.COM/SCHOOLS.HTML; HTTP://ALASKA.IHIGH.COM/BRISTOLBAY/

REGIONAL DEVELOPMENT - SOUTHWEST ALASKA MUNI. CONF.
3300 ARCTIC BLVD. #203
ANCHORAGE, AK 99503
PHONE 907-562-7380
FAX 907-562-0438
E-MAIL WAYERS@SWAMC.ORG
WEB HTTP://WWW.SOUTHWESTALASKA.COM

CDQ GROUP - BRISTOL BAY ECON. DEV. CORP.
P.O. BOX 1464
DILLINGHAM, AK 99576-1464
PHONE 907-842-4370
FAX 907-842-4336
E-MAIL SOCKEYE1@NUSHTEL.COM
WEB HTTP://WWW.BBEDC.COM

BOROUGH

BOROUGH FOR IGIUGIG AND LEVELOCK - LAKE & PENINSULA BOROUGH
P.O. BOX 495
KING SALMON, AK 99613
PHONE 907-246-3421
FAX 907-246-6602
E-MAIL LPBORO@BRISTOLBAY.COM
WEB HTTP://WWW.LAKEANDPEN.COM

BOROUGH FOR NAKNEK AND KING SALMON - BRISTOL BAY BOROUGH
P.O. BOX 189
NAKNEK, AK 99633
PHONE 907-246-4224
FAX 907-246-6633
E-MAIL CLERK@THEBOROUGH.COM
WEB HTTP://WWW.THEBOROUGH.COM

Appendix 2

Effects of Tourism And Visitor Use On Local Native Communities And Subsistence Activities, Alagnak Wild River: A Project Proposal -

the original Project Proposal for Planned Ethnographic Project,
"*Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River*"

Effects of Tourism And Visitor Use On Local Native Communities And Subsistence Activities, Alagnak Wild River:

A Project Proposal

by Michele Morseth

Tourism, especially ecotourism, is a fast growing industry with a variety of economic, sociocultural, and environmental impacts which is affecting the Katmai coast, the Alagnak river and other park areas in Alaska. There has not been an ethnographic study of the effects of tourism and visitor use (including sport fishing, hunting fly-in bear viewing, commercial photography, etc.) on indigenous cultures, subsistence activities or resources. Subsistence use is protected by ANILCA yet effects of consumptive and non-consumptive visitor use are unknown.

This two-year preliminary ethnographic study will examine the effects of tourism activities (both consumptive and non-consumptive use) on subsistence activities and village life including effects on traditional land and resource use activities and potential clashes of cultures and values in the Alagnak Wild River area of KATM. It is intended that this study will be developed as a prototype to be applied in other park areas with high visitor use, as needed.

Consequences of Inaction

Tourism in many forms has greatly increased along the Katmai coast and Alagnak Wild River, impacting natural and cultural resources in ways that have only been minimally documented. Cultural conflict between visitors and northern peoples can manifest itself in social and physical impacts for residents and unpleasant visitor experiences. We have no clear idea of what impacts increased tourism might have on i) subsistence activities including methods of taking fish and game and patterns of land use, ii) cultural values and beliefs, iii) archaeological sites, iv) availability of subsistence resources, v) local economies, and vi) carrying capacity of the natural resources and villages impacted. Native groups have voiced concerns but have not been identified or targeted by a special ethnographic study. The study is essential to gather baseline information in order to articulate these resource concerns with NPS manage policy to effectively protect and preserve resources over the long term.

Problem Statement

Tourism, particularly ecotourism, is a fast growing industry affecting the Katmai coast and the Alagnak Wild River and many other park areas in Alaska. No one has studied indepth the effects of tourism and visitor use (including sport fishing and hunting, fly-in bear viewing, commercial photography, etc.) on indigenous cultures, subsistence activities, or resources. The spatial dimensions of this increased visitation has also not been examined in the context of subsistence use of the same areas. Many rural economies rely heavily on the subsistence sector of their economy, yet there has not been any real cost/benefit analysis in terms of the effects on the mixed wage/transfer payment and subsistence economies of park associated villages nor has anyone weighed the social costs against the potential economic benefits.

The tourist industry, based primarily on the natural and cultural values of the park, is economically the second most important industry in the region, surpassed only by commercial fishing. Approximately 100 Incidental Business Permits were issued to operators in KATM last year. The Alagnak River is a major focus of recreational use (sport fishing and hunting, rafting) as well as subsistence use. Within the Alagnak River Corridor there are 12 Native allotments and 6 parcels selected and/or conveyed to Native corporations. Residents of Levelock, Igiugig, Naknek, South Naknek, and Clark's Point use the Alagnak River for fishing, trapping, and hunting.

We have no clear idea of what impact the visitor activities might have on local cultures, including cultural values and beliefs, cultural properties, subsistence resources, or ethnographic resources. This is of concern to Native groups, who believe, for example, that when a sport hunter kills a lead caribou, this will cause migration patterns to change thereby having immediate effects on subsistence practices. It is known that cultural sites, exposed by erosion along the coast are habitually visited by visitors to collect artifacts. Many other such concerns of Native groups have been voiced but not identified or targeted by a special ethnographic study. The study is essential to gather baseline information in order to articulate these resource concerns with NPS management policy to effectively protect and preserve resources over the long term.

This issue is complex and indigenous people of Alaska have begun to voice their concerns, yet there are many unknowns. Questions include:

1) What are the direct effects to subsistence use and the economy from an increase in visitor use in crucial areas?
2) What are these crucial areas where subsistence use and tourism overlap within park areas?
3) How are fish and animal populations or movements affected near villages and subsistence camps that rely on these animals for food or for tourist viewing?
4) How do rural communities cope with the influx of visitors who bring with them their own set of values and are perhaps critical of village lifeways?
5) How do young Native people internalize the conflicts brought by dual value sets if communities are trying to accommodate the foreign values of tourists?
6) How can impact to cultural and natural resources and subsistence economies be minimized while maximizing visitor experience?

The growth of visitor use threatens to change the natural and cultural resources of park areas before any baseline data can be gathered and threatens to cause conflicts between traditionally associated Native groups and non-local visitors.

Description of Recommended Project

This ethnographic study will examine the effects of tourism activities (both consumptive and non-consumptive use) on subsistence activities and village life including effects on traditional land and resource use activities, potential clashes of culture and values, and effects on cultural transmission in the Alagnak Wild River area, KATM. The Alagnak area has been selected as the initial focus of the study because of both the high visitor and subsistence use along its corridor. It is intended that this study will be developed as a prototype to be applied in the KATM coastal unit and in other park areas with high visitor use, as needed.

Appendix 3

NPS Project Management Information System (PMIS) Statement
for Planned Ethnographic Project,
"*Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River*"

PMIS Statement for Planned Project,
"Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River"

Project Identification - PMIS 55529	
Project Title: Evaluate Effects of Tourism and Visitor Use on Native Communities and Traditional Activities, ALAG	**Project Total Cost:** $183,182.00
Park/Unit: Katmai National Park & Preserve	**Region:** Alaska
States: AK	**Congressional District:** AKAL
Old Package Number:	**Reference Number:** KATM-C-030
Project Type: Non-facility , Multi-component	**Financial System Package Number:** KATM 055529
Contact Person: Jeanne Schaaf	**Contact Phone:** 907 644-3640

Project Status - PMIS 55529	
Date Created: 12/13/99	**Review Status:** Region-Reviewed on 02/13/2007
Date of Last Update: 01/29/07	**Updated By:** Jeanne Schaaf

Project Narratives - PMIS 55529

Description

Project Description: This three-year preliminary ethnographic study will examine the effects of tourism activities (both consumptive and non-consumptive use) on traditional activities and village life including effects on traditional land and resource use activities and potential clashes of values in the Alagnak Wild River area of KATM. It is intended that this study will be developed as a prototype to be applied in other park areas with high visitor use, as needed. Tourism, including eco-tourism, typically develops without taking into account needs and priorities of resident communities. This project aims to investigate the impacts visitor activities might have on the Central Yupik and Dena¿ina residents on or around the Alagnak River. The research questions include: What might tourist impact might be on 1) subsistence activities including methods of taking fish and game, and patterns of land use, 2) cultural values, beliefs, and identities, 3) cultural properties, 4) subsistence resource availability or, 5) local economies? Native groups have voiced concerns but have not been identified or targeted by a special ethnographic study. The study is essential to gather baseline information in order to articulate these resource concerns with NPS management policy to effectively protect and preserve resources over the long term.

Justifications

Project Justification: Tourism, particularly ecotourism, is a fast-growing industry affecting the Katmai coast, and many other park areas in Alaska. The growth of visitor use threatens to change the natural and cultural resources of park areas before any baseline data can be

gathered. The Alagnak River is a major focus of recreational use as well as traditional use. This year, there are thirty-three operators licensed to guide sport fishing and/or bear-viewing trips along the river, and eight operators that may lead day hikes; those visitors who go backpacking, or ride the river on rafts or in kayaks, remain uncounted. Total numbers of visitors are thus impossible to know, but reach into the thousands each season. Flight seeing is also something that is not regulated, and the impacts of the noise of low flights on animal and human populations are unknown. Within the Alagnak Wild River corridor there are twelve Native allotments and six parcels selected and/or conveyed to Native corporations. Residents of Levelock, Igiugig, Naknek, South Naknek, and Clark's Point use the Alagnak River for fishing, trapping and hunting. There has not been an ethnographic study of the effects of tourism and visitor use (including sport fishing, hunting, fly-in bear viewing, commercial photography, etc.) on indigenous cultures, traditional activities, or resources.

Measurable Results

Project Methods: The first two years of the study will involve review of available historic and ethnographic literature for the region, tourism literature, and other related theoretical literature; further refinement of the research design; development of interview questions; and establishing relationships with study communities. Carefully framed interview questions will be help to elicit responses relevant to the research questions outlined above. The Park Anthropologist, with local assistance, will conduct interviews with key consultants in Levelock, Kokhanok, Iguigig, King Salmon and South Naknek. Taped interviews will be duplicated, transcribed, and coded. The third year of the project will be used for data analysis, follow-up research, and report preparation and publication. Project collections will be cataloged and archived. Duplication of tapes and transcriptions will be sent to UAF AK Native Language Center. Photographs will be archived.

Outcomes and Products There are multiple outcomes for this study. First, it will provide the NPS with valuable ethnographic data for this particular region, with emphasis on the interface between tourists and local residents. Especially in times of rapid cultural change, such baseline ethnographic data is critical. Second, it will provide Park managers with important information that can inform management decisions in relation to concessionaires, numbers of permits issued, involvement of members of local communities in decision-making processes, and ongoing communications between all involved parties. Third, the project can be used as a prototype for similar tourist-impact research in other Parks. As with Alagnak, most Park areas badly need such studies in order to assess current impacts and manage for future sustainability of tourist activities. Fourth, the research process will contribute to building working relationships between Park staff and area residents, an outcome that is always desirable. Fifth, hopefully such studies will contribute to making local residents both more visible and more comprehensible to visitors, concessionaires, and Park Staff.

Products include the final report; archived materials such as taped interviews, photos, printed matter and related objects; shorter syntheses of the report for managers, concessionaires and others; and possible oral and visual products such as power point slide shows for related communities.

Project Activities, Assets, Emphasis Areas and GPRA Goals - PMIS 55529	
Activities • Interpret and Inform • Protection • Research	**Assets** • Campground • Ethnographic Resource • Historic Structure
Emphasis Areas • Alaska Subsistence Management • Compliance • Cultural Resource Protection • Education	**GPRA Goals and Percent Values** • Misc. Park-Specific Goals (Preserve Resources), 0% • Misc. Park-Specific Goals (Research and Study), 0% • Cultural landscapes , 20% • Ethnographic resources , 60% • Visitor Understanding , 20%

Project Prioritization Information - PMIS 55529	
Unit Priority: 9 **IN FY** 2007	**Unit Priority Band:** HIGH

Appendix 4

CESU Task Agreement and Phase 1 Budget
for Planned Ethnographic Project,
"*Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River*"

(a signed, final copy of this document is available from the Alaska Regional Office of the NPS, Anchorage)

Pacific Northwest Cooperative Ecosystem Studies Unit
Task Agreement
National Park Service

TASK AGREEMENT NO.:	**COOPERATIVE AGREEMENT NO.:**	**EFFECTIVE DATES:**
Jxxxxxxxxxxxx	H8W07060001	09/20/08 to 9/30/13

COOPERATOR: Portland State University

PROJECT TITLE: Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River

FY FUNDING: 2008 **ACCOUNT #** 9796-0810-CCA $xxxxx
9796-0802-UEE $xxxxx **NOT TO EXCEED:** $xxxxxx

PROJECT ABSTRACT: The National Park Service and Portland State University will collaborate in the development of a study of possible visitor impacts on Native traditional activities in the Alagnak Wild River corridor, in south-central Alaska. This study will document historic and contemporary use of the Alagnak River corridor by Native Alaskan communities. It will help to illuminate Alaskan Native communities' traditional ecological knowledge pertaining to the Alagnak River and riparian corridor. The study will also document any impacts, both direct and indirect, of non-resident visitation of Alagnak River upon Native Alaskan communities, including their uses of lands and resources within the Alagnak River corridor. The research methodology will involve a review of the literature and of archival materials, but will rely primarily on ethnographic interviews. Researchers will work closely with participating communities in developing methodologies and products, to ensure compatibility with communities' needs and preferences.

SCOPE OF WORK: See attached.

This Task Agreement is subject to all the terms and provisions of the Pacific Northwest Cooperative Ecosystem Studies Unit Cooperative Agreement.

PORTLAND STATE UNIVERSITY

Martha Kierstad
Assistant Vice-Provost
Office of Research and Sponsored Projects

Date

NATIONAL PARK SERVICE
PACIFIC WEST REGIONAL OFFICE

Lilette Baltodano
Contracting Officer

Date

TASK AGREEMENT NO.:xxxxxxxxx

Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River

This Task Agreement by and between the National Park Service (NPS) and Portland State University (PSU) is issued against the Cooperative Ecosystem Studies Unit Cooperative and Joint Venture Agreement, H8W07060001, for the purpose of mutual assistance in conducting a project entitled "Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River." Unless otherwise provided herein, the terms of the Cooperative Agreement apply to this Task Agreement.

ARTICLE I – BACKGROUND AND OBJECTIVES

The Alagnak (or "Branch") River, home to all five species of Pacific salmon, rainbow trout, arctic char, arctic grayling, and northern pike, has long served as a subsistence fishing river for Native Alaskan communities of the Alaska Peninsula region. Since time immemorial, these communities have maintained temporary residences along the Alagnak, fishing in the river while also hunting and gathering plant materials along the riparian corridor. Residents of past seasonal communities along the Alagnak relocated to permanent settlements, such as in the modern towns of Igiugig, Kokhanok, Levelock, King Salmon, Naknek, and South Naknek, in the early 20th century. Some of these families maintain cabins and Native allotments along the Alagnak River.

Following the passage of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA, Public Law 96-487), the Alagnak Wild River (ALAG) was designated as a Wild River under Title VI, Section 601(25) and 601(44) of that Act. Alagnak Wild River was created, in part, to preserve the upper 56 miles of the river in a free-flowing condition, and to protect the river and its immediate environments for the benefit and enjoyment of present and future generations. The river is managed free of impoundments and diversion, inaccessible by road, and its shorelines contain only "primitive" visitor services. In recent years, ALAG has become a very popular fly-in recreational fishery. As this fishery has developed, Native Alaskan communities have reported to NPS representatives a number of direct and indirect impacts to their historical uses of Alagnak River.

NPS resource managers require information about river corridor recreational users' potential impacts upon existing Native Alaskan communities and their uses of Alagnak River, to make decisions about the appropriate balance between competing mandates and disparate user groups. The NPS Organic Act charges the agency with managing, "by such means and measures as conform to the fundamental purpose to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment for the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." In addition, various NPS mandates require documentation and management of cultural resources and places that are of enduring cultural significance to resident populations. These mandates include, but are not limited to the American Indian Religious Freedom Act (AIRFA)of 1978 (P.L. 95-341); the Archeological Resources Protection Act (ARPA) of 1979, as amended (P.L. 96-95); the National Historic Preservation Act (NHPA) of 1966, as amended (P.L. 96-515); Executive Order 13007; and, Release No. 5 of the Cultural Resource Management Guideline (NPS-28), and its supplements.

Data describing recreational use during the summer, largely by non-local visitors, were collected by systematic counting and observation, and by the administration of mail questionnaires.[1] In addition, as the current project is in its planning phases, a summary study report of Native Alaskan uses of Alagnak Wild River, based principally on literature review, is being completed under a separate CESU task agreement.[2] Despite these studies, documentation of local residents' uses of the Alagnak River corridor, as well as potential visitor impacts on these uses, is insufficient to support NPS land and resource management mandates. Simultaneously, the Native Alaskan communities associated with Alagnak Wild River have expressed an interest in documenting their cultural knowledge of this area, both for the sake of cultural preservation and providing them a more credible voice in future natural resource management planning. The current study is designed to document information that will be of value to NPS resource managers, while also gathering information that will aid Native Alaskan communities preserve their knowledge of the Alagnak River corridor. Preliminary meetings Native Alaskan residents indicate they wish to participate directly in the research process, by learning the skills of ethnographic documentation and then employing these skills in helping to gather data to support the project's goals; to the fullest extent possible, this research project will accommodate this innovative, community-directed approach to ethnographic research.

This project is conceptualized as a five-phase study. Current financial assistance is only adequate to support Phases I-II, but it is anticipated that the NPS will provide additional financial assistance if the initial work is deemed satisfactory and funds are available. Phase I of the current study will involve a needs assessment, including a review of existing materials, communications with NPS staff and Native Alaskan representatives regarding project goals and methodologies, and the development of a work plan that will incorporate findings from these investigations. Phase II will involve initiating ethnographic research through the completion of Human Subjects documentation, the completion of any tasks required to obtain research permissions from participating Native Alaskan communities, and the development and implementation of training sessions for participating communities and appropriate NPS staff in methods of ethnographic documentation. If funds are available, Phase III will involve participation in ethnographic research, both through providing technical guidance to research "teams" made up of trained residents and/or the NPS research assistant, as well as through participation in original ethnographic interviews. Phase IV will involve development of a technical report that thematically summarizes project findings. Phase V will involve generating publications for public and/or Native Alaskan use, presenting project findings in a format that is publicly accessible.

An important aspect of this Task Agreement is the mutual benefit derived from the PSU and NPS cooperative relationship. The primary objective and purposes of this Task Agreement are those stated in Article I and throughout the task agreement. A secondary objective, however, is to foster the development of an academic program at PSU that is responsive to the search for practical solutions to the set of complex issues confronting contemporary National Park and other federal land managers. This project will enhance the knowledge base, and hence the capacity at PSU for development of technical outreach programs that are relevant to cultural and natural resource management in units of the National Park System and in many other federally managed areas. This collaborative project will also contribute to the

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[1] These include the Spatial and Temporal Patterns of Use in the Alagnak River Corridor NPS/PWRUW-NRTR 2005-02 NPS Katmai D-96, February 2005 [Zweibel, B. and Vande Kamp, M.] and The Alagnak Wild River Recreational Visitor Survey [Spang, N., Vande Kamp, M., & Johnson D., Technical Report NPS/CCSOU/NRTR-2006-02 NPS D-3, February 2006]. Both are reports of the Protected Area Social Research Unit, NPS Pacific Northwest Cooperative Ecosystem Studies Unit, College of Forest Resources, University of Washington, Seattle, WA 98195-2100

[2] Entitled "Alagnak Wild River Visitor Use Project: Alagnak Wild River Resident Users Study," this report is authored by Dr. Douglas Deur of the Protected Area Social Research Unit, NPS Pacific Northwest CESU, PI for this project.

capacity of PSU to develop and deliver curricula pertinent to the real-world job demands students will face after leaving academe.

ARTICLE II – STATEMENT OF WORK

A. PSU will:

1. *PHASE I*

    a. Collaboratively undertake a study titled "Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River," as described in Attachment I throughout this Task Agreement.
    b. Appoint Douglas Deur as Principal Investigator (PI).
    c. Coordinate a planning process for carrying out the research project, including communicating with NPS staff, Native Alaskan village and/or corporation representatives, Alaska Department of Fish and Game (ADF&G) staff, and other interested parties and stakeholders, regarding project goals and products, as well as identifying and compiling available documentation from published and unpublished sources of relevance to the project as described in Article VI and Attachment I
    d. On the basis of the planning process outlined in c. above, collaborate with the NPS ATR in the preparation of a detailed work plan and research strategy for Phase II and III as described in Article VI. Upon acceptance by the PI and the NPS ATR, this work plan will be considered integral to this Task Agreement.
    e. Be available for questions and requests emerging from the review of this work plan by the NPS ATR and other appropriate NPS staff, ADF&G staff, Native Alaskan village and/or corporation representatives and other interested parties.
    f. Produce a final draft of the project work plan that is responsive to the review comments of the NPS ATR and other appropriate NPS staff, Native Alaskan village and/or corporation representatives and other interested parties and stakeholders including ADF&G.
    g. During all five phases of the project, cooperate with the NPS ATR to ensure that the conduct of the project complies with the "NPS Interim Guidance Document Governing Code of Conduct, Peer Review, and Information Quality Correction for National Park Service Cultural and Natural Resource Disciplines," and any and all subsequent guidance issued by the NPS Director to replace this interim document.

2. PHASE II

    a. Complete all tasks required for UW Human Subjects review and approval of the proposed research.
    b. Comply with UW Human Subjects guidelines throughout the project duration.
    c. Complete tasks required to obtain consent to conduct research, as needed, from participating Native Alaskan villages and/or corporations.
    d. Develop and carry out training sessions on ethnographic documentation methods and protocols for residents of participating communities and any participating NPS staff who wish to participate in future ethnographic documentation efforts.
    e. As appropriate, submit revised work plans on an annual basis as described in Article VI. When accepted by the PI and the ATR, these revised work plans will be considered integral to this Task Agreement.

f. Identify a team, as needed, to accomplish all Phase II-V tasks. The PI will assume a team leadership position by providing coordination and oversight throughout the project duration. In consultation with the NPS ATR, the PI may opt to enlist the assistance of PSU staff or hired consultants to complete specific project tasks; the PI will supervise the work of individuals enlisted in this manner. Moreover, the PI will serve as a coordinator, providing guidance as needed to NPS staff that are enlisted to assist on project tasks and coordinating research activities that involve multiple project participants.

3. PHASE III (contingent on additional financial assistance)

   a. Generate a modification to this task agreement that accommodates additional funds and provides additional detail, as necessary, to the language pertaining to Phases III-V as currently contained in this task agreement.
   b. Provide technical guidance to research "teams" made up of trained residents and/or the NPS research assistant and other appropriate NPS staff.
   c. Conduct original ethnographic interviews with residents of participating communities regarding the primary themes of the study.
   d. Conduct additional literature review, as deemed appropriate by the project PI and ATR, to fill in any significant information gaps identified in Phases I-III.
   e. Assemble a team as needed to accomplish Phase III tasks.

4. PHASE IV (contingent on additional financial assistance)

   a. Analyze findings of literature review and ethnographic documentation phases, and produce an integrated, thematic draft report that presents project findings.
   b. Be available to NPS representatives and Native Alaskan communities, as well as other interested parties enlisted to review the document such as ADF&G staff, for discussion or clarification during their review and examination of this draft report.
   c. Produce an integrated thematic final report that incorporates the review comments of NPS staff, Native Alaskan communities' representatives, Alaska Department of Fish and Game staff, and other interested parties enlisted by the NPS to review the document, to the extent possible. This thematic document will discuss historical and contemporary uses of the Alagnak Wild River corridor by Native Alaskans, and outline any impacts of non-resident visitation to this river corridor. In addition, this report will thematically address elements of Native Alaskan traditional ecological knowledge pertaining to the Alagnak River corridor that might be relevant to the major themes of the report. The report will also briefly address resource management options identified by Native Alaskan participants that might minimize or mitigate any negative impacts of non-resident visitation as outlined in the project report, and will identify topics that may require additional research.
   d. Provide participating communities with an opportunity to learn about the project and its findings through a mutually agreed upon activity such as a community lecture, to be determined by the PI, NPS ATR, and NPS research assistant collaboratively.
   e. Assemble a team as needed to accomplish Phase IV tasks.

5. PHASE V (contingent on additional financial assistance)

   a. Communicate with representatives of the NPS and participating Native Alaskan communities regarding appropriate formats and venues for publication of project findings.
   b. Using excerpts from the project report and/or other project materials, generate no less than one publishable document that will be used to disseminate project findings, and initiate steps to seek publication of this/these document(s).

c. Coordinate with appropriate NPS staff and participating Native Alaskan communities to determine the suitability of particular content for the above publication(s).
d. Participate with appropriate NPS staff, participating Native Alaskan communities, and other interested parties in the review of a preliminary draft of this/these publication(s).
e. Respond to reviewer comments on this draft publishable document and produce a revised version that is suitable for submission to a publication outlet.
f. Submit this publication to a publication outlet.
g. Collaborate with the NPS ATR in a 60-day wrap-up period following the due date of the last project product.
h. Clearly identify and acknowledge the NPS and other partner agencies, organizations and individuals in any published material produced under or directly derived from this project.
i. Compile a project archive consisting of copies of audio or visual recordings, field notes, informed consent form, as well as any photographs, maps, and other materials gathered in the course of the study.

B. The NPS will:

1. Provide financial assistance to PSU as provided in Article V. The budget, included as Attachment I, is incorporated into this Task Agreement.
2. Assign LACL Cultural Resources Chief, Jeanne Schaaf, as the project ATR. The ATR will interact directly with the PSU PI, collaborate as appropriate on research tasks, and contribute to management decisions throughout the duration of the project.
3. Collaborate with the PI in producing the detailed work plans, and specifically assist the PI in the identification of archival materials, recruitment and oversight of any other NPS staff participating in the project, coordination with Native Alaskan as well as State of Alaska and federal agency representatives.
4. Facilitate review of the draft work plan with appropriate NPS staff, ADF&G staff, Native Alaskan village and/or corporation representatives and other interested parties and stakeholders.
5. Inform the PI of the specific activities required to comply with the "NPS Interim Guidance Document Governing Code of Conduct, Peer Review, and Information Quality Correction for National Park Service Cultural and Natural Resource Disciplines" and any and all subsequent guidance issued by the NPS Director to replace this interim guidance.
6. As appropriate coordinate efforts to comply with the "NPS Interim Guidance Document Governing Code of Conduct, Peer Review, and Information Quality Correction for National Park Service Cultural and Natural Resource Disciplines," and any and all subsequent guidance issued by the NPS Director to replace this interim document
7. Assign NPS staff as needed to assist in identifying, collecting and organizing research related materials and mapping of inventoried properties. Communicate the names and contact information for these individual to the PI in a timely fashion.
8. Assign Karen Stickman, Cultural Anthropologist for Lake Clark National Park and Preserve, to serve as the project research assistant; in addition to assisting substantively with the project research and participating in "community research team" interviews, Ms. Stickman will serve as coordinator with representatives from participating Native Alaskan villages and corporations as needed to expedite research efforts.
9. Provide the PI and his team with access to NPS files, archives and collections as necessary to inform the research and writing effort for the Study at mutually agreed upon times.
10. Collaborate as appropriate in the analysis of information gathered in the course of the study.
11. Provide review comments and recommendations on the draft and final reports in a timely fashion.
12. Coordinate official communications with participating Native Alaskan villages and corporations, as well as any other state and federal agencies that might have an interest in this research; this

will include the coordination of the review and examination of the draft publication(s) and its/their components.

13. Provide review comments and recommendations on the bibliography and the project archive in a timely fashion.
14. Clearly identify and acknowledge PSU in all published material produced under or directly derived from this task agreement.
15. Provide stipends and/or audio/visual recording devices as appropriate to participants in the "community research teams."
16. In consultation with the project PI, organize meetings with NPS/ALAG staff and other project participants as needed throughout the project duration.
17. Collaborate with PSU in a 60-day wrap-up period following the due date of the final report.
13. As specified in Article VI, distribute electronic or hard copies of progress reports, work plans and revised annual work plans as necessary, and draft and final reports as specified in Article VI directly to cooperating partner agencies.

ARTICLE III – TERM OF AGREEMENT

This Task Agreement is effective on September 20, 2008 and will expire September 30, 2013.

ARTICLE IV – KEY OFFICIALS

A. For the NPS

ATR

Jeanne Schaaf
Chief Cultural Resources
Lake Clark National Park and Preserve
National Park Service
240 West 5th Avenue Suite 236
Anchorage, AK 99501
907-644-3640 (V)
Jeanne_Schaaf@nps.gov

Other Primary Project Participant

Karen Stickman
Cultural Anthropologist
Lake Clark National Park and Preserve
National Park Service
240 West 5th Avenue Suite 236
Anchorage, AK 99501
907-644-3638 (V)
Karen_Stickman@nps.gov

B. For PSU:

PI

Dr. Douglas Deur
Department of Anthropology
Portland State University
P.O. Box 751
Portland, OR 97202
503-436-8877
deur@pdx.edu
deur@u.washington.edu

C. Changes in Key Officials – Neither the NPS nor PSU may make any permanent change in a key official without written notice to the other party reasonably in advance of the proposed change. The notice will include a justification with sufficient detail to permit evaluation of the impact of such a change on the scope of work specified within this Agreement. Any permanent change in key officials will be made only by modification to this Agreement.

ARTICLE V – AWARD AND PAYMENT

A. NPS will provide financial assistance on a reimbursable basis to PSU in an amount not to exceed $xxxxx, for Phase I and II work. The chargeable appropriations and funding sources for this Task Agreement is/are as follows: 9796-0810-CCA ($xxxxx) and 9796-0802-UEE ($xxxxx). Depending upon NPS satisfaction with Phase I and II and the availability of funds, NPS intends to provide approximately $xxxxxx in additional financial assistance to complete PSU Phases III-V.

B. Standard Form (SF) 270, Request for Advance or Reimbursement, must be submitted for payment to the Contracting Officer at the convenience of PSU, but not to exceed monthly or less frequently than annually. The request for reimbursement shall be accompanied by a breakdown sheet showing cost in each budgetary item and shall be addressed to:

Contracting and Property Division
National Park Service
Pacific West Regional Office
1111 Jackson St., Ste. 700
Oakland, CA 90607

C. Payment will be made via electronic funds transfer directly to PSU's account at their financial institution.

D. The result of work under each phase of this task agreement is considered to be independently useful. The data obtained from one phase, however, may be utilized for future phases, subject to satisfaction of the data, desirability for additional data, and available funding. Any future phase would be added through the issuance of a written modification to this agreement.

E. Funding sources: NPS 2008 CRPP Base and Ethnography funds - $xxxxx.

ARTICLE VI – PRODUCTS AND MILESTONES

A. Phase I research planning efforts will commence no later than September 21, 2008 with a series of conference calls to outline responsibilities for initial project planning and the construction of the detailed work plan. It is anticipated that ADF&G and other stakeholders will have expectations and information needs that will be considered in the direction and conduct of this research project. It is also anticipated that each of the participating Native Alaskan communities will have varying expectations of the methods and products for this research. In collaboration with the ATR, the PI will assess these agency, community and stakeholder expectations and, to the extent possible, generate a research plan giving them appropriate consideration.

B. All Phase I tasks shall be completed no later than November 15, 2009. All Phase II tasks shall be completed no later than August 31, 2010. All Phase III-V tasks shall be completed by a timetable agreed upon in the event that additional funding is secured; both the timetable and budget for Phase

III-V will be outlined in a modification to this task agreement. All project tasks will be completed by September 30, 2013.

C. The PI will communicate regularly by e-mail and telephone with the ATR in lieu of monthly progress reports. Written progress reports will be submitted to the ATR every six months beginning November 15, 2009. In addition to reporting work conducted during the reporting period, progress reports will provide a discussion of challenges facing the project, and may involve requests for assistance from the NPS in addressing these challenges. If necessary, existing work plans will be revised and distributed for review by NPS and ALAG resource management staff. If the PI submits revised work plans, the ATR and NPS will have 30 days for review and comment with an additional 30 days allowed for the PI and the ATR to collaboratively produce a final revised work plan.

D. The PI will submit a draft work plan to the ATR by July 30, 2009. This work will briefly summarize the outcomes of the planning process for future research, including communicating with NPS staff, Native Alaskan village and/or corporation representatives, ADF&G staff, and other interested parties, regarding project goals and products, as well as identifying and compiling available documentation from published and unpublished sources that will be of relevance to the project, as specified in Article II(1)d. It will outline specific research questions, research methods and protocols, and proposed final products. The NPS ATR will facilitate the review of this document by appropriate NPS staff, participating villages, ADF&G staff, and other interested parties. Following the review of this document by these parties, the project PI will produce a final work plan that is responsive to reviewer comments no later than October 15, 2009. The NPS will facilitate the distribution of this final document to appropriate NPS staff, participating villages, Alaska Department of Fish and Game staff, and other interested parties.

E. The PI will assemble a team, if needed, to participate in Phase II tasks by January 30, 2009.

F. The PI will provide training materials and sessions to participating Native Alaskan communities no later than August 31, 2010. The PI will develop the content for training sessions on ethnographic documentation methods and protocols for residents of participating communities that might wish to participate in the ethnographic documentation efforts in later phases of the project. Materials used as part of this "content" may include readings, power point presentations, or other items. The PI and/or the NPS research assistant will present training sessions, along with any training materials, to each of the communities that wishes to participate in the gathering of ethnographic information.

G. All Phase III tasks shall be completed no later than January 30, 2012, if funding is made available, though it is possible that actual project completion may precede this date. Precise timelines for PSU Phase III work shall be outlined in modifications to this task agreement, in the event that additional financial assistance is available.

H. If funded, all Phase IV tasks shall be completed no later than October 30, 2012, including the completion of a draft and final thematic project report. Precise timelines for PSU Phase IV work shall be outlined in modifications to this task agreement and in detailed work plans, in the event that additional funding is secured. It is anticipated, pending further project planning, that this report will consist of an integrated thematic document that will discuss historical and contemporary uses of the Alagnak Wild River corridor by Native Alaskans, and outline any impacts of non-resident visitation on this river corridor, Native Alaskan activities associated with the river corridor, as well as the communities themselves. In addition, this report will thematically address contextually relevant

elements of Native Alaskan traditional ecological knowledge pertaining to the Alagnak River corridor, such as environmental processes and changes that might affect Native Alaskan patterns of resource use. The report will also briefly address resource management options identified by Native Alaskan participants that might minimize or mitigate any negative impacts of non-resident visitation as outlined in the project report, and will identify topics that may require additional research. The document will be reviewed by NPS and Native Alaskan communities' representatives, as well as other interested parties such as ADF&G staff, and shall be responsive to these reviewers' comments and recommendations.

I. If funded, all Phase V tasks shall be completed no later than June 30, 2013, including the completion of an anticipated publication-ready document that summarizes project findings in part or in whole. Precise timelines for Phase V work shall be outlined in work plans and modifications to this task agreement including ample time for internal NPS and appropriate peer review.

F. By July 30, 2013, three printed copies of the Phase IV final report and three printed copies of the Phase V publication-ready (or published) document(s), as well as electronic copies of each document, will be submitted to the project ATR, as identified in Article IV.

G. By July 30, 2013, one printed copy of the Phase IV final report and one printed copy of the Phase V publication-ready (or published) document(s), as well as electronic copies of each document, will be submitted to the NPS PNW CESU Research Coordinator at the following address: CFR, Box 2100, University of Washington, Seattle, WA 98195-2100.

H. By July 30, 2013, three printed copies of the Phase IV final report and three printed copies of the Phase V publication-ready (or published) document(s), as well as electronic copies of each document, will be submitted to Ms. Linda Whitson at the Pacific West Regional Office for distribution to NPS libraries and DOI archival facilities. Her address is: National Park Service, 909 First Avenue, Seattle, WA 98104-1060.

I. During the 60-day wrap-up period following July 30, 2013, additional materials may be submitted to the project archive consisting of materials assembled by PI, research assistant(s), and the ATR and delivered to the NPS for curation and future use by September 30, 2013.

ARTICLE VII – LIABILITY

Each party accepts responsibility for any property damage, injury, or death caused by the acts or omissions of their respective faculty, students, employees, or other representatives arising under this Task Agreement, to the fullest extent permitted by law.

ARTICLE VIII – ATTACHMENTS

Attachment I – Proposal
Attachment II -- Budget

Attachment I – Proposal

Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River

I. Background

The Alagnak (or "Branch") River has long served as a subsistence fishing river for Native Alaskan communities of the Alaska Peninsula region. The River is home to populations of all five species of Pacific salmon, as well as significant rainbow trout, arctic char, arctic grayling, and northern pike populations. For generations, families have located along the banks of this River seasonally to harvest fish, hunt, gather plants, and carry out social activities. Prior to the 20th century, seasonal settlements lined the Alagnak River. Following the emergence of modern schooling, the influenza pandemic of 1918-20, and a number of other disruptions dating to the early 20th century, residents of these seasonal settlements relocated to permanent settlements some distance away, including (but not necessarily limited to) the modern towns of Igiugig, Kokhanok, Levelock, King Salmon, Naknek, and South Naknek. Residents of these communities have continued to visit the Alagnak for seasonal visits that still center on fishing in the river while also hunting and gathering plant materials along the riparian corridor. Some families maintain cabins and Native allotments along the River. In recent years, a growing non-resident population has discovered the fishing opportunities on Alagnak River. A growing recreational fishery has emerged. Lodges along the Alagnak now cater to visiting fishermen, many from outside of Alaska, some facilitating guided fly-fishing excursions.

The increase in non-resident visitation has raised a number of concerns among the Native Alaskan community that still uses the river. Some Native Alaskan river users have reported changes in the riparian corridor, such as declines in fish numbers or health, declines in water quality, trampling and other impacts on allotments and other riparian areas, changes in game abundance and location, and the like. Some Native Alaskan river users have also suggested that there are broader impacts of non-resident use of the river, such as changing opportunities for participation in guided fishing operations, displacement of hunting activities to places other than the Alagnak River, declining opportunities for social activities associated with seasonal encampment on the River, and the like.[3] Most of these perceived impacts are depicted as negative, but some Native Alaskans have informally reported positive impacts as well. Most are direct impacts, yet a number of indirect impacts appear to be likely but unexamined outcomes of these changes. While these perceived impacts have been mentioned in the course of past interviews and meetings, they have not been the focus of systematic inquiry in the past. Now, the National Park Service – which manages Alagnak Wild River, in conjunction with the Alaska Department of Fish and Game - will proceed with an ethnographic study that seeks to understand the full implications of these changes,

[3] Comments on these perceived impacts of non-resident use of the Alagnak River corridor, available from existing interview transcripts, meeting notes, and other sources, are being summarized in a report entitled "Alagnak Wild River Visitor Use Project: Alagnak Wild River Resident Users Study," this report is authored by Dr. Douglas Deur of the Pacific Northwest CESU, and is anticipated to be complete by the end of calendar year 2008.

including both direct and indirect outcomes of increased non-resident use of the Alagnak River on Native Alaskan communities. The study is expected to rely largely on qualitative interviewing, and to use relatively open-ended questions in the interest of identifying a range of cultural and social dimensions of Alagnak River use not previously discussed in reference to this area. The resulting documentation will assist the NPS in the goals of both gathering information that might help the NPS manage Alagnak Wild River in a manner that is consistent with enduring Native Alaskan uses of the river, as well as documenting cultural information that will be of intrinsic value to participating Native Alaskan communities that seek to record and sustain cultural information for future generations. While the products of this study are expected to include a thematic ethnographic report, it is also anticipated that Native Alaskan communities and NPS staff may wish to develop less conventional products from the outcomes of this research to achieve these goals.

The current project is conceived of as a 5-phase study. Phase I of the current study will involve a needs assessment, including a review of existing materials, communications with NPS staff and Native Alaskan representatives regarding project goals and methodologies, and the development of a work plan that will incorporate findings from these investigations. Phase II will involve initiating ethnographic research through the completion of Human Subjects documentation, the completion of any tasks required to obtain research permissions from participating Native Alaskan communities, and the development and implementation of training sessions for participating communities and appropriate NPS staff in methods of ethnographic documentation. Phase III will involve participation in ethnographic research, both through providing technical guidance to research "teams" made up of trained residents and/or the NPS research assistant, as well as through participation in original ethnographic interviews. Phase IV will involve development of a technical report that thematically summarizes project findings. Phase V will involve generating no fewer than one publication for public and/or Native Alaskan use, presenting project findings in a format that is publicly accessible.

II. Introduction

The Alagnak (or "Branch") River has long served as a subsistence fishing river for Native Alaskan communities of the Alaska Peninsula region. Since time immemorial, these communities have maintained temporary residences along the Alagnak, fishing in the river while also hunting and gathering plant materials along the riparian corridor. Even as these communities have relocated to permanent settlements some distance away, such as in the modern towns of Igiugig, Kokhanok, Levelock, King Salmon, Naknek, and South Naknek. Some families within these communities continue to maintain cabins and Native allotments along the Alagnak River. The River is home to populations of all five species of Pacific salmon, as well as significant rainbow trout, arctic char, arctic grayling, and northern pike populations.

Following the passage of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA, Public Law 96-487), the Alagnak Wild River (ALAG) was designated as a Wild River under Title VI, Section 601(25) and 601(44) of that Act. Alagnak Wild River was created, in part, to preserve the upper 56 miles of the river in a free-flowing condition, and to protect the river and its immediate environments for the benefit and enjoyment of present and future generations. The river is managed free of impoundments and diversion, inaccessible by road, and its shorelines contain only "primitive" visitor services. In recent years, ALAG has become a very popular fly-in recreational fishery. As this fishery has developed, Native Alaskan communities have reported to National Park Service (NPS) representatives a number of impacts to their historical uses of Alagnak River that are both direct and indirect.

NPS resource managers require information about river corridor users' potential impacts upon existing Native Alaskan communities and their uses of Alagnak River, in making decisions about the appropriate

balance between competing mandates and disparate user groups. The NPS Organic Act charges the agency with managing, "by such means and measures as conform to the fundamental purpose to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment for the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." In addition, various NPS mandates require documentation and management of cultural resources, as well as natural resources and places that are of enduring cultural significance to resident populations. These mandates include, but are not limited to the American Indian Religious Freedom Act (AIRFA)of 1978 (P.L. 95-341); the Archeological Resources Protection Act (ARPA) of 1979, as amended (P.L. 96-95); the National Historic Preservation Act (NHPA) of 1966, as amended (P.L. 96-515); Executive Order 13007; and, Release No. 5 of the Cultural Resource Management Guideline (NPS-28), and its supplements.

A variety of data describing conventional recreational use during the summer months largely by non-local visitors has been collected by systematic counting and recording of the location of recreational use, and by administering mail questionnaires (The Alagnak Wild River User Distribution Survey DRAFT [Zweibel, Vande Kamp, and Johnson] and The Alagnak Wild River Recreational Visitor Survey DRAFT [Spang, Vande Kamp, and Johnson], both in preparation). In addition, as the current project is in its planning phases, a summary study of Native Alaskan uses of Alagnak Wild River, based principally on literature review, is being completed under a separate CESU task agreement; entitled "Alagnak Wild River Visitor Use Project: Alagnak Wild River Resident Users Study," this study is authored by Dr. Douglas Deur of the Pacific Northwest CESU, PI for the current project.

Despite these existing studies, documentation of local residents' uses of the Alagnak River corridor, as well as potential visitor impacts on these uses, is incomplete and insufficient to support NPS land and resource management mandates. Simultaneously, the Native Alaskan communities associated with Alagnak Wild River have generally expressed an interest in documenting their cultural knowledge of this area, both for the sake of cultural preservation and apparently in the hope of providing Native Alaskan communities with a greater voice in future natural resource management planning in the area. The current study is therefore designed to document information that will be of value to NPS resource managers on the topic, while also gathering documentation of cultural information in a way that will aid Native Alaskan communities in preserving knowledge of the Alagnak River corridor. Preliminary meetings with Native Alaskan communities indicate that residents of these communities wish to participate directly in the research process, with residents learning the skills of ethnographic documentation and then employing these skills in helping to gather data to support the project's goals; to the fullest extent possible, this research project will accommodate this innovative, community-directed approach to ethnographic research.

III. Procedures

In all tasks, the Portland State University PI will work in collaboration with the National Park Service ATR and research assistant.

Phase I

In the course of Phase I of this five-phase research effort, the PI will conduct a needs assessment for future research, including communicating with NPS staff, Native Alaskan village and/or corporation representatives regarding project goals and products, as well as identifying and compiling available documentation from published and unpublished sources that will be of relevance to the project. Using this information, then, the PI will work with the NPS ATR in the preparation of a detailed work plan and

research strategy for the remaining phases of the project. This work plan will address major research questions, methodologies, and final products.

Phase II

In the course of Phase II, the PI and participating staff will collaborate to complete all of the activities required to initiate field research. This will include developing a rapport regarding the project with participating Native Alaskan communities and state and federal agencies, as well as the university Human Subjects Division and other interested parties. The PI and the NPS ATR will complete all tasks required for Human Subjects review and approval of the proposed research, as well as completing any tasks required to obtain consent to conduct research from participating Native Alaskan villages and/or corporations. Working with the NPS research assistant, the PI will develop the content for training sessions on ethnographic documentation methods and protocols for residents of participating communities that might wish to participate in the ethnographic documentation efforts in later phases of the project. Materials may include readings, power point presentations, or other items. The PI and/or the NPS research assistant will present training sessions, along with these materials, to each of the communities that wishes to participate in the gathering of ethnographic information. It is the intent of this project to help participating communities build capacity in the documentation of ethnographic information, so that individuals in these communities might participate more fully in this and other future research endeavors – an important if secondary benefit from this research effort. At this time, the PI will also work to identify a team, as needed, to accomplish all tasks for future phases of the project. The PI will assume a team leadership position by providing coordination and oversight throughout the duration of the project. In consultation with the NPS ATR, the PI may opt to enlist the assistance of PSU staff or hired consultants to complete specific project tasks; the PI will supervise the work of individuals enlisted in this manner on this project. The PI will serve as a coordinator, providing guidance as needed to NPS staff that are enlisted to assist on project tasks and coordinating research activities that involve multiple project participants.

Phase III

Phase III of this project will involve conducting the bulk of the original ethnographic research for this project. The project PI will conduct original ethnographic research with participating communities. In addition to (or, in some cases, in lieu of) the PI will provide technical guidance to research "teams" made up of trained residents and/or the NPS research assistant and other appropriate NPS staff, who will conduct original ethnographic interviews in the participating communities. Formal interviews will be audio recorded with the permission of participating communities and interviewees; the PI may opt to produce transcripts from these interviews that can be used in the construction of the final project report. The PI or project assistants may also participate in participant observation research, as deemed appropriate, to supplement formal ethnographic interviews and other forms of ethnographic inquiry. In order to fill any information gaps identified in the course of these interviews or preliminary project phases, the PI and/or the PI's research assistants will conduct additional literature review, as deemed appropriate by the project PI and ATR.

Phase IV

Phase IV consists of the analysis of project findings and the production of a final project report. Working in cooperation with the NPS ATR and research assistant, the PI will analyze findings of literature review and ethnographic interviews. On the basis of this analysis, the PI will produce an integrated, thematic draft report that presents project findings. The NPS will distribute this draft report to appropriate NPS reviewers, as well as Native Alaskan communities and/or interviewees, as well as other interested parties

enlisted to review the document such as Alaska Department of Fish and Game staff. The PI will be available during their review for discussion or clarification. On the basis of resulting review comments, the PI will produce an integrated thematic final project report. This thematic document will discuss historical and contemporary uses of the Alagnak Wild River corridor by Native Alaskans, such as fishing, hunting, plant gathering, social gatherings, ceremonial activities, and the like, at a level of detail sufficient to set the context for discussions of the impact of increased non-resident visitation. The document will briefly outline the emergence of recreational uses on Alagnak Wild River and will thematically address any impacts of non-resident visitation to this river corridor noted by Native Alaskan interviewees. In addition, this report will thematically address elements of Native Alaskan traditional ecological knowledge pertaining to the Alagnak River corridor that might be relevant to the major themes of the report, such as changes in the abundance or distribution of biota that might affect Native Alaskan uses of the river corridor. The report will also briefly and thematically address any resource management options discussed by Native Alaskan participants that might have the potential to minimize or mitigate any negative impacts of non-resident visitation as outlined in the project report. The report also will identify topics that may require additional research in future studies. Prior to the completion of Phase IV, the PI will also be available to present the project's findings to participating communities through a mutually agreed upon activity such as a community lecture, to be determined by the PI, NPS ATR, and NPS research assistant.

Phase V

Phase V is proposed to insure that the information obtained in the course of this project is available to a broader readership that might be true of "in-house" project reports. It is intended that the project PI will generate no fewer than one publishable document from the outcomes of the current study. In order to insure that sensitive topics and information are presented appropriately, the PI will communicate with representatives of the NPS and participating Native Alaskan communities regarding suitable formats and venues for publication of project findings. Using data or excerpts from the project report and other project materials, the PI will compose no fewer than one publishable document that will be used to disseminate project findings, and will initiate steps to seek publication of this document. (Publication will not be a condition of this project proposal, however, as the approval and timing of publication are not within the control of the project PI.) It is expected that the PI will work with NPS staff, participating Native Alaskan communities, and other interested parties in developing these materials, and will allow these parties to review and comment on these materials, prior to any effort at publication. Once a document has been reviewed and generally approved by these parties, the PI shall present the document to a mutually agreed-upon publication venue for consideration. In the course of these efforts, the PI shall also compile a project archive consisting of copies of audio or visual recordings, field notes, informed consent form, as well as any photographs, maps, and other materials gathered in the course of the study, and deliver these materials to the NPS for curation. The NPS may make copies of these materials for distribution to participating Native Alaskan communities.

IV. Products

Anticipated project products are outlined as followed:

1. The PI will submit a draft work plan to the ATR. This work will briefly summarize the outcomes of the planning process for future research, including communicating with NPS staff, Native Alaskan village and/or corporation representatives, Alaska Department of Fish and Game staff, and other interested parties, regarding project goals and products, as well as identifying and

compiling available documentation from published and unpublished sources that will be of relevance to the project. It will outline specific research questions, research methods and protocols, and proposed final products. The NPS ATR will facilitate the review of this document by appropriate NPS staff, participating villages, Alaska Department of Fish and Game staff, and other interested parties.

2. Following the review of the draft work plan by participants and interested parties, the project PI and ATR will collaborate produce a final work plan that is responsive to reviewer comments. The NPS will facilitate the distribution of this final document to appropriate NPS staff, participating villages, Alaska Department of Fish and Game staff, and other interested parties. It is anticipated that the draft work plan will be submitted to the NPS ATR by July 30, 2009, that the review will take up to 50 days, and that the PI will submit the revised work plan to the project ATR no later than October 15, 2009.

3. The PI will develop the content for training sessions on ethnographic documentation methods and protocols for residents of participating communities that might wish to participate in the ethnographic documentation efforts in later phases of the project. Materials used as part of this "content" may include readings, power point presentations, or other items.

4. The PI and/or the NPS research assistant will present training sessions, along with any training materials, to each of the communities that wishes to participate in the gathering of ethnographic information. It is anticipated that these training sessions will be completed by no later than August 31, 2010.

5. The PI will produce a draft project report. This report will consist of an integrated thematic document that will discuss historical and contemporary uses of the Alagnak Wild River corridor by Native Alaskans, and outline any impacts of non-resident visitation on this river corridor, Native Alaskan activities associated with the river corridor, as well as the communities themselves. In addition, this report will thematically address contextually relevant elements of Native Alaskan traditional ecological knowledge pertaining to the Alagnak River corridor, such as environmental processes and changes that might affect Native Alaskan patterns of resource use. The report will also briefly address resource management options identified by Native Alaskan participants that might minimize or mitigate any negative impacts of non-resident visitation as outlined in the project report, and will identify topics that may require additional research. The document will be reviewed by NPS and Native Alaskan communities' representatives, as well as other interested parties such as Alaska Department of Fish and Game staff. It is anticipated that this final report will be submitted to the NPS ATR no later than August 30, 2012, though this date may be subject to revision.

6. The project PI shall produce a final project report that is responsive to these reviewers' comments and recommendations. It is anticipated that this final report will be submitted to the NPS ATR no later than October 30, 2012, though this date may be subject to revision.

7. The project PI will produce no fewer than one draft publishable document that will be used to disseminate project findings. (Publication will not be a condition of this project proposal, however, as the approval and timing of publication are not within the control of the project PI.) It is expected that the PI will work with NPS staff, participating Native Alaskan communities, and other interested parties in developing these materials, and will allow these parties to review and comment on these materials, prior to any effort at publication. It is anticipated that this draft

document will be submitted to the NPR ATR no later than April 15, 2013, though this date may be subject to revision.

8. On the basis of review comments form NPS staff, participating communities and/or interviewees, and other interested parties, the PI will produce a final draft of this publishable document. At this time, following submission of the final draft to the NPS ATR, the PI shall present the document to a mutually agreed-upon publication venue for consideration. This publication may consist of a National Park Service published report, a university press volume, or an article submitted to a scholarly journal, depending on the nature of its content and the preferences of Native Alaskan communities, NPS staff, and other interested parties. It is anticipated that this document shall be completed and ready for submission to a publication outlet no later than June 30, 2013, though this date may be subject to revision.

9. By July 30, 2013, three printed copies of the Phase IV final report and three printed copies of the Phase V publication-ready (or published) document(s), as well as electronic copies of each document, will be submitted to the project NPS ATR.

10. By July 30, 2013, one printed copy of the Phase IV final report and one printed copy of the Phase V publication-ready (or published) document(s), as well as electronic copies of each document, will be submitted to the NPS PNW CESU Research Coordinator at the following address: CFR, Box 2100, University of Washington, Seattle, WA 98195-2100.

11. By July 30, 2013, three printed copies of the Phase IV final report and three printed copies of the Phase V publication-ready (or published) document(s), as well as electronic copies of each document, will be submitted to Ms. Linda Whitson at the Pacific West Regional Office for distribution to NPS libraries and DOI archival facilities. Her address is: National Park Service, 909 First Avenue, Seattle, WA 98104-1060.

12. At the close of the project, the PI will produce a project archive for NPS curation, consisting of project fieldnotes, maps, informed consent forms, and other project materials. During the 60-day wrap-up period following July 30, 2013, additional materials may be submitted to the project archive consisting of materials assembled by PI, research assistant(s), and the ATR and delivered to the NPS for curation and future use by September 30, 2013.

SUBSTANTIAL INVOLVEMENT DOCUMENTATION

Task Agreement No. or PR No._____

Project Title: Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River

Type of funds to be used for this project (bold the type of funds) ONPS, NRC, Fee Demo, Fire, Donation, other (be specific): CRPP BASE and ETHNOGRAPHY

l. Why was this cooperator selected?

The Portland State University Department of Anthropology has professional staff in the person of Dr. Douglas Deur who is uniquely qualified to collaborate with the NPS on this project. Working directly with the NPS Pacific-West Regional Office, Dr. Deur has successfully conducted and completed studies of cultural and historical resources on behalf of the NPS at Crater Lake National Park, Lava Beds National Monument, Lassen Volcanic National Park, Hagerman Fossil Beds National Monument, Oregon Caves National Monument, Aniakchak National Park and Preserve, Joshua Tree National Park, and elsewhere. Working for the Protected Areas Social Research Unit (PASRU) at the University of Washington, Dr. Deur served as PI on two separate projects related to the study area, including a NPS study of All Terrain Vehicle use in Alagnak Wild River and Katmai National Park, as well as the literature review addressing Alagnak Wild River that aided in the scoping of the current project. Dr. Deur will serve as PI for this project. PASRU has a 35-year history of doing applied social research for NPS.

2. Explain the nature of the anticipated substantial involvement? (How will the Agreement Technical Representative or other NPS personnel directly participate with the PI to carry out the project?)

Substantial involvement by the NPS will take place in several specific activities. The ATR and NPS research assistant will collaborate with the Principal Investigator (PI) to arrange for and participate in a meetings with participating Native Alaskan villages and/or corporations. The ATR will serve as an official representative of the NPS in the context of the meetings and subsequent interactions. Second, the NPS research assistant will participate in field research, providing her professional expertise and local knowledge in overseeing the activities of "community research teams," and assisting in other research tasks. Third, the ATR and NPS project assistant will be directly involved in working with the PI in the development of the draft and final versions of the project work plan and the final report, as well in the development of the anticipated publication resulting from this research. The ATR will arrange for both internal NPS and external reviews and collaborate with the PI in project management decisions throughout the duration of the project.

3. Why is the substantial involvement considered to be necessary for this project? (Make sure you understand the concept of substantial involvement before completing this. Call the Research Coordinator if necessary).

This project is fundamentally multi-disciplinary and requires that the National Park Service have access to the expertise of both NPS resource managers as well as topical experts with a working familiarity of the study area. The project will take place in a dynamic environment requiring adaptation of the work plan to

evolving conditions and budgetary uncertainties. It is highly important that the NPS be involved in making management decisions associated with this adaptation.

4. Explain why the project or activity entails a relationship of assistance rather than a contract for services (How will the NPS and the PI and/or graduate students benefit from this collaboration and how does it meet the requirement for supporting or stimulating a public purpose rather than procuring something for our direct benefit?)

Principals at the NPS and PSU agree that the research activities for this project will be more productive and mutually beneficial in the context of a collaborative relationship than would be possible in a conventional contract. In the short-term, the NPS and PSU will share responsibility for the conduct of various research activities. Funding uncertainties require that the NPS play an active and dynamic role in the research effort that exceeds usual contractual relationships. In addition, NPS staff must be actively involved in accessing input from non-NPS agencies and in maintaining ongoing relationships with Native Alaskan communities in a manner that cannot be relegated to a contractor. In the long-term, the NPS and PSU will continue to develop a mutually beneficial institutional relationship.

5. How was the determination made that the costs proposed are accurate and proper? (How were the costs identified in the project budget table developed?) Provide a breakdown of costs and rationale for determining they are acceptable.

On the bases of past experience on similar research projects and a critical evaluation of funding resources that are needed to conduct the research and produce final products that will be of great value to the NPS.

Approved: (the names of officials approving this project can be added electronically)

_____	_____	_____	_____
Key Official	Date	Contracting Officer	Date

Appendix 5

Draft Methodology Statement for Human Subjects Review,
Alagnak Wild River Ethnographic Study,
*"Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River"**

**The attached statement was originally developed for University of Washington review; it will require modification in light of the project work plan and Portland State University Office of Human Subjects standards*

Alagnak Wild River
Draft Human Subjects Documentation
Methodology Statement

The current research effort shall involve literature review, ethnographic interviews, field visits, and possible participant-observation research.

Literature review for this project has already begun, and shall continue into the ethnographic field research phase. Ethnographic field research shall focus primarily on Native Alaskans residing in four separate communities: Igiugig (pop. 50, 83% Alaskan Native), King Salmon (pop. 385, 30% Alaskan Native), Levelock (pop. 71, 95% Alaskan Native), and Naknek (pop.614, 47% Alaskan Native). Native Alaskan participants in all four communities are represented by the Bristol Bay Native Association (BBNA); moreover, all of these communities except King Salmon have independent village councils that perform the functions that, within the contiguous U.S., would normally by administered by both a city council and a tribal government.

The project manager, Dr. Douglas Deur, shall work with both the village councils, and in consultation with the BBNA, to sort out research protocols within each community, to recruit Native Alaskan research assistants from these communities, and to recruit potential ethnographic interviewees. Native Alaskan research assistants will be sought from within host communities in order to enhance rapport with interviewees and insure community support for the project, impart research skills that may be of value in this and other NPS research, and to overcome some of the logistical obstacles posed by the distance between the study area and the University of Washington. Research assistants shall be chosen from among individuals who have worked on cultural research within these communities previously, and shall be approved by the host community's village council prior to their participation (any research assistant working in King Salmon, where there is no village council, shall be approved by the BBNA). Dr. Deur, along with NPS personnel including the project's research assistant, NPS Anthropologist Karen Stickman, shall hold public meetings in each of the study communities to discuss project goals and methods; during these field visits, Dr. Deur shall meet with research assistants and provide guidance on field interview methods.

Dr. Deur's first field research visit shall involve initial ethnographic interviews in the four communities. Following the initial contact with recruited interviewees, the times and locations of initial interviews will be established with each interviewee. At the onset of each interview, the principal investigator will provide each interviewee with a description of the institutional genesis and broad goals of the current study. Interviews will continue until interviewees have had the opportunity to discuss, to the full extent that they wish, the topics identified above. In past projects, such interviews have taken from approximately one to three hours. Initial interviews will be conducted by Dr. Deur with Native Alaskan research assistants, and will – at the interviewee's discretion – be audio recorded. Audio recordings are deemed necessary so that certain comments by interviewees may be clearly and accurately represented in the final document. (A waiver for audio recording is to be included on the final page of the informed consent form. This recording waiver option is accompanied by a waiver option for direct quotation of the interviewee within this form.) Field notes will also be taken during these interviews. Dr. Deur will use follow-up meetings with Native Alaskan research assistants after

these interviews as training sessions, so that these assistants be able to conduct follow-up interviews when Dr. Deur is absent.

Interviews will not be rigidly structured, nor will they involve rigidly predetermined questions. Instead, the principal investigator will attempt to establish a conversation tone with interviewees; formal, listed questions tend to inhibit rapport with many Native Alaskan consultants, resulting in less detailed and less candid responses. Interviewees will first be asked to identify what stands out in their view as the most important cultural and/or subsistence traditions associated with the study area. Following this discussion, the principal investigator will attempt to address a number of themes, including but not limited to the interviewees' knowledge of any visitor impacts on lands and resources within the study area. Interviews will be presented with maps of the study area and will be invited to sketch directly on the maps to illustrate points made in their discussion. The principle investigator will seek to elicit the interviewees' knowledge of changes in uses of the study area over historic time and potential causes of these changes (including visitor impacts, as well as federal policies and land management practices). The principal investigator will then seek to establish the interviewee's concerns and recommendations regarding the amelioration of visitor impacts through changes in NPS management and policy affecting the study area.

As an example of the sorts of questions asked in these interviews, a list of likely questions regarding possible visitor impacts on subsistence plant gathering along Alagnak Wild River is included here:

• Are there particular places in the study area where plant materials have been gathered, either formerly or today?

• What is the role of these plants in the diet, culture and economy today? In what quantities are they taken in the study area?

• Are these plants used only on site, or are they taken home for later use? If the latter, how are they preserved and when are they used?

• Have visitors along Alagnak Wild River affected the location or availability of these plants? If so:

- When do these impacts occur?
- Where have these impacts occurred? With what frequency do they occur?
- What kind of disturbances have you seen and/or heard about from others in your community?
- Are these disturbances direct (e.g., trampling or use of plant resources) and/or indirect (e.g., resulting from tchanges to large mamal movements or foraging along the river)?

- How would you like to see the NPS manage plant gathering areas along Alagnak Wild River in the future? Is intervention required, in your view, to minimize or mitigate the impacts of visitor disturbances?

Following initial interviews, Native Alaskan research assistants from these communities, guided by Research Assistant, NPS Anthropologist Karen Stickman, may conduct follow-up interviews with certain interviewees to clarify points raised in initial interviews. These research assistants will also conduct formal or informal interviews with consultants not interviewed during Dr. Deur's initial research trip, adhering to the methods and protocols outlined here. All interviewees contacted by research assistants shall review and sign an informed consent form prior to formal interviews or the inclusion of any information provided by these individuals in the project report. Information gathered by these research assistants shall be sent to Dr. Deur for review, analysis, and possible inclusion in the project report.

Dr. Deur shall then conduct a second field research trip. During this trip, follow-up interviews will be conducted as needed and Dr. Deur shall present interim study findings to participating Native Alaskan councils. At this time, Native Alaskan consultants shall be invited to participate in an organized field visit (or visits) within the study area with Dr. Deur and research assistants to discuss research topics in greater detail. Notes will be taken during these meetings; audio recording and photography will only be conducted at the discretion of interviewees. It is anticipated that the tone of these field visits will be casual and that the informed consent form signed during the initial interview will suffice to cover participation in any such follow-up communications. To the extent possible, Dr. Deur shall attempt to be present during cultural and/or subsistence activities to observe any reported visitor impacts and/or to engage in participant-observation research. Such research typically reveals a wealth of contextual details not available through conventional interview methodologies. A number of subsequent research trips are anticipated after this second visit, to follow up on certain themes and make contact with interviewees not available during earlier field visits. Subsequent research trips to the study area will follow these same general guidelines.

Following the completion of all interviews and field visits, the accumulated information will be analyzed for content and recurring themes. Any unanswered issues or deficiencies in the documentation may be remedied by brief follow-up questions posed to past informants by Native Alaskan research consultants to clarify key points.

In the final report, interviewees comments will be summarized in general statements, while interviewees who sign the waiver allowing direct quotation may be quoted directly to illustrate certain key points. Traditional uses and values associated with study area lands and resources identified in the interviews will be discussed thematically, as will any apparent visitor impacts on identified lands and resources. This material will be compared and contrasted with information gained from published materials on Native Alaskan uses of the study area. The sentiments expressed by interviewees regarding past, present, and future NPS policies will be analyzed quantitatively and examined as a separate component of the final report; this portion of the report will also make recommendations regarding future management options based on facts and opinions shared by Native Alaskan consultants.

Upon the completion of the draft report, copies of the report will be made available to Native Alaskan interviewees, village councils and the BBNA, and NPS staff for review and comment. On the basis of these comments, a final report will be produced and submitted to participating Native Alaskan councils and NPS staff. At this time, all project materials – including audio recordings, field notes, sketch maps, and informed consent forms – will be formally archived in the Katmai National Park archive collection. It is anticipated that interviewing will begin by Fall of 2009, and that the final report will be completed by the end of the 2012 calendar year.

All interviewees are expected to be Native Alaskans, though it is possible that non-Native residents of these communities will also be interviewed. Interviewees must be members of Native Alaskan communities that have a demonstrable historical association with the study area; it is expected that all will be residents of Igiugig, Levelock, King Salmon, Kokhanok or Naknek. Subjects must also be recognized as having knowledge or interest in cultural and/or subsistence activities along Alagnak Wild River and possible visitor impacts on these activities.

The study's emphasis on traditional activities, coupled with the traditional role of elders within Native Alaskan communities, indicates that elderly consultants will play an important role in the current research effort. Simultaneously, the study's emphasis on relatively recent potential visitor impacts indicates that younger adults – especially those who still visit the Alagnak River for hunting, fishing, and other subsistence activities – will play an active role in the current research. Inter-generational variability in use of the study area, perception of visitor impacts, etc. is expected to be salient in providing a comprehensive overview of traditional uses of this area and the scope of potential visitor impacts. Participating village councils and/or the BBNA will play a key role in the identification of potential interviewees, and shall be informed of the importance of including interviewees of diverse ages, despite a significant focus upon the knowledge and views of elders and young adults. Still, no specific distribution of ages shall be sought within the subject population, so long as individuals of different ages are interviewed in numbers that are deemed to be equitable by the participating councils and communities. Children will not be formally interviewed, though their participation in cultural and/or subsistence activities observed during field visits or participant-observation shall be noted.

The Native Alaskan communities participating in this project are expected to exhibit gender differentiated roles and responsibilities relative to cultural and/or subsistence activities in the study area. For this reason, the inclusion of both men and women in the study is essential to provide a comprehensive overview of traditional uses of this area and the scope of potential visitor impacts. It is possible that the predominant role of men in subsistence hunting and commercial fishing – the principal activities expected to bring Native Alaskans to the study area today - shall result in a relatively large pool of potential, knowledgeable male interviewees and a numerical bias toward male subjects. Participating village councils and/or the BBNA will play a key role in the identification of potential interviewees, and shall be informed of the importance of including interviewees of both genders. Still, no specific gender ratio shall be sought, so long as men and women are interviewed in numbers that are deemed to be equitable by the participating councils and communities.

While it is not anticipated that formal exclusion procedures need to be adopted in this research project, the project will exclude any individuals who are determined to possess a clear conflict of

interest, or who are deemed mentally or physically incapable of full and meaningful participation.

Recruitment

Subjects shall be identified through direct consultation with representatives of the village councils of Igiugig, Levelock, and Naknek, as well as cultural staff with the Bristol Bay Native Association. Native Alaskan council representatives and/or Native Alaskan research assistants shall direct the project director toward potential project participants. Katmai National Park and Alaska NPS Regional Office staff have consulted with these councils on a number of matters in the past and will assist in identifying participating community members for the current study.

No fewer than twenty potential interviewees will be identified cumulatively within the four communities, working in direct consultation with each council, their designated cultural resource management representatives, and/or Native Alaskan research assistants; they will assist in identifying individuals who are believed to be both potentially knowledgeable about the study themes and areas, as well as potentially willing to participate in such a study. (These Native Alaskan village councils, as well as the BBNA, will have participated previously in federally funded consultation research regarding lands and resources in the Alagnak River region, and will be able to readily identify individuals who have willingly and effectively served as interviewees in the past. Potential interviewees may be identified from among these individuals.) While the project director will attempt to identify interviewees representing a broad range of ages, as well as maintaining a degree of parity in the gender of interviewees, no strict numerical targets will be established for such social and socioeconomic criteria. (See section D.2, above.)

The project director will contact identified community members directly, either by phone or in person, to describe the project and invite them to participate. Native Alaskan research assistants may also, following suitable instruction on project methods and the informed consent process, contact community members directly to invite project participation. However, councils that wish to have council staff or a designated liaison initially contact potential interviewees within their communities will be encouraged to do so. At the time of the initial contact, the potential interviewee will be sent or provided with a copy of this Human Subjects review document, as well as in the informed consent form. Potential interviewees who agree to participate will then be asked to identify a mutually convenient time and place for their interview. Printed copies of the informed consent form will be provided to potential interviewees prior to the initiation of the interview for their review and signature.

It is anticipated that potential Native Alaskan interviewees will be identified in the course of initial interview research in addition to those initially identified. Procedures and protocols shall be similar for these potential interviewees, with the Project Director contacting these individuals directly to describe the project and invite their participation. All other protocols shall be the same as with interviewees originally identified by the participating councils, their representatives, and/or research consultants.

In the unlikely event of changes in the design, risks, or anticipated outcomes of the study, the three village councils and the BBNA will be notified in writing. Under these circumstances,

interviewees will then be contacted directly by the Project Director, unless the councils wish to contact their members directly. Under these circumstances, interviewees would be given the opportunity to revisit their informed consent forms. A list of interviewee contact information will be maintained during the course of the study to facilitate rapid communication with interviewees as is deemed necessary.

As part of the initial communication with potential interviewees regarding project participation, individuals will be advised that they are being contacted because they have been identified as knowledgeable regarding the study's themes, but that participation in the study is entirely voluntary; moreover, the individual will be advised that he or she may opt to discontinue participation at any time, may choose to provide as much or as little information as he or she believes is appropriate, and that he or she may refuse to answer any question for any reason. These conditions are also articulated in the consent form.

Research of this type within Native Alaskan communities typically involves some modest remuneration to compensate community members for their time and contributions. In this study, consultants who participate in interviews at locations inside their home communities and sign project consent forms will be compensated for their interview time at a rate of $30. per hour for interview time. Individuals who participate in field visits for the purpose of conducting interviews and sign a project consent form shall be compensated at a rate of $30. per hour, but will also receive an additional $60 payment per field trip to cover the cost of travel and related expenses.

This ethnographic research shall be conducted in multiple locations. All interview locations shall be located in communities within the Bristol Bay region of Alaska. Interview locations shall be chosen on the basis of their convenience to interviewees; it is anticipated that initial interviews shall take place in the homes of subjects or in public meeting areas such as council offices. Field interviews and participant observation research is expected to take place at multiple sites within the Alagnak Wild River corridor.

Risks

There are no known direct risks to interviewees as a result of their participation in this study.

The study may potentially introduce indirect risks from the disclosure of sensitive information regarding traditional activities if this information was released to the general public. The location of burial sites or other archaeological sites within a public document, for example, could raise the potential for site looting and other site impacts. Participants will likely view certain information regarding religious and/or ceremonial activities identified in this study as being too sensitive for public disclosure.

Certain interviewees who express interest and capability will be invited to visit the Alagnak River corridor with Dr. Deur and Native Alaskan research assistants during Dr. Deur's second research trip to discuss traditional uses and visitor impacts within the study area in further detail. Individuals deciding to visit Alagnak Wild River for this purpose may be exposed to mild and predictable risks posed by travel to and from the field location, as well as travel along the corridor, which – like much of the terrain in their homeland – is remote, characterized by

seasonally (if predictably) inclement weather, and home to brown bears and other large mammals.

In light of the sensitivity of research findings, the final report will be an "in-house" document only, available only to Native Alaskan participants, Native Alaskan councils and NPS staff, and will not be distributed to the public. No archaeological research could be conducted on such sites by NPS staff without engaging in subsequent formal consultation procedures with participating Native Alaskan populations. No publication of field data shall occur without prior consultation with participating councils.

Suitable precautions will be taken to minimize physical risks associated with visitation of field sites by Native Alaskan consultants, including the possible exclusion of particularly elderly or infirm participants from such events.

The study has not been designed in such a way that it will yield specific tangible benefits for individual subjects. The study has been designed, however, to provide a number of benefits to members of participating Native Alaskan communities, including both participants and non-participants in the study. Alagnak Wild River appears to be a place of enduring importance for cultural and subsistence purposes, as well as in the commercial Bristol Bay fishery in which the four study communities play an active role. Native Alaskan community members will be formally consulted regarding their knowledge of traditional activities and visitor impacts in the study area and their concerns and preferences regarding its future management. The information gained through this study will help shape the land management decisions of NPS staff, allowing planners to minimize future impacts on cultural and natural resources that are of enduring significance to participants, their families, and their communities. In addition, the study will provide information that might assist Katmai National Park interpreters represent participating Native Alaskan communities' traditions in a manner that these communities deem accurate and appropriate. The final report will aid these communities in their ongoing efforts to document and preserve historical and cultural knowledge. Finally, the study is designed to facilitate improved communication between the National Park Service and Native Alaskan communities associated with Alagnak Wild River; this dialogue provides an opportunity to help park staff minimize or mitigate future potential visitor impacts on resources and other sources of potential inter-cultural conflict, as well as providing potential inroads to more material ends, such as employment opportunities for community members within the park.

Confidentiality

Interviewees will be given the opportunity on the informed consent form to specify whether they wish to be identified in the report or to remain anonymous. Those wishing to remain anonymous will not be identified, either directly or with a coding system, within the project report. It is anticipated that many consultants, however, may wish to be identified in the report. Interviewees wishing to be identified in the report will be coded using their initials – no code numbers shall be used. No other identifiers, other than village affiliation, shall be used in the report. All other contact information shall be kept in files that will have no public access and will not become part of the project archive; contact information (address and phone numbers) may be shared with appropriate Katmai National Park staff to facilitate future communication and consultation between the park and individuals identified as cultural experts in the course of this study.

Interviewees' names will not be quoted in publications that result from this study without receiving separate confirmation of their consent.

Interviewees' identities will be recorded on original fieldnotes only, but will not be reported in the project report or any audio recordings. (No photographs will be taken of individuals expressing a desire to remain anonymous.) Names will be retained on fieldnotes until the final project report is complete, to aid the principal researcher in recalling the content and circumstances of specific interviews. These fieldnotes will be retained within a restricted access collection within the Katmai National Park archives at the completion of the final report with the names of interviewees permanently stricken from the notes.

This study may involve the collection of information that is considered sensitive, such as information regarding hunting activities or traditional religious practices. Therefore, the final report will not be distributed publicly; copies will be distributed only to interviewees, the offices of participating Native Alaskan councils, and appropriate National Park Service staff. The University of Washington Human Subjects office shall also be given the opportunity to review the report if requested, in order to ensure that the study meets that office's guidelines. Following report completion, only those researchers who consult directly with participating Native Alaskan councils and National Park Service staff will be granted access to the final report. Notes and audiotapes from this study will be stored permanently in a restricted access archive within Katmai National Park. Such interview materials will be made freely available to the individuals who conducted the interviews documented therein, or by individuals who have received the permission of these interviewees. Otherwise, access to these materials will be restricted to appropriate NPS staff. Any other individuals wishing to use these materials will first have to secure consent from the park, which will require that park staff first secure approval from interviewees or, in the event of their death, their respective Native Alaskan councils.

Audio recordings shall be made of those interviews for which interviewees give their written consent to record. Audio recordings shall be made on a portable digital recorder, and shall be archived on CDs. At the end of the study, copies of these CDs may be sent to the interviewees, who may request editorial changes to these recordings at that time; following this process, these recordings will become a permanent part of the limited access archive collection at Katmai National Park, while the original recordings shall be deleted.

Photographs will be taken only during visits with Native Alaskan consultants to field sites, and will be taken only with the verbal consent of Native Alaskan participants. Consultants will be given the choice of whether such photos are used in the project report or included in the project archive at Katmai National Park in writing on a separate photograph waiver form (see attached form). Without such consent, these photos shall be destroyed at the end of the project. Photos in the report or included as part of the restricted access archive collection at Katmai National Park shall be protected under the same restricted access applied to other project documentation. Consultants will have the opportunity to review photos used in the report or placed in the archive, and will have the opportunity to request that photos be excluded at that time.

Photographs are not essential for the success of the study, but are only for illustrative purposes or for the documentation of places, resources, and practices of cultural and historical importance as

well as possible visitor impacts upon these things. Past experience indicates that some Native Alaskan consultants will view photography as eminently desirable and essential for the preservation of these places, resources, and practices, and may be disappointed if no photographs are taken. Others will refuse photography outright. For this reason, photography will be conducted only very sparingly, and only after building sufficient rapport with individuals that the principal investigator can reasonably assess consultants' receptivity. Accordingly, permission to take or use photographs is not sought on the consent form initially presented to individuals. It is expected that the mere mention of possible photography to individuals with unknown preferences on this matter may be a source of concern to certain individuals and may unnecessarily preclude their participation in the study or their discussion of certain sensitive sites and issues that may, in fact, be essential for the success of the study. In addition, it is very difficult for consultants to assess the appropriateness of photography abstractly prior to the discussions and site visits that accompany the field interview. Instead, a verbal request for permission to photograph will only be made under what are deemed to be appropriate circumstances, and in turn this verbal request – if granted – will be accompanied by a request for written permission. No photographs will be retained beyond the completion of the project without this written permission.

Appendix 6

Draft Human Subjects Form for Planned Ethnographic Study,
*"Evaluate the Effects of Tourism on Traditional Activities, Alagnak Wild River"**

**The attached form was originally developed for University of Washington review; it will require modification in light of the project work plan and Portland State University Office of Human Subjects standards*

UNIVERSITY OF WASHINGTON CONSENT FORM
Alagnak Wild River Resident User Study

Investigators:

Douglas Deur, Ph.D. **University of Washington** **Forest Resources**

Telephone: (503)805-1266 **e-mail: deur@unr.edu**

Investigators' statement

I am asking you to consider being in a research study. The purpose of this consent form is to give you the information you will need to help you decide whether or not to be in the study. Please read the form carefully. You may ask questions about the purpose of the research, what we would ask you to do, the possible risks and benefits, your rights as a volunteer, and anything else about the research or this form that is not clear. When all your questions have been answered, you can decide if you want to be in the study or not. This process is called 'informed consent.'

PURPOSE AND BENEFITS

The National Park Service is working with communities that traditionally use the Alagnak River to see if non-Native use of this River affects places and resources that matter to you. We ask for your help in recording some Native Alaskan uses of the Alagnak River corridor and any impacts that visitors might have on this area. We seek the input of Native Alaskan consultants through interviews. Some consultants may also be invited to visit places along the Alagnak River to discuss these issues.

The results of this study will help the National Park Service better understand the importance of the Alagnak River to Native Alaskan communities and to better protect areas of the river that are used by these communities. This study will not directly benefit you. However, we do hope that the results of this study might help protect places and resources that may be important to you.

PROCEDURES

If you choose to be in this study, we would like to interview you about how people use the Alagnak River. We will ask questions like "Do people from your family hunt along the Alagnak River?" or "Do non-Native visitors to the Alagnak River ever camp or fish on your family's allotment lands?" We will also ask your opinions about National Park Service policies that may affect Native Alaskan uses of the River. In addition, we will ask you to give suggestions about what might be included in a management plan for the Alagnak River

We will arrange for a time and place to meet that will be convenient for you. We can conduct interviews in your home or at another place, as you prefer. If transportation is available, we may

also be able to visit the Alagnak River if you want, and can hold a follow-up interview there. We can also have several interviews. Interviews could vary in length. Interviews usually last from one to three hours. A visit to the Alagnak River to discuss these issues may take a full day, due to the amount of travel involved. You can request that we keep the interview brief if you have limited time.

If you agree, we can audiotape your interview so that we can have an accurate record and so that your responses can be preserved. We will transcribe selections from your interview tape within three months of the interview. If you wish, we can permanently archive your interview tape and transcript in King Salmon at Katmai National Park. You can review the tape and edit it before the audiotape is archived in the park collection. Once the audiotape is archived at the collection, you can access it. You can withdraw the audiotape at any time. Other people can only access the archived audiotape with Katmai National Park's permission. Please indicate on the form below whether or not you give your permission for me to audiotape your interview. Also indicate whether you give your permission for the audiotape to be archived at Katmai National Park.
We hope to document places used by Native Alaskans today so that the National Park Service can better protect these areas. So we may ask for your help in identifying places that matter to you on maps. These maps will be stored with tapes, transcripts, and notes in Katmai National Park. People can only access the archived maps with Katmai National Park's permission. If we visit the Alagnak River together, and we agree that we should take some photographs for the report or project archive, I will first get your written permission on a separate form. We may want to contact you in the months following the interview to ask you a few quick follow-up questions. While Dr. Douglas Deur is conducting the first interviews, Native Alaskan research assistants may take part in these first interviews and may ask you follow-up questions.

When we have interviewed a number of people, we will write a summary project report. You will have an opportunity to review this report and request changes. You can review, edit, or remove any direct quotes by you. You can also review the audiotapes, notes, and maps from your interview before they are placed in the Katmai National Park collection. You may request changes to these items before they are placed in this collection.

RISKS, STRESS, OR DISCOMFORT

Some people feel that providing information for research is an invasion of privacy. The report may have information that you feel is sensitive. We have addressed concerns about your privacy and the confidential report below.

Some people feel self-conscious when they are audio-taped. Some people may feel stress when talking about certain topics. It is important to remember that taking part in this study is voluntary. You can stop at any time or refuse to answer any question.

OTHER INFORMATION

Taking part in this study is voluntary. You can stop at any time. Information you provide will be placed in Katmai National Park after you have had an opportunity to review and edit it. You can

have access to your archived interview audiotape and other information you have provided. The final report will not be distributed publicly. We will only give copies to interviewees, participating Native Alaskan councils, and appropriate National Park Service staff.

All personal information about you is confidential. If any findings from this study were published or presented, this would only be done with the involvement of participating Native Alaskan councils, and we would not use your name without your permission.
You may decide that you do not want to have your name to appear in the report or archived study information. In that case, indicate this on the form below, and your name will not appear in the project report. We will eliminate your name from any fieldnotes, audiotapes, or other project materials if you indicate that this is what you would prefer on the form below. To do this, we will use a code to identify your study information. We will keep a key that links your name and the code in a separate, secured location until March 2013, when the project will be complete. Then we will destroy the key to this code.

We will pay you to partially compensate you for your time and inconvenience. We will pay you $30 an hour for your interview. If you interview at the Alagnak River, we will pay you $30 an hour for interview time, plus a flat $60 to cover transportation time.

It is possible that you will meet again with Dr. Douglas Deur or his research assistants following this interview. Or we might re-contact you to ask if you would consider some follow-up questions after our interview. We might ask if you want to interview again, to follow up on things we discussed before, or to discuss new topics. If we have additional interviews, we will pay you $30 an hour for any additional interview time.

If you have any questions about this research study, please contact me at the telephone number or e-mail address listed at the top of this form. If you have any questions about your rights as a research consultant, please contact the University of Washington Human Subjects Division at (206)543-0098. If you have any questions about the methods and goals of the study, please contact Project Director Douglas Deur, at (503)436-8877.

_____

Signature of investigator Printed Name Date

Consultant's statement

This study has been explained to me. I volunteer to take part in this research. I have had a chance to ask questions. If I have any questions about this research study, I can contact Dr. Deur at the telephone number or e-mail address listed at the top of this form. If I have any questions about my rights as a research consultant, I can contact the University of Washington Human Subjects Division at (206)543-0098. If I have any questions about the methods and goals of the study, I can contact Project Director Douglas Deur, at (503)436-8877. I will receive a copy of this consent form.

1. I give my permission for the researcher to audiotape my interview.

   Yes _____ No _____

2. I give my permission to have my name mentioned in the project report as a project consultant.

   Yes _____ No _____

3. I give my permission for audiotapes, transcripts and notes to be archived in Katmai National Park.

   Yes _____ No _____

4. I give my permission to have my name included on archived materials from this project.

   Yes _____ No _____

_____

Signature of Consultant Printed Name date

_____

Address Telephone Number

Copies to: Researcher's file, Project Consultant

NOTES

[1] As Norris suggests, some of this river mileage was already managed by the NPS, so that the total number of newly protected miles under ANILCA was somewhat lower than these figures:

> "In order to provide greater protection to the Alagnak, Congress, as part of ANILCA, designated all but the lower 18 miles as a wild river. Theoretically, the newly designated wild river was 67 miles long, because it included both tributaries [upper Kukaklek River and all 11 miles of the Nonvianuk River] as well as the Alagnak's main stem. In practical terms, however, the creation of the wild river protected only 47.9 miles of the Alagnak: 19.5 miles of river that had already been protected along its south bank, and an additional 28.4 river miles that had been left unprotected on both banks" (Norris 1996: 205).

[2] As Norris (1996: 204) recounts,

> "Work on the Alagnak began as part of the general management plan process. In July 1983 an alternatives workbook, which listed management options for the river, was distributed to the public. The public was given time to comment on those options. Planners, however, were required to complete a management plan by the end of 1983. Therefore, they selected the public comments which pertained to the river, and prepared a management plan. The Alagnak River management plan was issued in November 1983."

In the original General Management Plan, the NPS noted that the river's primary values were fishing, boating, wildlife, and wilderness. The GMP advised entering into a cooperative agreement with the Alaska Department of Fish and Game "to more precisely define the status of resident fishes within the Alagnak River drainage" (NPS 1986). An archeological survey of the river corridor was also recommended in the GMP, but without specific timelines for implementation.

[3] Since its original designation, Alagnak Wild River has been managed in accordance with the Wild and Scenic River Act, as well as the laws, policies and regulations that guide all National Park Service management. As part of this NPS management, ands and resources must be managed in accordance with a variety of federal laws pertaining to natural and cultural resources. National Historic Preservation Act of 1966, the American Indian Religious Freedom Act of 1978, the Archaeological Resources Protection Act of 1979, Executive Order No. 11593 on Protection and Enhancement of the Cultural Environment, and a variety of other federal laws and policies. Disturbance of burial sites is specifically prohibited under the Native American Graves Protection and Repatriation Act of 1990. Access to sites of religious or ceremonial importance is ensured under Executive Order 13007 on American Indian Sacred Sites. Any NPS action that might affect Native Alaskan use of, or access to, these sites requires direct consultation with Native Alaskan governments as mandated by National Environmental Policy Act of 1969, Executive Order 13175 on Consultation with Tribal Governments, and other federal laws.

This area was also protected under the Bristol Bay Cooperative Management Plan (BBCMP), developed by the Alaska Land Use Council - this plan called especially for the protection of the Alagnak River fisheries production as well as recreational uses. The Alagnak Wild River management plan was designed to be compatible with the BBCMP.

[4] The ethnographic information use to produce this booklet was based in no small part on the interviews of Martha Crow with her mother and others. The interview notes from this research effort are on file with the Lake Clark and Katmai National Parks and Preserves Cultural Resource program, and would be available for future reference (Jeanne Schaaf pers. comm. 2008).

[5] Human Subject approval for full interviews was not sought in the course of the current research project. NPS Anthropologist, Karen Stickman, did take detailed notes at these meetings however, and these notes are part of the record included here. The content of these meetings was often on par with those of some ethnographic interviews, but in light of the circumstances of these events, the resulting data is referenced here as being from "meetings" rather than "interviews."

[6] To access these guidelines, please consult the websites of these two organizations at http://www.aaanet.org/ and http://www.sfaa.net/ respectively.

[7] In light of the ambiguity of ethnographic information from this early period, some sources do not take a position on the cultural specifics of the Peninsula Eskimo as they existed on the northern and interior Alaska Peninsula. It is possible that the Peninsula Eskimo in this area were culturally affiliated with Alutiiq-speakers but did not consistently speak Aluttiq, using the Yupik found to their immediate north. The Aglurmiut spoke Central Yupik.

[8] Early authors such as Wrangell noted strong cultural similarities with Eskimos throughout northern North America, clear to Greenland.

> "The Chugach and Kadyaks are purely maritime people; in their baidarkas covered with laftak they wage an implacable war on all sea animals, killing sea lion, seal, whale, and sea otter. They do not dress in caribou skins as do other people in this territory, but sew their park covers from the intestines and throat fur of sea and amphibious animals…At the present the Chugach, Kadyaks and all inhabitants of the Aleutian chain, as a result of long contact with the Russians, have changed in customs and forgotten their tribal traditions and this is why I do not present here a description of these peoples who in their primitive condition have been described by Messrs. Sarychev, Davydov and Langsdorf" (Wrangell 1970 [1839]: 13).

[9] In this area, certain significant differences in resource use were (and are) found between coastal and interior riverine areas. The portion of the seasonal round devoted to seal hunting among the coastal villages was often devoted to hunting of caribou and fur-bearers by interior villages (Van Stone 1984: 206-07). In many cases, the communities effectively exhibited a hybrid pattern,

combining coastal and interior patterns of resource procurement; the degree to which this has been the case is, of course, a function of the integration of interior and coastal communities.

[10] For more recent overviews of paleopathology in the region, see e.g. Kennleyside (2003).

[11] The preceding discussion of outmigration is not to suggest that the migrations of the 20th century were unidirectional, always taking people away from Alagnak River. On the contrary, families often relocated to the Alagnak for a time, reflecting similar changes and pressures in other Native Alaskan communities in the region. Mike Andrew's family moved to Alagnak from the Big Mountain area prior to 1935:

> "I don't remember what year they move from Big Mountain, they move down to Alagnak. That's [where] I was raised…down that Alagnak River, 1935. And my father told me they had reindeer, but I don't remember. I was born after they moved to Alagnak from Big Mountain" (M. Andrew in Andrew and Andrew 1995).

A number of women also report that they moved to Alagnak River when they were first married, joining kin along the river before moving away again. Mary Olympic recalled moving briefly to the old village on the Alagnak in 1950:

> "I start moving down to Branch, 'cause my, my brother gonna get married from Branch. At, that, I think that's why they move down…[I moved down the Branch with] my parents. 1950. We move down. We move around from there. Branch. We stay down there for one, one year… we had a tent. Summer times we put up fish…One summer we stayed up there… one year and one summer. And fall come. We moved back up, little. Me and husband make new cabin. When he start making cabin, I help him…Down across from old village [Alagnak]. They call 'em Sluryaraq [area where one slides]. We rename it "coffee place" (Olympic 1995).

Mary Tallekpalek also reported moving to the Alagnak with her new husband:

> "I married a long time ago. We come over by Branch River. The guy got, uh, I, he told me to Mama, we [had been] staying in Naknek two years… Reindeer coming all the time. He don't like the place, too. Um, my oldest brother, Mama told me, us guys, "let's go back to Kokhanok. The reindeer, too much work."…they [used to] stop in [Alagnak]. Branch River, you call. Then they… let me marry to the man….we move all the time [before] that, never move no more and stay Branch River, all the time…. we get cannery, Branch River, [Alagnak], you call that" (M. Tallekpalek in Tallekpalek and Tallekpalek 1998).

So too, Mary Nelson reported that she moved to the Alagnak River for a time immediately after she was married. While there, their home served as the family's base of operations for an annual cycle of resource activities that included fall fishing and hunting based from camps up the Kvichak River. Their home was roughly a mile from the Kvichak confluence, and a short distance from the place where the Tallekpalek family lived (Nelson 1997).

[12] The residents of this community were effectively part of the larger network of settlements that includes such communities as Igiugig, Kokhanok, and Levelock. Mike Andrew describes how, while isolated on the Alagnak River, he was able to meet and marry his wife, Dallia, through social gatherings and travel related to subsistence:

> "I meet Dallia 'cause she was younger than me. 'Cause we don't really talk, but I seen her once in a while because we live so far away. I live in Alagnak River. She live at Kukaklek, that's where she was raised. And we start travelling down this way, to Kvichak. That's where I met her. And lot of times I met them up on the lake, Kokhanok, when they was going to school. So we get, every time I see her, we know one another more all the time" (M. Andrew in Andrew and Andrew 1995).

Mike and Dallia were married in 1960.

[13] This relocation was facilitated in part by the development and diffusion of new transportation technologies that allowed families to revisit abandoned areas more rapidly and frequently. Seen in this light, some of these new home villages were said to be pleasantly "central" to a number of different areas used by extended family groups that included Alagnak River residents and their descendents. For example, Katmai Research project notes mention interviews with

> "a husband and wife. He grew up in Igiugig. It was an ideal place to live. It was central to various locations that they would stay throughout the year. They would stay over on the Branch River trapping in the winter and would be on the Kvichak River and Kaskanak Creek during the winter, fishing through the ice. People used to live on the land. They traveled throughout this region on a seasonal basis. That was their lifestyle, which is different than what people do today" (Katmai Research Project 1997: 6).

[14] Mary and her and her husband spent two winters living in the old village along the Alagnak, at the site of Nick Apokedak's allotment.

[15] Many residents of these smaller communities were reported to have been moving out over the last few years, mainly due to the availability of jobs elsewhere.

[16] In some cases, it is difficult to ascertain whether a family hailed from the Alagnak Village or the earlier village, as in the case of Mary Olympic's grandparents, who were said to have lived in the "older village" on the Alagnak River at the beginning of the 20th century:

> "before [my father] move up to Kukaklek they living down Alagnak, in older village. When he start, my dad reindeer herder. Then he move, 1906 he move up Kukaklek. And married, married to my mom, 1926" (Olympic 1995).

[17] It is possibly this church being discussed in somewhat cryptic notes from the Katmai Research project:

> "She thought the first church was built in 1924. She said the country burned down in 1927. She said this included the church and the graveyard except one grave that had a redwood marker and fence. She said in 1935 (or maybe the 1940s) a new church was built Then in 1960 they built a new church. She said the name was changed from Nicoli (St. ?) after the Apokedak's saw that the church in Tyonek was named the same thing. Now the church is St. Mary Protection. She said that St. Hermann, from Russia, traveled over the country and there were churches built at Diamnon J, three in Naknek, two along the Branch and one at Kaskanak (Katmai Research Project 1997).

[18] According to Royce Perkins, an ADF&G biologist who floated the River in 1971:

> "At the outlet of Nonvianuk Lake there are several buildings, some of which belong to Wein Consolidated Airlines. These are used by sport-fishermen. There are a couple of older log buildings which appear to have been a permanent home at one time. They are open and a note inside tells one he is welcome to stay overnight…
>
> "The next building we saw is at confluence of Alagnak and Nonvianuk branches. This small cabin appears to belong to a trapper and is in good repair…
>
> "for the remainder of the trip, we passed an increasing number of cabins and homes. Most of these are probably used as subsistence fishing and trapping camps" (quoted in Stirling 1982: 4-5).

[19] Wolfe (1986, 1979) has taken a functionalist approach to subsistence harvests of southwestern Alaska Native Alaskan communities, suggesting that the continued use of subsistence foods is economically rational in light of the high cost of alternatives. For example, Wolfe (1979: 259) says of the southwest Alaska Yupik that "subsistence foods were harvested if their average capital costs were less than the retail costs of food substitutes," Yet, many authors have taken issue with this approach, suggesting that subsistence resources tend to be prioritized for reasons that are as much cultural as monetary, and that there are a number of cultural obstacles to the

adoption of some commercially available food substitutes (e.g., Langdon 1991, Langdon and Worl 1981). Clearly, there are many motivations for the continuation of modern subsistence practices.

[20] The theme of redistribution of game species within and between Native Alaskan communities is widespread within the ethnographic literature. Ceremonial redistribution of meat and fish is common in this region during boys' first successful hunts. Redistribution of fish and game to less mobile members of the community is also the norm in most communities of the region. These kinds of redistributions, as identified in the ethnographic literature, have been adeptly summarized by Langdon and Worl (1981). See also Lantis 1946.

[21] Behnke noted of the commercial fishery of the 20th century, that

> "Commercial fishing and associated cannery employment have been the major economic bases of the communities around the Katmai proposal since the early 1900's, and have resulted in highly seasonal patterns of employment in the area. During the summer, thousands of jobs are crated by commercial fishing, canneries and services, and thousands of workers must be brought into the region to fill them. Local residents are able to find employment during the short summer fishing season, but at its conclusion, the temporary workers leave, and many of the residents drop out of the labor market for the winter. Unemployment compensation, welfare and subsistence activities become important to many families" (Behnke 1978: 134).

[22] Writing in the 1970s, Kresge et al. reported,

> "Hunting and trapping are not as important to the Bristol Bay economy as they were before the development of the commercial salmon fishery. Before the fishery was established, wildlife was the major source of food and clothing; cash was needed only to purchase supplies. After the industry was established, most Bristol Bay Natives began to earn incomes from fishing and no longer completely depended on subsistence activities. However, wildlife still remains an important food source as well as a supplementary source of money income" (Kresge, et., al., 1974: 6).

[23] While an important moose-hunting area, only a few individuals from these more distant communities actually utilized the area on any given year, and most of these individuals appear to have personal and/or kinship ties to more proximate communities:

> "Only a few residents of these communities hunt moose in the Branch (Alagnak) River, and access is mainly by boat or float-equipped aircraft. Several families with ties to Levelock regularly utilize the Branch for moose hunting" (Behnke 1978: 143-144).

[24] Likewise, Behnke noted that "Residents of Igiugig and Levelock do ascend the Alagnak River by boat and snowmachine… and utilize the [Alagnak region] for moose-hunting" (Behnke 1978: 151).

[25] Researchers have noted the continuity of certain pre-contact ceremonial practices on the Alaska Peninsula despite the pervasiveness of Russian Orthodox traditions, especially as these practices relate to the hunt (Crowell 1992; Lantis 1947). In documenting the cosmology of the related Qaluyaarmiut, Fienup-Riordan (1980: 126) concluded that, in these people's worldview "the natural world is a moral order subject to the same rules of hierarchy, power transference, and the cycling of souls as the human social order, and dependent for continuity on right relations within that order." Ceremonies such as the first seal observances serve in part to show respect to a prey species that is conceptualized as having sentience and a willingness to maintain the human-seal relationship if proper respects are shown. Related to this fact, Fienup-Riordan (1986, 1980) commented on a number of seal meat exchanges that are part of the ceremonial traditions of the southwest Alaska "Eskimo."

[26] A number of individuals have noted that they preferentially hunt and fish close to villages when circumstances allow rather than ranging over relatively large areas. Occasionally, at communities like Igiugig or Levelock, it is possible to subsist without extensive travel, owing to a fortuitous if temporary proximity of game. Apparently speaking of the Kvichak River, George Wilson Sr. noted,

> "fishing, lot of fresh fish out of the river, here. So we got a variety of food here. Right from the village, here, not far. Don't have to go very far to get any kind of a fish or bird, ptarmigan, and meat. So it's been real nice out here. Since I moved up I enjoyed trapping here" (G. Wilson in Wilson and Wilson 1995).

[27] Dan Salmon often spoke of the importance of the forks as a hunting area and repeatedly alluded to traveling to and from the Alagnak River forks from Igiugig as part of Igiugig families' subsistence circuit (e.g., Salmon 2002: 9).

[28] Families also gathered surplus wild meat, fish, and berries for special social events, such as those centering on the Christmas holiday:

> "before holidays come, they used to gather food, save it for this coming holiday, put 'em away without getting spoiled. Even fish, meat, cut 'em up, keep it cold long time. They never have no freezers I could remember. But they always keep it some place outside to keep it cold, without getting spoiled the meat. And fish. Or their really good smoked fish, put in there. People come, on holidays they put on table" (M. Andrew in Andrew and Andrew 1995).

[29] The distribution of spawning locations within watersheds of the region appear to have been underestimated in past studies, especially in places with turbid waters, a fact that has become apparent in recent radio telemetry studies (Young 2005).

[30] Often, fishing seems to be complete by the end of September. Supporting this view, in September of 1973 Mary Kaye Hussion, a canoe and kayak outfitter, reported: "The lower part has many Native allotments and fish-camps but nobody was there that late in the season" (quoted in Stirling 1982: 9).

[31] For example, ADF&G biologist, Richard Russell reported "an old native drying rack at Kukaklek with rainbow tails up to 10 inches across on it in the 40's" (quoted in Stirling 1982: 10).

[32] The potential impacts of park expansion on the extensive trapping within Alagnak as well as certain headwater locations such as Kukaklek and Nonvianuk Lakes were certainly of concern during the expansion studies occurring in the 1970s. As Behnke (1978) noted,

> "Certain species bringing high prices, such as lynx, are also more abundant within and near the proposal area, particularly in the upper Alagnak drainage and American Creek. A few trappers have large investments in time, experience, traplines, and cabins in the proposal which would be lost if they could not trap in the area" (Behnke 1978: 172).

[33] Gabby Gregory, for example, recalled trapping with his father along the Alagnak, as well as Kukaklek Lake and other waterways on this edge of Katmai:

> "those days we catch beaver, when beaver season, [in] mink season, hunt mink in those creeks there, below somewhere that little creek there. Mink and otter… no wolf" (Gregory 1998).

[34] Simultaneously, George Wilson's father, Clarence Wilson (born ca. 1897), a non-Native man married to a Native Alaskan woman originally from Dillingham, had also trapped in the Alagnak River corridor many years before this time. The couple had arrived in Levelock in roughly 1925 and began joining the residents of this community in trapping along the Alagnak soon thereafter (Morseth 2000). At this time, the residents of Levelock were said to fish in the summertime and trap through the winter. This may be the same family individual mentioned in the following Katmai Research Project:

> "His father came to the area as a trapper and prospector, he died way back in 1947. During his days of trapping he talked about working areas of the upper Branch River because no one else was trapping in that area. He didn't have to ask permission of anyone to use the area, but he seemed to know where other people were trapping and that you stayed away from those areas or else asked

> permission. He said that hunting was very different from this in that you could hunt anywhere and didn't have to ask permission of anyone. On the upper Branch he said he had cabins and trapped otter, mink, fox and a few wolverine. He said there were no lynx in those days in that area and that they were only found further inland" (Katmai Research Project 1997: 11-12).

[35] It is possible that the expansion of NPS management in this area, with the park boundary expansions and the establishment of Alagnak Wild River also played a minor role in discouraging trapping in the Alagnak River corridor relative to other trapping territories in the larger region.

[36] Writing in 1906, Elliot noted that "Reindeer cross and recross the Kvichak River in large herds during the month of September; as they range over to and from the Peninsula of Alaska, feeding, and also to escape from mosquitoes. At the mouth of this stream is one of the broadest deer roads in the country" (Elliot 1906: 397).

[37] While most sources attribute the name of the Alagnak River to a different, Yupik origin (meaning 'making mistakes' or 'indecisive' in reference to the River's meandering course), it is interesting to note that the term "Alagnaq" is often translated as "salmonberry" in Alutiiq (see Deur 2007).

[38] Similarly, interviewees such as Mary Tallekpalek have noted that berries are not good during "dry years" in this region (Morseth 2000).

[39] Mary Olympic mentioned that there is a location at Horseshoe Bend with a Yupik name meaning that the location is "not good" because the wind was unpredictable here and often inhibited travel along the river by boats with sails.

[40] This use of boats to carry gear to and from camps at the beginning and end of the season is additionally corroborated by a 1979 letter from the Bristol Bay Native Corporation to Curtis V. McVee, State Director of the Bureau of Land Management, summarizing the use of Alagnak River as well as Kukaklek and Nonvianuk Lakes:

> "the area around both lakes have been historically and still are trapped in the winter by residents along Iliamna Lake and the Kvichak River. In the fall, skiffs are run up the Alagnak River to Kukaklek Lake, loaded with equipment and supplies which are utilized during the winter after freeze up" (Stirling 1982: 13).

Interviewees also mentioned traveling up the Alagnak to drop gear at their cabins:

> "In the early part of Oct. he goes up the Branch in his skiff to outfit his cabins. He mentioned 3 of them along the upper reaches of the Branch and the two lakes that feed it" (Katmai Research Project 1997: 15).

[41] The type of boats used over time has varied, providing different levels of access to portions of the river. The Brandal family reports using a johnboat to trek up the Alagnak River, apparently to hunt its banks. Ray and Henry Erickson report taking jet skiffs up the Alagnak River as far as the rapids "just for fun" while fishing for salmon in Aniakchak Bay (Deur 2007).

[42] A growing literature addresses the impacts of climate change in northerly latitudes on indigenous cultural and subsistence practices. See, e.g., the papers in Krupnik and Jolly (2002).

As late as 1983, the National Park Service suggested that the Alagnak was not accessed by ATVs, though it is also clear that ATVs were in use within the communities that accessed the Alagnak:

> "Local residents use the river via motorboat and snowmachine for sport and subsistence purposes. Overland access, except as noted above, does not exist" (NPS 1983: 18; cf. Deur 2008).

[43] Behnke noted that

> "Those who have the most income, and therefore theoretically have the least need of subsistence resources, are most able to purchase easy access to resources through the ownership or charter of specialized vehicles" (Behnke 1978: 166).

Yet, in light of the social cohesion both within and between these communities, as well as the well-documented practice of food sharing within and between communities, the benefits of transportation technology and access to vehicles is broadly distributed throughout the villages.

[44] Royce Perkins noted in his report to the ADF&G in 1971:

> "Due to the apparently very heavy traffic of sport fishermen at the outlet of Nonvianuk Lake, I would suggest the placement of a man here during summer. In the two days we were there I gave four citations for violations" (quoted in Stirling 1982: 6).

Peter Shepherd, another employee of the Alaska Department of Fish and Game, floated the Nonvianuk branch of the Alagnak River in August of the same year, and reported that:

> "Three planes landed while we were there carrying a total of 13 fisherman (4 of whom were without licenses and/or fishing w/multiple hook and were cited). Nearly all of these people took their limit of 5 rainbow" (quoted in Stirling 1982: 6).

[45] Likewise, the first Alagnak River Management Plan noted that, the early 1980s, a growing number of hunters targeted moose along the River corridor in the fall by floating the River (NPS 1983: 17).

[46] Some Native Alaskan families have apparently been involved with these rafting operations:

> "I have a friend with a rafting business on the Alagnak River. They float the river, have a breakfast and overnight there. They land on a sand bar there, they dismantle their tents and fly back out. There's no more than 6 people at a time. They're very environmentally conscious" (Stickman 2008).

[47] In studies on adjacent drainages, potential development along the waterfront, especially in spawning areas, has been identified as a greater threat to salmon populations than recreational or subsistence uses (Young 2005). The precise applicability of this research to the Alagnak case remains unclear. Any declines in the salmon population are problematic, some meeting participants noted, not only because of the short-term consequences, but also because it indicates that the overall health of the area might be declining. In this assertion, these individuals are consistent with the general finding that anadromous fish serve as "keystone species" in riverine environments (Willson and Halupka 1995).

[48] Speaking in 1995, former Katmai Superintendent, Bill Pierce, noted that the NPS had received "a lot of comments about a decline in the fishery, although we have no documented evidence of that" (Katmai Research Project 1997). In response to concerns expressed by residents, though, the NPS expanded their dialogue with the State of Alaska and commercial fishing guides regarding possible impacts on the fishery.

[49] Some individuals suggest that there is a significant qualitative difference between the visitors who spend time in the area and those hunters who fly in and out of the area for brief forays: "The tourists are nice; it's the hunters flying in and out [who are the problem]" (Stickman 2008).

[50] There is much evidence to suggest that moose were already on the decline on the Alaska Peninsula prior to the designation of Alagnak Wild River:

> "This decline is believed to be related to habitat deficiencies, particularly scarcity of critical browse in winter months, which weakens moose, and may result in poor calf survival. Predation by wolf and brown bear are believed to have additional impacts on calf survival. Hunting and natural mortality have further reduced the adult populations" (Behnke 1978:126-127).

[51] George Setuk reported hearing of such abuses, but not witnessing it himself:

> "I've heard a lot of different stories, about them… sportfishermen just banging caribou, and shooting caribou and leaving them, y'know and... But I never seen it, so I couldn't say" (Setuk in Charley and Setuk 1998).

[52] It is important to recognize the relative newness of regulation relative to the span of human use of the river. Some interviewees still recalled their first encounters with fish and game regulation on the Alagnak. Mike Andrew recalls,

> "when first Fish and Game I see [on] that Alagnak River. And I didn't know what Fish and Game [was]. But I talked with him for three, four hours. Then he try to check on the sled what we had, you know. See what we caught. I tell him, we didn't caught anything. I tell him, if we caught something, we'll show you what we caught" (M. Andrew in Andrew and Andrew 1995).

Other interviewees and meeting participants have shared similar recollections: "One time I was fishing and the Park service told me what to catch and not to catch. I don't like that" (Stickman 2008). Some, especially Dan Salmon, suggested that members of the community were often not aware of new NPS acquisitions or regulations pertaining to NPS-managed lands; this led to animosity when enforcement programs became established. Some residents, especially, in Naknek, were vocally critical of the National Park Service more generally, due to past conflicts over such issues as boundary expansion and access to natural resources within park boundaries. Some expressed the view that they have little rapport with the NPS, and yet a rapport is needed if the two entities are going to help insure the long-term health of Alagnak Wild River. The planned "Evaluate the Effects of Tourism" will have to navigate these community sentiments if the project is to be successful. If undertaken judiciously, it is possible that the study may actually help to facilitate some of this rapport.

[53] The success of this collaboration, some suggested, depended on the familiarity of staff, including seasonal with the general issues of trespass and with the geographical distribution of allotments. For example, Katmai Research Project participants documented the perspectives of a river user who apparently had worked with the NPS on this issue:

> "He said it caused real big problems for a year or two as the lodges believed they had free and unlimited access to all lands along the river and within the wild and scenic area. He said there were lots of problems with trespass and the like during that time but that he and others raised a big stink and the park is now more cooperative and tries to recognize and inform others of the private lands along that river. Yet he says there are still problems as there was a new and "green" park ranger up there last year trying to kick people off of lands that were private. He had no clue as to the land ownership patterns" (Katmai Research Project 1997: 16).

[54] In a 1995 meeting, former Katmai Superintendent, Bill Pierce, also identified an increase in human waste along the riverbanks as a major problem emanating from increased visitation of Alagnak Wild River (Katmai Research Project 1997).

[55] Morseth (1998) notes that the smaller operators who predated the large lodge operations were sometimes "nostalgic" for the relative quiet and abundance of the river of earlier years.

[56] For reasons relating to liability and university accountability, the involvement of students would be most efficient if overseen principally by the NPS research assistant, Karen Stickman, in consultation with Douglas Deur, rather than being directed solely by Deur. Nonetheless, Deur can provide presentations and instruction to students being principally overseen by Stickman. In past attempts to secure support for ethnographic research on the Alagnak from the University of Washington's Human Subjects Division, that office had objections to liability concerns associated with student involvement, and advocated giving NPS staff principal responsibility for student oversight.