

**STAFF ANALYSIS**  
**FSA15-01/04/06/09/10 AND FSA14-07/08**

**ISSUES**

Fisheries Special Action Requests FSA15-01, 04, 06, 09 and 10 were submitted by the *Algaaciq* Tribal Government that represents the Algaaciq Native Village at St. Mary's, the Holy Cross Tribe representing the Holy Cross Native Village, the Kaltag Tribal Council representing Kaltag Village, the Marshall Traditional Council representing the Native Village of Marshall, and the Anvik Tribal Council. All essentially request the same thing. They request the Federal Subsistence Board (Board) close the Yukon River drainage to the harvest of salmon except by Federally qualified users, further reduce the pool of eligible harvesters based on the Alaska National Interest Lands Conservation Act (ANILCA) Section 804 analysis, and implement an allocation strategy between eligible users.

In 2014, Special Action Request FSA14-07 was submitted by the Native Village of Marshall and requested the Board adopt an ANILCA Section 804 determination for the community of Marshall and allow residents of Marshall some opportunity to harvest Chinook Salmon. The Board received the request on June 24, 2014. Special Action Request FSA14-08 was submitted by the *Iqurmiut* Traditional Council at Russian Mission and requested the Board adopt an ANILCA Section 804 determination to allow residents of Russian Mission some opportunity to harvest Chinook Salmon. The Board received the request on June 27, 2014. Based on the timing of the requests and the number of communities involved, Office of Subsistence Management staff determined that they did not have the time required to appropriately conduct the ANILCA Section 804 analysis and instead deferred the requests.

**DISCUSSION**

All six Tribes request the Board implement a strategy for Chinook Salmon subsistence management and allocation that will ensure the ability of subsistence users, consistent with necessary conservation, to engage in their customary and traditional uses of Chinook Salmon. In the recent 2015 requests, Tribes state that without Federal management of Yukon River Chinook Salmon fisheries, local communities will not be ensured a priority and opportunity for customary and traditional uses of Chinook Salmon that are required by Title VIII of ANILCA. The Tribes said that without Federal management, their social and cultural reliance on Chinook Salmon will be impacted. The State manager anticipates low Yukon River Chinook Salmon returns again in 2015. Without Federal management, the Tribes' abilities to harvest Chinook Salmon for customary and traditional subsistence uses will be compromised by other regulatory requirements that do not prioritize rural subsistence uses. Therefore, the Tribes request the Board implement an allocation strategy consistent with Section 804 of ANILCA that provides for equitable opportunity for subsistence uses of Chinook Salmon by communities within the Yukon River drainage. The Tribes said Chinook Salmon harvest management for the Yukon River drainage is usually approached by limiting the area, time, and gear for fishery openings. The Tribes wrote that these blunt strategies have proven insufficient for precise management of Chinook Salmon and failed to equitably allocate Chinook Salmon between communities. Additionally, the Tribes request the Board assume

management of all Yukon salmon stocks as necessary to ensure conservation and subsistence uses of Chinook Salmon stocks.

Finally, the Algaaciq Native Village at St. Mary's (FSA15-01), the Holy Cross Native Village (FSA15-04), the Kaltag Village (FSA15-06), the Native Village of Marshall (FSA15-09), and the Anvik Tribal Council (FSA15-10) said

It is essential that the Board work closely with our Tribe and the other tribal governments on the Yukon River drainage in managing salmon and subsistence uses for the River. The Yukon River Inter-Tribal Fish commission must be included in the co-management demonstration project the Secretary has committed to establish with the Kuskokwim tribes. Federal/tribal co-management through the inter-tribal fish commission is essential for effective management of salmon and subsistence uses in the Yukon drainage. For the 2015 season, the Board should implement an interim co-management system through rules or a special action to fulfill tribal consultation requirement and the Secretary's policy as provided in the commitment to establish the demonstration project. The interim measure should meaningfully incorporate the tribal government through the inter-tribal commission into all 2015 pre-season and in-season management actions and in the development and implementation of a Chinook allocation plan for the members and residents of the tribal communities.

In Special Action Request FSA15-01/04/06/09/10, the Tribes request that staff include Chinook, Chum, Sockeye, and Coho Salmon in the analysis. Management of Chinook Salmon runs affect management of other species of salmon because run timing overlaps. Commercial fisheries for Chum and Coho Salmon occur primarily in the lower river, and they limit the opportunity for middle and upper river communities to harvest Chum or Coho Salmon for subsistence. Additionally, the end of the directed fishery for Chinook Salmon and the beginning of the directed fishery for Chum or Coho Salmon are not defined in regulation leaving unclear when Federal management of the salmon runs ends. Allowing the Special Action to continue into Chum and Coho Salmon runs allows the Federal manager to maintain authority until it is clear that Federal management of salmon harvests is no longer necessary in order to either protect Chinook Salmon or provide opportunity for subsistence users to harvest Chinook, Chum, or Coho Salmon.

Staff left out the Tanana River drainage from the area covered in the analysis. Few Chinook Salmon are observed past its confluence with the Salcha River. There are no Federal public waters in the area.

### **Existing Federal Regulation**

#### **50 CFR 100.27(e)(3) Subsistence taking of fish—Yukon-Northern Area**

*(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action*

### **Proposed Federal Regulation**

§ \_\_\_\_ .27(e)(3) Subsistence taking of fish—Yukon-Northern Area

*(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.*

*Unless re-opened by the Federal Fisheries Manager, Federal public waters in the Yukon River drainage that are within and adjacent to the exterior boundaries of the Arctic Innoko, Kanuti, Koyukuk, Nowitna, Tetlin, Yukon Delta, and Yukon Flats National Wildlife Refuges; the Steese National Conservation Area; the White Mountains National Recreation Area; portions of Beaver and Birch creeks and the Fortymile Rivers that are segments of the National Wild and Scenic River system located outside the boundaries of these Federal conservation units; and Yukon-Charley Rivers National Preserve and Gates of the Arctic National Park and Preserve are closed to the harvest of salmon.*

*When re-opened by the Federal Fisheries Manager, Federal public waters in the Yukon River drainage that are within and adjacent to the exterior boundaries of the Arctic Innoko, Kanuti, Koyukuk, Nowitna, Tetlin, Yukon Delta, and Yukon Flats National Wildlife Refuges; the Steese National Conservation Area; the White Mountains National Recreation Area; portions of Beaver and Birch creeks and the Fortymile Rivers that are segments of the National Wild and Scenic River system located outside the boundaries of these Federal conservation units; and Yukon-Charley Rivers National Preserve and Gates of the Arctic National Park and Preserve are closed to the harvest of salmon except by Federally qualified subsistence users.*

**Extent of Federal Public Lands**

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3 Federal public waters in the Yukon River drainage minus the Tanana River drainage include all navigable and non-navigable waters located within and adjacent to the exterior boundaries of the Arctic, Innoko, Kanuti, Koyukuk, Nowitna, Tetlin, Yukon Delta, and Yukon Flats National Wildlife Refuges; Yukon-Charley Rivers National Preserve; the Steese National Conservation Area; the White Mountains National Recreation Area; and those segments of the National Wild and Scenic River system, of the Yukon River drainage, located outside the boundaries of these Federal conservation units (i.e., portions of Beaver and Birch Creeks and the Delta, and the Fortymile Rivers). Additionally, waters that are within and adjacent to the exterior boundaries of Gates of the Arctic National Park and Preserve are within Federal jurisdiction for purposes of Federal subsistence fisheries management. Federal public waters include all Yukon commercial fishing Districts Y1-Y3; parts of Subdistricts 4A and 4C; and most of Subdistrict 5D (see **Maps**).

**Customary and Traditional Use Determination**

Residents of the Yukon River drainage and the community of Stebbins have a customary and traditional use determination for all salmon in the Yukon River drainage. The area includes the 61 communities described in the **Appendix Table A-1**. Additionally, residents of Chevak, Hooper Bay, and Scammon Bay have a customary and traditional use determination for fall Chum Salmon in the Yukon River drainage.

## Background

People who are members of Yup'ik Eskimo and *Deg Hit'an*, *Doy Hit'an*, Holikachuk, *Denaakk'e* (Koyukon), *Gwich'in*, *Han*, Tanana, Tanacross, or Upper Tanana Athabaskan cultural groups live in the 61 rural communities with a customary and traditional use determination for salmon in the lower Yukon River drainage. Settlement patterns since 1900 have been characterized by movement from nomadism to permanent settlements at important harvesting sites, around trading posts, and to send children to school. Others have moved to the area to work in education, government, mining, trade, and other industries (Clark 1981; Fienup-Riordan 1984, 1986; Haynes and Simeone 2007; Hosley 1981; Mishler and Simeone 2004; Nelson 1983; Slobodin 1981; Wolfe and Scott 2010; VanStone 1984; VanStone and Goddard 1981). The population of the area has more than doubled in the 50 years between 1960 and 2010. In 2010, an estimated 18,404 people living in 6,358 households were described by the U.S. Bureau of the Census as permanent residents of rural communities in the Yukon River drainage (ADCCED 2014).

A major force of change affecting salmon harvest levels in the lower Yukon River drainage was the use of salmon to feed sled dogs described below.

The period from 1900 to 1940 encompasses the peak sled dog era in the Yukon River drainage . . . virtually every family maintained a small number of sled dogs . . . In the 1930s airplanes began to replace commercial dog teams for the movement of freight and mail but sled dogs continued to provide the bulk of winter transportation for individuals and families throughout the Yukon River drainage (Andersen and Scott 2010:2–5).

By the 1970s snowmobiles had largely replaced the family dog team. Some people continue to keep dogs. No one in the upper Yukon River drainage reported harvesting Chinook Salmon for dog food in 2009, 2010, or 2011, nor during a survey conducted in 2008 that included the communities of Tanana and Fort Yukon (Andersen and Scott 2010; Jallen, Decker, and Hamazaki 2012; Jallen, Ayers, and Hamazaki 2012; Jallen and Hamazaki 2011). In 2011, the most recent year for which data are available, an estimated 40,178 salmon were harvested for dog food in the upper Yukon River drainage. The majority was fall Chum Salmon. Smaller amounts of summer Chum Salmon and Coho Salmon were also harvested to feed dogs. In the middle Yukon River drainage, an estimated 12,252 salmon were harvested for dog food. The majority was summer Chum Salmon, an estimated 9,743 fish. Smaller amounts of fall Chum Salmon and Coho Salmon were harvested to feed dogs. Regularly, over half the salmon harvested to feed dogs has been summer Chum Salmon. In the lower Yukon River drainage, an estimated 624 salmon were harvested for dog food. The majority was summer Chum Salmon.

For the lower Yukon River drainage, the population more than doubled in 50 years between 1960 and 2010; the population in 2010 was 5,104 people living in 1,240 households (ADCCED 2014). Residents are primarily Yup'ik Eskimo (Fienup-Riordan 1986).

For the middle Yukon River drainage, the population increased by 30% in the 50 years between 1960 and 2010 (ADCCED 2014); the population peaked between 1980 and 2000 and has since declined to 2,010 people living in 754 households in 2010. Villages are generally described as culturally affiliated with *Deg Hit'an*, *Doy Hit'an*, Holikachuk, *Denaakk'e* (Koyukon) Athabascans, and Inupiat Eskimos (Hosley 1981, VanStone and Goddard 1981).

In contrast to the lower and middle, the population in only the upper Yukon River drainage peaked between 1970 and 2000 and has since declined; the population increased by only 1.5% in the 50 years between 1960 and 2010 (ADCCED 2014). Villages are generally described as culturally affiliated with Koyukon, Gwich'in, and Han Athabascans (Clark 1981, Hosley 1981, Mishler and Simeone 2004, Nelson 1983, Slobodin 1981, Wolfe and Scott 2010, VanStone and Goddard 1981). For centuries, caribou comprised a large part of the harvest of wild resources for food. Large numbers of migratory caribou were available from the Porcupine and Fortymile caribou herds. The collapse of the Fortymile caribou herd between 1950 and 1970 had an enormous effect on the ability of many villages to harvest caribou and the loss of a significant resource available in the area (Van Lanen et al. 2012). For some Gwich'in and Han people, the enforcement of the U.S-Canada boundary since the 1940s has cut them off from much of their hunting and trapping areas in Canada. Eagle City, Chicken, and Central were established as gold mining supply sites; however, most miners had left the area by 1910. Native and non-Natives worked on steamboats, in mines, and in wood chopping camps, as well as on traplines. In the 1970s land auctions attracted new residents to Eagle City. Gold miners continue to return to the area seasonally. Roads have linked Eagle with the Alaska Highway since the 1950s, the Steese Highway connected Central with Fairbanks in 1927, and the Dalton Highway (Haul Road) from Fairbanks crosses the Yukon River between the communities of Rampart and Stevens Village (Crow and Obley 1981, Hosley 1981).

A significant factor affecting the management of salmon fisheries in the upper Yukon River drainage is the three highway access points, described above. The Federal closure will not affect the State fisheries at the three highway access points because none are located on Federal public lands.

### **Biological Background**

In 2000, Yukon River Chinook and fall Chum Salmon stocks were yield concerns<sup>1</sup> and Yukon River summer Chum Salmon were a management concern<sup>2</sup> based on the State Board of Fisheries' *Sustainable Salmon Fisheries Policy* (5 AAC 39.222). Beginning in 2003, the Yukon River summer Chum and fall Chum Salmon runs showed significant improvement, and consequently, in 2007 were no longer of yield or management concern. In contrast, Chinook Salmon continued to be a yield concern based on the inability, despite the use of specific management measures, to maintain expected yields or harvestable surpluses above the stock's escapement needs since 1998 (Hayes et al. 2014).

For 2014, preliminary data indicated that Chinook Salmon escapement goals were met in two tributaries where it could be measured (the East Fork Andreafsky River and the Chena River). Additionally, an estimated 64,000 Chinook Salmon passed into Canada, which was above the Canadian Interim Management Escapement Goal of 42,500–55,000 (ADF&G 2014a). An estimated 50% of the Chinook Salmon that enter the Yukon River are Canadian-origin fish (Munro and Tide 2014). Chinook Salmon return to spawn in many areas of the Yukon River drainage in Alaska. Escapements into seven Yukon River tributaries in Alaska are measured against escapement goals: the West Fork Andreafsky River, East Fork Andreafsky River, Anvik River, and Nulato River in the lower and middle Yukon River drainage; the Gisasa River in the Koyukuk River drainage; and the Chena River and Salcha River in the Tanana River drainage. Chinook Salmon entering areas upriver of the Yukon River's confluence with the Tanana

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<sup>1</sup> Yield concern results from chronic inability to maintain yields or harvestable surplus above escapement needs.

<sup>2</sup> Management concern results from a chronic inability to maintain escapements with the bounds of an escapement goal.

River are generally considered Canadian-origin fish. Therefore, the management strategy differs from the strategy below the Yukon River's confluence with the Tanana River. Downriver, Chinook Salmon of Canadian origin mix with Chinook Salmon returning to Alaska (Estensen et al. 2013).

The Chum Salmon return is made up of two genetically distinct runs, an early summer Chum and a later fall Chum Salmon run. Preliminary data for 2014 indicated that summer Chum Salmon runs into most tributaries experienced below average escapement; however, the Anvik River escapement goal was achieved (ADF&G 2014a). The majority of summer Chum Salmon escapement is into the Anvik River drainage, and a large portion is into the Koyukuk River drainage.

In Alaska, fall Chum Salmon spawn primarily in the upper portion of the drainage, including the Tanana, Porcupine, and Chandalar river drainages. Coho Salmon are most abundant in the Yukon River drainage up to and including the Tanana River drainage. Coho Salmon are uncommon in the Koyukuk River drainage. Sockeye Salmon are uncommon in the Yukon River drainage (Estensen et al. 2013).

The U.S. and Canada Joint Technical Committee and the Yukon River Panel are meeting April 16, 2015. The complete analysis and formal acceptance of the 2015 Chinook Salmon total run size will not be finalized until after they meet. However, based on the information compiled so far, the run size may be similar to 2014, around 130,000 Chinook Salmon. A run of this size would be well below average, but could be sufficient to achieve most escapement objectives provided conservative management actions are applied in the subsistence fishery. The Summer Chum Salmon run outlook is for a run also similar to the 2014 run with a large surplus available for subsistence and other uses (Bue, Estensen, and Schmidt 2015). Information presented to the applicable Regional Advisory Councils at their winter 2015 meetings by ADF&G and U.S. Fish and Wildlife Service is in **Appendix B**.

### **Harvest History**

In 2014, the preliminary estimated commercial salmon harvest was 0 Chinook, 530,644 summer Chum, 0 fall Chum, and 0 Coho Salmon in the Alaskan portion of the Yukon River drainage. In the lower Yukon River (Districts 1–2) 427,347 summer Chum Salmon were harvested. In District 4A, 96,385 summer Chum Salmon were harvested. In District 6, 6,912 summer Chum Salmon were harvested. A total of 416 permit holders sold fish in 2014, and the exvessel value was approximately \$1,860,721, which was down from \$3,513,436 in 2013 (ADF&G 2014a, Munro and Tide 2014).

In 2012, the estimated sport harvest of Chinook Salmon from the Yukon Management Area (excluding the Tanana River) was 231 fish, consistent with other estimates from the past decade, predominately from the Anvik and Andreafsky rivers (Burr 2014). Downstream of the Koyukuk River, 2008–2012, the average annual sport harvest of Chum Salmon was 249 fish and Coho Salmon was 287 fish (ADF&G 2014b)

In 2000, “hook and line fishing gear was added to the types of legal subsistence fishing gear in the lower portion of the Yukon River drainage . . . . Consequently harvest estimates of sport-caught fish . . . are generally low because local residents usually fish under subsistence regulations” (Burr 2012:10)

The preliminary 2013 subsistence salmon harvest estimates in the Alaska portion of the Yukon River drainage were about 11,000 Chinook, 92,000 summer Chum, 112,900 fall Chum, and 14,100 Coho Salmon. These are the most recent estimates available at this time. For comparison, recent 5-year average

(2008–2012) subsistence salmon harvest estimates were 37,675 Chinook, 76,710 summer Chum, 80,515 fall Chum, and 15,830 Coho Salmon for communities in the Alaska portion of the Yukon River drainage (YRJTC 2014). More detailed harvest data are available in **Appendix Tables A-2 to A-5**.

### **Regulatory History**

Since 2000, Yukon River fisheries have been managed to conserve Chinook Salmon, especially Canadian-origin Chinook Salmon. The Canadian Interim Management Escapement Goal of 42,500–55,000 Chinook Salmon is based on the Eagle sonar program. In order to meet this goal, the passage at the Eagle sonar station must include a minimum of 42,500 fish for escapement, provide for a subsistence harvest in the community of Eagle upstream of the sonar (approximately 1,000–2,000 fish), and incorporate Canadian harvest sharing as dictated in the US/Canada Yukon River Treaty (20–26% of the total allowable catch) (ADF&G 2014a).

For several years subsistence fishers have had no opportunity to harvest Chinook Salmon in the Yukon River drainage. Additionally, the harvest of summer Chum Salmon has been restricted in order to protect Chinook Salmon from incidental harvests. The 2014 season was “the most conservatively managed Chinook Salmon season in recent history” (ADF&G 2014a). For example, the lower Yukon River drainage was closed to the harvest of salmon for 6 days. Subsequently, the area opened only to the harvest of summer Chum Salmon, and subsistence fishers were restricted to using dip nets and required to live release Chinook Salmon (**Appendix Table A-6**). In the middle Yukon River drainage, all areas of District 4 were closed to the harvest of salmon for a minimum of 9 days in the Innoko River to a maximum of 22 days in Subdistricts 4B and 4C. Subsequently, the area opened only to the harvest of summer Chum Salmon, and subsistence fishers were restricted to using gear types that allowed live release of Chinook Salmon (**Appendix Table A-7**). In the upper Yukon River drainage, subsistence fishers were not allowed to use greater than 4-inch mesh-size gillnets for up to 45 days in summer 2014 (**Appendix Table A-8**, ADF&G 2014a).

Management of the Yukon River salmon fishery is complex due to the (1) inability to determine stock-specific abundance and timing, (2) overlapping multi-species salmon runs, (3) efficiency of methods and means, (4) allocation issues, and (5) the immense size of the Yukon River drainage. For management purposes, the summer season refers to the fishing associated with Chinook and summer Chum Salmon migrations and fall season refers to the fishing associated with the fall Chum and Coho Salmon migrations. During the fishing season, management is based on preseason projections and inseason run assessments. Since 1995 the main river sonar project at Pilot Station has provided inseason estimates of salmon passage for fisheries management. The level of commercial, subsistence, and personal use harvests can be adjusted through the use of State emergency orders and Federal special actions to control time and area of openings and closures. For Chinook Salmon, since 2001 there has been an action plan developed through a public process that contains goals, objectives, and provisions necessary for achieving rebuilding goals and objectives (Munro and Tide 2014).

### **Section 804 Analysis**

Section 804 of ANILCA requires the Secretary of the Department of the Interior and the Secretary of the Department of Agriculture to respond when the population of a fish or wildlife species in a particular area becomes depressed to the point that the Secretaries are forced by circumstances to choose between

otherwise qualified rural residents who wish to fish, hunt, or trap from that depressed population. Section 804 of ANILCA requires the Secretaries to make a determination based on three criteria: (1) customary and direct dependence upon the populations as the mainstay of livelihood, (2) local residency, and (3) the availability of alternative subsistence resources.

**ANILCA Section 804**

*Except as otherwise provided in this Act and other Federal laws, the taking on public lands of fish and wildlife for nonwasteful subsistence uses shall be accorded priority over the taking on such lands of fish and wildlife for other purposes. Whenever it is necessary to restrict the taking of populations of fish and wildlife on such lands for subsistence uses in order to protect the continued viability of such populations, or to continue such uses, such priority shall be implemented through appropriate limitations based on the application of the following criteria:*

- (1) customary and direct dependence upon the populations as the mainstay of livelihood;*
- (2) local residency; and*
- (3) the availability of alternative resources.*

**Codified Federal Regulations 50 CFR §\_\_100.17 Determining priorities for subsistence uses among rural Alaska residents**

*(a) Whenever it is necessary to restrict the subsistence taking of fish and wildlife on public lands in order to protect the continued viability of such populations, or to continue subsistence uses, the Board shall establish a priority among the rural Alaska residents after considering any recommendation submitted by an appropriate Regional Council.*

*(b) The priority shall be implemented through appropriate limitations based on the application of the following criteria to each area, community, or individual determined to have customary and traditional use, as necessary:*

- (1) Customary and direct dependence upon the populations as the mainstay of livelihood;*
- (2) Local residency; and*
- (3) The availability of alternative resources.*

*(c) If allocation on an area or community basis is not achievable, then the Board shall allocate subsistence opportunity on an individual basis through application of the criteria in paragraphs (b)(1) through (3) of this section.*

*(d) In addressing a situation where prioritized allocation becomes necessary, the Board shall solicit recommendations from the Regional Council in the area affected.*

Once a limited pool of qualified users is identified based on an analysis of the above three criteria and informed by recommendations from the relevant Regional Advisory Councils, other management actions are taken to ensure subsistence opportunities are available within the confines of specific conservation

concerns. In other words, an analysis based on Section 804 of ANILCA and 50 CFR §\_\_100.17 does not allocate resources among those within the limited pool of users; it simply identifies that pool of users.

In this case, such an analysis is required because the proponent requested it and because of the projected small harvestable surplus of Chinook Salmon in the Yukon River drainage relative to the large number of subsistence users with a customary and traditional use determination to harvest Chinook Salmon. There is a high potential for harvest to exceed the harvestable surplus. The following section addresses these criteria as they relate to rural residents with a customary and traditional use determination for salmon in the Yukon River drainage, which includes the 61 communities described in **Appendix Table A-1**. Because of the large amount of information, communities are divided into three groups for the purpose of describing their harvests and uses of salmon.

### Sources of Information

Published ethnographic studies of the communities that have a customary and traditional use determination for Chinook Salmon in the Yukon River drainage include: Clark 1981; Fienup-Riordan 1984, 1986; Haynes and Simeone 2007; Hosley 1981; Mishler and Simeone 2004; Nelson 1983; Slobodin 1981; Wolfe and Scott 2010; VanStone 1984; and VanStone and Goddard 1981). Historical and contemporary subsistence patterns are described in the technical paper series of the Division of Subsistence, ADF&G. Harvest statistics are housed in three places. The results of household harvest surveys are reported in the *Community Subsistence Information System*, an online database, Division of Subsistence, ADF&G (2015a). The FWS/ADF&G permit reporting system is another source, but it is not widely used in most rural areas of the state (FWS 2015). Therefore, both household harvest data and reports from the FWS/ADF&G permit reporting system are used below to describe a community's harvest levels of some wild resources. Finally, drainage residents report their harvests of salmon during annual household harvest surveys that are described in Jallen, Decker, and Hamazaki (2012). The primary purpose of household harvest surveys is to document subsistence uses of wild resources. These quantitative studies focus on a one-year time period; however, they may not be the "typical" year. In fact, annual variation in subsistence patterns can be significant as subsistence harvesters respond, for example, to the availability of resources or employment opportunities that may vary considerably from year to year. Additionally, some community harvest estimates from surveys are imprecise ranges. Only by observing large data sets can we begin to see trends. Household harvest survey data are collected, processed, and reported by major resource categories (salmon, nonsalmon fishes, etc.). Harvest levels are converted to pounds edible weight and presented as per capita harvest levels. Per capita harvest levels allow comparisons between resources and communities regardless of human population differences.

### Upper Yukon River Drainage

#### *Criterion 1: Customary and Direct Dependence upon the Population as the Mainstay of Livelihood*

##### *Residents of Eagle and Eagle Village*

Residents of Eagle and Eagle Village rely on salmon as a mainstay of the subsistence economy. People rely on large quantities of salmon, including Chinook Salmon, that they harvest from the upper Yukon River drainage. More fall Chum Salmon are harvested than other salmon species (**Figure 1**). Historically

fish, especially salmon, were a vital resource for Han people living in the area (Mishler and Simeone 2004). Chinook Salmon pass Eagle Village around July 1 and continue for about a month. After a short break, the fall Chum Salmon run begins in mid-August and continues to late September. There are fishwheels harvesting salmon from Eagle Village to the Canadian border. “Up until the 1970s, Han families usually moved to their fish camps while the salmon were running” (Mishler and Simeone 2004:60). They processed Chinook Salmon for human consumption and Chum Salmon for dog food. They cut salmon fillets into long strips and smoked salmon, kippered and froze salmon, and smoked salmon fish eggs.

*Residents of Chicken*

Residents of Chicken do not rely on salmon as a mainstay of the subsistence economy. The community of Chicken is situated on the Taylor Highway on a tributary of the Fortymile River and about 95 highway miles from Circle that is on the Yukon River. Salmon are not observed in the Fortymile River drainage in Alaska except a few Chum Salmon below the Taylor Highway bridge that crosses the Fortymile River about 46 miles from Chicken. No subsistence harvests of salmon have been reported by Chicken residents (Jallen, Decker, and Hamazaki 2012).

*Residents of Beaver, Birch Creek, Circle, Fort Yukon, Venetie, Chalkyitsik, and Arctic Village*

Residents of the communities rely on salmon as a mainstay of the subsistence economy. Most residents harvest more fall Chum Salmon than other salmon species from the upper Yukon River drainage (**Figure 1**). Five groups of Gwich'in, or bands, were centered historically in the Upper Yukon-Porcupine region of Alaska (Slobodin 1981). In 1983, Caulfield described the harvest of fish. “Traditionally fish were one of the most reliable and abundant food resources in the Upper Yukon-Porcupine region, and this fact remains true today . . . Harvest of fish was a major component of the annual cycle for bands” (Caulfield 1983:36).

Salmon are harvested primarily along the Yukon River . . . King salmon arrive at Fort Yukon during the end of June and are generally caught . . . during the early part of July. Chum Salmon arrive in August . . . The most intensive fishing activity for Chums takes place in late August and early September . . . King salmon are extremely oily and are usually cut into strips and hung to dry in smokehouses. King salmon heads are often split, dried, and used in soups . . . Several thousand Chums may be split and dried on racks in the fall for dog food (Caulfield 1983:74).

Additionally, “Chalkyitsik has traditionally been an important fishing site” located on the Salmon Fork of the Black River (Caulfield 1983:127). “The main reason for the . . . settlement was the presence of abundant source of whitefish which run down the nearby creek during the fall” (Nelson 1973:18). Traditional territory included the Porcupine and Black rivers. Historic settlements were at Shuman House, Burnt Paw, Old Rampart, Bluefish Lake, Ohtig Lake, Chalkyitsik, and Salmon Village. From Salmon village, Chum Salmon were gaffed in the fall at spawning areas.

Residents of Arctic Village generally harvest salmon from the Chandalar River drainage above Venetie (ADF&G 1986; Caulfield 1983; Jallen, Decker, and Hamazaki 2012). Fall Chum Salmon account for the majority of salmon returning to the Chandalar River and begin to arrive in late July or early August.

“Summer Chum Salmon, while not as abundant, have been intermittently observed in the Chandalar River. . . . While Chinook Salmon are known to spawn in the Chandalar River, their actual abundance is unknown” (Melegari and Osborne 2008:1).

*Residents of Central*

Residents of Central do not rely on salmon as a mainstay of the subsistence economy. Central residents harvest some salmon, primarily Chinook Salmon (**Figure 1**). They harvest salmon from the mainstem of the Yukon River, probably at Circle. Central was a mining supply site and telegraph maintenance station in the 1890s and early 1900s. Mining activity in the area continues today. Central also provides services to area residents (Hosely 1981; Jallen, Decker, and Hamazaki 2012). Central is located on the upper reaches of Birch Creek and along the Steese Highway that connects Fairbanks to the community of Circle on the Yukon River, 33 highway miles away.

*Residents of Stevens Village*

Residents of Stevens Village rely on salmon as a mainstay of the subsistence economy. People harvest more Chinook or fall Chum Salmon than summer Chum or Coho Salmon (**Figure 1**). Chinook Salmon are generally available in the area from late June or early July through July and in some years into August. Late run Chinook Salmon are mixed with summer Chum Salmon. Coho Salmon arrive by September. In 1984 Sumida (1986) wrote that all Chinook Salmon were prepared for human consumption, and only some entrails, backbones, and other discarded parts were fed to dogs. Summer Chum Salmon were used primarily for dog food, some fall Chum Salmon were prepared for human consumption and some were fed to dogs, and most Coho Salmon were used for dog food and some were prepared for human consumption. Most fish camps were located along the Yukon River mainstem from just below the Dalton Highway bridge (about 27 river miles downriver) to several miles above Stevens Village. Chinook Salmon were desired by all households in the community. They were cut, smoked, and dried in strips, frozen, salted, and/or canned. Fish heads and roe were sometimes processed for later use. Summer Chum and Coho Salmon were selectively cut for human consumption or dog food based in part on the quality of the fish, number of dogs, and the number of Chinook Salmon already harvested. Salmon for dog food were handled with less care (Sumida 1986). In 2007, about 40% of Stevens Village households had fish camps where they processed and smoked salmon. Most fishing sites were located downriver from the community about halfway to the Dalton Highway bridge where a few fish camps had seasonal occupants from outside the area. The average use of a particular fish camp by a family was 51 years. Sled dogs were common in Stevens Village (Wolfe and Scott 2010). Wolfe and Scott (2010) wrote down a quote from a Stevens Village resident describing the traditional use area and the impact of the Dalton Highway bridge.

You know all these villages of the Interior originally were separate bands . . . . Every band or village had its traditional hunting and fishing ground that the other bands recognized. Traditionally, the Stevens Village people’s traditional use area was forty miles upriver [from the Yukon bridge] halfway to Beaver Village, around Marten Island, then north back to the foothills, south to Hess Creek. On the western edge, the traditional boundary was at the Ray River area, which is now where the Dalton Highway crosses the Yukon. Traditionally, at that Ray River area for a few miles on either side was like an overlap of Rampart people and Stevens Village people.

Now and more contemporary times, with the advent of state fishing regulations and with this road, that traditional type area is not recognized anymore [by outsiders]. You have nonlocal Natives will come in and set up camp right off the road, like you saw last night. In more traditional times, they would ask permission from the tribe of whose area they were in. That's kind of still a little bit in practice, but not so much, because nowadays people travel, and even Native peoples kind of abide by the state and federal hunting and fishing boundaries and permitting system rather than the traditional form of governance over traditional tribal fishing and hunting boundaries (Wolfe and Scott 2010:28–29).

*Residents of Rampart*

Residents of Rampart rely on salmon as a mainstay of the subsistence economy. People harvest more Chinook and fall Chum Salmon than summer Chum or Coho Salmon (**Figure 1**). People have fish camps up to the Dalton Highway bridge. A stretch of river below the bridge is used by residents of Stevens Village and Rampart. Wolfe and Scott (2010) reported that in 2007 five fishcamp families in the area below the bridge were dual residents of Rampart and Fairbanks and four fish camps were occupied by people without connections to the villages.

*Residents of Tanana*

Residents of Tanana rely on salmon as a mainstay of the subsistence economy. People harvest some Chinook Salmon and more fall Chum Salmon than other salmon species (**Figure 1**). Tanana was a center of trade and the local store distributed baled fish into the 1950s (Case and Halpin 1990). People living along the river and nearby drainages began to settle at Tanana while continuing to move to summer fish camps in order to harvest, process, and preserve salmon. Sites used by Tanana residents to harvest salmon include Old Station and Kallands that are located within about 5 miles downriver. Chinook Salmon usually arrived at Tanana by mid-June. “The traditional *Nuchalawoyya* council meeting and potlatch occurred in June . . . . This celebration required enough food to feed hundreds of guests from other villages for several days. Donations of wild foods saved over the winter were contributed to the potlatch, and some were harvested specifically for the potlatch at this time” (Case and Halpin 1990:35). The celebration of *Nuchalawoyya* is a continuing yearly event in Tanana (Morrow 2014). Chinook Salmon are harvested through July. Summer Chum Salmon begin passing Tanana around July 1 and continue through July, overlapping with Chinook Salmon. Typically, there is a lull in fishing in early August before fall Chum and Coho Salmon arrived. In 1986 people harvested, processed, and preserved salmon at short-term camp sites nearby Tanana and at fish camps where they lived most of the summer. Tanana residents stayed at about 30 fish camps. Fish camps used since 1968 extended from Birches downriver to the Rapids upriver and also along the Tanana River. People harvested fish in areas that extended further. Chinook Salmon were eaten fresh, frozen, canned, or cut into strips and smoked and dried. Only entrails and backbones were fed to dogs. Chum and Coho Salmon were canned or smoked and dried, and some were split and allowed to freeze in the cold fall temperatures. Bellies were sometimes pickled. Some summer and fall Chum Salmon were harvested specifically for dogs, sometimes as “crib” fish, fish that were aged and frozen outside with minimum processing (Case and Halpin 1990). In 2007 many Tanana fish camps were located upriver from the community at the Rapids, a productive area for fish wheels. Sled dogs were common (Wolfe and Scott 2010).

*Rural Residents of the Tanana River Drainage*

Residents of the 28 communities rely on salmon as a mainstay of the subsistence economy; however, they rely on salmon taken in the Tanana River drainage based on ethnographic information and the annual subsistence salmon harvest survey (Brown et al. 2014, Haynes and Simeone 2007, Jallen, Decker, and Hamazaki 2012). The nearest community is Manley, about 70 river miles from the Yukon River.

*Criterion 2: Local Residency*

Fourteen rural communities are situated in the upper Yukon River drainage and therefore have the highest degree of local residency. They are the following: Eagle Village, Eagle city, Chicken, Central, Circle, Fort Yukon, Chalkyitsik, Venetie, Arctic Village, Birch Creek, Beaver, Stevens Village, Rampart, and Tanana. Eight are situated on the mainstem Yukon River and five are situated on tributaries; Chalkyitsik is in the Porcupine River drainage, Venetie is in the Chandalar River drainage, Birch Creek and Central are in the Birch Creek drainage, and Chicken is in the Fortymile River drainage.

There are 28 rural communities in the Tanana River drainage. The nearest community is Manley, about 70 river miles from the Yukon River.

*Criterion 3. Availability of Alternative Resources*

Twelve rural communities in the upper Yukon River are discussed regarding Criterion 3 because it has not been shown that other rural communities rely on salmon that they harvest from the Yukon River drainage (except the Tanana River drainage). They are the following: Eagle Village, Eagle city, Circle, Fort Yukon, Chalkyitsik, Venetie, Arctic Village, Birch Creek, Beaver, Stevens Village, Rampart, and Tanana. The following description of the availability of wild resources other than salmon relies on ethnographic sources and wildlife population assessments in ADF&G management reports.

The residents of the 12 communities are highly dependent on fishes, and fish comprise the majority of annual harvests for subsistence, in pounds edible weight (**Table 1**, Case and Halpin 1990, Caulfield 1983, Gustafson 2004, Koskey and Mull 2010, Mishler and Simeone 2004, Nelson 1983, and Wolfe and Scott 2010). Fish camps for harvesting nonsalmon fishes are situated near sloughs, creeks, or lakes known for abundant and relatively predictable fish populations. Nonsalmon fishes that are available to harvest include northern pike, whitefishes, arctic char, sucker, arctic grayling, lake trout, sheefish, and burbot. All 12 communities appear to be similarly situated regarding their abilities to harvest nonsalmon fishes in the upper Yukon River drainage.

The historic range of the Fortymile caribou herd stretches from Whitehorse, Yukon Territory, to past Fairbanks, both north and south of the Yukon River. In 1920, Murie (1935) estimated the herd size at 250,000–300,000 caribou. By the 1970s, the herd had declined to an estimated 5,000 caribou. Since 1995, the herd size has been stable or growing. In 2010, the herd size was estimated at almost 52,000 caribou. Since 1990 competition among Alaska hunters has increased because of reduced quotas and complex regulations. Since 1995, the herd has become increasingly available along the Alaska road system. This resulted in some fall harvest quotas being reached or exceeded in 1–10 days (**Table 2**, Gross 2011, Harvest Management Coalition 2012).

Arctic Village is highly reliant on the Porcupine caribou herd. In some years Porcupine caribou are harvested by Venetie, Beaver, Fort Yukon, and Chalkyitsik (0–100 caribou per year combined) (**Table 3**, Caikoski 2011). Alaska residents who live north of the Yukon River are not required to obtain caribou harvest tickets and report cards. In 2010 the harvest limit was 10 caribou. The herd migrates through Units 26C, 25D, 25B and that portion of Unit 25A east of the East Fork Chandalar River. Most local harvest is by residents of Kaktovik and Arctic Village in years when the herd winters in or near the upper Chandalar River, and hunter success relies heavily on yearly migration changes. In 2010 the Porcupine caribou herd was estimated to be 170,000 caribou and healthy (Caikoski 2011). Communities appear to be similarly situated regarding their abilities to harvest caribou, except Arctic Village that has access to Porcupine caribou in years when they migrate to the area.

Moose are an important wild resource for residents in the upper Yukon River drainage (**Table 2** and **Table 4**; Caulfield 1983; Brown, Walker, and Vanek 2004; Holen et al. 2012; Slobodin 1981; Stevens and Maracle 2011, and Van Lanen et al. 2012). In 2012 Van Lanen et al. (2012) described the contemporary importance of moose to Yukon Flats villages.

In terms of effort, use, and social significance, moose is the single most important game resource for Yukon Flats communities. Both ethnographic research and harvest assessments demonstrate that for many Yukon Flats residents, moose hunting is the primary fall hunting activity and moose provides the primary source of wild meat (Van Lanen et al 2012:20).

In the portion of the Yukon Flats in Unit 25D west, a limited number of State Tier II permits and a limited number of Federal permits are issued because of the “low moose densities combined with relatively high demand for moose by local residents” (Caikoski 2010:611). In Units 25A and 25B “moose densities are generally considered among the lowest in Interior Alaska” (Caikoski 2010:624). Moose densities in other areas of the upper Yukon River drainage (Units 20C, 20F, and 26C) have been low for many years (Hollis 2010). Moose are more abundant in Unit 20E, which Eagle city, Eagle Village, and Chicken residents can access by highway vehicle on the Taylor Highway (Gross 2010).

Moose are not available in high numbers and the demand for moose is high in the upper Yukon River drainage, except relatively better opportunities to harvest moose exist for residents of Unit 20E, including residents of Eagle city, Eagle Village, and Chicken.

### *Summary*

Rural residents of only some rural upper Yukon River drainage communities are known to rely on salmon from the area as a mainstay of the subsistence economy. The communities of Chicken and Central do not. Fourteen rural communities are situated in the upper Yukon River drainage and therefore have the closest degree of local residency. Caribou do not consistently migrate within hunting range of the communities except Arctic Village. Most of the area is generally sparsely populated by moose except in Unit 20E. Residents of Eagle city and Eagle Village are in Unit 20E and have access to hunting areas via the Taylor Highway. Fall Chum Salmon are widely available, but they are not preferred “eating fish” and more fall Chum Salmon are harvested and preserved for dog food than for human consumption.

Middle Yukon River Drainage

*Criterion 1: Customary and Direct Dependence upon the Population as the Mainstay of Livelihood*

*Residents of Ruby*

Residents of Ruby rely on salmon as a mainstay of the subsistence economy. People harvest Chinook, summer Chum, and fall Chum Salmon in nearly equal numbers from the Yukon River drainage. Fewer Coho Salmon are harvested (**Figure 2**). Ruby is a Koyukon Athabascan village. Koyukon summer fish camps were located on the Yukon River between the mouths of the Koyukuk River and the Nowitna River when gold was discovered nearby present-day Ruby in 1907. Ruby developed as a mining supply site. Most miners had left the area by the 1940s. Later, residents of the nearby settlement of Kokrines moved to Ruby (ADCCED 2014).

*Residents of Galena*

Residents of Galena rely on salmon as a mainstay of the subsistence economy. People harvest large quantities of Chinook and fall Chum Salmon and lesser amounts of summer Chum and Coho Salmon from the Yukon River drainage (**Figure 2**). Galena is a Koyukon Athabascan village that was established as a mining supply site in the early 1900s nearby a Koyukon summer fish camp. Soon after, residents of nearby Loudon ran out of building space and moved their community to the site of Galena. The U.S. Military built an airfield in the 1940s that was staffed by hundreds of people until it closed in the 1990s, and the population of Galena declined from 833 to 470 people between 1990 and 2010 (ADCCED 2014). In 1986, Galena residents harvested salmon up to 20 miles upriver past Ruby, almost to the Nowitna River mouth, and downriver past Kaltag, 143 miles from Galena (Marcotte 1990). Many salmon harvesting sites were located in front of Galena, at the upper end of Jimmy Slough (about 5 miles downriver from Galena), and at Bishop Mountain, an area with swift current and a large eddy, and that was especially productive for Chinook Salmon harvesting (Marcotte 1990).

*Residents of Koyukuk*

Residents of Koyukuk rely on salmon as the mainstay of the subsistence economy. People harvest Chinook, summer Chum, and fall Chum Salmon in nearly equal numbers from the Yukon River drainage. Fewer Coho Salmon are harvested (**Figure 1**). Koyukuk is located at the confluence of the Yukon and Koyukuk rivers. Koyukuk is a Koyukon Athabascan village.

*Residents of Huslia*

Residents of Huslia rely on salmon as the mainstay of the subsistence economy. They harvest more summer Chum Salmon than fall Chum or Chinook Salmon from the Yukon River drainage (**Figure 1**). In 1983, people harvested, processed, and preserved salmon at 12 fish camps situated in an area from 40 miles downriver and 15 miles upriver from Huslia. People moved to fish camps for periods up to two weeks (Marcotte 1986). Chinook and summer Chum Salmon arrived in late June. Summer and fall Chum Salmon were harvested from July to September. “Salmon were either smoked and dried, frozen in the community freezer facility, canned or eaten fresh” (Marcotte 1986: 29). A portion of summer Chum Salmon was fed to dogs. Some people harvested salmon on the mainstem Yukon River. In 1951, people

moved 4 miles to the current location of Huslia from a settlement called Cutoff because a flood damaged their homes (Orth 1971). Huslia is a Koyukon Athabascan village.

*Residents of Hughes*

Residents of Hughes rely on salmon as the mainstay of the subsistence economy. They harvest more summer Chum Salmon than fall Chum or Chinook Salmon from the Yukon River drainage (**Figure 2**). The site of Hughes was a mining supply site about 1900 and later became a Koyukon Athabascan settlement (Marcotte and Haynes 1985). In 1982, Marcotte and Haynes (1985) observed salmon fishing throughout the summer. People harvested salmon up to 25 miles from the village up and down the Koyukuk River. Use of fish camps had decreased and people processed and preserved salmon nearby their homes in Hughes. “Fish were consumed by people or fed to dogs. Fish were eaten fresh or preserved by drying, freezing, or canning. Air-dried fish were lightly smoked over a dry balsam poplar or willow fire, then stored in a cache or smokehouse. Some Chinook Salmon, either dried strips or pieces, were preserved by canning in quart jars” (Marcotte and Haynes 1985:40).

*Residents of Alatna and Allakaket*

Residents of Alatna and Allakaket rely on salmon as the mainstay of the subsistence economy. They harvest more summer Chum Salmon than fall Chum or Chinook Salmon from the Yukon River drainage (**Figure 2**). The communities are situated across the Koyukuk River from one another at the confluence of the Alatna and Koyukuk rivers. In 2011, more Chum Salmon was harvested by Allakaket residents than any other wild resource, in pounds edible weight. “While Chinook Salmon have never been abundant on the upper Koyukuk, recent declines in the number of Chinook Salmon returning to the Yukon River drainage have had a dramatic effect on the number of Chinook Salmon harvested and used in Allakaket” (Holen et al. 2012: 86). “Salmon fishing is a major focus during the short Chinook Salmon run from July into August, followed by Chum Salmon during August and September. Chinook Salmon are preferred for human consumption over Chum. Chum Salmon are more abundant, but of poor quality and fed to dogs” (Holen et al. 2012: 85). In 2011, people harvested most of their salmon between Allakaket and the mouth of the Kanuti River. Some salmon were harvested in the Alatna River. Several families continue to travel to fish camps staying up to a week. Some people staying with extended family members harvested salmon from the mainstem Yukon River. Alatna and Allakaket are situated on an historical trade route between the coast and interior Alaska. The Episcopal Mission school was established at the present site of the communities in 1906. Residents of Alatna are more Inupiat ancestry; Allakaket residents are more Koyukon ancestry.

*Residents of Bettles and Evansville*

Residents of Bettles and Evansville do not rely on salmon as a mainstay of the subsistence economy. Few salmon are harvested (**Figure 2**). Salmon have never been abundant in the vicinity of Bettles and Evansville (Marcotte and Haynes 1985). In 2011, researchers noted that salmon were used mainly to feed dogs, and dog teams were no longer kept by the majority of residents (Holen et al. 2012). Residents of Evansville are a mixture of Koyukon Athabascans and Inupiat. Bettles was established as a mining supply site about 1900. A U.S. Navy airstrip was completed in 1945.

*Residents of Wiseman and Coldfoot*

Residents of Wiseman or Coldfoot do not rely on salmon as a mainstay of the subsistence economy. Few salmon are harvested. Historically, residents harvested small amounts of salmon locally, mainly Chum and Chinook Salmon that arrived in July (Holen et al. 2012). The State subsistence salmon fishery in the area has been closed since 1978 because of conservation concerns for possible overharvesting because of the easy access provided by the Dalton Highway. Coldfoot was established as a mining supply site about 1900 and was intermittently occupied until the 1970s when the Dalton Highway was built. Coldfoot is located alongside the highway that connects the Alaska highway system to the North Slope. In 2011, most employment was focused on government services and services provided to tourists. Coldfoot is situated just off the Middle Fork Koyukuk River. Wiseman, located about 12 miles from Coldfoot, originally was a mining supply site established about 1900. Never entirely abandoned, Alaska Native and other residents rely on subsistence for food and for cash through trapping (Holen et al. 2012). The Dalton Highway runs nearby Wiseman. Wiseman is situated at the confluence of Wiseman Creek and the Middle Fork Koyukuk River.

*Residents of Nulato and Kaltag*

Residents of Nulato and Kaltag rely on salmon as the mainstay of the subsistence economy. They harvest many more Chinook Salmon than summer Chum, fall Chum, or Coho Salmon from the Yukon River drainage (**Figure 2**). In 1985, Wheeler (1987) observed that people preferred to eat Chinook Salmon because of their high oil content. Summer Chum Salmon arrived in early July and were an important source of dog food and generally were not eaten by people. Fall Chum and Coho Salmon ran from mid to late August and were consumed by people and fed to dogs. In 1985, there was a commercial roe fishery, and the leftover summer Chum Salmon carcasses were air-dried to be used as dog food and rarely eaten by people. An occasional Chum Salmon was cut, dried, and eaten with seal oil. In 2001, Nulato residents harvested salmon at Nine Mile Camp and other areas within about 20 miles of the community (Moncrieff and Klein 2003). Salmon were harvested across the Yukon River from the village of Kaltag to about 6 miles downriver, and almost all were smoked at Kaltag. Kaltag and Nulato are situated on historical trade routes between the coastal and interior Alaska. Kaltag was formed when two settlements, Upper Kaltag and Lower Kaltag, moved to the site of present-day Kaltag situated near the confluence of the Kaltag and Yukon rivers. Nulato is located at the confluence of the Nulato and Yukon rivers. Nulato and Kaltag are primarily Koyukon Athabascan communities.

*Residents of Anvik and Grayling*

Residents of Anvik and Grayling rely on salmon as the mainstay of the subsistence economy. They harvest high numbers of Chinook and summer Chum Salmon and lower numbers of fall Chum and Coho Salmon from the Yukon River drainage (**Figure 2**). Wolfe and Scott (2007), Retherford and Brown (2014), and Trainor (2014) estimated that Chinook Salmon was the largest single-species source of wild food used by residents of Anvik and Grayling, in pounds edible weight. Chinook Salmon were cut into strips and dried. Before refrigeration became available, Anvik residents made strips and jarred Chinook Salmon or made salted fish. People now also freeze whole uncooked, unprocessed salmon for later use (Trainor 2014). Chinook Salmon arrive in June. “Starting mid-July, fall Chum Salmon arrive in the Yukon River near Grayling. Late summer often brought rain showers, which made drying and smoking fish more difficult. As a result, much of the later runs’ harvests were jarred or salted, explained one

Grayling man” (Retherford and Brown 2014: 328). In 2011, residents of Grayling harvested salmon from the mainstem Yukon River within 25 miles upriver and within 15 miles downriver.

In 2011, residents of Anvik harvested salmon upriver about 19 miles as far as the community of Grayling, and downstream about 11 miles as far as a site called Paradise. An Anvik resident described Chum Salmon bound for the Anvik River, “The carcass is almost useless, even for dog food, even for our own use. Once you cut them, they just dry up like bark. There’s no oil or nothing in them. The fish are ready to die” (Wolfe and Scott 2007:46).

From 2003 to 2007, about 7% of Anvik households used fish camps to harvest, process, and preserve salmon, and about 12% of Grayling households. Other residents processed, and preserved their salmon nearby their homes at Anvik or Grayling. Households at Anvik and Grayling reported 25 years of use of their fish camps, on average. An Anvik resident said fish camps have become less important with the decline of sled dogs paired with less need to preserve large quantities of salmon for dog food. Anvik is situated at the confluence of the Anvik and Yukon rivers and is an historical settlement. A trading post was established there in the 1860s. Anvik is primarily a Deg Hit’an Athabascan community. Grayling is alongside the Yukon River and was the site of a wood cutting camp around 1900. Residents of the settlement of Holikachuk along the Innoko River moved to the present-day site of Grayling about 1960. People continue to return to the Innoko River drainage to harvest wild resources. Grayling is primarily a Doy Hit’an and Holikachuk Athabascan community.

#### *Residents of Shageluk*

Residents of Shageluk rely on salmon as the mainstay of the subsistence economy. They harvest many more summer Chum Salmon than Chinook, fall Chum, or Coho Salmon from the Yukon River drainage (**Figure 1**). Shageluk is the only year round community situated alongside the Innoko River. Shageluk is primarily a Deg Hit’an/Doy Hit’an Athabascan community.

#### *Criterion 2: Local Residency*

Sixteen communities are situated in the middle Yukon River drainage. They are the following: Ruby, Galena, Koyukuk, Huslia, Hughes, Allakaket, Alatna, Bettles, Evansville, Wiseman, Coldfoot, Nulato, Kaltag, Grayling, Anvik, Shageluk.

#### *Criterion 3. Availability of Alternative Resources*

Twelve rural communities in the middle Yukon River are discussed regarding Criterion 3 because it has not been shown that other rural communities rely on salmon that they harvest from the Yukon River drainage. They are the following: Ruby, Galena, Koyukuk, Huslia, Hughes, Allakaket, Alatna, Nulato, Kaltag, Grayling, Anvik, Shageluk. The following description of the availability of wild resources other than salmon relies on ethnographic sources and wildlife population assessments in ADF&G management reports.

Residents of the middle Yukon River drainage are highly dependent on fishes (**Table 5**; Anderson, Brown, Walker, and Elkin 2004; Brown, Burr, Elkin, and Walker 2005; Brown, Koster, and Koontz 2010; Clark 1981; Holen et al. 2012; Nelson 1983; Retherford and Brown 2014; Trainor 2014; Wolfe and Scott 2010). Nonsalmon fishes that are available to harvest include northern pike, whitefishes, arctic char,

sucker, arctic grayling, lake trout, sheefish, and burbot. Fishcamps for harvesting nonsalmon fishes are situated near sloughs, creeks, or lakes known for abundant and relatively predictable fish populations.

Moose are an important wild resource for residents of the middle Yukon River drainage (**Table 6**). Moose are generally available for harvest in the area (Stout 2010a, 2010b, 2010c; Hollis 2010; Peirce and Seavoy 2008). Several small herds of caribou are in the area but are rarely hunted because they are relatively inaccessible during the hunting season. It has been estimated that less than 10 caribou a year were harvested from these herds between 2000 and 2010 (**Table 7**, Hollis 2011). The Western Arctic Caribou Herd winter in the Nulato Hills that are west of the Koyukuk River but very few have wintered in the southern portion of the Nulato Hills since 1996. Hunting is open year round with a 5 caribou limit, but caribou are not always present (Dau 2011).

It appears that all 13 communities are similarly situated regarding their abilities to harvest resources alternative to Chinook or summer Chum Salmon in the middle Yukon River drainage.

### *Summary*

Residents of only some middle Yukon River drainage communities are known to rely on salmon as a mainstay of the subsistence economy. The communities of Coldfoot, Wiseman, Bettles, and Evansville do not rely on salmon. Other than salmon, wild resources available for harvest by residents of the middle Yukon River drainage include nonsalmon fishes, and moose. It appears all 12 communities that rely on salmon from the middle Yukon River drainage are similarly situated regarding the availability of alternative resources.

Chinook Salmon are harvested and preserved only for human consumption and are universally preferred over other salmon species by local residents. Summer Chum Salmon are generally available for harvest; however, only some Chum Salmon are harvested and preserved for human consumption. A large portion of the harvest of summer and fall Chum Salmon is preserved for dog food for several reasons including Chum Salmon are more abundant and therefore easier to harvest in the large numbers necessary to feed dogs, and Chum Salmon are often close to spawning and contain less oil than is needed to be considered highly edible (Andersen and Scott 2010, Case and Halpin 1990, Holen et al. 2012, Moncrieff and Klein 2003; Marcotte 1986, Marcotte and Haynes 1985, Nelson 1983, Retherford and Brown 2014, Trainor 2014, Wheeler 1987, Wolfe and Scott 2010). Coho Salmon are desired but cannot be harvested in numbers necessary to replace Chinook Salmon; Coho Salmon are generally not available for harvest in the Koyukuk River drainage. The number of Coho Salmon available for harvest is less than Chum Salmon.

### Lower Yukon River Drainage

#### *Criterion 1: Customary and Direct Dependence upon the Population as the Mainstay of Livelihood*

##### *Residents of Holy Cross*

Residents of Holy Cross rely on salmon as the mainstay of the subsistence economy. They harvest many more Chinook Salmon than summer Chum, fall Chum, or Coho Salmon from the Yukon River drainage (**Figure 3**). In 2001 research, residents of Holy Cross “mentioned fishing at areas such as Paimiut, the Holy Cross area, Victors, the Yukon River above the Innoko River, above Walker Slough, Patsy Island

and below Holy Cross. Some had been fishing the area since the late 1920s or 1930s. Others started in the late 1960s or early 1970s” (Moncrieff and Klein 2003:15). The site of Holy Cross was a Yup’ik Eskimo settlement when a Jesuit mission and school were built in 1886 that attracted new residents. Most residents have Yup’ik Eskimo or Deg Hit’an Athabascan ancestry (Wheeler 1998).

*Residents of Russian Mission*

Residents of Russian Mission rely on salmon as a mainstay of the subsistence economy. More Chinook Salmon are harvested than summer Chum, fall Chum and Coho Salmon from the Yukon River drainage (**Figure 3**). Chinook Salmon arrive at the village generally in late May or early June, followed rapidly by summer Chum Salmon (Pete 1986, Mikow 2014). Fall Chum and Coho Salmon are harvested until late September. Chinook Salmon are the primary salmon for human consumption. In 2011, people harvested salmon from the mainstem Yukon River in the area of historical village and camps sites: Dogfish Village (about 20 miles upriver), *Ingrirrarmiut* (almost to the village of Marshall), and *Iquarmiut* (Ohogamiut) in between (Mikow 2014). Additionally,

In terms of processing the salmon, a key respondent explained the techniques used at their family fish camp. The fish are cut into either slabs or strips and then hung to dry for 3 days, after which time they are hung in the smokehouse. The smoking process takes approximately a week, and the finished product is frozen. The process of drying and smoking salmon can be more difficult when the weather is cool and rainy, and one key respondent noted that cooler than average temperatures in recent summers had made smoking fish more of a challenge. Key respondent comments confirmed the importance of salmon species to the community, particularly Chinook Salmon. One key respondent stated this was because they are “fatter and have more meat and a higher oil content” (Mikow 2014:397).

Russian Mission is a Yup’ik Eskimo village. A Russian trading post was established at the present-day site of Russian Mission about 1840. Contemporary Russian Mission is “a culmination of successive relocations of residents of settlements in the area from Paimiut downriver to Ingrirrarmiut along the Yukon River” including the former settlement of Iquarmiut (Ohogamiut) (Pete 1986: 123).

*Residents of Marshall*

Residents of Marshall rely on salmon as a mainstay of the subsistence economy. Chinook and summer Chum Salmon are harvested in almost equal numbers, and fewer fall Chum and Coho Salmon are harvested from the lower Yukon River drainage (**Figure 3**). Marshall is a Yup’ik Eskimo Village. Many people from the former settlement of Iquarmiut (Ohogamiut) moved to Marshall.

*Residents of Pilot Station, Saint Mary’s, Pitkas Point, Mountain Village, Kotlik, Emmonak, Alakanuk, Nunam Iqua*

Residents of the villages rely on salmon as a mainstay of the subsistence economy. In all of the villages, summer Chum Salmon are harvested in much larger quantities than Chinook, fall Chum, or Coho Salmon (**Figure 3**). The best available information describes the subsistence harvest and use of salmon in only some communities.

Saint Mary's is situated at the confluence of the Andreafsky and Yukon rivers. People fish for salmon at Old Andreafsky, below Pitkas Point, and between Pilot Station and Mountain Village. Many people said that "they have been fishing these sites since at least the 1960s. Some of them have fished in these areas since they were children" (Moncrieff and Klein 2003:15).

Alakanuk is situated in the south mouth of the Yukon River along Kwikluak Pass about 15 miles from the Bering Sea. In 2002, people reported they

fish or fished in areas such as Flat Island, the old town site near Jack Emel's cannery, in the slough, on the Yukon and near Manning Island. They also fished in Kwiguk Slough at Ulgy's Point or Waskey Point, near Fish Village and at Big Eddy. The youngest person interviewed . . . had been fishing in the area for roughly 30 years while the couple with most longevity in the area had been fishing for roughly 50 or 60 years (Moncrieff and Klein 2003:14).

People said that first and second pulses of Chinook Salmon that enter the Yukon River are returning to Canada or the Tanana River. The "third" run of Chinook Salmon generally arrive between June 20 and 27, are lean, run for three days, and spawn in the lower river in tributaries such as the Andreafsky River. In 2008, a resident of Alakanuk described preserving salmon.

We use kings for strips and for dried fish. We didn't put away any strips this year. The ones we caught were too few and too small. Kings also are used for brining. This year we didn't do any of those things. I used only a Chum Salmon net [because of net restrictions], so the kings we caught were too small for strips. . . . Chums are okay but kings are the preferred fish. With Chums, we take the backbone out. The outer part of the meat we cut with the skin and that's most of what we eat. My wife saves as much meat from the backbone as she could. She dried the backbones for the dogs and some for us (Wolfe and Scott 2010:11-12).

For Alakanuk, Wolfe and Scott (2010) estimated that Chinook Salmon provided 14% of the wild food harvest, in pounds edible weight, in 2007. Summer Chum Salmon contributed the most to the harvest of wild foods, 22%. From 2003 to 2007, 15% of Alakanuk households used fish camps. "Fish camps were used more commonly by previous generations" (2010:24). "Reasons for using a fish camp included the availability of wood for building racks and for smoking fish, the lack of dust when drying fish outdoors, and the nearness to his set net sites for fishing" (2010:25).

Another fisherman believed declining fish camp use around Alakanuk was connected to the closures of commercial fishing. Without reliable commercial fisheries, people looked for work in town . . . . An elder said he had a series of fish camps during his lifetime. He changed locations three times because of flooding. He remembered these hardships with a good natured laugh. After three moves, he said that was "enough." As an elder, he now dried fish at the village (Wolfe and Scott 2010:26).

In Alakanuk in 2008, there were about 250 dogs, but few pulled sleds, and only 5% of households caught salmon to feed dogs.

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Emmonak is situated about 12 miles from Bering Sea on the south mouth, Kwiguk Pass, of the Yukon River. “Residents of Emmonak fished for salmon in most of the main passes of the Yukon Delta (Kwiguk, Kwikluak, and Kwikpak passes) upstream to the Head of Passes, and in nearshore waters at the mouths of these passes” (Fall et al. 2012: 133) as well as other areas. In 2007, Chum Salmon and moose contributed most to the wild food harvest, 26% each, in pounds edible weight.

### *Residents of Stebbins*

It is likely that residents of Stebbins do not rely on salmon from the Yukon River drainage. Stebbins is located on the Bering Sea coast about 40 miles north of the Yukon River mouth. In 1981, residents of Stebbins were known to travel to fish camps near the north mouth of the Yukon River to harvest process and preserve salmon (Wolfe 1981, 1982). Most if not all had commercial salmon permits. Fall et al. (2014) reported that in 2012, more than 99% of Stebbin’s harvest of salmon was from the Stebbins area. An estimated 145 salmon were harvested in other areas outside the vicinity of Stebbins.

### *Scammon Bay, Chevak, and Hooper Bay*

Residents of Scammon Bay, Chevak, and Hooper Bay have a customary and traditional use determination in the Yukon River drainage for fall Chum Salmon only. Chevak is not included in the postseason harvest survey because of its distance from the Yukon River (Jallen, Decker, and Hamazaki 2012). All three communities are located in the southern portion of the Coastal District. The harvest from the Coastal District contains fish not necessary bound for the Yukon River. In 2011, the most recent year for which data are available, Hooper Bay harvested an estimated 13,979 salmon of which 267 were fall Chum Salmon. None were reported harvested in the Yukon River. Scammon Bay harvested an estimated 5,465 salmon including 48 fall Chum Salmon, of which 23 were reported harvested in the Yukon River, probably incidental to 485 Chinook, 3,374 summer Chum, and 32 Coho Salmon harvested from the Yukon River. Neither community reported retaining any salmon for dog food. In the 1980s, “Scammon Bay families regularly moved north to fish salmon around the mouth of the Black River. In 1981 some Scammon Bay people fished along the south pass, apparently with fish camps established on Manning Island” at the south mouth of the Yukon River (Wolfe 1981: 59). Residents of Hooper Bay and Chevak worked at the salmon processor in Mountain Village. Fienup-Riordan (1986) reported that from their fish camps just inside the mouth of the Black River (about 30 miles below the south mouth of the Yukon River), Scammon Bay “men sometimes move into the Yukon River proper, as far up as Mountain Village, to try their luck drifting. Also, after the commercial season closes at Black River, several families normally relocate to the north or middle mouths of the Yukon River to take advantage of the fall runs of Chum and Coho, which only briefly visit the Black River area” (Fienup-Riordan 1986:136).

It appears that the communities rely on salmon as a mainstay of the subsistence economy. Some fall Chum Salmon are harvested in the Yukon River.

### *Criterion 2: Local Residency*

Eleven communities are situated in the lower Yukon River drainage. From upriver to downriver, they are the following: Holy Cross, Russian Mission, Marshall, Pilot Station, Saint Mary’s, Pitkas Point, Mountain Village, Kotlik, Emmonak, Alakanuk, and Nunam Iqua.

Stebbins is located on the Bering Sea coast about 40 miles north of the Yukon River delta.

Scammon Bay, Chevak, and Hooper Bay are located south of the mouth of the Yukon River. Scammon Bay is closest, about 60 miles by water, and Chevak is farthest, about 100 miles by water.

*Criterion 3. Availability of Alternative Resources*

Only the 11 rural communities of the lower Yukon River drainage are discussed regarding Criterion 3 because it has not been shown that Stebbins, located on the coast, relies on salmon in the Yukon River drainage. The following description of the availability of wild resources other than salmon relies on ethnographic sources and wildlife population assessments in ADF&G management reports.

Residents of the lower Yukon River drainage are highly dependent on fishes (**Table 8**, Fall et al. 2012; Fienup-Riordan 1984, 1986; Brown, et al. 2005; Mikow 2014; Pete 1986; VanStone 1984; Wolfe and Scott 2010). Nonsalmon fishes that are available to harvest include northern pike, whitefishes, arctic char, sucker, arctic grayling, lake trout, sheefish, and burbot. Fish camps for harvesting nonsalmon fishes are situated near sloughs, creeks, or lakes known for abundant and relatively predictable fish populations.

Moose is an important wild resource for residents of the lower Yukon River drainage (**Table 9**, Brown and Koster 2005, Weekley 2011). Moose densities are moderate to high and growing (Perry 2010). There is a huntable moose population largely below Mt. Village. Moderate densities exist up to Paimiut located downriver from Holy Cross.

Caribou are generally not available to harvest in the lower Yukon River drainage area. From 1994 to 2010, approximately 10,000 to 40,000 Mulchatna caribou entered Unit 18, but south of the Kuskokwim River. “Caribou from the Western Arctic caribou herd occasionally use portions of Unit 18 north of the Yukon River . . . . Unit 18 is on the periphery of the herd’s range, and use of this area is occasional and intermittent (Perry 2011:111, **Table 9**).

All 11 communities appear to be similarly situated regarding their abilities to harvest resources alternative to salmon in the lower Yukon River drainage.

Other resources available to residents of Scammon Bay, Hooper Bay, and Chevak are herring, other nonsalmon fishes, and marine mammals. Some rely on salmon that they harvest from the Yukon River likely related to commercial fishing of summer and fall Chum Salmon, some of which are retained for subsistence (Fienup-Riordan 1986, Wolfe 1981).

*Summary*

Residents of lower Yukon River drainage communities are known to rely on salmon from the Yukon River drainage as a mainstay of the subsistence economy. Eleven communities are situated in the lower Yukon River drainage and therefore have the closest degree of local residency to the salmon runs. As alternatives to salmon, wild resources available for harvest by residents of the lower Yukon River drainage include nonsalmon fishes and moose. All 11 communities appear to be similarly situated regarding their abilities to harvest alternative resources to salmon in the lower Yukon River drainage.

Additionally, it is likely that Scammon Bay, Hooper Bay, and Chevak rely on fall Chum Salmon that they harvest from the Yukon River drainage.

## Conclusion of Section 804 Analysis

### *Upper Yukon River Drainage*

Twelve of 42 rural communities of the upper Yukon River have the higher level of customary and direct dependence on salmon from the Yukon River drainage, minus the Tanana River drainage, than do Chicken, Central, or the 28 communities in the Tanana River drainage after consideration of the three criteria in ANILCA Section 804. The eligible communities include 1,692 people living in 697 households. From upriver to downriver, they are the following: Eagle Village, Eagle city, Circle, Fort Yukon, Venetie, Chalkyitsik, Arctic Village, Birch Creek, Beaver, Stevens Village, Rampart, and Tanana.

### *Middle Yukon River Drainage*

Twelve of 16 rural communities of the middle Yukon River drainage have the higher level of customary and direct dependence on salmon from the Yukon River drainage than do Coldfoot, Wiseman, Bettles, and Evansville after consideration of the three criteria in ANILCA Section 804. The eligible communities include 2,043 people living in 758 households. From upriver to downriver, they are the following: Ruby, Galena, Koyukuk, Huslia, Hughes, Allakaket, Alatna, Nulato, Kaltag, Grayling, Anvik, and Shageluk.

### *Lower Yukon Drainage*

Eleven of 12 rural communities in the lower Yukon River drainage have the higher level of customary and direct dependence on salmon from the Yukon River drainage than does Stebbins after consideration of the three criteria in ANILCA Section 804. The eligible communities include 5,104 people living in 1,240 households. From upriver to downriver, they are the following: Holy Cross, Russian Mission, Marshall, Pilot Station, Saint Mary's, Pitkas Point, Mountain Village, Kotlik, Emmonak, Alakanuk, and Nunam Iqua. Additionally, three communities in the Coast District, Scammon Bay, Hooper Bay, and Chevak, have a high level of customary and direct dependence on fall Summer Chum Salmon from the Yukon River drainage.

## **Allocation**

The Office of Subsistence Management, in cooperation with the Federal fishery manager, will be responsible for coordinating the allocation of Chinook Salmon to the eligible rural communities if the Federal fishery manager, in consultation with other fishery managers, deems a harvestable surplus of Chinook Salmon has entered the Yukon River drainage. The allocation will be based on the 20-year (1990–2009) average harvest of Chinook Salmon by community and will be equitably distributed.

## **Effects of the Proposal**

If the Special Action Request was approved, the Board would close Federal public waters of the Yukon River drainage, minus the Tanana River drainage, to the harvest of salmon. The Federal closure would affect State sport fisheries that target Chinook, Chum, and Coho Salmon, and they would not be allowed in Refuge waters during the Federal closure. The Federal closure would affect State commercial and subsistence fisheries that target salmon, and they would not be allowed in Refuge waters during the Federal closure. The Federal fishery manager, in consultation with other fishery managers, would open a Federal subsistence Chinook Salmon fishery only if levels justify harvest. Only Federally qualified

residents of 35 out of 61 rural communities in the customary and traditional use determination for salmon would be eligible to harvest salmon in Federal public waters (8,839 out of 18,404 people living in the Yukon River drainage, ADCCED 2014, **Appendix Table A-1**). The Federal manager could maintain authority into the timing of Chum, Sockeye, and Coho Salmon runs until it was clear that Federal management of salmon harvests was no longer necessary in order to either protect Chinook Salmon or provide opportunity to harvest Chinook, summer Chum, fall Chum, or Coho Salmon. If the Special Action was adopted, the Federal Subsistence Management Program should build and administer a program to allocate a possible harvestable surplus of Chinook Salmon to the 35 communities in the ANILCA Section 804 determination.

If the Special Action Request was approved, and without assurance of State partnership in the management process, some challenges the Federal management team would face include coordination of stock management, inseason stock assessment, the timely finalization of a Chinook Salmon allocation strategy, and implementation of a permitting process. Based on these considerations, if the Federal Subsistence Management Program assumed management of all Yukon salmon stocks the U.S. Fish and Wildlife Service might not have the existing capacity to fulfill all management responsibilities resulting from the approval.

If this Special Action Request was not approved, the State fishery manager would likely close the Yukon River drainage to the harvest of Chinook Salmon before June 1 and likely would not allow any directed Chinook Salmon harvest during part, if not all, of the 2015 season. The Federal manager should open Federal public waters to the harvest of Chinook Salmon to only the 61 communities with a customary and traditional use determination (**Appendix Table A-1**) if a harvestable surplus of Chinook Salmon entered the Yukon River, and he would manage harvest through area, timing, and gear restrictions. Allocation of Chinook Salmon to eligible communities would not be possible unless implemented pre-season.

## **OSM CONCLUSION**

**Support** Special Action Request FSA15-01/04/06/09/10A and FSA14-07/08 (deferred). The regulation should read:

### **§\_\_\_\_.27(e)(3) Subsistence taking of fish—Yukon-Northern Area**

*(ii) ~~For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.~~*

*Unless re-opened by the Federal Fisheries Manager, Federal public waters in the Yukon River drainage that are within and adjacent to the exterior boundaries of the Arctic Innoko, Kanuti, Koyukuk, Nowitna, Tetlin, Yukon Delta, and Yukon Flats National Wildlife Refuges; the Steese National Conservation Area; the White Mountains National Recreation Area; portions of Beaver and Birch creeks and the Fortymile Rivers that are segments of the National Wild and Scenic River system located outside the boundaries of these Federal conservation units; and Yukon-Charley Rivers National Preserve and Gates of the Arctic National Park and Preserve are closed to the harvest of salmon.*

*When re-opened by the Federal Fisheries Manager, Federal public waters in the Yukon River drainage that are within and adjacent to the exterior boundaries of the Arctic Innoko, Kanuti, Koyukuk, Nowitna, Tetlin, Yukon Delta, and Yukon Flats National Wildlife Refuges; the Steese National Conservation Area; the White Mountains National Recreation Area; portions of Beaver and Birch creeks and the Fortymile Rivers that are segments of the National Wild and Scenic River system located outside the boundaries of these Federal conservation units; and Yukon-Charley Rivers National Preserve and Gates of the Arctic National Park and Preserve are closed to the harvest of salmon except by Federally qualified residents of Eagle Village, Eagle city, Circle, Fort Yukon, Venetie, Chalkyitsik, Arctic Village, Birch Creek, Beaver, Stevens Village, Rampart, Tanana, Ruby, Galena, Koyukuk, Huslia, Hughes, Allakaket, Alatna, Nulato, Kaltag, Grayling, Anvik, Shageluk, Holy Cross, Russian Mission, Marshall, Pilot Station, Saint Mary's, Pitkas Point, Mountain Village, Kotlik, Emmonak, Alakanuk, and Nunam Iqua; and Scammon Bay, Hooper Bay, and Chevak for fall Chum Salmon only.*

### **Justification**

It is likely that the 2015 Chinook Salmon run into the Yukon River will not provide a significant harvestable surplus, and the directed Chinook Salmon subsistence fishery will be closed for part, if not all, of the season. Communities with the most customary and direct dependence on Yukon River drainage salmon runs will likely harvest more Chum, Sockeye, or Coho Salmon to compensate, and opening commercial salmon fisheries should be postponed to allow opportunity for middle and upper river communities to harvest summer Chum, fall Chum, and Coho Salmon. The primary effect of the Special Action is on the distribution of a possible harvestable surplus of Chinook Salmon among communities. The Tribes describe their experience with State management as “blunt strategies” that abruptly open short periods of harvest opportunity with little pre-announcement, similar to management of commercial fisheries for example, fostering a derby milieu. They further describe State management as “proven insufficient . . . to equitably allocate Chinook Salmon between communities” because the State lacks the necessary management tools. Federal regulation 50 CFR §\_\_100.17 *Determining priorities for subsistence uses among rural Alaska residents* that springs from ANILCA Section 804 allows the Federal Subsistence Management Program to implement an allocation strategy among those rural communities found to be most customarily and directly dependent on the Chinook Salmon. Once communities are identified through the three criteria, the Federal program can further reduce the pool of eligible harvesters by allocating Chinook Salmon to communities. The Federal program can restrict eligible communities from fishing for periods to allow Chinook, summer Chum, fall Chum, or Coho Salmon to move to upriver spawning beds and communities while at the same time allowing an equitable harvest allocation to all eligible communities. Subsistence fisheries may be able to harvest and retain Chinook Salmon that are mixing with Chum Salmon, as is their custom, with their Chinook Salmon harvest levels restricted by their community allocations. Finally, allowing the Special Action to close Chum and Coho Salmon fisheries allows the Federal manager to maintain authority until it is clear that Federal management of salmon harvests is no longer necessary in order to either protect Chinook Salmon or provide opportunity for subsistence users to harvest Chinook, summer Chum, fall Chum, or Coho Salmon.

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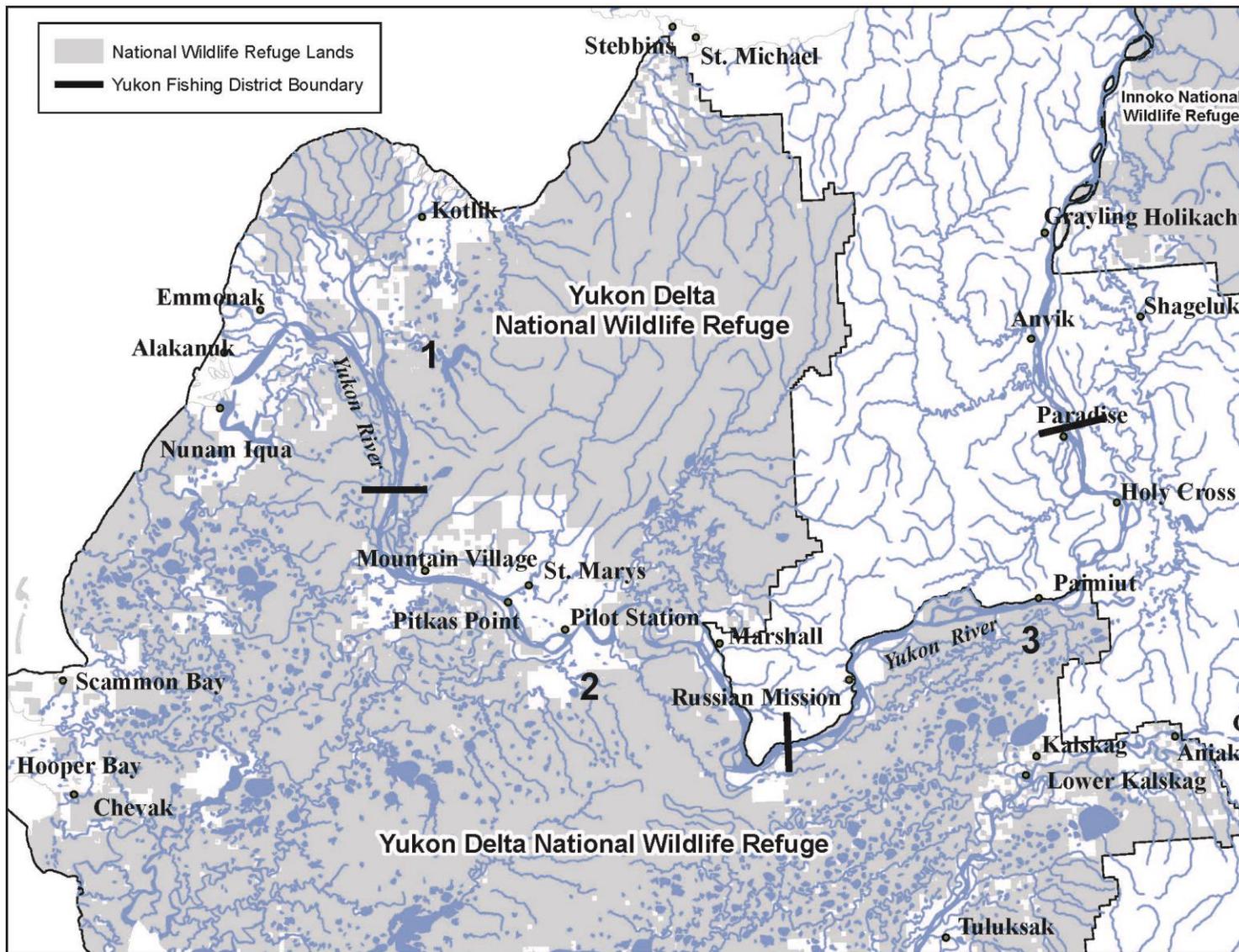
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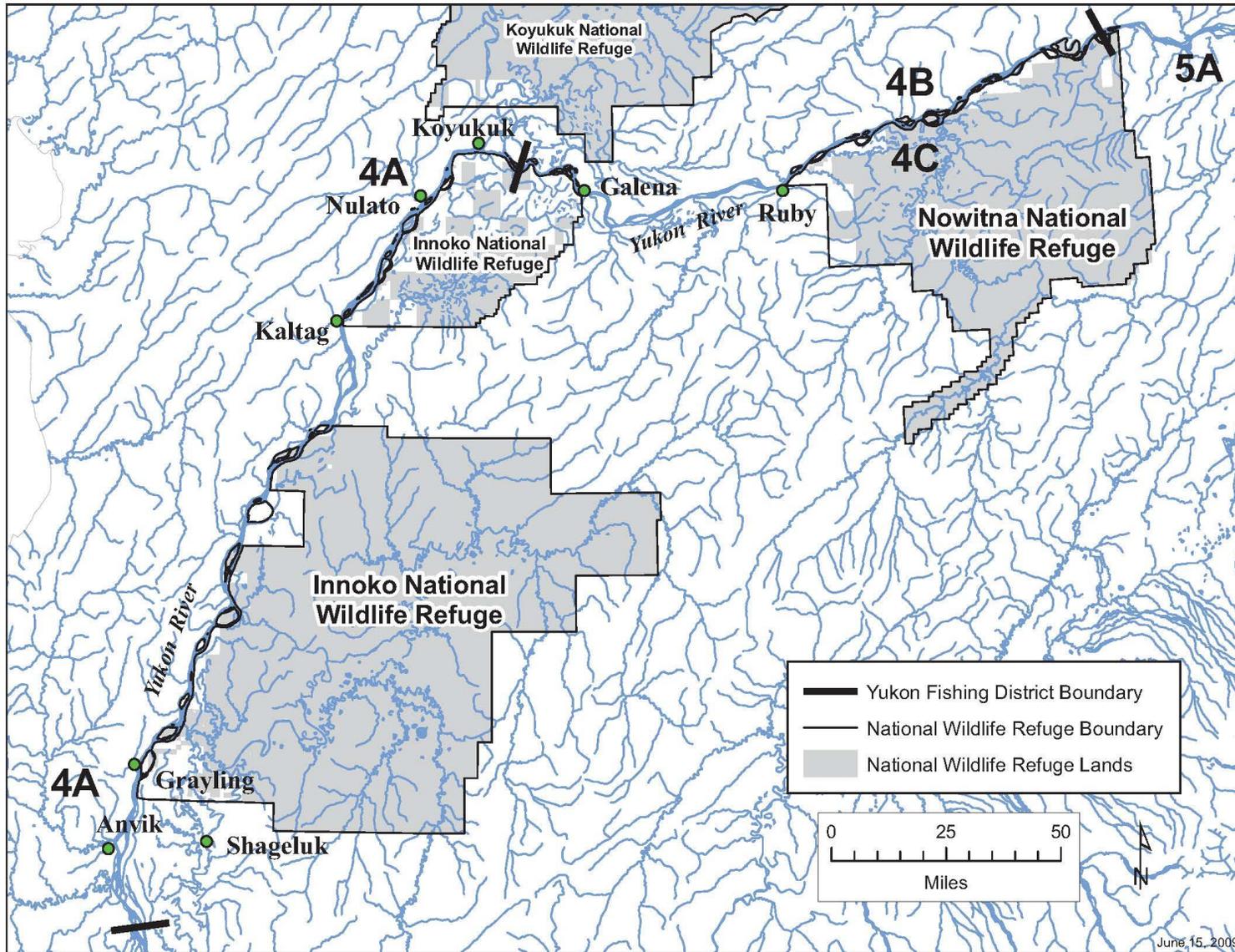
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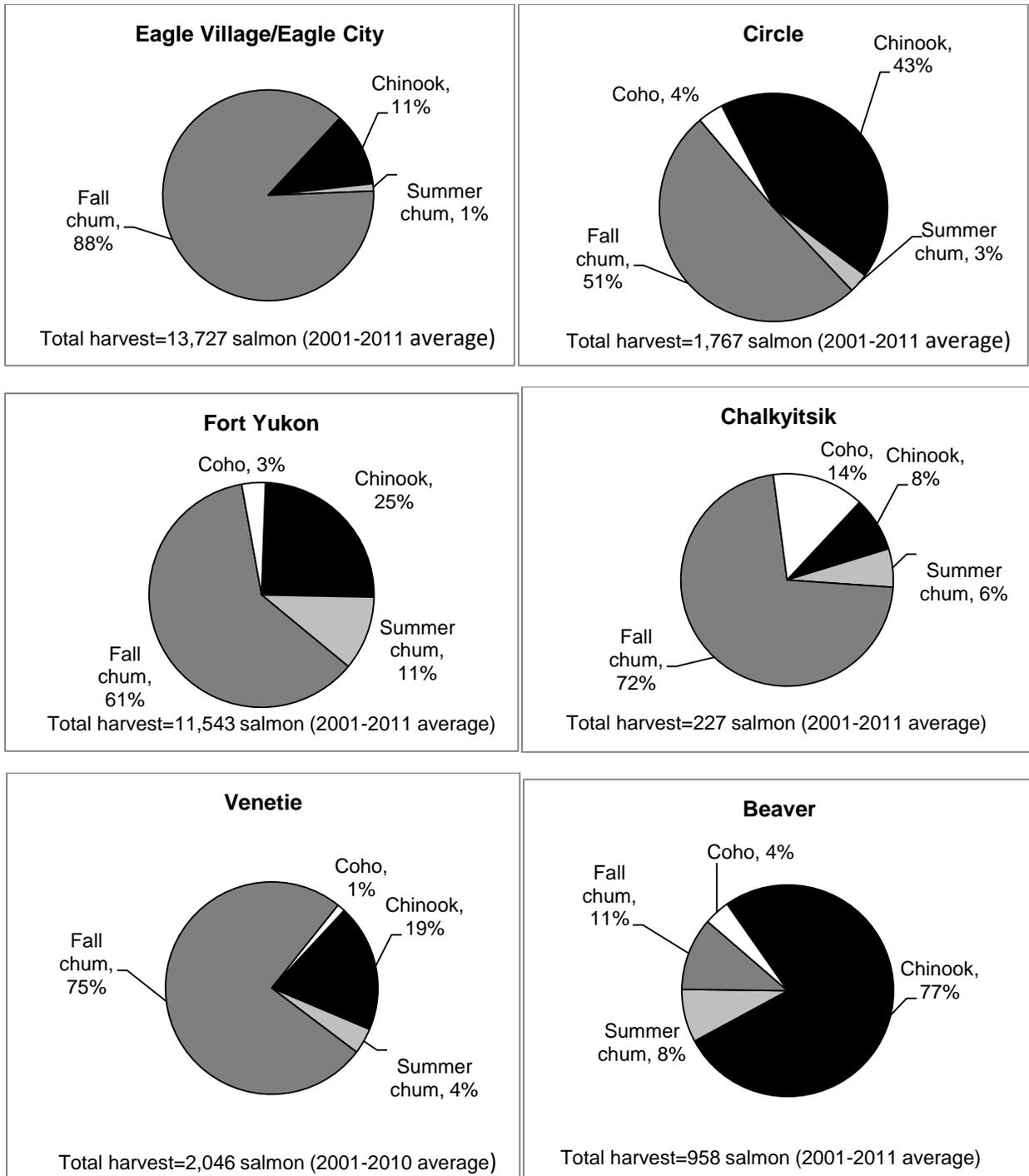


Map 1. Yukon River drainage, Districts 1, 2, and 3.

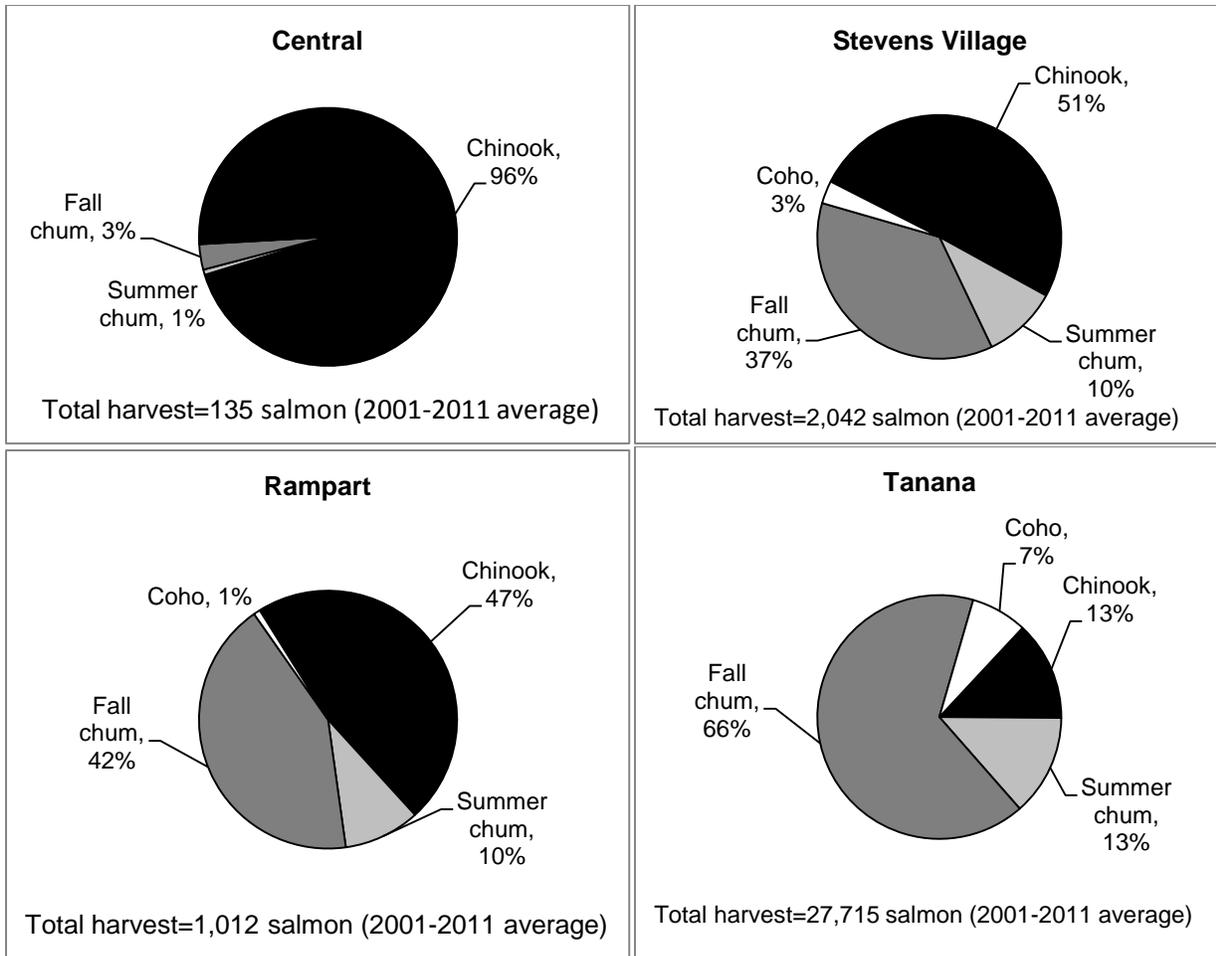


Map 2. Yukon River drainage in Alaska, District 4.

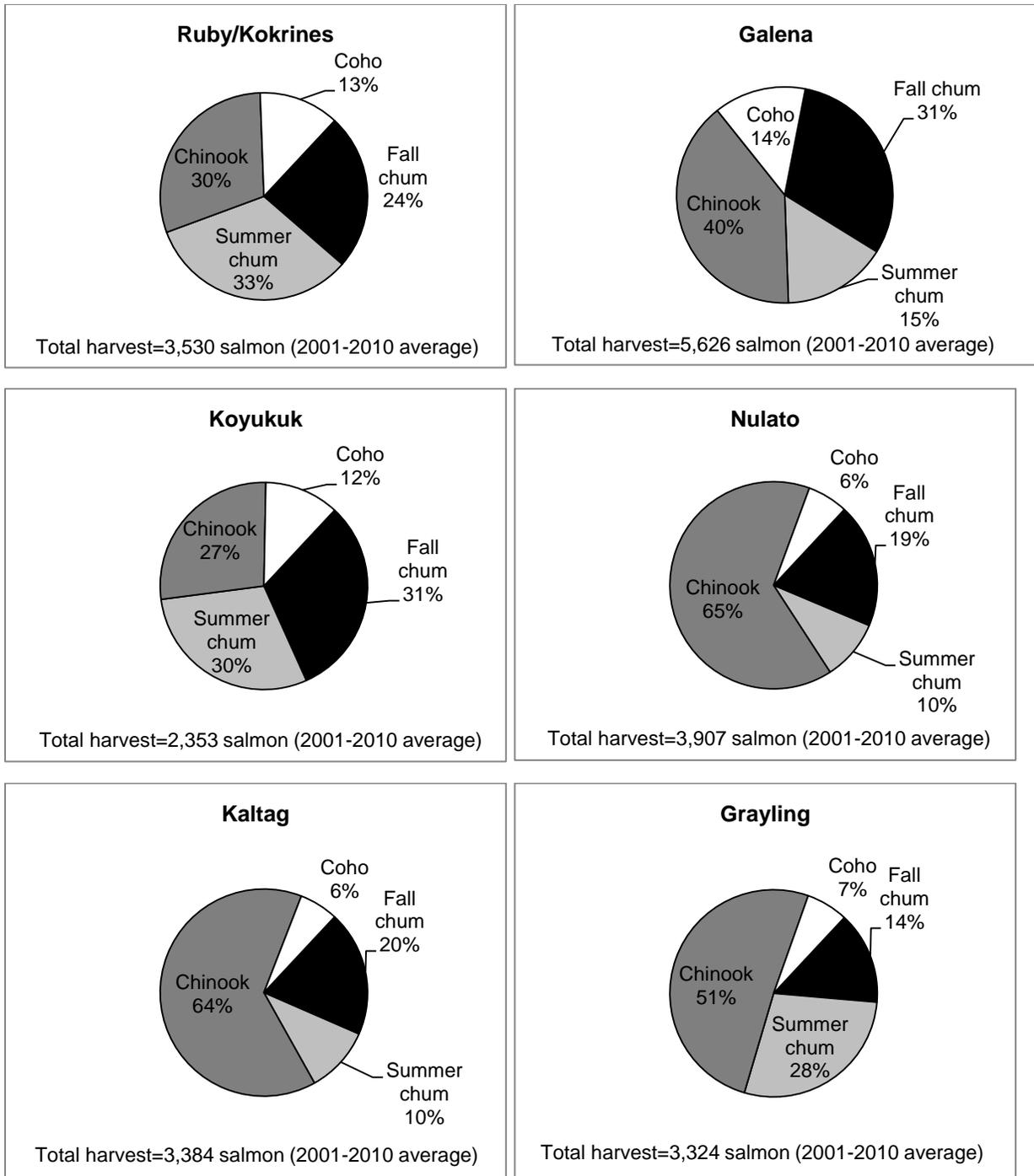




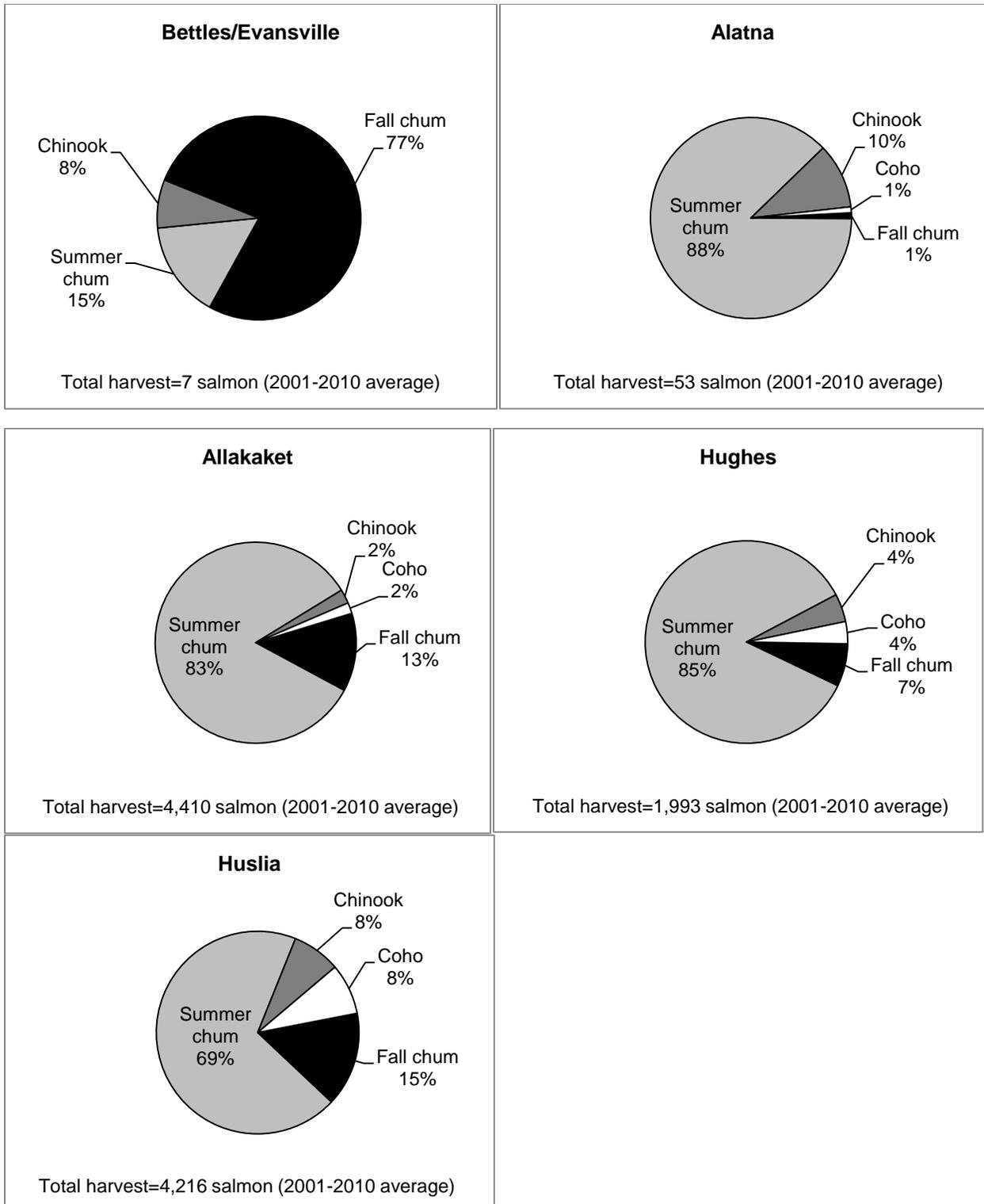
**Figure 1.** The percentage of each species of salmon harvested by communities in the upper Yukon River drainage, 2001-2011 average (source: Jallen, Decker, and Hamazaki 2012) (continued on next page).



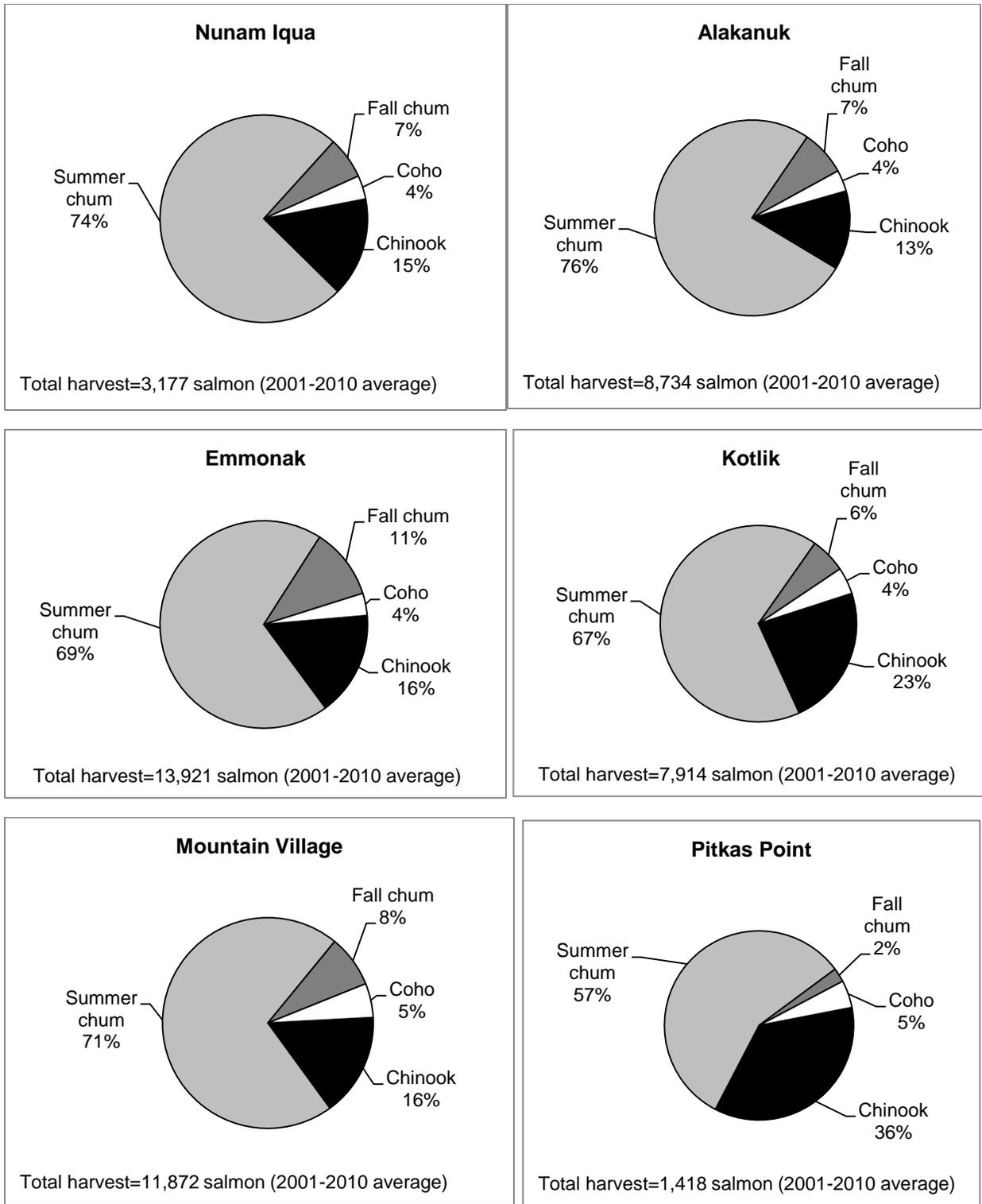
**Figure 1.** The percentage of each species of salmon harvested by communities in the upper Yukon River drainage, 2001-2011 average (source: Jallen, Decker, and Hamazaki 2012) (continued from previous page).



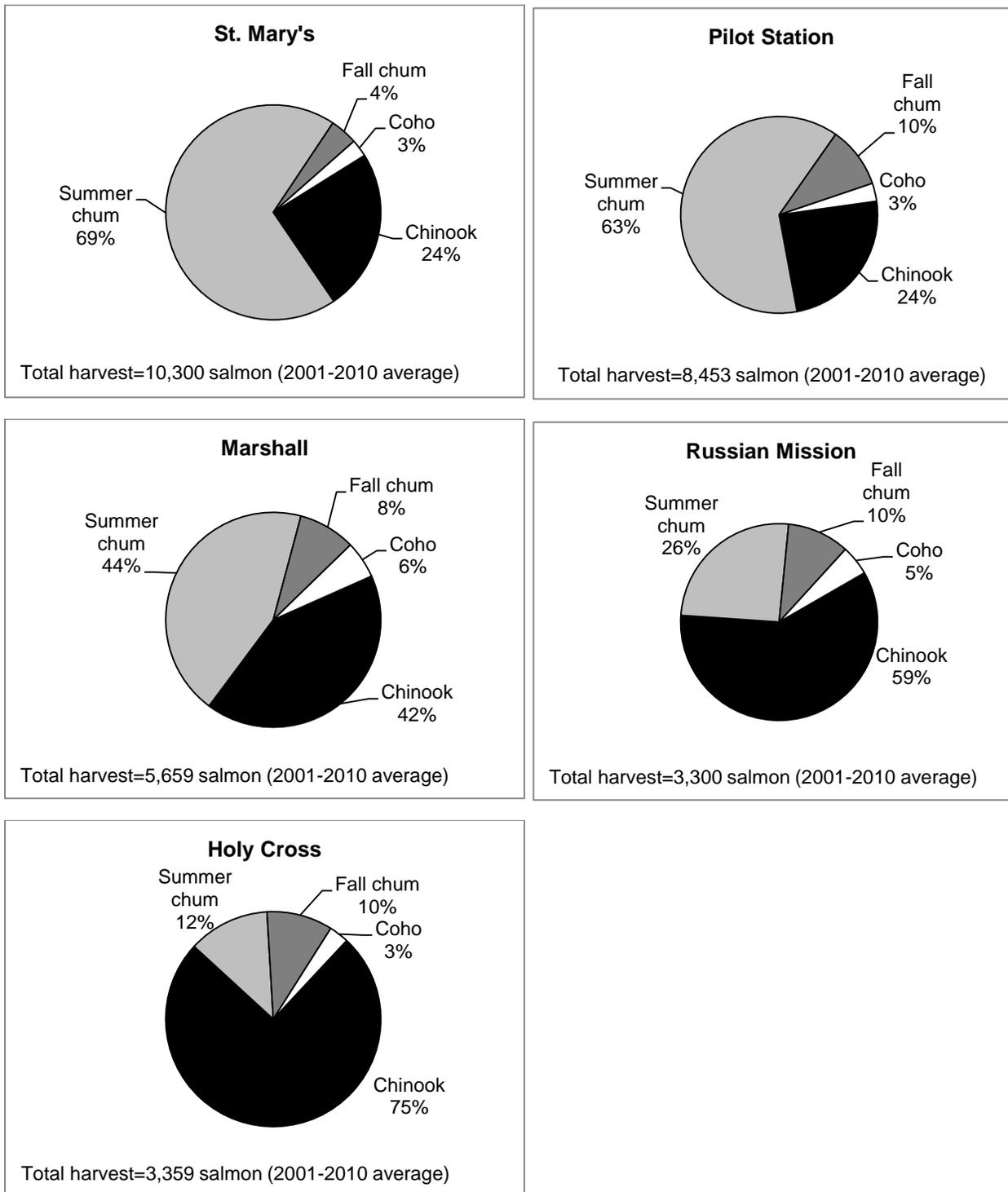
**Figure 2.** The harvest of salmon for subsistence by species and community in the middle Yukon River drainage, 2001-2010 average (source: Jallen, Decker, and Hamazaki 2012) (continued on next page).



**Figure 2.** The harvest of salmon for subsistence by species and community in the middle Yukon River drainage, 2001-2010 average (source: Jallen, Decker, and Hamazaki 2012) (*continued from previous page*).



**Figure 3.** The harvest of salmon for subsistence by species and community in the lower Yukon River drainage, 2001–2010 average (source: Jallen, Decker, and Hamazaki 2012) (continued on next page).



**Figure 3.** The harvest of salmon for subsistence by species and community in the lower Yukon River drainage, 2001–2010 average (source: Jallen, Decker, and Hamazaki 2012) (continued from previous page).

**Table 1.** The harvest of wild resources by resource category, upper Yukon River drainage communities.

| Village                | Per person harvest | 95% Confidence interval (+/-) | Percentage of total harvest |
|------------------------|--------------------|-------------------------------|-----------------------------|
|                        | Pounds             |                               |                             |
| <b>Beaver 2011</b>     |                    |                               |                             |
| Salmon                 | 154                | 39%                           | 43%                         |
| Nonsalmon fish         | 14                 | 40%                           | 4%                          |
| Large land mammals     | 156                | 41%                           | 44%                         |
| Small land mammals     | 7                  | 63%                           | 2%                          |
| Marine mammals         | 0                  | 0%                            | 0%                          |
| Birds and eggs         | 26                 | 28%                           | 7%                          |
| Marine invertebrates   | 0                  | 0%                            | 0%                          |
| Berries and plants     | 2                  | 23%                           | 1%                          |
| Total                  | 359                | 28%                           | 100%                        |
| <b>Beaver 1985</b>     |                    |                               |                             |
| Salmon                 | 414                | 16%                           | 57%                         |
| Nonsalmon fish         | 79                 | 18%                           | 11%                         |
| Large land mammals     | 129                | 15%                           | 18%                         |
| Small land mammals     | 57                 | 10%                           | 8%                          |
| Marine mammals         | 0                  | 0%                            | 0%                          |
| Birds and eggs         | 49                 | 8%                            | 7%                          |
| Marine invertebrates   | 0                  | 0%                            | 0%                          |
| Berries and plants     | 3                  | 15%                           | <1%                         |
| Total                  | 732                | 12%                           | 100%                        |
| <b>Fort Yukon 1987</b> |                    |                               |                             |
| Salmon                 | 608                | 18%                           | 61%                         |
| Nonsalmon fish         | 121                | 18%                           | 12%                         |
| Large land mammals     | 200                | 28%                           | 20%                         |
| Small land mammals     | 33                 | 17%                           | 3%                          |
| Marine mammals         | 0                  | 0%                            | 0%                          |
| Birds and eggs         | 33                 | 19%                           | 3%                          |
| Marine invertebrates   | 0                  | 0%                            | 0%                          |
| Berries and plants     | 3                  | 25%                           | <1%                         |
| Total                  | 999                | 14%                           | 100%                        |

*Continued on next page.*

**Table 1.** The harvest of wild resources by resource category, upper Yukon River drainage communities (*continued from previous page*).

| Village                     | Per person harvest | 95% Confidence interval (+/-) | Percentage of total harvest |
|-----------------------------|--------------------|-------------------------------|-----------------------------|
|                             | Pounds             |                               |                             |
| <b>Stevens Village 1984</b> |                    |                               |                             |
| Salmon                      | 922                | 0%                            | 81%                         |
| Nonsalmon fish              | 102                | 0%                            | 9%                          |
| Large land mammals          | 73                 | 0%                            | 6%                          |
| Small land mammals          | 21                 | 0%                            | 2%                          |
| Marine mammals              | 0                  | 0%                            | 0%                          |
| Birds and eggs              | 20                 | 0%                            | 2%                          |
| Marine invertebrates        | 0                  | 0%                            | 0%                          |
| Berries and plants          | 2                  | 0%                            | <1%                         |
| Total                       | 1,139              | 0%                            | 100%                        |
| <b>Tanana 1987</b>          |                    |                               |                             |
| Salmon                      | 1,600              | 0%                            | 74%                         |
| Nonsalmon fish              | 358                | 0%                            | 17%                         |
| Large land mammals          | 141                | 0%                            | 7%                          |
| Small land mammals          | 39                 | 0%                            | 2%                          |
| Marine mammals              | 0                  | 0%                            | 0%                          |
| Birds and eggs              | 16                 | 0%                            | 1%                          |
| Marine invertebrates        | 0                  | 0%                            | 0%                          |
| Berries and plants          | 3                  | 0%                            | <1%                         |
| Total                       | 2,157              | 0%                            | 100%                        |

Source: ADFG 2015a

**Table 2.** The harvest of caribou and moose by residents of Chicken, Eagle city and Eagle Village, Rampart, Tanana, and Central based on permit returns, 2001-2010.

| <b>REPORTED ON PERMITS</b>          |                  |                                 |             |             |             |             |             |             |             |             |             |
|-------------------------------------|------------------|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Management Unit of Residence</b> | <b>Community</b> | <b>Caribou Harvest (number)</b> |             |             |             |             |             |             |             |             |             |
|                                     |                  | <b>2010</b>                     | <b>2009</b> | <b>2008</b> | <b>2007</b> | <b>2006</b> | <b>2005</b> | <b>2004</b> | <b>2003</b> | <b>2002</b> | <b>2001</b> |
| 20E                                 | Chicken          | 3                               | 2           | 2           | 1           | 1           | 1           | 2           | 0           | 4           | 1           |
|                                     | Eagle            | 39                              | 16          | 11          | 26          | 19          | 19          | 11          | 27          | 56          | 30          |
| 20F                                 | Rampart          |                                 |             |             |             |             |             |             |             |             |             |
|                                     | Tanana           |                                 |             |             |             |             |             | 2           |             | 1           | 1           |
| 25C                                 | Central          | 7                               | 10          | 8           | 10          | 15          |             | 6           | 23          | 29          | 11          |
| <b>Moose Harvest (number)</b>       |                  |                                 |             |             |             |             |             |             |             |             |             |
| 20E                                 | Chicken          |                                 | 1           |             |             | 1           |             | 1           | 2           | 3           | 3           |
|                                     | Eagle            | 5                               | 11          | 11          | 9           | 12          | 9           | 9           | 6           | 11          | 13          |
| 20F                                 | Rampart          |                                 |             |             |             |             | 1           |             | 1           | 2           | 1           |
|                                     | Tanana           | 10                              | 9           | 8           | 7           | 8           | 13          | 8           | 11          | 9           | 11          |
| 25C                                 | Central          | 7                               | 6           | 7           | 9           | 6           | 6           | 7           | 5           | 8           | 5           |

Source: FWS 2015.

**Table 8.** The harvest of moose by upper Yukon River drainage communities based on household surveys.

| HOUSEHOLD HARVEST SURVEY     |                 |            |                            |                         |                          |                     |
|------------------------------|-----------------|------------|----------------------------|-------------------------|--------------------------|---------------------|
| Management Unit of Residence | Community       | Study Year | MOOSE HARVEST              |                         |                          |                     |
|                              |                 |            | Estimated Harvest (number) | Lower Estimate (number) | Higher Estimate (number) | Per Person (pounds) |
| 20E                          | Eagle           | 2004       | 7                          | 7                       | 8                        | 39                  |
| 20F                          | Tanana          | 2002       | 60                         | 54                      | 65                       | 123                 |
|                              |                 | 1999       | 39                         | 28                      | 50                       | 78                  |
|                              |                 | 1998       | 39                         | 28                      | 50                       | 78                  |
|                              |                 | 1997       | 42                         | 32                      | 53                       | 77                  |
|                              |                 | 1996       | 34                         | 26                      | 42                       | 62                  |
|                              |                 | 1987       | 57                         | 57                      | 57                       | 156                 |
| 25D                          | Beaver          | 2011       | 16                         | 16                      | 16                       | 118                 |
|                              |                 | 2010       | 6                          | 3                       | 9                        | 44                  |
|                              |                 | 2009       | 9                          | 8                       | 10                       | 140                 |
|                              |                 | 2008       | 2                          | 2                       | 3                        | 20                  |
|                              |                 | 1985       | 15                         | 13                      | 17                       | 127                 |
|                              | Birch Creek     | 2010       | 5                          | 1                       | 9                        | 90                  |
|                              |                 | 2009       | 5                          | 5                       | 5                        | 113                 |
|                              |                 | 2008       | 5                          | 5                       | 6                        | 92                  |
|                              | Chalkyitsik     | 2010       | 19                         | 2                       | 36                       | 135                 |
|                              |                 | 2009       | 7                          | 6                       | 10                       | 162                 |
|                              |                 | 2008       | 8                          | 7                       | 10                       | 75                  |
|                              | Circle          | 2010       | 22                         | 22                      | 23                       | 120                 |
|                              |                 | 2009       | 10                         | 5                       | 16                       | 103                 |
|                              |                 | 2008       | 5                          | 5                       | 5                        | 28                  |
|                              | Fort Yukon      | 2010       | 36                         | 31                      | 41                       | 33                  |
|                              |                 | 2009       | 64                         | 49                      | 79                       | 103                 |
|                              |                 | 2008       | 61                         | 43                      | 79                       | 76                  |
|                              |                 | 1987       | 150                        | 119                     | 181                      | 168                 |
|                              | Stevens Village | 2010       | 2                          | 1                       | 3                        | 16                  |
|                              |                 | 2009       | 5                          | 4                       | 6                        | 56                  |
|                              |                 | 2008       | 1                          | 1                       | 3                        | 12                  |
|                              |                 | 1984       | 7                          | 7                       | 7                        | 54                  |
|                              | Venetie         | 2010       | 5                          | 4                       | 7                        | 16                  |
|                              |                 | 2009       | 24                         | 17                      | 39                       | 86                  |
|                              |                 | 2008       | 22                         | 21                      | 24                       | 80                  |

Source: ADF&G 2015a, Holen et al. 2012, Stevens and Maracle 2011, Van Lanen et al. 2012.

**Table 3.** The harvest of caribou by upper Yukon River drainage communities based on household surveys.

| HOUSEHOLD HARVEST SURVEY     |                 |            |                            |                         |                          |                     |
|------------------------------|-----------------|------------|----------------------------|-------------------------|--------------------------|---------------------|
| Management Unit of Residence | Community       | Study Year | Caribou Harvest            |                         |                          |                     |
|                              |                 |            | Estimated Harvest (number) | Lower Estimate (number) | Higher Estimate (number) | Per Person (pounds) |
| 20E                          | Eagle           | 2004       | 19                         | 19                      | 22                       | 15                  |
| 20F                          | Tanana          | 2002       | 4                          | 4                       | 6                        | 2                   |
|                              |                 | 1999       | 14                         | 8                       | 27                       | 7                   |
|                              |                 | 1998       |                            |                         |                          |                     |
|                              |                 | 1997       |                            |                         |                          |                     |
|                              |                 | 1996       | 3                          | 2                       | 6                        | 1                   |
|                              |                 | 1987       | 40                         |                         |                          | 11                  |
| 25D                          | Beaver          | 2011       |                            |                         |                          |                     |
|                              |                 | 2010       |                            |                         |                          |                     |
|                              |                 | 2009       |                            |                         |                          |                     |
|                              |                 | 2008       |                            |                         |                          |                     |
|                              |                 | 1985       |                            |                         |                          |                     |
|                              | Birch Creek     | 2010       |                            |                         |                          |                     |
|                              |                 | 2009       |                            |                         |                          |                     |
|                              |                 | 2008       |                            |                         |                          |                     |
|                              | Chalkyitsik     | 2010       |                            |                         |                          |                     |
|                              |                 | 2009       |                            |                         |                          |                     |
|                              |                 | 2008       |                            |                         |                          |                     |
|                              | Circle          | 2010       |                            |                         |                          |                     |
|                              |                 | 2009       | 4                          | 2                       | 10                       | 6                   |
|                              |                 | 2008       | 1                          | 1                       | 1                        | 1                   |
|                              | Fort Yukon      | 2010       | 6                          | 3                       | 9                        | 15                  |
|                              |                 | 2009       | 35                         | 17                      | 65                       | 8                   |
|                              |                 | 2008       | 3                          | 1                       | 7                        | 1                   |
|                              |                 | 1987       | 156                        | 49                      | 262                      | 25                  |
|                              | Stevens Village | 2010       |                            |                         |                          |                     |
|                              |                 | 2009       |                            |                         |                          |                     |
|                              |                 | 2008       |                            |                         |                          |                     |
|                              | Venetie         | 2010       | 44                         | 35                      | 53                       | 37                  |
|                              |                 | 2009       | 6                          | 4                       | 9                        | 14                  |
|                              |                 | 2008       | 16                         | 14                      | 19                       | 3                   |

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Source: ADF&G 2015a, Holen et al. 2012, Stevens and Maracle 2011, and Van Lanen et al. 2012.

**Table 8.** The harvest of moose by upper Yukon River drainage communities based on household surveys.

| HOUSEHOLD HARVEST SURVEY     |                 |            |                            |                         |                          |                     |
|------------------------------|-----------------|------------|----------------------------|-------------------------|--------------------------|---------------------|
| Management Unit of Residence | Community       | Study Year | MOOSE HARVEST              |                         |                          |                     |
|                              |                 |            | Estimated Harvest (number) | Lower Estimate (number) | Higher Estimate (number) | Per Person (pounds) |
| 20E                          | Eagle           | 2004       | 7                          | 7                       | 8                        | 39                  |
| 20F                          | Tanana          | 2002       | 60                         | 54                      | 65                       | 123                 |
|                              |                 | 1999       | 39                         | 28                      | 50                       | 78                  |
|                              |                 | 1998       | 39                         | 28                      | 50                       | 78                  |
|                              |                 | 1997       | 42                         | 32                      | 53                       | 77                  |
|                              |                 | 1996       | 34                         | 26                      | 42                       | 62                  |
|                              |                 | 1987       | 57                         | 57                      | 57                       | 156                 |
| 25D                          | Beaver          | 2011       | 16                         | 16                      | 16                       | 118                 |
|                              |                 | 2010       | 6                          | 3                       | 9                        | 44                  |
|                              |                 | 2009       | 9                          | 8                       | 10                       | 140                 |
|                              |                 | 2008       | 2                          | 2                       | 3                        | 20                  |
|                              |                 | 1985       | 15                         | 13                      | 17                       | 127                 |
|                              | Birch Creek     | 2010       | 5                          | 1                       | 9                        | 90                  |
|                              |                 | 2009       | 5                          | 5                       | 5                        | 113                 |
|                              |                 | 2008       | 5                          | 5                       | 6                        | 92                  |
|                              | Chalkyitsik     | 2010       | 19                         | 2                       | 36                       | 135                 |
|                              |                 | 2009       | 7                          | 6                       | 10                       | 162                 |
|                              |                 | 2008       | 8                          | 7                       | 10                       | 75                  |
|                              | Circle          | 2010       | 22                         | 22                      | 23                       | 120                 |
|                              |                 | 2009       | 10                         | 5                       | 16                       | 103                 |
|                              |                 | 2008       | 5                          | 5                       | 5                        | 28                  |
|                              | Fort Yukon      | 2010       | 36                         | 31                      | 41                       | 33                  |
|                              |                 | 2009       | 64                         | 49                      | 79                       | 103                 |
|                              |                 | 2008       | 61                         | 43                      | 79                       | 76                  |
|                              |                 | 1987       | 150                        | 119                     | 181                      | 168                 |
|                              | Stevens Village | 2010       | 2                          | 1                       | 3                        | 16                  |
|                              |                 | 2009       | 5                          | 4                       | 6                        | 56                  |
|                              |                 | 2008       | 1                          | 1                       | 3                        | 12                  |
|                              |                 | 1984       | 7                          | 7                       | 7                        | 54                  |
|                              | Venetie         | 2010       | 5                          | 4                       | 7                        | 16                  |
|                              |                 | 2009       | 24                         | 17                      | 39                       | 86                  |
| 2008                         |                 | 22         | 21                         | 24                      | 80                       |                     |

Source: ADF&G 2015a, Holen et al. 2012, Stevens and Maracle 2011, Van Lanen et al. 2012.

**Table 4.** The harvest of caribou by upper Yukon River drainage communities based on household surveys.

| HOUSEHOLD HARVEST SURVEY     |                 |            |                            |                         |                          |                     |
|------------------------------|-----------------|------------|----------------------------|-------------------------|--------------------------|---------------------|
| Management Unit of Residence | Community       | Study Year | Caribou Harvest            |                         |                          |                     |
|                              |                 |            | Estimated Harvest (number) | Lower Estimate (number) | Higher Estimate (number) | Per Person (pounds) |
| 20E                          | Eagle           | 2004       | 19                         | 19                      | 22                       | 15                  |
| 20F                          | Tanana          | 2002       | 4                          | 4                       | 6                        | 2                   |
|                              |                 | 1999       | 14                         | 8                       | 27                       | 7                   |
|                              |                 | 1998       |                            |                         |                          |                     |
|                              |                 | 1997       |                            |                         |                          |                     |
|                              |                 | 1996       | 3                          | 2                       | 6                        | 1                   |
|                              |                 | 1987       | 40                         |                         |                          | 11                  |
| 25D                          | Beaver          | 2011       |                            |                         |                          |                     |
|                              |                 | 2010       |                            |                         |                          |                     |
|                              |                 | 2009       |                            |                         |                          |                     |
|                              |                 | 2008       |                            |                         |                          |                     |
|                              |                 | 1985       |                            |                         |                          |                     |
|                              | Birch Creek     | 2010       |                            |                         |                          |                     |
|                              |                 | 2009       |                            |                         |                          |                     |
|                              |                 | 2008       |                            |                         |                          |                     |
|                              | Chalkyitsik     | 2010       |                            |                         |                          |                     |
|                              |                 | 2009       |                            |                         |                          |                     |
|                              |                 | 2008       |                            |                         |                          |                     |
|                              | Circle          | 2010       |                            |                         |                          |                     |
|                              |                 | 2009       | 4                          | 2                       | 10                       | 6                   |
|                              |                 | 2008       | 1                          | 1                       | 1                        | 1                   |
|                              | Fort Yukon      | 2010       | 6                          | 3                       | 9                        | 15                  |
|                              |                 | 2009       | 35                         | 17                      | 65                       | 8                   |
|                              |                 | 2008       | 3                          | 1                       | 7                        | 1                   |
|                              |                 | 1987       | 156                        | 49                      | 262                      | 25                  |
|                              | Stevens Village | 2010       |                            |                         |                          |                     |
|                              |                 | 2009       |                            |                         |                          |                     |
|                              |                 | 2008       |                            |                         |                          |                     |
|                              | Venetie         | 2010       | 44                         | 35                      | 53                       | 37                  |
|                              |                 | 2009       | 6                          | 4                       | 9                        | 14                  |
|                              |                 | 2008       | 16                         | 14                      | 19                       | 3                   |

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Source: ADF&G 2015a, Holen et al. 2012, Stevens and Maracle 2011, and Van Lanen et al. 2012.

**Table 5.** The harvest of wild resources by resource category, in pounds edible weight, middle Yukon River drainage communities, based on household surveys (continued on next page).

| Community              | Per person harvest | 95% Confidence interval (+/-) | Percentage of total harvest |
|------------------------|--------------------|-------------------------------|-----------------------------|
|                        | Pounds             |                               |                             |
| <b>Holy Cross 1990</b> |                    |                               |                             |
| Salmon                 | 121                | 39%                           | 19%                         |
| Nonsalmon fish         | 81                 | 32%                           | 13%                         |
| Large land mammals     | 322                | 21%                           | 51%                         |
| Small land mammals     | 69                 | 31%                           | 11%                         |
| Marine mammals         |                    |                               |                             |
| Birds and eggs         | 29                 | 26%                           | 4%                          |
| Marine invertebrates   |                    |                               |                             |
| Berries and plants     | 13                 | 44%                           | 2%                          |
| Total                  | 634                | 18%                           | 100%                        |
| <b>Shageluk 1990</b>   |                    |                               |                             |
| Salmon                 | 158                | 29%                           | 35%                         |
| Nonsalmon fish         | 141                | 27%                           | 32%                         |
| Large land mammals     | 126                | 27%                           | 28%                         |
| Small land mammals     | 8                  | 40%                           | 2%                          |
| Marine mammals         |                    |                               |                             |
| Birds and eggs         | 9                  | 40%                           | 2%                          |
| Marine invertebrates   |                    |                               |                             |
| Berries and plants     | 3                  | 26%                           | 1%                          |
| Total                  | 445                | 23%                           | 100%                        |
| <b>Anvik 2011</b>      |                    |                               |                             |
| Salmon                 | 232                | 23%                           | 59%                         |
| Nonsalmon fish         | 35                 | 49%                           | 9%                          |
| Large land mammals     | 90                 | 27%                           | 23%                         |
| Small land mammals     | 19                 | 56%                           | 5%                          |
| Marine mammals         |                    |                               |                             |
| Birds and eggs         | 13                 | 34%                           | 3%                          |
| Marine invertebrates   |                    |                               |                             |
| Berries and plants     | 2                  | 44%                           | 1%                          |
| Total                  | 391                | 22%                           | 100%                        |
| <b>Anvik 1990</b>      |                    |                               |                             |
| Salmon                 | 174                | 29%                           | 21%                         |
| Nonsalmon fish         | 129                | 29%                           | 15%                         |
| Large land mammals     | 385                | 22%                           | 46%                         |
| Small land mammals     | 112                | 65%                           | 13%                         |
| Marine mammals         |                    |                               |                             |
| Birds and eggs         | 41                 | 16%                           | 5%                          |
| Marine invertebrates   |                    |                               |                             |
| Berries and plants     | 3                  | 25%                           |                             |
| Total                  | 843                | 20%                           | 100%                        |

**Table 5.** The harvest of wild resources by resource category, in pounds edible weight, middle Yukon River drainage communities, based on household surveys (*continued on next page*).

| Community            | Per person harvest | 95% Confidence interval (+/-) | Percentage of total harvest |
|----------------------|--------------------|-------------------------------|-----------------------------|
|                      | Pounds             |                               |                             |
| <b>Grayling 2011</b> |                    |                               |                             |
| Salmon               | 122                | 20%                           | 50%                         |
| Nonsalmon fish       | 37                 | 21%                           | 15%                         |
| Large land mammals   | 59                 | 21%                           | 24%                         |
| Small land mammals   | 15                 | 34%                           | 6%                          |
| Marine mammals       |                    |                               |                             |
| Birds and eggs       | 8                  | 28%                           | 3%                          |
| Marine invertebrates |                    |                               |                             |
| Berries and plants   | 5                  | 21%                           | 2%                          |
| Total                | 246                | 18%                           | 100%                        |
| <b>Grayling 1990</b> |                    |                               |                             |
| Salmon               | 374                | 17%                           | 42%                         |
| Nonsalmon fish       | 151                | 16%                           | 17%                         |
| Large land mammals   | 293                | 9%                            | 33%                         |
| Small land mammals   | 37                 | 18%                           | 4%                          |
| Marine mammals       |                    |                               |                             |
| Birds and eggs       | 30                 | 12%                           | 3%                          |
| Marine invertebrates |                    |                               |                             |
| Berries and plants   | 8                  | 14%                           | 1%                          |
| Total                | 894                | 10%                           | 100%                        |
| <b>Nulato 2010</b>   |                    |                               |                             |
| Salmon               | 108                | 9%                            | 45%                         |
| Nonsalmon fish       | 26                 | 17%                           | 11%                         |
| Large land mammals   | 86                 | 8%                            | 36%                         |
| Small land mammals   | 9                  | 17%                           | 4%                          |
| Marine mammals       |                    |                               |                             |
| Birds and eggs       | 2                  | 9%                            | 1%                          |
| Marine invertebrates |                    |                               |                             |
| Berries and plants   | 7                  | 22%                           | 3%                          |
| Total                | 239                | 9%                            | 100%                        |
| <b>Huslia 1983</b>   |                    |                               |                             |
| Salmon               | 555                | 7%                            | 51%                         |
| Nonsalmon fish       | 91                 | 7%                            | 8%                          |
| Large land mammals   | 379                | 3%                            | 35%                         |
| Small land mammals   | 19                 | 4%                            | 2%                          |
| Marine mammals       |                    |                               |                             |
| Birds and eggs       | 33                 | 3%                            | 3%                          |
| Marine invertebrates |                    |                               |                             |
| Berries and plants   | 6                  | 3%                            | 1%                          |
| Total                | 1,082              | 5%                            | 100%                        |

**Table 5.** The harvest of wild resources by resource category, in pounds edible weight, middle Yukon River drainage communities, based on household surveys (continued on next page).

| Community                    | Per person harvest | 95% Confidence interval (+/-) | Percentage of total harvest |
|------------------------------|--------------------|-------------------------------|-----------------------------|
|                              | Pounds             |                               |                             |
| <b>Hughes 1982</b>           |                    |                               |                             |
| Salmon                       | 1,162              |                               | 78%                         |
| Nonsalmon fish               | 72                 |                               | 5%                          |
| Large land mammals           | 212                |                               | 14%                         |
| Small land mammals           | 16                 |                               | 1%                          |
| Marine mammals               |                    |                               |                             |
| Birds and eggs               | 24                 |                               | 2%                          |
| Marine invertebrates         |                    |                               |                             |
| Berries and plants           | 6                  |                               | <1%                         |
| Total                        | 1,492              |                               | 100%                        |
| <b>Alatna 2011</b>           |                    |                               |                             |
| Salmon                       | 27                 | 94%                           | 9%                          |
| Nonsalmon fish               | 21                 | 92%                           | 7%                          |
| Large land mammals           | 219                | 62%                           | 73%                         |
| Small land mammals           | 10                 | 85%                           | 3%                          |
| Marine mammals               |                    |                               |                             |
| Birds and eggs               | 18                 | 62%                           | 6%                          |
| Marine invertebrates         |                    |                               |                             |
| Berries and plants           | 4                  | 22%                           | 1%                          |
| Total                        | 299                | 60%                           | 100%                        |
| <b>Allakaket 2011</b>        |                    |                               |                             |
| Salmon                       | 152                | 41%                           | 29%                         |
| Nonsalmon fish               | 175                | 42%                           | 33%                         |
| Large land mammals           | 170                | 26%                           | 32%                         |
| Small land mammals           | 9                  | 49%                           | 2%                          |
| Marine mammals               |                    |                               |                             |
| Birds and eggs               | 13                 | 26%                           | 2%                          |
| Marine invertebrates         |                    |                               |                             |
| Berries and plants           | 6                  | 18%                           | 1%                          |
| Total                        | 525                | 38%                           | 100%                        |
| <b>Allakaket/Alatna 1984</b> |                    |                               |                             |
| Salmon                       | 376                |                               | 60%                         |
| Nonsalmon fish               | 117                |                               | 19%                         |
| Large land mammals           | 117                |                               | 19%                         |
| Small land mammals           | 9                  |                               | 1%                          |
| Marine mammals               |                    |                               |                             |
| Birds and eggs               | 30                 |                               | 5%                          |
| Marine invertebrates         |                    |                               |                             |
| Berries and plants           | 9                  |                               | 1%                          |
| Total                        | 629                |                               | 100%                        |

**Table 5.** The harvest of wild resources by resource category, in pounds edible weight, middle Yukon River drainage communities, based on household surveys (continued on next page).

| Community                    | Per person harvest | 95% Confidence interval (+/-) | Percentage of total harvest |
|------------------------------|--------------------|-------------------------------|-----------------------------|
|                              | Pounds             |                               |                             |
| <b>Allakaket/Alatna 1983</b> |                    |                               |                             |
| Salmon                       | 444                |                               | 64%                         |
| Nonsalmon fish               | 140                |                               | 20%                         |
| Large land mammals           | 73                 |                               | 10%                         |
| Small land mammals           | 13                 |                               | 2%                          |
| Marine mammals               |                    |                               |                             |
| Birds and eggs               | 22                 |                               | 3%                          |
| Marine invertebrates         |                    |                               |                             |
| Berries and plants           | 4                  |                               | 1%                          |
| Total                        | 696                |                               | 100%                        |
| <b>Allakaket/Alatna 1982</b> |                    |                               |                             |
| Salmon                       | 554                |                               | 61%                         |
| Nonsalmon fish               | 177                |                               | 20%                         |
| Large land mammals           | 118                |                               | 13%                         |
| Small land mammals           | 24                 |                               | 3%                          |
| Marine mammals               |                    |                               |                             |
| Birds and eggs               | 25                 |                               | 3%                          |
| Marine invertebrates         |                    |                               |                             |
| Berries and plants           | 7                  |                               | 1%                          |
| Total                        | 906                |                               | 100%                        |
| <b>Evansville 2011</b>       |                    |                               |                             |
| Salmon                       | 7                  |                               | 14%                         |
| Nonsalmon fish               | 5                  |                               | 10%                         |
| Large land mammals           | 27                 |                               | 51%                         |
| Small land mammals           |                    |                               |                             |
| Marine mammals               |                    |                               |                             |
| Birds and eggs               | 2                  |                               | 3%                          |
| Marine invertebrates         |                    |                               |                             |
| Berries and plants           | 11                 |                               | 22%                         |
| Total                        | 53                 |                               | 100%                        |
| <b>Bettles 2011</b>          |                    |                               |                             |
| Salmon                       | 4                  |                               | 2%                          |
| Nonsalmon fish               | 8                  |                               | 4%                          |
| Large land mammals           | 155                |                               | 89%                         |
| Small land mammals           |                    |                               |                             |
| Marine mammals               |                    |                               |                             |
| Birds and eggs               | 2                  |                               | 1%                          |
| Marine invertebrates         |                    |                               |                             |
| Berries and plants           | 6                  |                               | 3%                          |
| Total                        | 175                |                               | 100%                        |

**Table 5.** The harvest of wild resources by resource category, in pounds edible weight, middle Yukon River drainage communities, based on household surveys (continued on next page).

| Community                      | Per person harvest | 95% Confidence interval (+/-) | Percentage of total harvest |
|--------------------------------|--------------------|-------------------------------|-----------------------------|
|                                | Pounds             |                               |                             |
| <b>Bettles/Evansville 1984</b> |                    |                               |                             |
| Salmon                         | 14                 |                               | 11%                         |
| Nonsalmon fish                 | 7                  |                               | 5%                          |
| Large land mammals             | 89                 |                               | 73%                         |
| Small land mammals             | 2                  |                               | 2%                          |
| Marine mammals                 | 0                  |                               |                             |
| Birds and eggs                 | 4                  |                               | 4%                          |
| Marine invertebrates           | 0                  |                               |                             |
| Berries and plants             | 6                  |                               | 5%                          |
| Total                          | 123                |                               | 100%                        |
| <b>Bettles/Evansville 1983</b> |                    |                               |                             |
| Salmon                         | 41                 |                               | 22%                         |
| Nonsalmon fish                 | 26                 |                               | 14%                         |
| Large land mammals             | 104                |                               | 56%                         |
| Small land mammals             | 0                  |                               |                             |
| Marine mammals                 |                    |                               |                             |
| Birds and eggs                 | 3                  |                               | 2%                          |
| Marine invertebrates           |                    |                               |                             |
| Berries and plants             | 11                 |                               | 6%                          |
| Total                          | 185                |                               | 100%                        |
| <b>Bettles/Evansville 1982</b> |                    |                               |                             |
| Salmon                         | 66                 |                               | 25%                         |
| Nonsalmon fish                 | 42                 |                               | 16%                         |
| Large land mammals             | 134                |                               | 52%                         |
| Small land mammals             | 9                  |                               | 3%                          |
| Marine mammals                 |                    |                               |                             |
| Birds and eggs                 | 2                  |                               | 1%                          |
| Marine invertebrates           |                    |                               |                             |
| Berries and plants             | 7                  |                               | 3%                          |
| Total                          | 260                |                               | 100%                        |
| <b>Coldfoot 2011</b>           |                    |                               |                             |
| Salmon                         |                    |                               |                             |
| Nonsalmon fish                 |                    |                               |                             |
| Large land mammals             | 33                 | 142%                          | 86%                         |
| Small land mammals             |                    |                               |                             |
| Marine mammals                 |                    |                               |                             |
| Birds and eggs                 |                    |                               |                             |
| Marine invertebrates           |                    |                               |                             |
| Berries and plants             | 6                  | 55%                           | 15%                         |
| Total                          | 38                 | 65%                           | 100%                        |

**Table 5.** The harvest of wild resources by resource category, in pounds edible weight, middle Yukon River drainage communities, based on household surveys (continued on next page).

| Community            | Per person harvest | 95% Confidence interval (+/-) | Percentage of total harvest |
|----------------------|--------------------|-------------------------------|-----------------------------|
|                      | Pounds             |                               |                             |
| <b>Wiseman 2011</b>  |                    |                               |                             |
| Salmon               | 12                 |                               | 4%                          |
| Nonsalmon fish       | 13                 |                               | 5%                          |
| Large land mammals   | 222                |                               | 76%                         |
| Small land mammals   | 1                  |                               | <1%                         |
| Marine mammals       |                    |                               |                             |
| Birds and eggs       | 24                 |                               | 8%                          |
| Marine invertebrates |                    |                               |                             |
| Berries and plants   | 21                 |                               | 7%                          |
| Total                | 294                |                               | 100%                        |
| <b>Galena 2010</b>   |                    |                               |                             |
| Salmon               | 119                | 48%                           | 47%                         |
| Nonsalmon fish       | 31                 | 44%                           | 12%                         |
| Large land mammals   | 90                 | 25%                           | 36%                         |
| Small land mammals   | 6                  | 48%                           | 2%                          |
| Marine mammals       |                    |                               |                             |
| Birds and eggs       | 3                  | 26%                           | 1%                          |
| Marine invertebrates | <1                 | 132%                          | <1%                         |
| Berries and plants   | 4                  | 30%                           | 2%                          |
| Total                | 254                | 34%                           | 100%                        |
| <b>Galena 1985</b>   |                    |                               |                             |
| Salmon               | 545                | 76%                           | 69%                         |
| Nonsalmon fish       | 62                 | 76%                           | 8%                          |
| Large land mammals   | 155                | 23%                           | 20%                         |
| Small land mammals   | 15                 | 32%                           | 2%                          |
| Marine mammals       |                    |                               |                             |
| Birds and eggs       | 8                  | 25%                           | 1%                          |
| Marine invertebrates |                    |                               |                             |
| Berries and plants   | 3                  | 37%                           | <1%                         |
| Total                | 787                | 54%                           | 100%                        |
| <b>Ruby 2010</b>     |                    |                               |                             |
| Salmon               | 178                | 43%                           | 59%                         |
| Nonsalmon fish       | 24                 | 31%                           | 8%                          |
| Large land mammals   | 85                 | 23%                           | 28%                         |
| Small land mammals   | 5                  | 38%                           | 2%                          |
| Marine mammals       |                    |                               |                             |
| Birds and eggs       | 3                  | 24%                           | 1%                          |
| Marine invertebrates | <1%                | 108%                          | <1%                         |
| Berries and plants   | 6                  | 13%                           | 2%                          |
| Total                | 301                | 31%                           | 100%                        |

**Table 5.** The harvest of wild resources by resource category, in pounds edible weight, middle Yukon River drainage communities, based on household surveys (continued from previous page).

| Community            | Per person harvest | 95% Confidence interval (+/-) | Percentage of total harvest |
|----------------------|--------------------|-------------------------------|-----------------------------|
|                      | Pounds             |                               |                             |
| <b>Tanana 1987</b>   |                    |                               |                             |
| Salmon               | 1,600              |                               | 74%                         |
| Nonsalmon fish       | 358                |                               | 17%                         |
| Large land mammals   | 141                |                               | 7%                          |
| Small land mammals   | 39                 |                               | 2%                          |
| Marine mammals       |                    |                               |                             |
| Birds and eggs       | 16                 |                               | 1%                          |
| Marine invertebrates |                    |                               |                             |
| Berries and plants   | 3                  |                               | <1%                         |
| Total                | 2,157              |                               | 100%                        |

Black cell=0

Source: ADFG 2015a.

**Table 6.** The harvest of moose by middle Yukon River drainage communities based on household surveys.

| HOUSEHOLD HARVEST SURVEYS |            |                   |                         |                         |                     |                                  |
|---------------------------|------------|-------------------|-------------------------|-------------------------|---------------------|----------------------------------|
| Community                 | Study Year | Moose Harvest     |                         |                         |                     |                                  |
|                           |            | Estimated Harvest | Lower Estimate (number) | Upper Estimate (number) | Per Person (pounds) | 95% Confidence Interval (% +/- ) |
| Ruby city                 | 2010       | 27                | 27                      | 27                      | 80                  | 22                               |
|                           | 2002       | 31                | 27                      | 35                      | 81                  | 14                               |
|                           | 2001       | 30                | 25                      | 35                      | 72                  | 17                               |
|                           | 1999       | 26                | 26                      | 27                      | 76                  | 4                                |
|                           | 1998       | 32                | 28                      | 36                      | 97                  | 13                               |
|                           | 1997       | 28                | 26                      | 31                      | 70                  | 9                                |
|                           | 1996       | 25                | 22                      | 28                      | 64                  | 12                               |
| Galena                    | 2010       | 67                | 67                      | 67                      | 85                  | 19                               |
|                           | 2002       | 94                | 86                      | 103                     | 88                  | 9                                |
|                           | 2001       | 120               | 82                      | 158                     | 97                  | 31                               |
|                           | 1999       | 96                | 80                      | 112                     | 94                  | 17                               |
|                           | 1998       | 88                | 74                      | 103                     | 99                  | 16                               |
|                           | 1997       | 131               | 112                     | 150                     | 132                 | 15                               |
|                           | 1996       | 130               | 109                     | 151                     | 128                 | 16                               |
|                           | 1985       | 121               | 94                      | 148                     | 137                 | 22                               |
| Huslia                    | 2002       | 67                | 63                      | 71                      | 165                 | 7                                |
|                           | 2001       | 88                | 86                      | 92                      | 183                 | 4                                |
|                           | 1999       | 79                | 65                      | 93                      | 170                 | 18                               |
|                           | 1998       | 72                | 62                      | 82                      | 158                 | 14                               |
|                           | 1997       | 81                | 67                      | 94                      | 200                 | 17                               |
|                           | 1983       | 86                | 84                      | 89                      | 311                 | 3                                |
| Hughes                    | 1982       | 38                |                         |                         | 201                 |                                  |
| Alatna                    | 2011       | 4                 | 4                       | 5                       | 77                  | 101                              |
|                           | 2002       | 12                | 7                       | 17                      | 180                 | 41                               |
|                           | 2001       | 6                 | 6                       | 6                       | 125                 | 0                                |
|                           | 1999       | 6                 | 5                       | 11                      | 96                  | 68                               |
|                           | 1998       | 5                 | 5                       | 5                       | 100                 |                                  |
|                           | 1997       | 9                 | 9                       | 9                       | 194                 |                                  |
| Allakaket                 | 2011       | 19                | 19                      | 19                      | 70                  | 31                               |
|                           | 2002       | 35                | 30                      | 41                      | 140                 | 16                               |
|                           | 2001       | 35                |                         |                         | 110                 |                                  |
|                           | 1999       | 37                | 35                      | 38                      | 118                 | 4                                |
|                           | 1998       | 37                | 33                      | 40                      | 104                 | 10                               |
|                           | 1997       | 43                | 41                      | 47                      | 133                 | 8                                |
| Allakaket/Alatna          | 1984       | 39                |                         |                         | 107                 |                                  |
|                           | 1983       | 26                |                         |                         | 70                  |                                  |
|                           | 1982       | 31                |                         |                         | 102                 |                                  |

Continued on next page.

**Table 6.** The harvest of moose by middle Yukon River drainage communities based on household surveys (*continued from previous page*).

| HOUSEHOLD HARVEST SURVEYS |            |                   |                         |                         |                     |                                  |
|---------------------------|------------|-------------------|-------------------------|-------------------------|---------------------|----------------------------------|
| Community                 | Study Year | Moose Harvest     |                         |                         |                     |                                  |
|                           |            | Estimated Harvest | Lower Estimate (number) | Upper Estimate (number) | Per Person (pounds) | 95% Confidence Interval (% +/- ) |
| Bettles                   | 2011       | 2                 |                         |                         | 90                  |                                  |
|                           | 1999       | 2                 | 1                       | 4                       | 18                  | 153                              |
|                           | 1998       | 7                 | 4                       | 13                      | 127                 | 87                               |
|                           | 1997       |                   |                         |                         |                     |                                  |
| Evansville                | 2011       | 1                 |                         |                         | 27                  |                                  |
|                           | 1999       | 2                 | 2                       | 3                       | 42                  | 41                               |
|                           | 1998       | 4                 | 3                       | 5                       | 68                  | 43                               |
|                           | 1997       | 3                 | 2                       | 5                       | 32                  | 102                              |
| Bettles/Evansville        | 2002       |                   |                         |                         |                     |                                  |
|                           | 1984       | 14                |                         |                         | 82                  |                                  |
|                           | 1983       | 15                |                         |                         | 94                  |                                  |
|                           | 1982       | 13                |                         |                         | 96                  |                                  |
| Wiseman                   | 2011       | 4                 |                         |                         | 166                 |                                  |
| Coldfoot                  | 2011       |                   |                         |                         |                     |                                  |
| Nulato                    | 2010       | 40                | 40                      | 40                      | 82                  | 7                                |
|                           | 2001       | 42                | 38                      | 47                      | 72                  | 11                               |
|                           | 1999       | 79                | 76                      | 82                      | 129                 | 4                                |
|                           | 1998       | 57                | 52                      | 60                      | 109                 | 6                                |
|                           | 1997       | 67                | 56                      | 78                      | 117                 | 16                               |
|                           | 1996       | 47                | 37                      | 57                      | 78                  | 21                               |
| Kaltag                    | 2002       | 35                | 31                      | 39                      | 93                  | 13                               |
|                           | 2001       | 43                |                         |                         | 104                 |                                  |
|                           | 1999       | 46                | 45                      | 49                      | 108                 | 6                                |
|                           | 1998       | 50                | 48                      | 52                      | 118                 | 5                                |
|                           | 1997       | 40                | 32                      | 47                      | 87                  | 19                               |
|                           | 1996       | 31                | 27                      | 36                      | 74                  | 16                               |
| Grayling                  | 2011       | 23                | 23                      | 23                      | 58                  | 21                               |
|                           | 2004       | 28                |                         |                         | 87                  |                                  |
|                           | 2003       | 36                |                         |                         | 106                 |                                  |
|                           | 2002       | 33                | 32                      | 34                      | 100                 | 6                                |
|                           | 1990       | 76                | 69                      | 82                      | 289                 | 9                                |
| Anvik                     | 2011       | 15                | 15                      | 15                      | 90                  | 27                               |
|                           | 2004       | 24                | 22                      | 26                      | 112                 | 8                                |
|                           | 2003       | 16                | 15                      | 18                      | 79                  | 11                               |
|                           | 2002       | 21                | 18                      | 25                      | 104                 | 16                               |
|                           | 1990       | 45                | 38                      | 52                      | 364                 | 16                               |
| Shageluk                  | 2004       | 16                |                         |                         | 77                  |                                  |
|                           | 2003       | 28                |                         |                         | 112                 |                                  |
|                           | 2002       | 31                | 25                      | 37                      | 134                 | 21                               |
|                           | 1990       | 20                | 16                      | 25                      | 126                 | 27                               |
| Holy Cross                | 2004       | 26                | 23                      | 28                      | 66                  | 11                               |
|                           | 2003       | 38                | 35                      | 41                      | 100                 | 8                                |
|                           | 2002       | 48                | 46                      | 52                      | 138                 | 7                                |
|                           | 1990       | 111               | 91                      | 130                     | 314                 | 18                               |

Blank cell=0 or not applicable.

Source: ADFG 2015a.

**Table 7.** The harvest of caribou by middle Yukon River drainage communities based on household surveys.

| HOUSEHOLD HARVEST SURVEYS |            |                   |                         |                         |                     |                                 |
|---------------------------|------------|-------------------|-------------------------|-------------------------|---------------------|---------------------------------|
| Community                 | Study Year | Caribou Harvest   |                         |                         |                     |                                 |
|                           |            | Estimated Harvest | Lower Estimate (number) | Upper Estimate (number) | Per Person (pounds) | 95% Confidence Interval (% +/-) |
| Ruby city                 | 2010       | 3                 | 3                       | 3                       | 2                   | 108                             |
|                           | 2002       |                   |                         |                         |                     |                                 |
|                           | 2001       |                   |                         |                         |                     |                                 |
|                           | 1999       | 1                 | 1                       | 1                       | 1                   | 23                              |
|                           | 1998       |                   |                         |                         |                     |                                 |
|                           | 1997       |                   |                         |                         |                     |                                 |
|                           | 1996       |                   |                         |                         |                     |                                 |
| Galena                    | 2010       | 6                 | 6                       | 6                       | 2                   | 140                             |
|                           | 2002       | 8                 | 4                       | 13                      | 2                   | 54                              |
|                           | 2001       |                   |                         |                         |                     |                                 |
|                           | 1999       | 8                 | 4                       | 16                      | 2                   | 108                             |
|                           | 1998       | 7                 | 1                       | 13                      | 2                   | 80                              |
|                           | 1997       | 39                | 14                      | 63                      | 9                   | 63                              |
|                           | 1996       | 40                | 15                      | 65                      | 10                  | 62                              |
|                           | 1985       | 40                | 11                      | 69                      | 12                  | 72                              |
| Huslia                    | 2002       | 82                | 74                      | 90                      | 49                  | 10                              |
|                           | 1999       | 78                | 61                      | 95                      | 40                  | 21                              |
|                           | 1998       | 264               | 210                     | 318                     | 140                 | 20                              |
|                           | 1997       | 56                | 33                      | 80                      | 34                  | 42                              |
|                           | 1983       | 53                | 49                      | 57                      | 36                  | 7                               |
| Hughes                    | 1982       |                   |                         |                         |                     |                                 |
| Alatna                    | 2011       | 28                | 26                      | 31                      | 118                 | 88                              |
|                           | 2002       | 34                | 18                      | 50                      | 123                 | 46                              |
|                           | 2001       |                   |                         |                         |                     |                                 |
|                           | 1999       |                   |                         |                         |                     |                                 |
|                           | 1998       | 11                | 11                      | 11                      | 53                  |                                 |
|                           | 1997       | 21                | 21                      | 21                      | 109                 |                                 |
| Allakaket                 | 2011       | 95                | 95                      | 95                      | 84                  | 28                              |
|                           | 2002       | 106               | 83                      | 128                     | 101                 | 21                              |
|                           | 2001       | 9                 | 9                       | 9                       | 7                   |                                 |
|                           | 1999       | 13                | 12                      | 15                      | 10                  | 10                              |
|                           | 1998       | 43                | 36                      | 51                      | 29                  | 18                              |
|                           | 1997       | 11                | 7                       | 14                      | 8                   | 34                              |
| Allakaket/Alatna          | 1984       | 4                 |                         |                         | 3                   |                                 |
|                           | 1983       |                   |                         |                         |                     |                                 |
|                           | 1982       | 6                 |                         |                         | 5                   |                                 |
| Bettles                   | 2011       | 6                 | 6                       | 6                       | 65                  |                                 |
|                           | 1999       | 21                | 7                       | 36                      | 52                  | 69                              |
|                           | 1998       | 25                | 14                      | 54                      | 107                 | 115                             |
|                           | 1997       |                   |                         |                         |                     |                                 |

Continued on next page.

**Table 7.** The harvest of caribou by middle Yukon River drainage communities based on household surveys (continued from previous page).

| HOUSEHOLD HARVEST SURVEYS |            |                   |                         |                         |                     |                                 |
|---------------------------|------------|-------------------|-------------------------|-------------------------|---------------------|---------------------------------|
| Community                 | Study Year | Caribou Harvest   |                         |                         |                     |                                 |
|                           |            | Estimated Harvest | Lower Estimate (number) | Upper Estimate (number) | Per Person (pounds) | 95% Confidence Interval (% +/-) |
| Evansville                | 2011       |                   |                         |                         |                     |                                 |
|                           | 1999       | 2                 | 1                       | 3                       | 10                  | 41                              |
|                           | 1998       | 4                 | 1                       | 6                       | 16                  | 60                              |
|                           | 1997       | 3                 | 2                       | 5                       | 8                   | 102                             |
| Bettles/Evansville        | 2002       |                   |                         |                         |                     |                                 |
|                           | 1984       | 3                 |                         |                         | 5                   |                                 |
|                           | 1983       | 5                 |                         |                         | 8                   |                                 |
|                           | 1982       | 14                |                         |                         | 28                  |                                 |
| Coldfoot                  | 2011       | 2                 | 2                       | 3                       | 33                  | 142                             |
| Wiseman                   | 2011       | 4                 |                         |                         | 40                  |                                 |
| Nulato                    | 2010       |                   |                         |                         |                     |                                 |
|                           | 2001       |                   |                         |                         |                     |                                 |
|                           | 1998       | 5                 | 4                       | 7                       | 3                   | 30                              |
|                           | 1997       | 3                 | 2                       | 7                       | 1                   | 120                             |
|                           | 1996       | 13                | 4                       | 22                      | 5                   | 69                              |
| Kaltag                    | 2002       |                   |                         |                         |                     |                                 |
|                           | 2001       |                   |                         |                         |                     |                                 |
|                           | 1998       | 6                 | 5                       | 7                       | 4                   | 17                              |
|                           | 1997       | 8                 | 1                       | 16                      | 4                   | 89                              |
|                           | 1996       | 16                | 10                      | 22                      | 9                   | 37                              |
| Grayling                  | 2011       |                   |                         |                         |                     |                                 |
|                           | 2004       | 2                 |                         |                         | 2                   |                                 |
|                           | 2003       | 2                 |                         |                         | 1                   |                                 |
|                           | 2002       |                   |                         |                         |                     |                                 |
|                           | 1990       | 1                 | 1                       | 2                       | 1                   | 72                              |
| Anvik                     | 2011       |                   |                         |                         |                     |                                 |
|                           | 2004       |                   |                         |                         |                     |                                 |
|                           | 2003       |                   |                         |                         |                     |                                 |
|                           | 2002       |                   |                         |                         |                     |                                 |
|                           | 1990       | 9                 | 2                       | 16                      | 12                  | 74                              |
| Shageluk                  | 2004       |                   |                         |                         |                     |                                 |
|                           | 2003       |                   |                         |                         |                     |                                 |
|                           | 2002       |                   |                         |                         |                     |                                 |
|                           | 1990       |                   |                         |                         |                     |                                 |
| Holy Cross                | 2004       |                   |                         |                         |                     |                                 |
|                           | 2003       |                   |                         |                         |                     |                                 |
|                           | 2002       | 2                 | 1                       | 3                       | 1                   | 44                              |
|                           | 1990       | 4                 | 2                       | 11                      | 2                   | 154                             |

Blank cell=0 or not applicable.

Source: ADFG 2015a.

**Table 8.** The harvest of wild resources by resource category, in pounds edible weight, lower Yukon River drainage communities, based on household surveys.

| Village                      | Per person harvest | 95% Confidence Interval (+/-) | Percentage of total harvest |
|------------------------------|--------------------|-------------------------------|-----------------------------|
|                              | Pounds             |                               |                             |
| <b>Mountain Village 2010</b> |                    |                               |                             |
| Salmon                       | 112                | 17%                           | 42%                         |
| Nonsalmon fish               | 55                 | 48%                           | 21%                         |
| Large land mammals           | 61                 | 14%                           | 23%                         |
| Small land mammals           | 3                  | 31%                           | 1%                          |
| Marine mammals               | 15                 | 31%                           | 6%                          |
| Birds and eggs               | 10                 | 23%                           | 4%                          |
| Marine invertebrates         | 0                  | 0%                            | 0%                          |
| Berries and plants           | 10                 | 12%                           | 4%                          |
| Total                        | 265                | 28%                           | 100%                        |
| <b>Marshall 2010</b>         |                    |                               |                             |
| Salmon                       | 194                | 22%                           | 49%                         |
| Nonsalmon fish               | 93                 | 67%                           | 24%                         |
| Large land mammals           | 72                 | 31%                           | 18%                         |
| Small land mammals           | 6                  | 40%                           | 1%                          |
| Marine mammals               | 6                  | 94%                           | 2%                          |
| Birds and eggs               | 12                 | 28%                           | 3%                          |
| Marine invertebrates         | 0                  | 0%                            | 0%                          |
| Berries and plants           | 8                  | 35%                           | 2%                          |
| Total                        | 393                | 39%                           | 100%                        |
| <b>Russian Mission 2011</b>  |                    |                               |                             |
| Salmon                       | 110                | 21%                           | 34%                         |
| Nonsalmon fish               | 89                 | 35%                           | 27%                         |
| Large land mammals           | 107                | 19%                           | 33%                         |
| Small land mammals           | 4                  | 40%                           | 1%                          |
| Marine mammals               | 3                  | 121%                          | 1%                          |
| Birds and eggs               | 9                  | 23%                           | 3%                          |
| Marine invertebrates         | 0                  | 106%                          | 0%                          |
| Berries and plants           | 5                  | 26%                           | 1%                          |
| Total                        | 329                | 18%                           | 100%                        |
| <b>Emmonak 2008</b>          |                    |                               |                             |
| Salmon                       | 192                | 10%                           | 40%                         |
| Nonsalmon fish               | 83                 | 10%                           | 17%                         |
| Large land mammals           | 123                | 8%                            | 25%                         |
| Small land mammals           | 3                  | 30%                           | 1%                          |
| Marine mammals               | 55                 | 13%                           | 11%                         |
| Birds and eggs               | 15                 | 9%                            | 3%                          |
| Marine invertebrates         | 0                  | 50%                           | 0%                          |
| Berries and plants           | 11                 | 9%                            | 2%                          |
| Total                        | 482                | 7%                            | 100%                        |

Source: ADF&G 2015a.

**Table 9.** The harvest of moose and caribou by lower Yukon River drainage communities based on household surveys.

| HOUSEHOLD HARVEST SURVEYS |            |                   |                         |                         |                     |                                 |
|---------------------------|------------|-------------------|-------------------------|-------------------------|---------------------|---------------------------------|
| Community                 | Study Year | Estimated Harvest | Lower Estimate (number) | Upper Estimate (number) | Per Person (pounds) | 95% Confidence Interval (% +/-) |
| <b>Moose harvest</b>      |            |                   |                         |                         |                     |                                 |
| Holy Cross                | 2004       | 26                | 23                      | 28                      | 66                  | 11                              |
|                           | 2003       | 38                | 35                      | 41                      | 100                 | 8                               |
|                           | 2002       | 48                | 46                      | 52                      | 138                 | 7                               |
|                           | 1990       | 111               | 91                      | 130                     | 314                 | 18                              |
| Russian Mission           | 2011       | 59                | 59                      | 59                      | 102                 | 20                              |
|                           | 2009       | 51                | 41                      | 61                      | 123                 | 20                              |
| Marshall                  | 2010       | 43                | 42                      | 43                      | 67                  | 22                              |
|                           | 2009       | 44                | 33                      | 54                      | 120                 | 24                              |
| St. Mary's                | 2009       | 119               | 47                      | 191                     | 111                 | 56                              |
| Mountain Village          | 2010       | 88                | 88                      | 88                      | 61                  | 14                              |
|                           | 2009       | 110               | 91                      | 128                     | 128                 | 16                              |
| Kotlik                    | 2009       | 71                | 55                      | 88                      | 107                 | 23                              |
| Emmonak                   | 2008       | 136               | 125                     | 145                     | 123                 | 8                               |
| Alakanuk                  | 2009       | 64                | 49                      | 79                      | 93                  | 23                              |
| Nunam Iqua                | 2009       | 18                | 7                       | 32                      | 77                  | 77                              |
| <b>Caribou harvest</b>    |            |                   |                         |                         |                     |                                 |
| Holy Cross                | 2004       |                   |                         |                         |                     |                                 |
|                           | 2003       |                   |                         |                         |                     |                                 |
|                           | 2002       | 2                 | 1                       | 3                       | 1                   | 44                              |
|                           | 1990       | 4                 | 2                       | 11                      | 2                   | 154                             |
| Russian Mission           | 2011       | 5                 | 5                       | 5                       | 2                   | 96                              |
|                           | 2009       |                   |                         |                         |                     |                                 |
| Marshall                  | 2010       | 5                 | 5                       | 6                       | 2                   | 136                             |
|                           | 2009       | 6                 | 4                       | 16                      | 3                   | 167                             |
| St. Mary's                | 2009       |                   |                         |                         |                     |                                 |
| Mountain Village          | 2010       |                   |                         |                         |                     |                                 |
|                           | 2009       | 9                 | 4                       | 28                      | 2                   | 200                             |
| Kotlik                    | 2009       | 2                 | 1                       | 18                      | 1                   | 400                             |
| Emmonak                   | 2008       |                   |                         |                         |                     |                                 |
| Alakanuk                  | 2009       |                   |                         |                         |                     |                                 |
| Nunam Iqua                | 2009       |                   |                         |                         |                     |                                 |

Blank cell=0 or not applicable.

Source: ADF&G 2015a, Weekly et al. 2011.

**APPENDIX A**  
**SUPPLEMENTARY TABLES**

**Appendix Table A-1.** The number of people in the customary and traditional use determination for Chinook and summer Chum Salmon in the upper Yukon River drainage, by community and Fishery Management District, 1960-2010.

| U.S. CENSUS POPULATION           |              |              |              |              |              |              |                           |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------------------|
| Community                        | 1960         | 1970         | 1980         | 1990         | 2000         | 2010         | 2010 number of households |
| Stebbins city                    | 158          | 231          | 331          | 400          | 547          | 556          | 134                       |
| <b>Outside drainage subtotal</b> | <b>158</b>   | <b>231</b>   | <b>331</b>   | <b>400</b>   | <b>547</b>   | <b>556</b>   | <b>134</b>                |
| Alakanuk city                    | 278          | 265          | 522          | 544          | 652          | 677          | 160                       |
| Nunam Iqua city                  | 125          | 125          | 103          | 109          | 164          | 187          | 43                        |
| Emmonak city                     | 358          | 439          | 567          | 642          | 767          | 762          | 185                       |
| Kotlik city                      | 57           | 228          | 293          | 461          | 591          | 577          | 128                       |
| <b>District 1 subtotal</b>       | <b>818</b>   | <b>1,057</b> | <b>1,485</b> | <b>1,756</b> | <b>2,174</b> | <b>2,203</b> | <b>516</b>                |
| Mountain Village city            | 300          | 419          | 583          | 674          | 755          | 813          | 184                       |
| Pitkas Point CDP                 | 28           | 70           | 88           | 135          | 125          | 109          | 31                        |
| Saint Marys city                 | 260          | 384          | 382          | 441          | 500          | 507          | 151                       |
| Pilot Station city               | 219          | 290          | 325          | 463          | 550          | 568          | 121                       |
| Marshall city                    | 166          | 175          | 262          | 273          | 349          | 414          | 100                       |
| <b>District 2 subtotal</b>       | <b>973</b>   | <b>1,338</b> | <b>1,640</b> | <b>1,986</b> | <b>2,279</b> | <b>2,411</b> | <b>587</b>                |
| Russian Mission city             | 102          | 146          | 169          | 246          | 296          | 312          | 73                        |
| Holy Cross city                  | 256          | 199          | 241          | 277          | 227          | 178          | 64                        |
| Shageluk city                    | 155          | 167          | 131          | 139          | 129          | 83           | 36                        |
| <b>District 3 subtotal</b>       | <b>513</b>   | <b>512</b>   | <b>541</b>   | <b>662</b>   | <b>652</b>   | <b>573</b>   | <b>173</b>                |
| Anvik city                       | 120          | 83           | 114          | 82           | 104          | 85           | 33                        |
| Grayling city                    | 0            | 139          | 209          | 208          | 194          | 194          | 55                        |
| Kaltag city                      | 165          | 206          | 247          | 240          | 230          | 190          | 70                        |
| Nulato CDP                       | 183          | 308          | 350          | 359          | 336          | 264          | 92                        |
| Koyukuk city                     | 128          | 124          | 98           | 126          | 101          | 96           | 42                        |
| Huslia city                      | 168          | 159          | 188          | 207          | 293          | 275          | 91                        |
| Hughes city                      | 69           | 85           | 73           | 54           | 78           | 77           | 31                        |
| Allakaket city                   | 115          | 174          | 163          | 170          | 97           | 105          | 44                        |
| Alatna CDP                       |              |              |              | 31           | 35           | 37           | 12                        |
| Bettles city                     | 77           | 57           | 49           | 36           | 43           | 12           | 9                         |
| Evansville CDP                   | 77           | 57           | 45           | 33           | 28           | 15           | 12                        |
| Wiseman CDP                      | 0            | 0            | 8            | 33           | 21           | 14           | 5                         |
| Coldfoot CDP                     |              |              |              |              | 13           | 10           | 6                         |
| Galena city                      | 261          | 302          | 765          | 833          | 675          | 470          | 190                       |
| Ruby city                        | 179          | 145          | 197          | 170          | 188          | 166          | 62                        |
| <b>District 4 subtotal</b>       | <b>1,542</b> | <b>1,839</b> | <b>2,506</b> | <b>2,582</b> | <b>2,436</b> | <b>2,010</b> | <b>754</b>                |
| Tanana city                      | 349          | 120          | 388          | 345          | 308          | 246          | 100                       |
| Rampart CDP                      | 49           | 36           | 50           | 68           | 45           | 24           | 10                        |
| Stevens Village CDP              | 102          | 74           | 96           | 102          | 87           | 78           | 26                        |
| Beaver CDP                       | 101          | 101          | 66           | 103          | 84           | 84           | 36                        |
| Fort Yukon city                  | 701          | 448          | 619          | 580          | 595          | 583          | 246                       |
| Chalkyitsik CDP                  | 57           | 130          | 100          | 90           | 83           | 69           | 24                        |

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Appendix Table A-1. Continued from previous page

| U.S. CENSUS POPULATION     |              |               |               |               |               |               |                           |
|----------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------------------|
| Community                  | 1960         | 1970          | 1980          | 1990          | 2000          | 2010          | 2010 number of households |
| Arctic Village CDP         | 110          | 85            | 111           | 96            | 152           | 152           | 65                        |
| Venetie CDP                | 107          | 112           | 132           | 182           | 202           | 166           | 61                        |
| Birch Creek CDP            | 32           | 45            | 32            | 42            | 28            | 33            | 17                        |
| Circle CDP                 | 41           | 54            | 81            | 73            | 100           | 104           | 40                        |
| Chicken CDP                | 0            | 0             | 0             | 0             | 17            | 7             | 5                         |
| Central CDP                | 28           | 26            | 36            | 52            | 134           | 96            | 53                        |
| Eagle Village CDP          | 0            | 0             | 54            | 35            | 68            | 67            | 31                        |
| Eagle city                 | 92           | 36            | 110           | 168           | 129           | 86            | 41                        |
| <b>District 5 subtotal</b> | <b>1,769</b> | <b>1,267</b>  | <b>1,875</b>  | <b>1,936</b>  | <b>2,032</b>  | <b>1,795</b>  | <b>755</b>                |
| Livengood CDP              |              |               |               |               | 29            | 13            | 7                         |
| Manley CDP                 | 72           | 34            | 61            | 96            | 72            | 89            | 41                        |
| Minto CDP                  | 161          | 168           | 153           | 218           | 258           | 210           | 65                        |
| Whitstone CDP              |              |               |               |               |               | 97            | 22                        |
| Nenana city                | 286          | 362           | 470           | 393           | 402           | 378           | 171                       |
| Four Mile Road CDP         |              |               |               |               | 38            | 49            | 14                        |
| Healy CDP                  | 67           | 79            | 334           | 487           | 1,000         | 1,021         | 434                       |
| McKinley Park CDP          | 0            | 0             | 60            | 171           | 142           | 185           | 109                       |
| Anderson city              | 341          | 362           | 517           | 628           | 367           | 246           | 90                        |
| Ferry CDP                  |              |               |               | 56            | 29            | 33            | 17                        |
| Lake Minchumina CDP        | 0            | 0             | 22            | 32            | 32            | 13            | 6                         |
| Cantwell CDP               | 85           | 62            | 89            | 147           | 222           | 219           | 104                       |
| Delta Junction city        | 0            | 703           | 945           | 652           | 840           | 958           | 377                       |
| Fort Greely CDP            | 0            | 1,820         | 1,635         | 1,299         | 461           | 539           | 236                       |
| Deltana CDP                |              |               |               |               | 1,570         | 2,251         | 784                       |
| Healy Lake CDP             | 0            | 0             | 33            | 47            | 37            | 13            | 7                         |
| Big Delta CDP              | 0            | 0             | 285           | 400           | 749           | 591           | 206                       |
| Dry Creek CDP              | 0            | 0             | 0             | 106           | 128           | 94            | 29                        |
| Dot Lake CDP               | 56           | 42            | 67            | 70            | 19            | 13            | 7                         |
| Dot Lake Village CDP       |              |               |               |               | 38            | 62            | 19                        |
| Tanacross CDP              | 102          | 84            | 117           | 106           | 140           | 136           | 53                        |
| Tetlin CDP                 | 122          | 114           | 107           | 87            | 117           | 127           | 43                        |
| Tok CDP                    | 129          | 214           | 589           | 935           | 1,393         | 1,258         | 532                       |
| Northway CDP               | 196          | 40            | 73            | 123           | 95            | 71            | 27                        |
| Northway Jct. CDP          | 0            | 0             | 0             | 88            | 72            | 54            | 20                        |
| Northway Village CDP       |              |               |               |               |               | 98            |                           |
| Alcan border CDP           | 0            | 0             | 0             | 27            | 21            | 33            | 16                        |
| Nabesna CDP                |              |               |               |               |               | 5             | 3                         |
| <b>District 6 subtotal</b> | <b>1,617</b> | <b>4,084</b>  | <b>5,557</b>  | <b>6,168</b>  | <b>8,271</b>  | <b>8,856</b>  | <b>3,439</b>              |
| <b>TOTAL</b>               | <b>7,390</b> | <b>10,328</b> | <b>13,935</b> | <b>15,490</b> | <b>18,391</b> | <b>18,404</b> | <b>6,358</b>              |

CDP=Census Designated Place. Black cell=information is not available. Source: ADCCED 2014.

**Appendix Table A-2.** The estimated number of Chinook Salmon harvested for subsistence by residents of communities that participated in the yearly postseason harvest survey or permit system.

| YEARLY POSTSEASON HOUSEHOLD SURVEYS AND PERMITS |                   |                   |                   |                   |       |
|---|-------------------|-------------------|-------------------|-------------------|-------|
| CHINOOK SALMON HARVEST                          |                   |                   |                   |                   |       |
| Community of residence                          | 1991-1995 average | 1996-2000 average | 2001-2005 average | 2006-2010 average | 2011  |
| Nunam Iqua                                      | 492               | 697               | 571               | 409               | 250   |
| Alakanuk  | 1,293             | 1,399             | 1,326             | 953               | 1,464 |
| Emmonak   | 2,423             | 2,344             | 2,297             | 2,232             | 2,172 |
| Kotlik  | 2,587             | 1,795             | 1,799             | 1,871             | 2,369 |
| Mountain Village                                | 1,738             | 1,961             | 2,061             | 1,693             | 2,063 |
| Pitkas Point                                    | 706               | 751               | 615               | 397               | 246   |
| Saint Marys                                     | 2,077             | 2,199             | 2,565             | 2,458             | 1,734 |
| Pilot Station                                   | 2,150             | 2,198             | 2,419             | 1,689             | 1,340 |
| Marshall  | 2,168             | 2,281             | 2,528             | 2,209             | 2,686 |
| Russian Mission                                 | 2,029             | 2,013             | 2,321             | 1,601             | 1,550 |
| Holy Cross                                      | 3,036             | 3,181             | 2,346             | 2,684             | 2,231 |
| Shageluk  | 197               | 654               | 410               | 336               | 353   |
| Anvik   | 509               | 745               | 1,079             | 1,115             | 1,052 |
| Grayling  | 1,235             | 1,784             | 1,737             | 1,644             | 1,374 |
| Kaltag  | 1,551             | 1,405             | 1,960             | 2,371             | 2,488 |
| Nulato  | 1,805             | 2,013             | 2,876             | 2,186             | 1,538 |
| Koyukuk   | 597               | 547               | 486               | 802               | 1,349 |
| Galena  | 1,869             | 2,023             | 2,510             | 1,970             | 1,434 |
| Ruby/Kokrines                                   | 1,541             | 1,812             | 1,286             | 836               | 482   |
| Huslia  | 470               | 132               | 312               | 339               | 121   |
| Hughes  | 89                | 67                | 130               | 48                | 10    |
| Allakaket                                       | 327               | 148               | 143               | 57                | 42    |
| Alatna  | 17                | 12                | 3                 | 8                 | 3     |
| Bettles   | 15                | 12                | 1                 | 0                 | 0     |
| Tanana  | 2,744             | 3,566             | 3,648             | 3,888             | 2,936 |
| Rampart   | 1,712             | 1,541             | 964               | 321               | 201   |
| Stevens Village                                 | 2,233             | 1,133             | 1,506             | 696               | 415   |
| Birch Creek                                     | 90                | 103               | 72                | 81                | 49    |
| Beaver  | 1,141             | 777               | 1,008             | 667               | 356   |
| Fort Yukon                                      | 4,785             | 2,680             | 3,347             | 2,348             | 2,472 |
| Circle  | 1,314             | 942               | 945               | 593               | 297   |
| Central   | 188               | 113               | 109               | 154               | 66    |
| Eagle   | 1,221             | 1,749             | 1,820             | 1,337             | 728   |
| Venetie   | 744               | 169               | 128               | 670               | 10    |
| Chalkyitsik                                     | 1                 | 15                | 38                | 0                 | 0     |
| Manley  | 534               | 156               | 322               | 296               | 287   |
| Minto   | 197               | 465               | 121               | 34                | 61    |
| Nenana  | 1,405             | 842               | 855               | 609               | 681   |

Source: Brase and Hamner 2002, Jallen, Decker, and Hamazaki 2012

**Appendix Table A-3.** The estimated number of summer Chum Salmon harvested for subsistence by residents of communities that participated in the yearly postseason harvest survey or permit system.

| YEARLY POSTSEASON HOUSEHOLD SURVEYS AND PERMITS |                   |                   |                   |                   |        |
|---|-------------------|-------------------|-------------------|-------------------|--------|
| SUMMER CHUM SALMON HARVEST                      |                   |                   |                   |                   |        |
| Community of residence                          | 1991-1995 average | 1996-2000 average | 2001-2005 average | 2006-2010 average | 2011   |
| Nunam Iqua                                      | 2,185             | 2,352             | 2,378             | 2,345             | 2,077  |
| Alakanuk  | 8,686             | 5,865             | 6,232             | 7,031             | 7,447  |
| Emmonak   | 12,204            | 9,340             | 9,111             | 10,151            | 12,468 |
| Kotlik  | 9,355             | 7,577             | 5,258             | 5,278             | 6,598  |
| Mountain Village                                | 7,521             | 9,465             | 8,235             | 8,611             | 9,355  |
| Pitkas Point                                    | 1,292             | 1,249             | 808               | 814               | 585    |
| Saint Marys                                     | 7,526             | 7,901             | 7,140             | 7,045             | 6,760  |
| Pilot Station                                   | 5,278             | 5,283             | 5,219             | 5,375             | 4,182  |
| Marshall  | 2,549             | 2,331             | 1,965             | 3,010             | 3,810  |
| Russian Mission                                 | 2,092             | 1,355             | 508               | 1,173             | 1,225  |
| Holy Cross                                      | 1,195             | 658               | 373               | 449               | 363    |
| Shageluk  | 5,377             | 5,505             | 2,798             | 588               | 1,145  |
| Anvik   | 934               | 1,961             | 561               | 1,341             | 220    |
| Grayling  | 3,528             | 2,333             | 877               | 997               | 838    |
| Kaltag  | 1,686             | 215               | 433               | 267               | 163    |
| Nulato  | 453               | 1,392             | 298               | 442               | 246    |
| Koyukuk   | 1,208             | 600               | 550               | 845               | 890    |
| Galena  | 2,471             | 2,664             | 570               | 1,191             | 3,414  |
| Ruby/Kokrines                                   | 2,852             | 2,097             | 1,257             | 1,072             | 775    |
| Huslia  | 8,154             | 1,120             | 3,295             | 2,529             | 3,166  |
| Hughes  | 1,548             | 996               | 1,792             | 1,602             | 954    |
| Allakaket                                       | 5,312             | 2,650             | 3,426             | 3,928             | 2,368  |
| Alatna  | 402               | 93                | 17                | 75                | 132    |
| Bettles   | 202               | 78                | 1                 | 1                 | 0      |
| Tanana  | 4,452             | 2,749             | 2,825             | 4,020             | 4,381  |
| Rampart   | 1,546             | 410               | 88                | 92                | 67     |
| Stevens Village                                 | 623               | 194               | 112               | 285               | 43     |
| Birch Creek                                     |                   |                   |                   |                   |        |
| Beaver  | 638               | 137               | 96                | 46                | 393    |
| Fort Yukon                                      | 1,409             | 38                | 1,110             | 1,151             | 1,297  |
| Circle  | 113               | 140               | 30                | 60                | 48     |
| Central   | 21                | 16                | 1                 | 1                 | 0      |
| Eagle   | 151               | 113               | 218               | 206               | 2      |
| Venetie   | 928               | 48                | 27                | 155               | 0      |
| Chalkyitsik                                     | 103               | 26                | 0                 | 27                | 0      |
| Manley  | 1,388             | 504               | 191               | 168               | 142    |
| Minto   | 714               | 560               | 136               | 112               | 27     |
| Nenana  | 3,857             | 2,804             | 1,103             | 630               | 471    |

Source: Brase and Hamner 2002, Jallen, Decker, and Hamazaki 2012

**Appendix Table A-4.** The estimated number of fall Chum Salmon harvested for subsistence by communities that participated in the yearly postseason harvest survey or permit system.

| YEARLY POSTSEASON HOUSEHOLD SURVEYS AND PERMITS |                   |                   |        |
|---|-------------------|-------------------|--------|
| FALL CHUM SALMON HARVEST                        |                   |                   |        |
| Community of residence                          | 2001-2005 average | 2006-2010 average | 2011   |
| Nunam Iqua                                      | 189               | 226               | 51     |
| Alakanuk  | 636               | 674               | 881    |
| Emmonak   | 1,202             | 1,879             | 1,540  |
| Kotlik  | 455               | 468               | 962    |
| Mountain Village                                | 806               | 1,091             | 800    |
| Pitkas Point                                    | 21                | 47                | 30     |
| Saint Marys                                     | 337               | 513               | 611    |
| Pilot Station                                   | 994               | 708               | 575    |
| Marshall  | 532               | 439               | 562    |
| Russian Mission                                 | 339               | 334               | 11     |
| Holy Cross                                      | 258               | 408               | 94     |
| Shageluk  | 44                | 356               | 249    |
| Anvik   | 301               | 242               | 202    |
| Grayling  | 417               | 542               | 1,152  |
| Kaltag  | 684               | 642               | 196    |
| Nulato  | 632               | 885               | 652    |
| Koyukuk   | 551               | 924               | 1,388  |
| Galena  | 1,312             | 2,148             | 2,739  |
| Ruby/Kokrines                                   | 923               | 801               | 592    |
| Huslia  | 1,044             | 228               | 183    |
| Hughes  | 141               | 131               | 64     |
| Allakaket                                       | 356               | 754               | 92     |
| Alatna  | 0                 | 1                 | 0      |
| Bettles   | 10                | 0                 | 0      |
| Tanana  | 14,801            | 19,364            | 21,728 |
| Rampart   | 181               | 647               | 340    |
| Stevens Village                                 | 441               | 874               | 911    |
| Birch Creek                                     | unavailable       |                   |        |
| Beaver  | 88                | 105               | 122    |
| Fort Yukon                                      | 5,817             | 7,306             | 7,188  |
| Circle  | 1,020             | 1,237             | 299    |
| Central   | 0                 |                   | 7      |
| Eagle   | 5,752             | 15,339            | 17,455 |
| Venetie   | 1,724             | 1,633             | 1,938  |
| Chalkyitsik                                     | 247               | 95                | 0      |
| Manley  | 1,594             | 3,221             | 2,333  |
| Minto   | 325               | 99                | 1,500  |
| Nenana  | 5,166             | 10,681            | 5,268  |

Source: Jallen, Decker, and Hamazaki 2012

**Appendix Table A-5.** The estimated number of Coho Salmon harvested for subsistence by communities that participated in the yearly postseason harvest survey or permit system.

| YEARLY POSTSEASON HOUSEHOLD SURVEYS AND PERMITS |                   |                   |       |
|---|-------------------|-------------------|-------|
| COHO SALMON HARVEST                             |                   |                   |       |
| Community of residence                          | 2001-2005 average | 2006-2010 average | 2011  |
| Nunam Iqua                                      | 105               | 130               | 23    |
| Alakanuk  | 264               | 352               | 431   |
| Emmonak   | 378               | 592               | 472   |
| Kotlik  | 449               | 250               | 201   |
| Mountain Village                                | 459               | 788               | 261   |
| Pitkas Point                                    | 64                | 69                | 37    |
| Saint Marys                                     | 321               | 220               | 230   |
| Pilot Station                                   | 272               | 230               | 145   |
| Marshall  | 258               | 376               | 150   |
| Russian Mission                                 | 115               | 209               | 0     |
| Holy Cross                                      | 122               | 77                | 0     |
| Shageluk  | 28                | 95                | 36    |
| Anvik   | 144               | 202               | 19    |
| Grayling  | 240               | 194               | 119   |
| Kaltag  | 331               | 79                | 258   |
| Nulato  | 305               | 190               | 118   |
| Koyukuk   | 337               | 211               | 137   |
| Galena  | 746               | 804               | 1,013 |
| Ruby/Kokrines                                   | 698               | 186               | 312   |
| Huslia  | 403               | 282               | 70    |
| Hughes  | 73                | 68                | 13    |
| Allakaket                                       | 80                | 75                | 13    |
| Alatna  | 1                 | 0                 | 0     |
| Bettles   | 0                 | 0                 | 0     |
| Tanana  | 2,970             | 2,437             | 312   |
| Rampart   | 2                 | 15                | 0     |
| Stevens Village                                 | 20                | 104               | 0     |
| Birch Creek                                     | unavailable       |                   |       |
| Beaver  | 3                 | 72                | 0     |
| Fort Yukon                                      | 280               | 493               | 1,040 |
| Circle  | 89                | 40                | 0     |
| Central   | 0                 | 0                 | 0     |
| Eagle   | 6                 | 0                 | 1     |
| Venetie   | 8                 | 37                | 34    |
| Chalkyitsik                                     | 11                | 53                | 0     |
| Manley  | 1,807             | 1,768             | 1,482 |
| Minto   | 136               | 34                | 0     |
| Nenana  | 6,467             | 4,016             | 3,304 |

Source: Jallen, Decker, and Hamazaki 2012

**Table 6.** The date and length of Federal and State closures to salmon fishing, Upper Yukon River drainage, 2014.

| <b>UPPER YUKON RIVER DRAINAGE—FEDERAL AND STATE 2014 IN-SEASON REGULATIONS</b>  |   |  |
|---|---|--|
| <b>Area</b>   | <b>Closed to the harvest of salmon<br/>(only 4-inch or smaller mesh-size gillnets and no fish wheels allowed)</b> | <b>Open to the harvest of salmon<br/>(only 6-inch or smaller mesh-size gillnets and fish wheels with live boxes allowed)</b> |
| Tanana and Rampart<br>Subdistricts 5A/B/C<br>Illinois Creek to Waldron Creek  | June 7 <sup>a</sup>   | July 22 (45 days closed)   |
| Stevens Village and Beaver<br>Subdistrict 5D Lower<br>Waldron Creek to Hadweezic River  | June 11   | July 25 (44 days closed)   |
| Fort Yukon, Venetie, Chalkyitsik, and<br>Birch Creek<br>Subdistrict 5D Middle<br>Hadweezic River to 22 Mile Slough<br>including Porcupine River and<br>Chandalar River only above Venetie | June 15   | July 28 (43 days closed)   |
| Central, Circle, and Eagle<br>Subdistrict 5D Upper<br>22 Mile Slough to Canadian border   | June 17   | August 1 (45 days closed)  |

<sup>a</sup> In Subdistricts 5A, 5B, and 5C subsistence fishers were not allowed to use 4-inch or less mesh-size gillnets for 7 days from June 30 to July 7, 2014, because “enforcement and public reports were becoming increasingly more common that the gear was being used to target Chinook Salmon” (Summer Announcement 15, ADFG 2014A).

Source: ADFG 2015b.

**Appendix Table A-7.** The date and length of Federal and State closures to salmon fishing, middle Yukon River drainage, 2014.

| MIDDLE YUKON RIVER DRAINAGE—FEDERAL AND STATE 2014 IN-SEASON REGULATIONS                         |  |                                      |  |                   |
|--|--|--------------------------------------|--|-------------------|
| Area   | Closed to the harvest of salmon <sup>a</sup> | Opened to the harvest of Chum Salmon |  | Length of closure |
|  |  | Date                                 | Gear   |                   |
| Anvik and Grayling Subdistrict 4A Lower ¾ mile downstream of Old Paradise Village to Stink Creek | May 31                                       | June 18                              | Only dip nets and live release fish wheels allowed | 18 days           |
| Anvik River Special Management Area (lower 12 miles Anvik River)                                 | May 31                                       | June 18                              | Only dip nets and beach seines allowed             | 18 days           |
| Kaltag, Nulato, and Koyukuk Subdistrict 4A Upper Stink Creek to Cone Point                       | June 2                                       | June 23                              | Only dip nets and live release fish wheels allowed | 21 days           |
| Galena and Ruby Subdistricts 4B and 4C   | June 4                                       | June 26                              | Only dip nets and live release fish wheels allowed | 22 days           |
| Shageluk Innoko River  | June 19                                      | June 28                              | Only 6-inch or smaller mesh-size gillnets allowed  | 9 days            |
| Huslia, Hughes, Alatna, Allakaket, Bettles, Evansville Koyukuk River                             | June 18                                      | July 2                               | Only 6-inch or smaller mesh-size gillnets allowed  | 14 days           |

<sup>a</sup> Only 4-inch or smaller mesh-size gillnets allowed.

Source: ADFG 2015b.

**Appendix Table A-8.** The date and length of Federal and State closures to salmon fishing, lower Yukon River drainage, 2014.

| MIDDLE YUKON RIVER DRAINAGE—FEDERAL AND STATE 2014 IN-SEASON REGULATIONS |  |                                      |   |                   |
|--|--|--------------------------------------|---|-------------------|
| Area   | Closed to the harvest of salmon <sup>a</sup> | Opened to the harvest of Chum Salmon |   | Length of closure |
|  |  | Date                                 | Gear  |                   |
| District 1   | May 26                                       | June 1                               | Only dip nets allowed.  | 6 days            |
|  |  | June 9 <sup>b</sup>                  | Only dip nets/beach seines allowed.<br>Sun.–Fri. 12 hour/day<br>Sat. 18 hour/day                          |                   |
|  |  | July 3 <sup>b</sup>                  | One 3-hour opening, only 6-inch or smaller mesh-size gillnets allowed.<br>Chinook Salmon may be retained. |                   |
|  |  | July 5                               | One 4-hour opening, only 6-inch or smaller mesh-size gillnets allowed.<br>Chinook Salmon may be retained. |                   |
|  |  | July 8                               | Only 6-inch or smaller mesh-size gillnets allowed. Chinook Salmon may be retained. 7 days/week.           |                   |
| District 2   | May 26                                       | June 1                               | Only dip nets allowed.  | 6 days            |
|  |  | June 9 <sup>b</sup>                  | Only dip nets/beach seines allowed.<br>Sun.–Fri. 10 hours/day   |                   |
|  |  | July 5                               | One 4-hour opening, only 6-inch or smaller mesh-size gillnets allowed.<br>Chinook Salmon may be retained. |                   |
|  |  | July 8                               | Only 6-inch or smaller mesh-size gillnets allowed. Chinook Salmon may be retained. 7 days/week.           |                   |
| District 3   | May 26                                       | June 1                               | Only dip nets allowed   | 6 days            |
|  |  | July 3                               | One 4-hour opening, only 6-inch or smaller mesh-size gillnets allowed.<br>Chinook Salmon may be retained. |                   |
|  |  | July 9                               | Only 6-inch or smaller mesh-size gillnets allowed. Chinook Salmon may be retained. 6 day/week.            |                   |
| Coastal District, northern portion                                       | May 26                                       | July 2                               | Only 6-inch or smaller mesh-size gillnets allowed   | 38 days           |

<sup>a</sup> Only 4-inch or smaller mesh-size gillnets allowed.

<sup>b</sup> Commercial fishery opened simultaneously.

Source: ADF&G 2015b.

**APPENDIX B**  
**YUKON RIVER SALMON**  
**REGIONAL ADVISORY COUNCIL 2015 WINTER MEETING PACKET**

# Yukon River Salmon

## 2015 Winter Meeting Packet

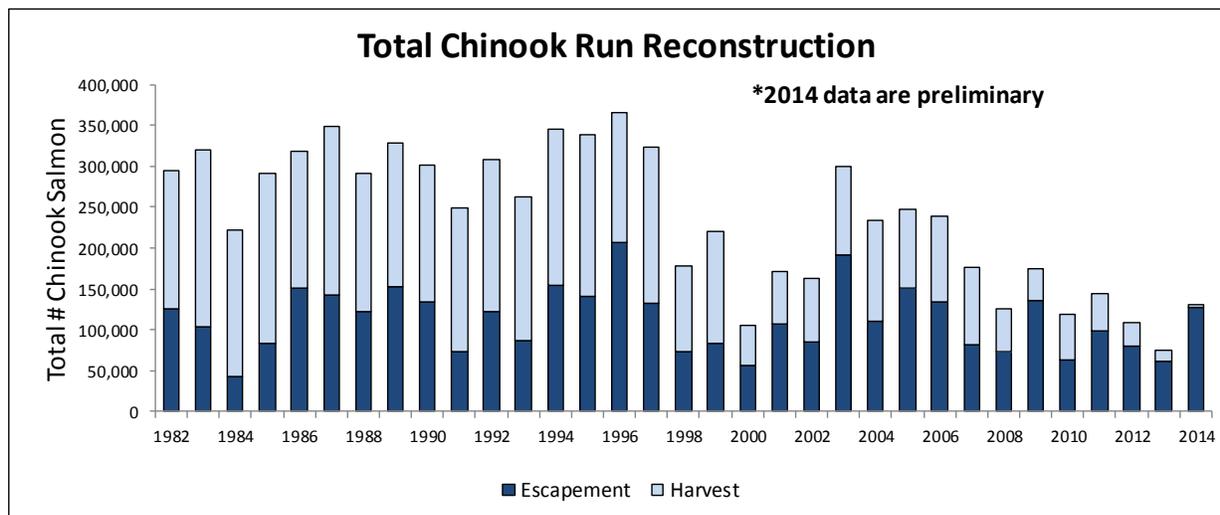
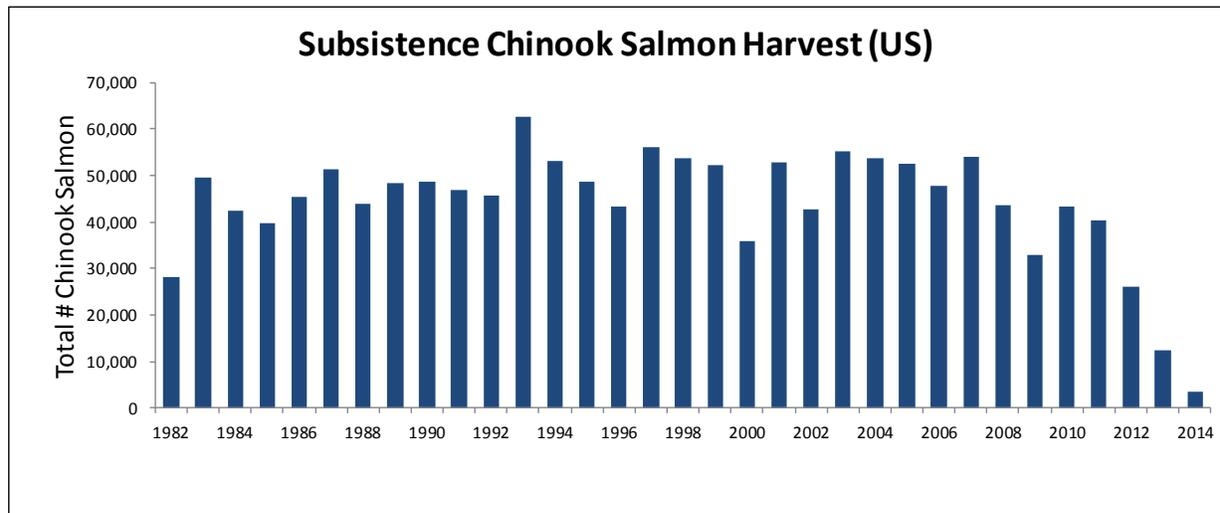
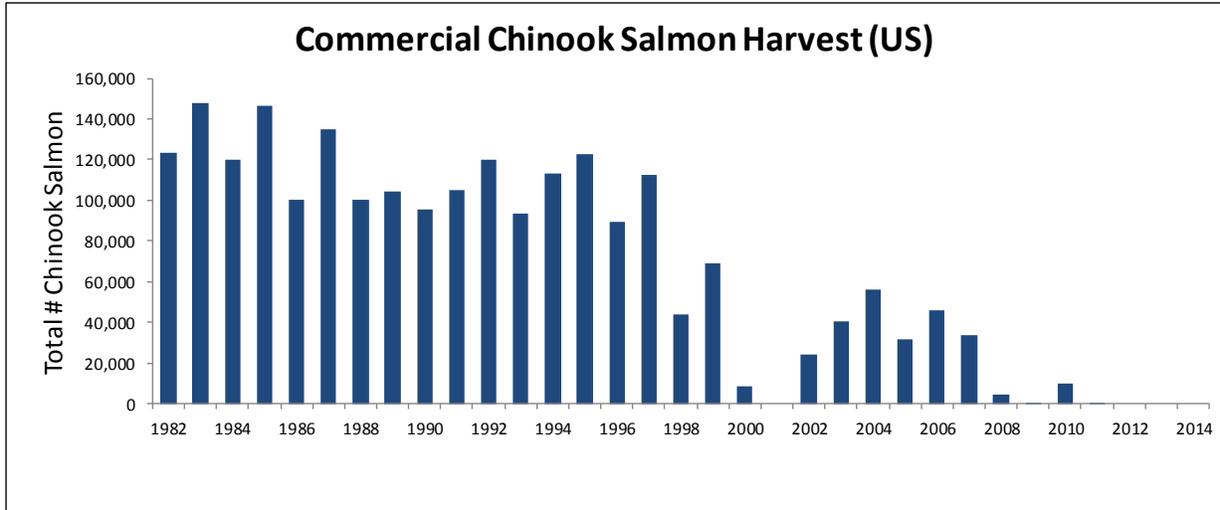


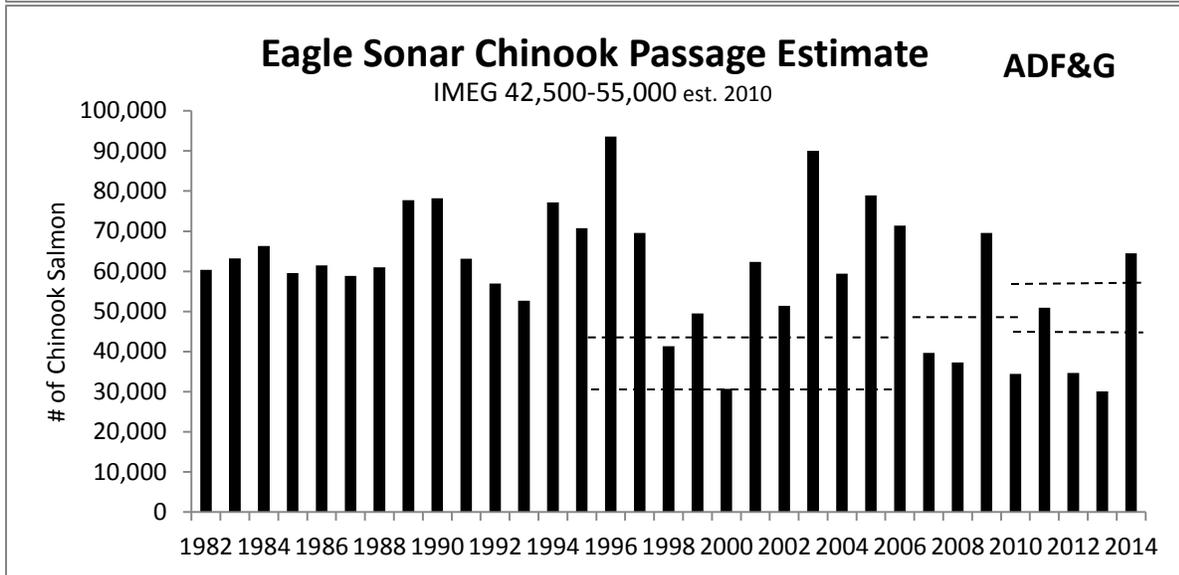
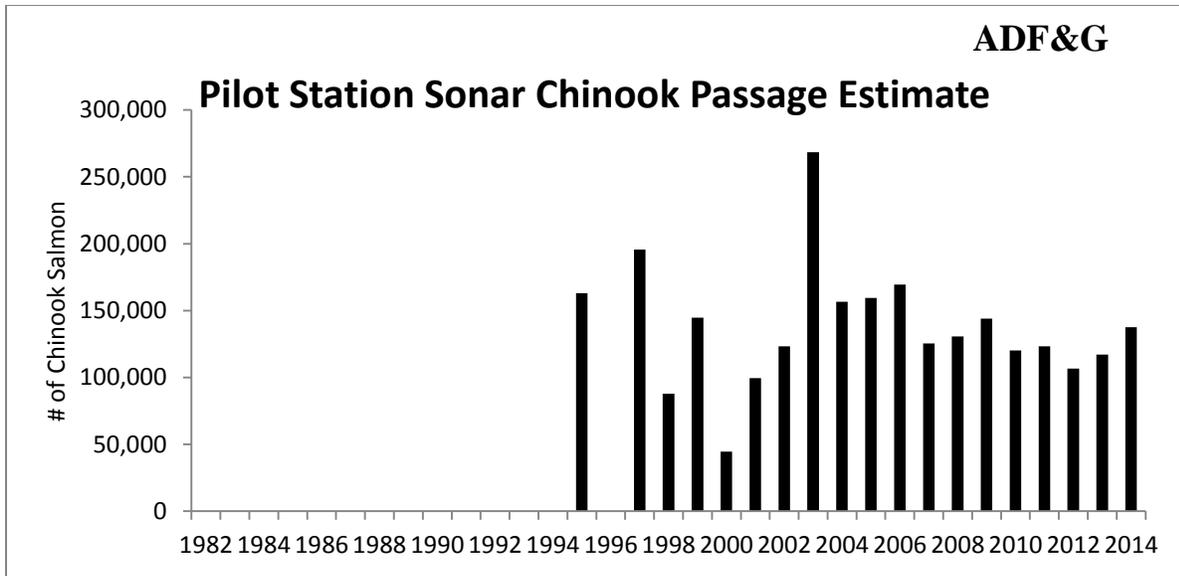
Alaska Department of Fish and Game  
Stephanie Schmidt, Area Management Biologist  
Anchorage Area Office  
333 Raspberry Road  
Anchorage, AK 99518  
Phone: (907) 267-2217  
Fax: (907) 267-2442

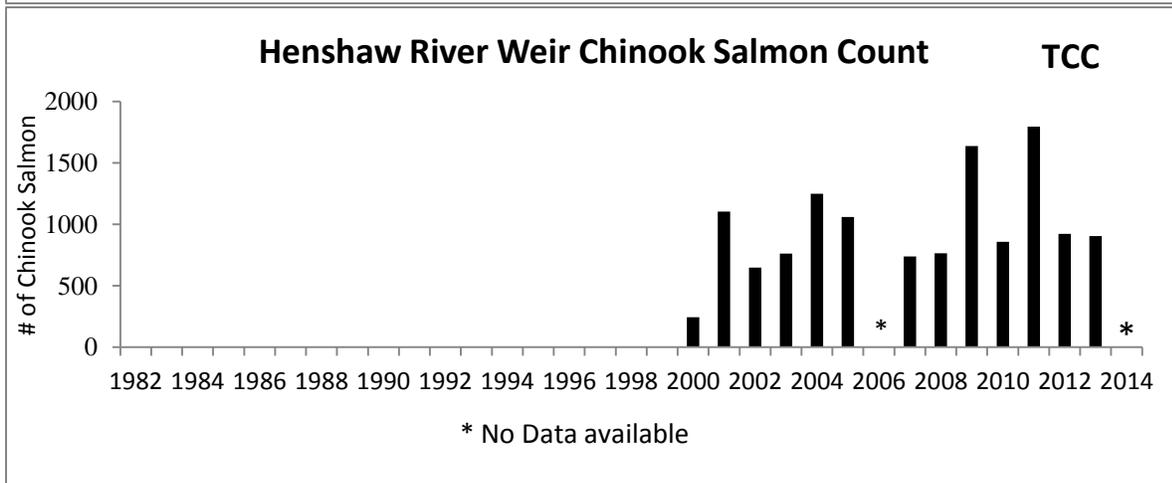
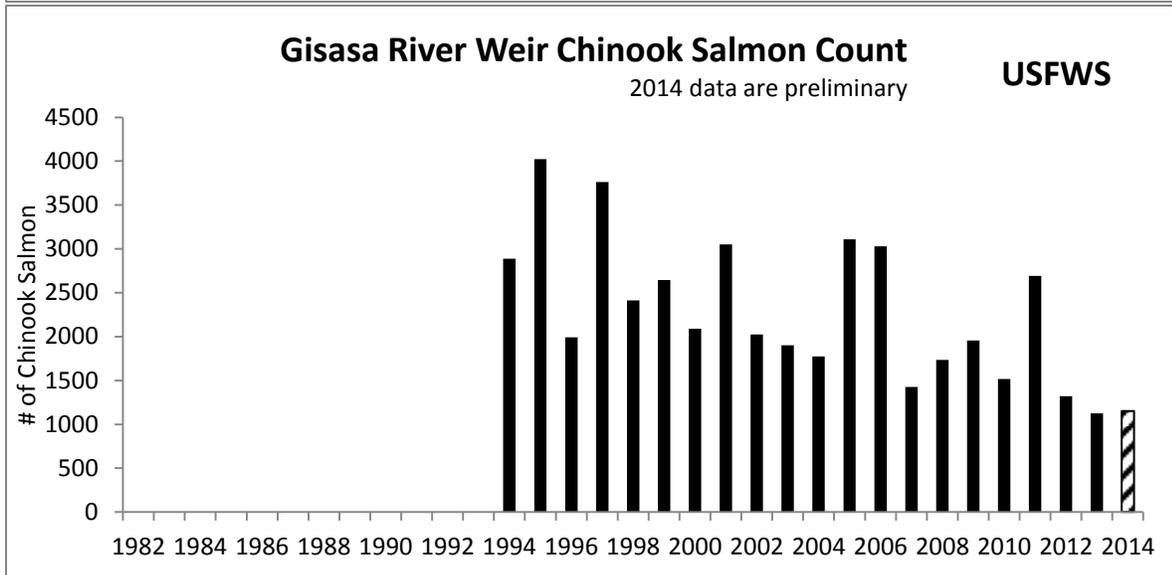
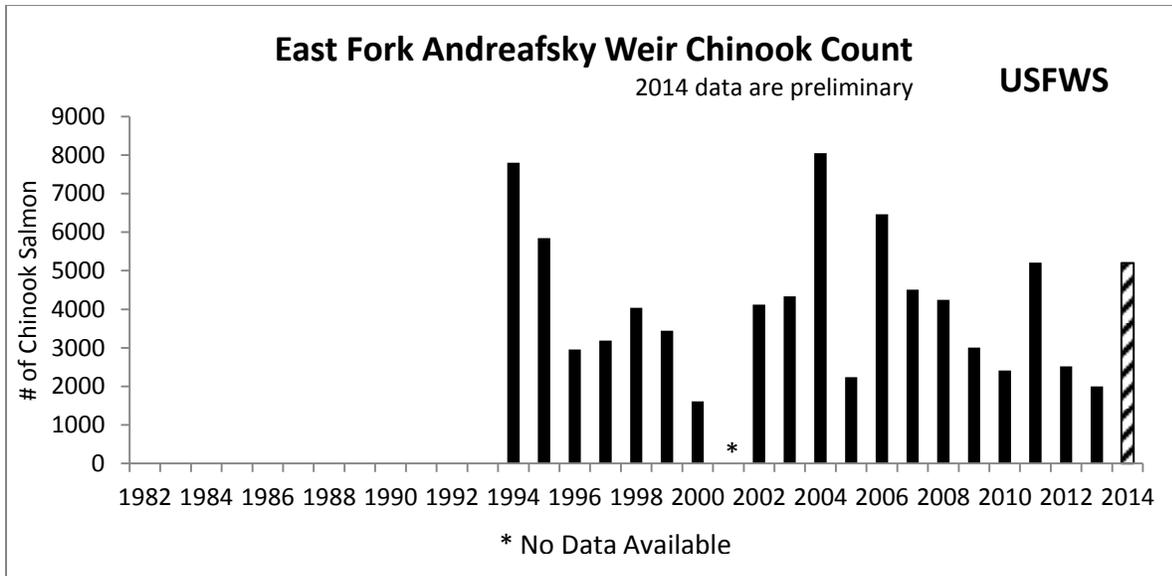
Jeff Estensen, Fall Area Management Biologist  
Upper Yukon Area Office  
1300 College Road  
Fairbanks, AK 99701  
Phone: (907) 459-7274  
Fax: (907) 459-7271

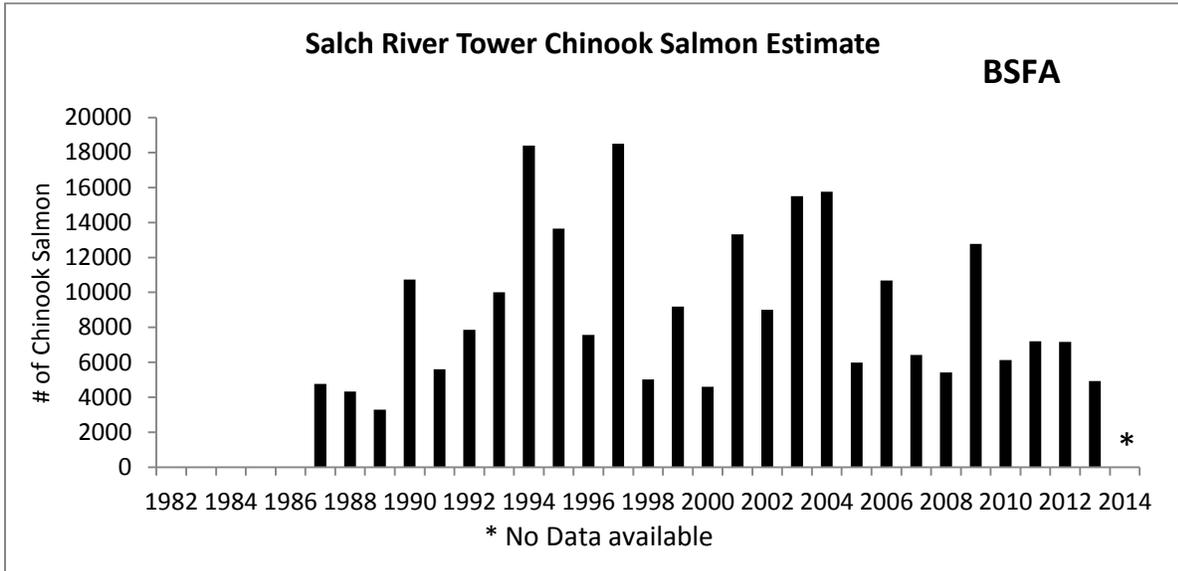
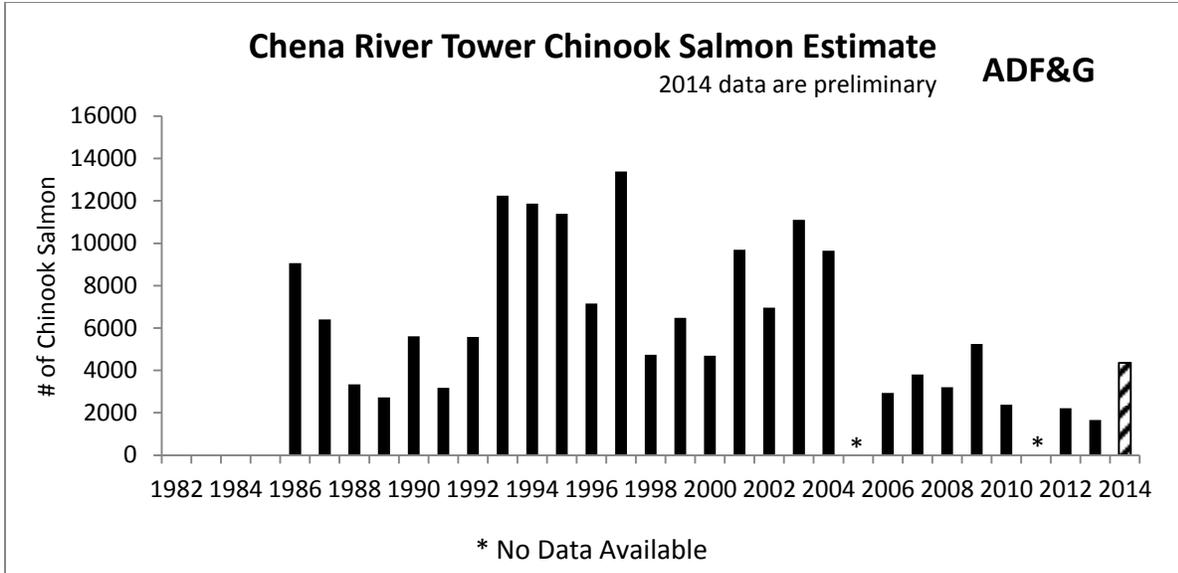


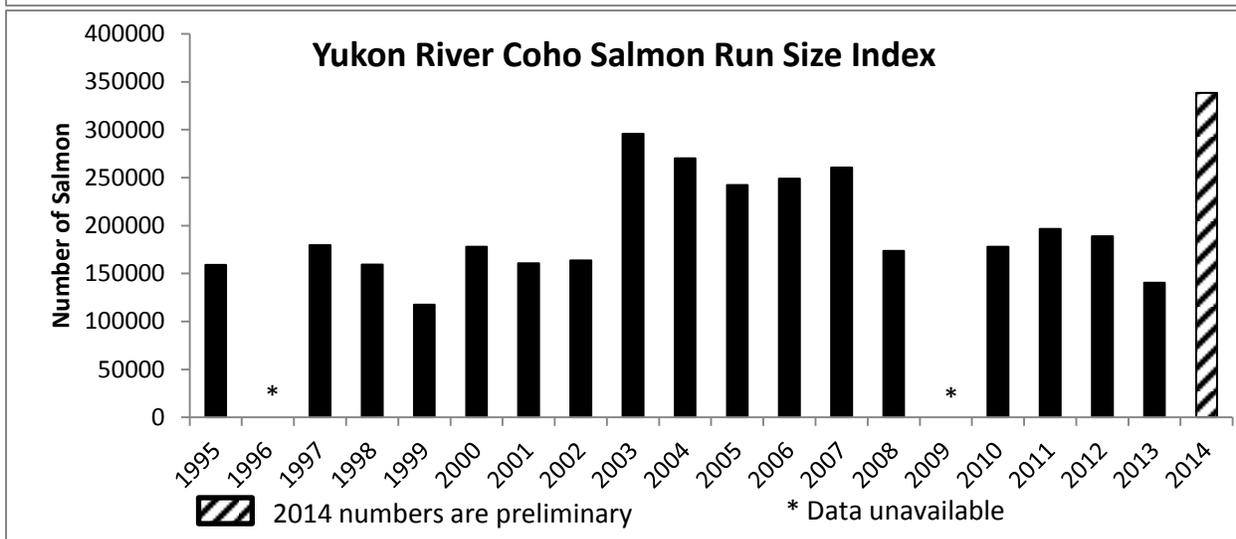
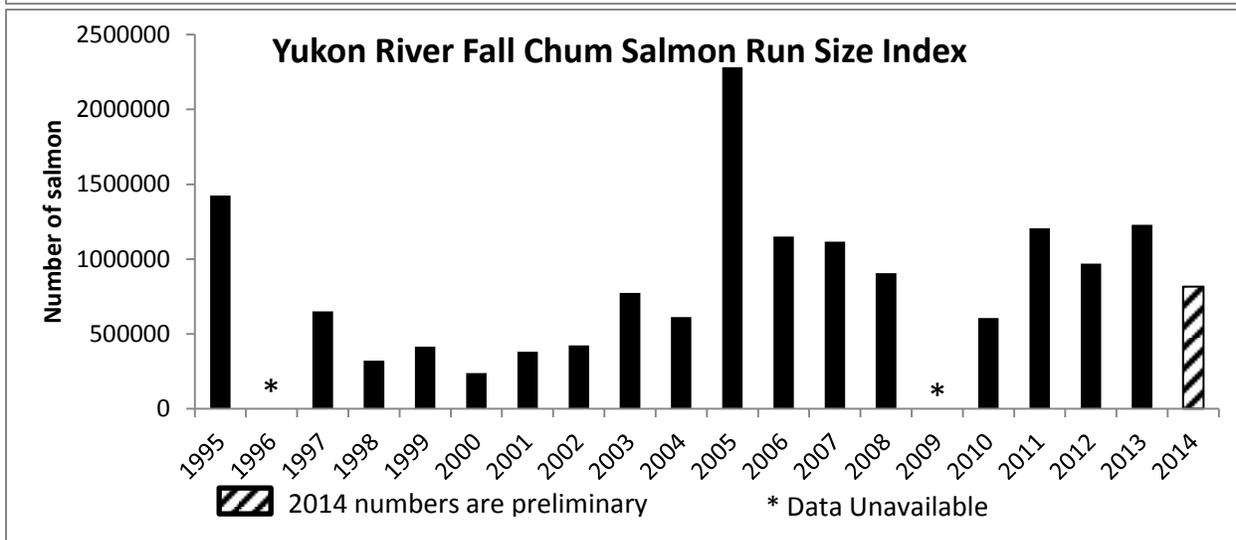
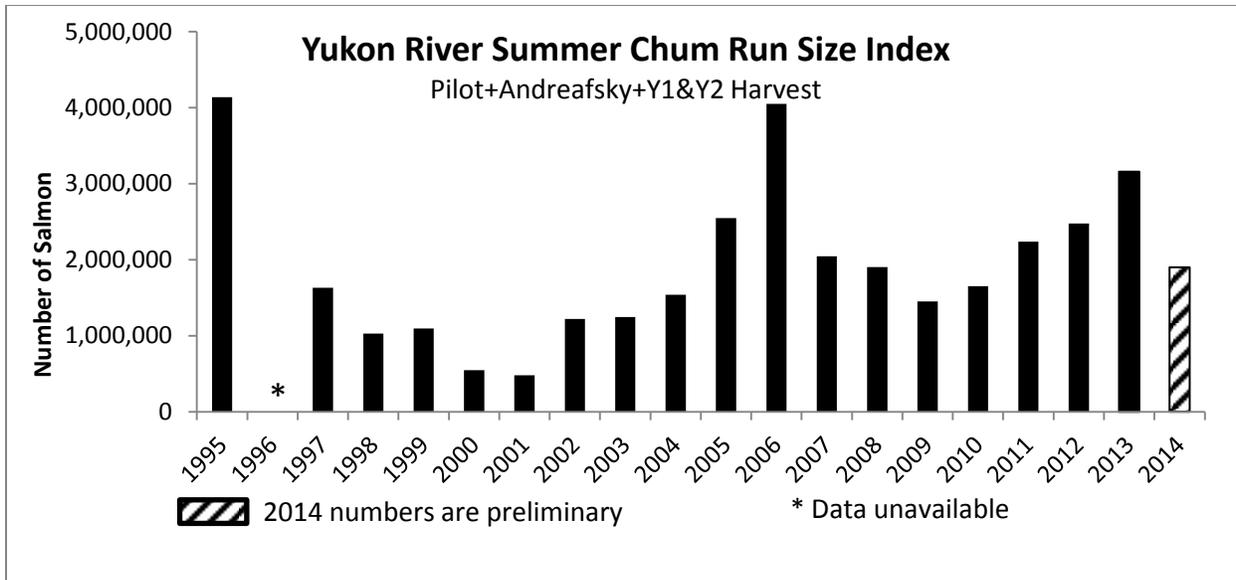
U.S. Fish and Wildlife Service  
Fred Bue, Yukon Area Inseason Manager  
Fairbanks Fish and Wildlife Field Office  
101 12<sup>th</sup> Avenue, Rm 110  
Fairbanks, AK 99701  
Phone: (907) 455-1849  
Fax (907) 456-0454

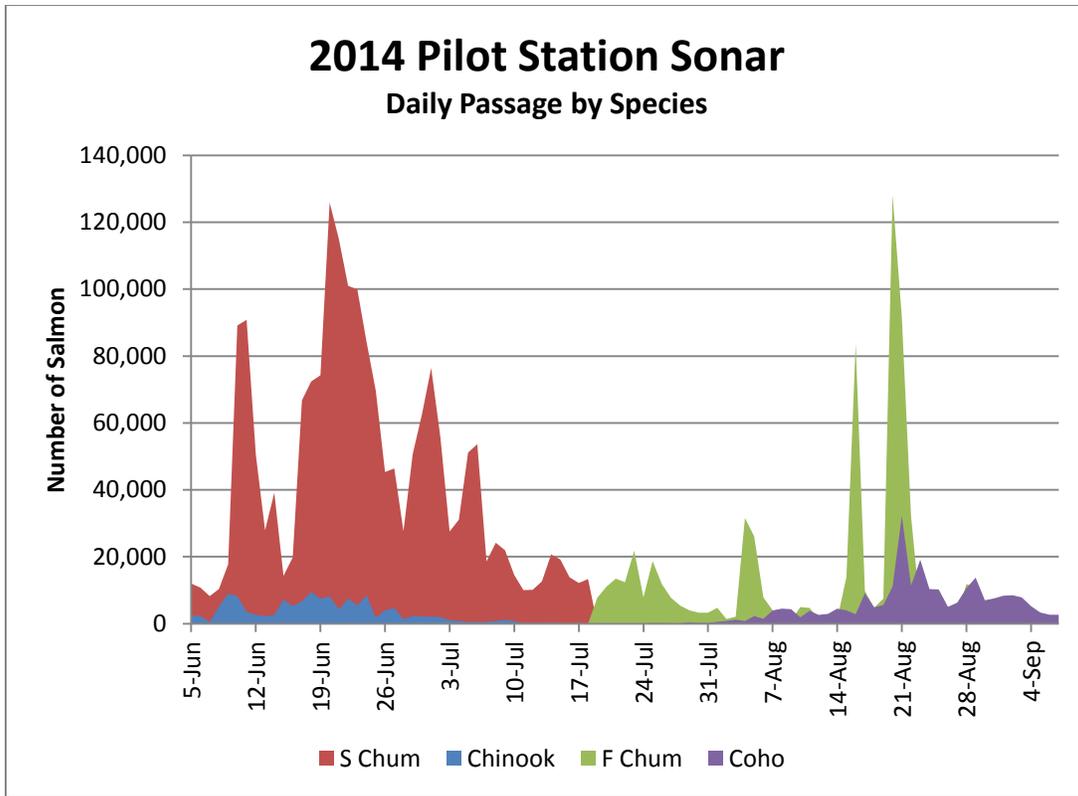




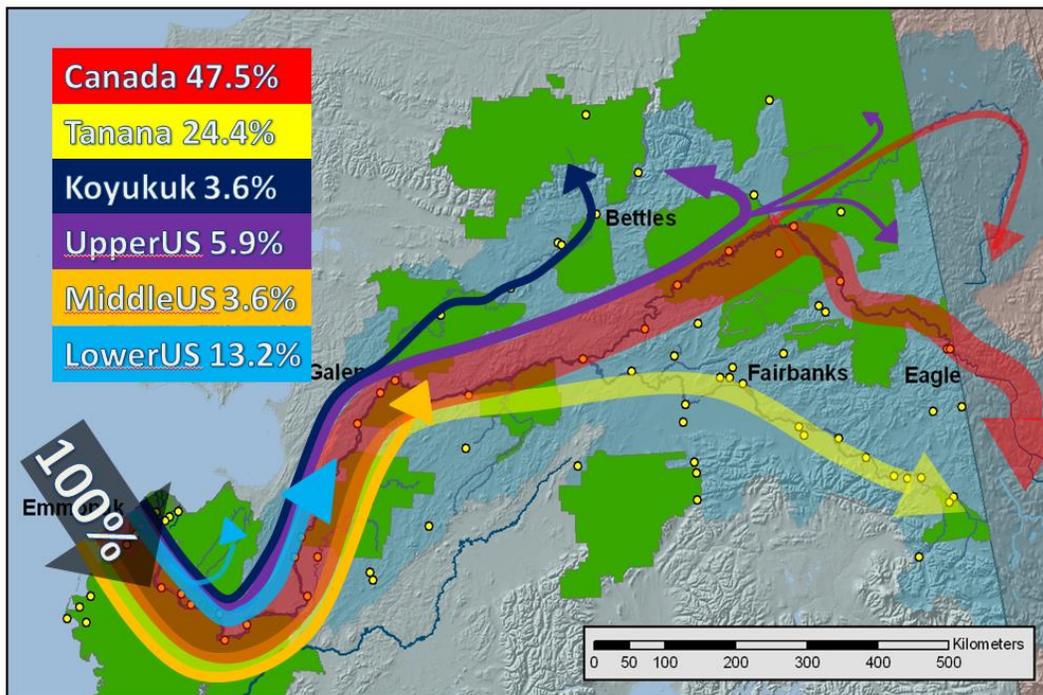








### Yukon River Chinook Salmon Percent Stock of Origin based on 2004 Radio Telemetry Study





## 2015 Yukon River Salmon Fisheries Chinook Salmon Conservation Discussion

### 2015 Yukon Salmon Outlook

Complete analysis and formal acceptance of the 2015 Chinook Salmon total run size will not be finalized until after the Joint Technical Committee (JTC) and the Yukon River Panel meet later this spring. However, based on the information compiled so far, the run size may be similar to 2014, around 130,000 Chinook Salmon. A run of this size would be well below average, but could be sufficient to achieve most escapement objectives provided conservative management actions are applied in the subsistence fishery. The Summer Chum Salmon run outlook is for a run also similar to the 2014 run with a large surplus available for subsistence and other uses. The following is a list of possible management options for discussion purposes.

### Management Strategy and Options

- No commercial, sport, or personal use fishing for Chinook Salmon is anticipated.
- Initiate the subsistence salmon fishing schedule soon after ice break up occurs at the delta, beginning in District 1 and implemented chronologically with the upriver migration .
- Allow early subsistence fishing opportunity to target non-salmon species, such as sheefish, with 6-inch gillnets before Chinook Salmon enter the river.
- Regulations require closed subsistence fishing on the first pulse of Chinook Salmon. Plan for additional pulse protection based on expectations of a poor season. The Coastal District, Koyukuk, Innoko, and Tanana Rivers should expect some closed salmon fishing periods to protect pulses of Chinook salmon in those areas. Closures would be initiated in the Coastal District and District 1 and similarly implemented in upriver fishing districts and subdistricts based on migratory timing.
- When Summer Chum Salmon become abundant, subsistence fishing opportunities with selective gear such as dip nets and fish wheels with the live release of Chinook Salmon will likely be provided. It may be possible to allow use of 6-inch gillnets if areas can be identified where chum salmon are very abundant and few Chinook Salmon are present.
- 4-inch gillnets not exceeding 60-feet in length, will be allowed to target non-salmon species during subsistence salmon fishing closures. This opportunity to target non-salmon will be discontinued if this gear is used to harvest Chinook Salmon.
- Relax subsistence restrictions after the Chinook Salmon run has passed or if confidence is high that the run is much better than anticipated.
- Anticipate full subsistence opportunity during the fall season.
- Commercial Summer Chum Salmon fishery will occur when chum become abundant. Selective gear options will be used (including dip nets, beach seines, and manned fish wheel). All Chinook Salmon must be released alive.

- Commercial Fall Chum Salmon fishery expected to begin at the transition period between summer and fall seasons.

### **Management Questions**

With a run outlook similar to recent years, people should not be expecting to target Chinook Salmon with large mesh nets or fishwheels. The summer fishing season will start out cautiously and follow with subsistence fishing opportunities primarily focused on harvesting other fish species using time, area, and fishing gear restrictions. The incidental harvest of Chinook Salmon will be watched closely. However, the most effective tool in conservation is public support. As part of the management process, we would like your feedback on the following questions.

1. Are there other ideas on ways to reduce Chinook Salmon mortality when targeting Summer Chum Salmon that might be effective for subsistence fishermen?
2. Are there other ideas on ways to reduce mortality of large/female Chinook Salmon when targeting Summer Chum Salmon that might be effective for subsistence fishermen?
3. The Yukon is a large river system with a patch-work of State and Federal jurisdictions due to 7 different Refuges contained within the drainage. What is this RAC's position on Federal managers restricting Chinook Salmon fishing in waters adjacent to Federal management units to only Federally qualified subsistence users this summer in order to reduce fishing pressure from people living outside the Yukon River drainage or in urban areas, thereby providing a priority for those living closer to the resource?
  - This action would only apply to about one half the area along the river which lies within or adjacent to Refuge boundaries.
  - This action would not allow family members living outside the drainage or those living in the Fairbanks North Star Borough to participate in subsistence fishing within the affected sections of river.
  - This action would only apply to fishing opportunity targeting Chinook Salmon. Since Summer Chum Salmon are expected to be abundant, this action would only apply to planned fishing opportunities targeting Summer Chum Salmon when a high incidental harvest of Chinook Salmon might be expected.

**INTERAGENCY STAFF COMMITTEE RECOMMENDATION**  
**FSA15-01/04/06/09/10 AND DEFERRED FSA14-07/08**

**Oppose** Fisheries Special Action Request FSA15-01/04/06/09/10 and Deferred FSA14-07/08

**Justification**

The special action requests submitted to the Federal Subsistence Board (Board) regarding Yukon River salmon fisheries have the same requests to 1) close Federal public waters of the Yukon River drainage to the harvest of salmon, except by Federally qualified subsistence users; and 2) implement an allocation strategy, consistent with Section 804 of ANILCA, that provides for equitable opportunity for customary and traditional uses of Chinook salmon for Federally qualified subsistence users within the Yukon River drainage. While the special actions request that the Board assume management of Yukon River salmon stocks, it should be clarified that these requested actions are limited to the take of salmon on Federal public waters of the Yukon River drainage. The Board's action on these special action requests will not affect non-Federal public waters of the drainage.

The closure aspects of these special actions are unnecessary, as the Federal in-season manager already has the delegated authority to open and close Federal public waters in the Yukon River drainage to the harvest of salmon by non-Federally qualified users. In order to close Federal public lands or waters to the take of fish and wildlife for nonsubsistence uses, it must be determined that the closure is necessary for the conservation of healthy populations of fish or wildlife, to continue subsistence uses for fish or wildlife, or for reasons of public safety or administration. Based on conservation concerns for Chinook salmon, it is unlikely that there will be any directed subsistence or nonsubsistence Chinook salmon fisheries on the Yukon River this year. Joint Federal and State in-season management will likely close fishing periods for other salmon species to protect pulses of Chinook salmon. However, the requested closure to salmon, other than Chinook salmon, for the entire fishing season does not meet the requirements of ANILCA Sections 804, 815(3), and 816 because the populations will likely be able to support sustainable harvest. Thus, the closure to other salmon species would not be necessary for the conservation of healthy populations or to continue subsistence uses for those populations.

Given the complexity of Yukon River fisheries management, including the health of multiple Chinook salmon stocks, the size of the area, and the patchwork of jurisdictions, it would be difficult to equitably provide opportunity for Chinook salmon through the ANILCA Section 804 process. We appreciate the proponents' concerns that current Chinook harvest management is insufficient; however, there is much effort invested to provide harvest opportunity for salmon and non-salmon species that can sustain harvest. Additionally, the current management strategy relies on coordinated efforts among the State of Alaska, Federal agencies, Canada, and the public, including Federally qualified subsistence users, to afford meaningful conservation of the Chinook salmon stock as a sustainable resource.



## *Algaaciq Tribal Government*

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February 6, 2015

Tim Towarak, Chairman – Federal Subsistence Board  
c/o Gene Peltola, U.S. Fish & Wildlife Service  
Office of Subsistence Management  
1011 East Tudor Road  
Anchorage, AK 99503

RE: Algaaciq Native Village Special Action Request to the Federal Subsistence Board to Assume Management of Yukon Salmon Stocks, Limit 2015 Yukon Chinook Salmon Fisheries to Federally Qualified Subsistence Users, Conduct an ANILCA 804 Analysis to Determine Customary & Traditional Subsistence Uses of Salmon, and Implement an Allocation Strategy Between Federally Qualified Subsistence Users in the Yukon River Drainage

Mr. Towarak:

The Algaaciq Native Village, a federally recognized Tribe, submits this Special Action Request asking the Federal Subsistence Board to limit 2015 Yukon River subsistence Chinook salmon fisheries to federally qualified subsistence users. To do this, the Tribe asks the Board to conduct an ANILCA 804 analysis. Our Tribe also request that the Board implement a strategy for Chinook salmon subsistence management and allocation among the Native Villages, communities and federally qualified subsistence users throughout the Yukon River drainage that ensures the ability, consistent with necessary conservation, to engage in our customary and traditional uses of Chinook. Without federal management of Yukon River Chinook fisheries, our local tribal members and tribal communities will not be ensured of priority and opportunity for customary and traditional uses of the Yukon Chinook salmon that is required by Title VIII of ANILCA. Without federal management, our social and cultural reliance on this resource will also be impacted. The Tribe also requests the Board take over management of the Yukon salmon fisheries other than Chinook in order to ensure that the management of these salmon fisheries is consistent with the management of the Yukon drainage Chinook stocks for conservation and opportunity for subsistence users.

The Yukon River provides the second largest subsistence Chinook fishery in Alaska. However, since 2007, the Yukon River Chinook salmon populations entered a multiyear period of low abundance. Escapement goals to Canada were not met in 2007, 2008, 2010, 2012 and 2013. Subsistence harvests have been restricted each year. In 2012, subsistence fishers

harvested around 26,000 Chinook salmon from the Yukon. In 2013, only 12,50 Chinook salmon were harvested from Yukon River subsistence fisheries. In 2014, the State of Alaska closed all subsistence Chinook fisheries along the Yukon River. Thousands of subsistence users with customary and traditional nutritional, economic, and spiritual reliance on Chinook salmon were denied the opportunity to harvest Chinook salmon.

The State anticipates low Yukon River Chinook salmon runs again in 2015. For the same reasons that Federal management of the Kuskokwim River drainage fisheries in 2014 was necessary, Federal management of subsistence Chinook salmon fisheries along the Yuko river during the 2015 fishing season is necessary to preserve our customary, traditional, social and cultural uses of this essential resource. It is further necessary to ensure the healthy conservation of Chinook salmon stocks for future subsistence harvests.

Federal management of Chinook salmon during the 2015 Yukon River fishing season is necessary to provide for the priority and opportunity for customary and traditional subsistence uses of Chinook salmon, to preserve our social and cultural uses of Chinook salmon, and to ensure the healthy conservation of Chinook salmon stocks in light of anticipated low Chinook salmon run forecasts in 2015. Without federal management, the Tribe's ability to harvest Chinook for customary and traditional subsistence uses will be compromised by other regulatory requirements that do not prioritize subsistence uses.

The Tribe also requests the Board implement an allocation strategy, consistent with section 804 of ANILCA, which provides for equitable opportunity for customary and traditional subsistence uses of Chinook for Native Villages, communities and federally qualified subsistence users within the Yukon River drainage. Chinook harvest management for the Yukon is usually approached by limiting the area, time and gear for fishery openings. These blunt strategies have proven insufficient as methods for precise management of Chinook and fail to equitably allocated the Chinook resource between communities and subsistence users when harvesting surpluses are low. This management strategy also falls short of what is required for the conservation and rebuilding of the Yukon Chinook stocks. It is also essential that there is a management strategy for Yukon chum, red and silver salmon stocks that is consistent with ensuring conservation, rebuilding and the opportunity for subsistence uses of Yukon Chinook salmon. The Tribe requests federal management of all Yukon salmon stocks as necessary to ensure conservation and subsistence uses of the Chinook stocks.

It is essential that the Board work closely with our Tribe and other tribal governments on the Yukon River drainage in managing salmon and subsistence uses for the River. The Yukon River Inter-Tribal Fish Commission must be included in the co-management demonstration project the Secretary has committed to establish with the Kuskokwim tribes. Federal/tribal co-management through the inter-tribal fish commission is essential for effective management of salmon and subsistence uses in the Yukon River drainage. For the 2015 season, the Board should implement an interim co-management system through temporary rules or a special action to fulfill tribal consultation requirements and the Secretary's policy as provided in the commitment to establish the demonstration project. The interim measure should meaningfully incorporate the tribal governments through the inter-tribal commission into all 2015 pre-season

Mr. Tim Towarak  
February 6, 2015  
Page 3

and in-season management actions and in the development and implementation of a Chinook allocation plan for the members and residents of tribal communities.

Respectfully submitted,

A handwritten signature in black ink that reads "Moses Paukan Sr." with a stylized flourish at the end.

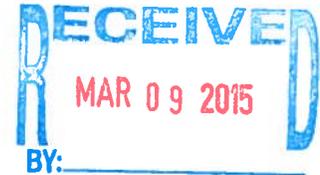
Moses Paukan Sr., President  
Algaaciq Native Village

**Holy Cross Tribe**  
PO Box 89  
Holy Cross, Alaska 99602  
Phone: (907) 476-7124 Fax: (907) 476-7132



February 27, 2015

Tim Towarak, Chairman – Federal Subsistence Board  
c/o Gene Peltola, U.S. Fish & Wildlife Service  
Office of Subsistence Management  
1011 East Tudor Road  
Anchorage, AK 99503



Re: Holy Cross native village Special Action Request to the Federal Subsistence Board to Assume Management of Yukon Salmon Stocks, Limit 2015 Yukon Chinook Salmon Fisheries to Federally Qualified Subsistence Users, Conduct an ANILCA 804 Analysis to Determine Customary & Traditional Subsistence Uses of Salmon, and Implement an Allocation Strategy Between Federally Qualified Subsistence Users in the Yukon Drainage.

Mr. Towarak:

The Native Village of Holy Cross, a federally recognized Tribe, submits this Special Action Request asking the Federal Subsistence Board to limit 2015 Yukon River subsistence Chinook salmon fisheries to federally qualified subsistence users. To do this, the Tribe asks the Board to conduct an ANILCA 804 analysis. Our Tribe also requests that the Board implement a strategy for Chinook salmon subsistence management and allocation among the Native Villages, communities and federally qualified subsistence users throughout the Yukon River drainage that ensures the ability, consistent with necessary conservation, to engage in our customary and traditional uses of Chinook. Without federal management of Yukon River Chinook fisheries, our local tribal members and tribal communities will not be ensured the priority and opportunity for customary and traditional uses of the Yukon Chinook salmon that is required by Title VIII of ANILCA. Without federal management, our social and cultural reliance on this resource will also be implicated. The Tribe also requests the Board take over management of the Yukon salmon fisheries other than Chinook in order to ensure that the management of these salmon fisheries is consistent with the management of the Yukon drainage Chinook stocks for conservation and opportunity for subsistence uses.

The Yukon River provides the second largest subsistence Chinook fishery in Alaska. However, since 2007, the Yukon River Chinook salmon populations entered a multiyear period of low abundance. Escapement goals to Canada were not met in 2007, 2008, 2010, 2012, or 2014. Subsistence harvests have been restricted each year. In 2012, subsistence fishers harvested

Eugene Paul, Chief  
Mathew Burkett, Second Chief  
Kristi Turner, Secretary/ Treasurer  
Alfred Demientieff Jr, Sandra Sims, David Whitley and Justin Whitley

**Holy Cross Tribe**  
PO Box 89  
Holy Cross, Alaska 99602  
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around 26,000 Chinook salmon from the Yukon. In 2013, only 12,500 Chinook salmon were harvested from Yukon River subsistence fisheries. In 2014, the State of Alaska closed all subsistence Chinook fisheries along the Yukon River. Thousands of subsistence users with customary and traditional nutritional, economic, and spiritual reliance on Chinook salmon were denied the opportunity to harvest Chinook salmon.

The State anticipates low Chinook salmon runs again in 2015. For the same reasons that Federal management of the Kuskokwim River drainage fisheries in 2014 was necessary, Federal management of subsistence Chinook salmon fisheries along the Yukon River during the 2015 fishing season is necessary to preserve our customary, traditional, social and cultural uses of this essential resource. It is further necessary to ensure the healthy conservation of Chinook salmon stocks for future subsistence harvests.

Federal management of Chinook salmon during the 2015 Yukon River fishing season is necessary to provide for the priority and opportunity for customary and traditional subsistence uses of Chinook salmon, to preserve our social and cultural uses of Chinook salmon, and to ensure the healthy conservation of Chinook salmon stocks in light of anticipated low Chinook salmon run forecasts in 2015. Without federal management, the Tribe's ability to harvest Chinook for customary and traditional subsistence uses will be compromised by other regulatory requirements that do not prioritize subsistence uses.

The Tribe requests that the Board conduct an ANILCA 804 analysis for Holy Cross village. Our Tribe qualifies as a rural community under ANILCA, and has engaged in customary and traditional subsistence uses of Chinook salmon since time immemorial. Chinook salmon also play a crucial role in our Tribe's social and cultural practices, and it is important to protect these practices. This determination is essential to our cultural, economic, nutritional, and spiritual reliance on this valuable resource.

The Tribe also requests the Board implement an allocation strategy, consistent with section 804 of ANILCA, which provides for equitable opportunity for customary and traditional subsistence uses of Chinook for the Native Villages, communities and federally qualified subsistence users within the Yukon River drainage. Chinook harvest management for the Yukon is usually approached by limiting the area, time and gear for fishery openings. These blunt strategies have proven insufficient as methods for precise management of Chinook and fail to equitably allocate the Chinook resource between communities and subsistence users when harvestable surpluses are low. This management strategy also falls short of what is required for the conservation and rebuilding of the Yukon Chinook stocks. It is also essential that there is a management strategy for Yukon chum, red and silver salmon stocks that is consistent with

Eugene Paul, Chief  
Matthew Burkett, Second Chief  
Kristi Turner, Secretary/ Treasurer  
Alfred Demientieff Jr, Sandra Sims, David Whitley and Justin Whitley

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ensuring conservation, rebuilding and the opportunity for subsistence uses of Yukon Chinook salmon. The Tribe requests federal management of all Yukon salmon stocks as necessary to ensure conservation and subsistence uses of the Chinook stocks.

It is essential that the Board work closely with our Tribe and the other tribal governments on the Yukon River drainage in managing salmon and subsistence uses for the River. The Yukon River Inter-Tribal Fish Commission must be included in the co-management demonstration project the Secretary has committed to establish with the Kuskokwim tribes. Federal/tribal co-management through the inter-tribal fish commission is essential for effective management of salmon and subsistence uses in the Yukon drainage. For the 2015 season, the Board should implement an interim co-management system through temporary rules or a special action to fulfill tribal consultation requirements and the Secretary's policy as provided in the commitment to establish the demonstration project. The interim measure should meaningfully incorporate the tribal governments through the inter-tribal commission into all 2015 pre-season and in-season management actions and in the development and implementation of a Chinook allocation plan for the members and residents of tribal communities.

Thank you.

Respectfully,  
Holy Cross Tribe



Eugene Paul  
First Chief

Eugene Paul, Chief  
Matthew Burkett, Second Chief  
Kristi Turner, Secretary/ Treasurer  
Alfred Demientieff Jr, Sandra Sims, David Whitley and Justin Whitley

**Holy Cross Tribe**  
**PO Box 89**  
**Holy Cross, Alaska 99602**  
**Phone: 907-476-7124 Fax: 907-476-7132**



**Resolution 2015-16**

**A Resolution Supporting a Special Action Request to the Federal Subsistence Board to Assume Management of Yukon River Salmon Stocks and Implement the Subsistence Priority in Title VIII of ANILCA**

**WHEREAS**, the Native Village of Holy Cross is a federally recognized Tribe located in the Yukon River Drainage whose Tribal members have engaged in customary and traditional use of Chinook salmon since time before memory to sustain our nutritional, economic and cultural way of life; and

**WHEREAS**, For over more than a decade, Yukon River Chinook salmon runs have been in steep decline and returns are far below what is necessary to meet escapement goals and to provide for Tribal customary and traditional subsistence uses and needs; and

**WHEREAS**, the 2015 Chinook salmon run is projected to be another year of declining Chinook returns which will be insufficient to meet Yukon subsistence uses and escapement goals; and

**WHEREAS**, Title VIII of ANILCA requires the Federal Subsistence Board to provide a priority for subsistence uses by rural residents with customary and traditional use of Yukon Chinook stocks and to allocate among eligible users when the harvest is too small to provide for all subsistence users; and

**WHEREAS**, under the Federal Subsistence Board process, it conducts an analysis guided by section 804 of ANILCA to determine which Native Villages and rural communities have customary and traditional use of Yukon Chinook stocks; and

**WHEREAS**, the Federal Subsistence Board failed in 2014 and previous years to assert federal subsistence management of Yukon salmon stocks to provide the opportunity for federally qualified subsistence users to meet subsistence needs and to ensure the conservation and rebuilding of the Yukon Chinook stocks; and

**WHEREAS**, federal management of the Yukon River Drainage subsistence salmon fisheries in 2015 is necessary to provide subsistence fishing opportunity for our Tribal fishing way of life and to ensure the conservation and rebuilding of Yukon Chinook salmon stocks; and

**WHEREAS**, federal management should include, at least, restricting Yukon River Chinook salmon fisheries to federally qualified subsistence users and implementing an allocation strategy that provides an equitable opportunity for customary and traditional subsistence uses of Chinook, salmon; and

**Holy Cross Tribe**  
**PO Box 89**  
**Holy Cross, Alaska 99602**  
**Phone: 907-476-7124 Fax: 907-476-7132**

**WHEREAS**, in implementing federal salmon management regulations, policies and programs for the Yukon, it is essential that federal salmon management agencies institute a tribal co-management structure as soon as possible.

**NOW THEREFORE BE IT RESOLVED**, that the Native Village of Holy Cross submits the attached Special Action Request to the Office of Subsistence Management seeking federal management of Yukon salmon fisheries in 2015 limiting Chinook salmon fisheries to qualified federal subsistence users and implementing a strategy to equitably allocate Chinook salmon among Yukon Native Villages, Communities, and federally qualified subsistence users.

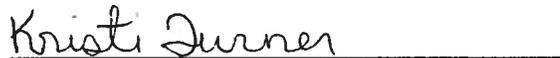
**CERTIFICATION**

This resolution was duly adopted by the Holy Cross Tribe at a meeting held at the Village Council's office in Holy Cross, Alaska on the 27th day of February, 2015 by the following vote:  
Ayes 5, Nays 0, Abstain 0.

ATTEST:



Eugene J. Paul – First Chief



Kristi Turner, Secretary/ Treasurer



**Kaltag Tribal Council**  
**P.O. Box 129**  
**Kaltag, Alaska 99748**  
**Phone # 907-534-2224**  
**Fax # 907-534-2299**  
**esmailka32@hotmail.com**

March 5, 2015



Tim Towarak, Chairman- Federal Subsistence Board  
c/o Gene Peltola. U.S. Fish & Wildlife Service  
Office of Subsistence Management  
1011 East Tudor Road  
Anchorage, AK 99503

Re: Kaltag Village Special Action Request to the Federal Subsistence Board to Assure Management of Yukon Salmon Stock, Limit 2015 Yukon Chinook Salmon Fisheries to Federally Qualified Subsistence Users, Conduct an ANILCA 804 Analysis to Determine Customary & Traditional Subsistence Uses of Salmon, and Implement an Allocation Strategy Between Federally Qualified Subsistence Users in the Yukon Drainage.

Dear Mr. Towarak,

The Native Village of Kaltag, a federally recognized Tribe, submits this Special Action Request asking the Federal Subsistence Board to limit 2015 Yukon River subsistence Chinook salmon fisheries to federally qualified subsistence users. To do this, the Tribe asks the Board to conduct an ANILCA 804 analysis. Our Tribe also requests that the Board implement strategy for Chinook salmon subsistence management and allocation among the Native Villages, communities and federally qualified subsistence users throughout the Yukon River drainage that ensures the ability, consistent with necessary conservation, to engage in our customary and traditional uses of Chinook. Without federal Management of Yukon River Chinook fisheries, our local tribal members and tribal communities will not be ensured the priority and opportunity for customary and traditional uses of the Yukon Chinook salmon that is required by Title VIII of ANILCA. Without federal management, our social and cultural reliance on this resource will also be implicated. The Tribe also requests the Board take over management of the Yukon salmon fisheries other than Chinook in order to ensure that the management of these salmon fisheries is consistent with the management of the Yukon drainage Chinook stocks for conservation and opportunity for subsistence uses.

The Yukon River provides the second largest subsistence Chinook fishery in Alaska. However, since 2007, the Yukon River Chinook salmon populations entered a multiyear period of low abundance. Escapement goals to Canada were not met in 2007, 2008, 2010, 2012 or 2014. Subsistence harvests have

been restricted each year. In 2012, subsistence fishers harvested around 26,000 Chinook salmon from the Yukon. In 2013, only 12,500 Chinook salmon were harvested from Yukon River subsistence fisheries. In 2014, the State of Alaska closed all subsistence Chinook fisheries along the Yukon River. Thousands of subsistence users with customary and traditional nutritional, economic, and spiritual reliance on Chinook salmon were denied the opportunity to harvest Chinook salmon.

The State anticipates low Chinook salmon runs again 2015. For the same reasons that federal management of the Kuskokwim River draining fisheries in 2014 was necessary, Federal management of subsistence Chinook salmon fisheries along the Yukon River during the 2015 fishing season is necessary to preserve our customary, Traditional, social and cultural uses of this essential resource. It is further necessary to ensure the healthy conservation of Chinook salmon stocks for future subsistence harvests.

Federal management of Chinook salmon during the 2015 Yukon River fishing season is necessary to provide for the priority and opportunity for customary and traditional subsistence uses of Chinook salmon, to preserve our social and cultural uses of Chinook salmon, and to ensure the healthy conservation of Chinook salmon stocks in light of anticipated low Chinook salmon run forecasts in 2015. Without federal management, the Tribe's ability to harvest Chinook for customary and traditional subsistence uses will be compromised by other regulatory requirements that do not prioritize subsistence uses

The Tribe requests that the Board conduct an ANILCA 804 analysis for (Native Village). Our Tribe qualifies as a rural community under ANILCA, and has engaged in customary and traditional subsistence uses of Chinook salmon since time immemorial. Chinook salmon also play a crucial role in our Tribe's conservation of Chinook salmon stocks in light of anticipated low Chinook salmon run forecasts in 2015. Without federal management, the Tribe's ability to harvest Chinook for customary and traditional subsistence uses will be compromised by other regulatory requirements that do not prioritize subsistence uses

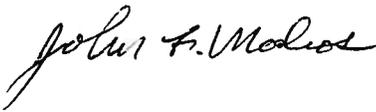
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The Tribe also requests the Board implement an allocation strategy, consistent with section 804 of ANILCA, which provides for equitable opportunity for customary and traditional subsistence uses of Chinook for the Native Villages, communities and federally qualified subsistence users within the Yukon River drainage. Chinook harvest management for the Yukon is usually approached by limiting the area, time and gear for fishery openings. These blunt strategies have proven insufficient as methods for precise management of Chinook and fail to equitably allocate the Chinook resource between communities and subsistence users when harvestable surpluses are low. This management strategy also falls short of what is a management strategy for Yukon chum, red and silver salmon stocks that is consistent with ensuring conservation, rebuilding and opportunity for subsistence uses of Yukon

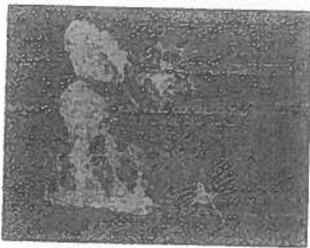
Chinook salmon. The tribe requests federal management of all Yukon salmon stocks as necessary to ensure conservation and subsistence uses of the Chinook stocks.

It is essential that the Board work closely with our Tribe and the other tribal governments on the Yukon River drainage in managing salmon and subsistence uses for the River. The Yukon River Inter-Tribal Fish Commission must be included in the co-management demonstration project the Secretary has committed to establish with the Kuskokwim tribes. Federal/tribal co-management through the inter-tribal fish commission is essential for effective management of salmon and subsistence uses in the Yukon drainage. For the 2015 season, the Board should implement as interim co-management system through temporary rules or a special action to fulfill tribal consultation requirement and the Secretary's policy as provided in the commitment to establish the demonstration project. The interim measure should meaningfully incorporate the tribal government through the inter-tribal commission into all 2015 pre-season and in-season management actions and in the development and implementation of a Chinook allocation plan for the members and residents of the tribal communities.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John F. Madros". The signature is written in a cursive, flowing style.

John F. Madros  
2<sup>nd</sup> Chief  
Kaltag Tribal Council



Kaltag Tribal Council  
P.O. Box 129  
Kaltag, Alaska 99748  
Phone # 907-534-2224  
Fax # 907-534-2299  
esmailka32@hotmail.com

Resolution 2015-11

Supporting a Special Action Request to the Federal Subsistence Board to Assume Management of Yukon River Salmon Stocks and Implement the Subsistence Priority in Title VIII of ANILCA.

- WHEREAS, The Native Village of Kaltag is a federally recognized Tribe located in the Yukon River Drainage whose Tribal members have engaged in customary and traditional use of Chinook salmon since time before memory to sustain our nutritional, economic and cultural way of life; and
- WHEREAS, For over more than a decade, Yukon River Chinook salmon runs have been in steep decline and returns are far below what is necessary to meet escapement goals and to provide for Tribal customary and traditional subsistence uses and needs; and
- WHEREAS, The 2015 Chinook salmon run is projected to be another year of declining Chinook returns which will be insufficient to meet Yukon subsistence uses and escapement goals; and
- WHEREAS, Title VIII of ANILCA requires the Federal Subsistence Board to provide a priority for subsistence uses by rural residents with customary and traditional use of Yukon Chinook stocks and to allocate among eligible users when the harvest is too small to provide for all subsistence users; and
- WHEREAS, Under the Federal Subsistence Board process, it conducts an analysis guided by section 804 of ANILCA to determine which Native Village and rural communities have customary and traditional use of Yukon Chinook stocks; and
- WHEREAS, The Federal Subsistence Board failed in 2014 and previous years to assert federal subsistence management of Yukon Salmon stock to provide the opportunity for federally qualified subsistence user to meet subsistence needs and to ensure the conservation and rebuilding of the Yukon Chinook stocks; and
- WHEREAS, The federal management of the Yukon River Drainage subsistence salmon fisheries in 2015 is necessary to provide subsistence fishing opportunity for our

Tribal fishing way of life and to ensure the conservation and rebuilding of Yukon Chinook salmon stocks; and

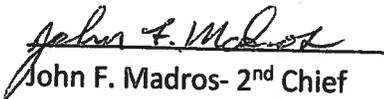
WHEREAS, Federal management should include, at least, restricting Yukon River Chinook salmon fisheries to federally qualified subsistence users and implementing an allocation strategy that provides an equitable opportunity for customary and traditional subsistence uses of Chinook, salmon; and conservation of Chinook salmon stocks in light of anticipated low Chinook salmon run forecasts in 2015. Without federal management, the Tribe's ability to harvest Chinook for customary and traditional subsistence uses; and

WHEREAS, In implementing federal salmon management regulations, policies and programs for the Yukon, it is essential that federal salmon management agencies institute a tribal co-management structure as soon as possible.

NOW THEREFORE BE IT RESOLVED, that the Native Village of Kaltag Tribe submits the attached Special Action Request to the Office of Subsistence Management seeking federal management of Yukon salmon fisheries in 2015 limiting Chinook salmon fisheries to qualified federal subsistence users and implementing a strategy to equitably allocate chinook salmon among Yukon Native Village, Communities, and federally qualified subsistence users.

#### CERTIFICATION

This certifies that the above resolution was duly approved by the Kaltag Tribal Council, on March 5, 2015. This resolution was adopted by a vote of 4 for 0 against, with 0 abstaining.

  
John F. Madros- 2<sup>nd</sup> Chief

  
Tribal Council Member



**Native Village of Marshall**  
Marshall Traditional Council  
P.O. Box 110  
Marshall, AK 99585  
Phone: (907) 679-6302 Fax: (907) 679-6187

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March 25, 2015

Tim Towarak, Chairman-Federal Subsistence Board  
c/o Gene Peltola, U.S. Fish & Wildlife Service  
Office of Subsistence Management  
1011 East Tudor Road  
Anchorage, AK 99503

Re: Native Village of Marshall Special Action Request to the Federal Subsistence Board to Assume Management of the Yukon River Salmon Stocks, Limit 2015 Yukon Chinook Salmon Fisheries to Federally Qualified Subsistence Users, Conduct an ANILCA 804 Analysis to Determine Customary & Traditional Subsistence Uses of Salmon, and Implement an Allocation Strategy Between Federally Qualified Users in the Yukon Drainage.

Mr. Towarak:

The Native Village of Marshall, a federally recognized Tribe, submits this Special Action Request asking the Federal Subsistence Board to limit 2015 Yukon River subsistence Chinook salmon fisheries to federally qualified users. To this, the Tribe asks the Board to conduct an ANILCA 804 analysis. Our Tribe also requests that the Board implements a strategy for Chinook salmon subsistence management and allocation among the Native Villages, communities and federally qualified subsistence users throughout the Yukon River drainage that ensures the ability, consistent necessary conservation, to engage in our customary and traditional uses of Chinook. Without federal management of Yukon River Chinook fisheries, our local tribal members and tribal communities will not be ensured the priority and opportunity for customary and traditional uses of the Yukon Chinook salmon that is required by Title VIII of ANILCA. Without federal management, our social and cultural reliance on this resource will also be implicated. The Tribe also requests the Board take over management of the Yukon salmon fisheries other than Chinook in order to ensure that the management of these salmon fisheries is consistent with the management of the Yukon drainage Chinook stocks for conservation and opportunity for subsistence uses.

The Yukon River provides the second largest subsistence Chinook fishery in Alaska. However, since 2007, the Yukon River Chinook salmon populations entered a multiyear period of low abundance. Escapement goals with Canada were not met in 2007, 2008, 2010, 2012, or 2014. Subsistence harvests have been restricted each year. In 2012, subsistence fishers harvested around 26,000 Chinook salmon from the Yukon. In 2013, only 12,500 Chinook salmon were harvested from the Yukon River subsistence fisheries.

In 2014, the State of Alaska closed all subsistence Chinook fisheries along the Yukon River. Thousands of subsistence users with customary and traditional, economic and spiritual reliance on Chinook salmon were denied the opportunity to harvest Chinook salmon.

The State anticipates low Chinook salmon runs again in 2015. For the same reasons that Federal management of the Kuskokwim River drainage fisheries in 2014 was necessary, Federal management of subsistence Chinook salmon fisheries along the Yukon River during 2015 fishing season is necessary to preserve our customary, traditional, social and cultural uses of this essential resource. It is further necessary to ensure the healthy conservation of Chinook salmon stocks for future subsistence harvests.

Federal management of Chinook salmon during the 2015 Yukon River fishing season is necessary to provide for the priority and opportunity for customary and traditional subsistence uses of Chinook salmon, to preserve our social and cultural uses of Chinook salmon, and to ensure the healthy conservation of Chinook salmon stocks in light of anticipated low Chinook salmon run forecasts in 2015. Without federal management, the Tribe's ability to harvest Chinook for customary and traditional subsistence uses will be compromised by other regulatory requirements that do not prioritize subsistence uses.

The Tribe requests that the Board conduct an ANILCA 804 analysis for the Native Village of Marshall. Our Tribe qualifies as a rural community under ANILCA, and has engaged in customary and traditional subsistence uses of Chinook salmon since time immemorial. Chinook salmon also play a crucial role in our Tribe's social and cultural practices, and it is important to protect these practices. This determination is essential to our cultural, economic, nutritional, and spiritual reliance on this valuable resource.

The Tribe also requests the Board implement an allocation strategy, consistent with section 804 of ANILCA, which provides for equitable opportunity for customary and traditional subsistence uses of Chinook for the Native Villages, communities and federally qualified subsistence users within the Yukon River drainage. Chinook harvest management for the Yukon is usually approached by limiting the area, time and gear for fishery openings. These blunt strategies have proven insufficient as methods for precise management of Chinook and fail to equitably allocate the Chinook resources between communities and subsistence users when harvestable surpluses are low. This management strategy also falls short of what is required for the conservation and rebuilding of the Yukon Chinook stocks. It is also essential that there is a management strategy for Yukon chum, red and silver salmon stocks that is consistent with ensuring conservation, rebuilding and the opportunity for subsistence uses of Yukon Chinook salmon. The Tribe requests federal management of all Yukon salmon stocks as necessary to ensure conservation and subsistence uses of the Chinook stocks.

It is essential that the Board work closely with our Tribe and the other tribal governments on the Yukon River drainage in managing salmon and subsistence uses for the River. The Yukon River Inter- Tribal Commission must be included in the co-management demonstration project the Secretary has committed to establish with the Kuskokwim tribes. Federal/tribal co-management through the inter-tribal fish commission is essential for effective management of salmon and subsistence uses in the Yukon drainage. For the 2015 season, the Board should implement an interim

co-management system through temporary rules or a special action to fulfill tribal consultation requirements and the Secretary's policy as provided in the commitment to establish the demonstration project. The interim measure should meaningfully incorporate the tribal governments through the inter-tribal commission into all 2015 preseason and in-season management actions and in the development and implementation of a Chinook allocation plan for the members and residents of tribal communities.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Nicholai Düny".

Nicholai Düny, President

Cc: file



**ANVIK TRIBAL COUNCIL**  
P.O. BOX 10  
ANVIK, ALASKA 99558  
(907) 663-6322 phone  
(866)524-5035 fax  
[anvik.tribal@gmail.com](mailto:anvik.tribal@gmail.com)

**Resolution 2015-12**

**Resolution Supporting a Special Action Request to the Federal Subsistence Board to Assume Management of the Yukon River Salmon Stocks and Implement the Subsistence Priority in Title VIII of ANILCA.**

**WHEREAS**, the Native Village of Anvik is a federally recognized Tribe located in the Yukon River Drainage who Tribal members have engaged in customary and traditional use of Chinook salmon since time before memory to sustain our nutritional, economic and cultural way of life; and

**WHEREAS**, for over more than a decade, Yukon River Chinook salmon runs have been in steep decline and returns are far below what is necessary to meet escapement goals and to provide for Tribal customary and traditional subsistence uses and needs; and

**WHEREAS**, the 2015 Chinook salmon run is projected to be another year of declining Chinook returns which will be insufficient to meet Yukon subsistence uses and escapement goals; and

**WHEREAS**, Title VIII of ANILCA requires the Federal Subsistence Board to provide a priority for subsistence uses by rural residents with customary and traditional use of Yukon Chinook stocks and to allocate among eligible users when the harvest is too small to provide for all subsistence users; and

**WHEREAS**, under the Federal Subsistence Board process, it conducts an analysis guided by section 804 of ANILCA to determine which Native Villages and rural communities have customary and traditional use of Yukon Chinook stocks; and

**WHEREAS**, federal management of the Yukon River Drainage subsistence salmon fisheries in 2015 is necessary to provide subsistence fishing opportunity for our Tribal fishing way of life and to ensure the conservation and rebuilding of Yukon Chinook salmon stocks; and

**WHEREAS**, federal management should include, at least, restricting Yukon River Chinook salmon fisheries to federally qualified subsistence users and implementing an allocation strategy that provides an equitable opportunity for customary and traditional subsistence uses of Chinook, salmon; and

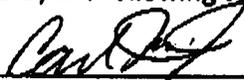
**WHEREAS**, in implementing federal salmon management regulations, policies and programs for the Yukon, it is essential that federal salmon management agencies institute a tribal co-management structure as soon possible; and

**NOW THEREFORE BE IT RESOLVED**, that the Native Village of Anvik submits the attached Special Action Request to the Office to the Office of Subsistence Management seeking federal management of Yukon salmon fisheries in 2015 limiting Chinook salmon fisheries to qualified federal subsistence users and implementing a strategy to equitably allocate Chinook salmon among Yukon Native Villages, Communities, and federally qualified subsistence users.

**CERTIFICATION**

This resolution was duly adopted by the Anvik Tribe at a meeting held in Anvik on the 26<sup>th</sup> day of March 2015 by the following votes: Ayes 5, Nays 0, Abstain 0.

ATTEST: \_\_\_\_\_

  
Carl Jerue -First Chief

  
Christine Elswick- Secretary/Treasurer



**ANVIK TRIBAL COUNCIL**  
**P.O. BOX 10**  
**ANVIK, ALASKA 99558**  
**(907) 663-6322 phone**  
**(866)524-5035 fax**  
**anvik.tribal@gmail.com**

March 25, 2015

Tim Towarak, Chairman-Federal Subsistence Board  
c/o Gene Peltola, U.S. Fish & Wildlife Service  
Office of Subsistence Management  
1011 East Tudor Road  
Anchorage, Alaska 99503

The Native village of Anvik Special Action Request to the Federal Subsistence Board to Assume Management of Yukon Salmon Stocks, Limit 2015 Yukon Chinook Salmon Fisheries to Federally Qualified Subsistence Users, Conduct an ANILCA 804 Analysis to Determine Customary & Traditional Subsistence Uses of Salmon, and Implement an Allocation Strategy Between Federally Qualified Subsistence Users in the Yukon Drainage.

Mr. Towarak:

The Native village of Anvik, a federally recognized Tribe, submits this Special Action Request asking the Federal Subsistence Board to limit 2015 Yukon River subsistence Chinook salmon fisheries to federally qualified subsistence users. To do this, the Tribe asks the Board to conduct an ANILCA 804 analysis. Our tribe also requests that the Board implement a strategy for Chinook salmon subsistence management and allocation among the Native villages, communities and federally qualified subsistence users throughout the Yukon River drainage that ensures the ability, consistent with necessary conservation, to engage in our customary and traditional uses of Chinook. Without federal management of the Yukon River Chinook fisheries, our local tribal members and tribal communities will not be ensured the priority and opportunity for customary and traditional uses of the Yukon Chinook salmon that is required by the Title VIII of ANILCA. Without federal management, our social and cultural reliance on this resource will also be implicated. The Tribe also requests the Board take over management of the Yukon salmon fisheries other than Chinook in order to ensure that the management of these salmon fisheries is consistent with the management of the Yukon drainage Chinook stocks for conservation and opportunity for subsistence uses.

The Yukon River provides the second largest subsistence Chinook fishery in Alaska. However, since 2007, the Yukon River Chinook salmon populations entered a multiyear period of low abundance. Escapement goals to Canada were not met in 2007, 2008, 2010, 2012, or 2014. Subsistence harvests have been restricted each year. In 2012, subsistence fishers harvested around 26,000 Chinook salmon from the Yukon. In 2013, only 12,500 Chinook salmon were harvested from Yukon River subsistence fisheries. In 2014, the State of Alaska closed all subsistence Chinook fisheries along the Yukon River. Thousands of subsistence users with customary and traditional nutritional, economic, and spiritual reliance on Chinook salmon were denied the opportunity to harvest Chinook salmon.

Anvik Tribal Council  
Carl Jerue, Chief, Robert Walker 2<sup>nd</sup> Chief, Christine Elswick, Secretary, Renee Richardson, member, Nathan Elswick member

The State anticipates low Chinook salmon runs again in 2015. For the same reasons that Federal management of the Kuskokwim River drainage fisheries in 2014 was necessary, Federal management of subsistence Chinook salmon fisheries along the Yukon River during the 2015 fishing season is necessary to preserve our customary, traditional, social and cultural uses of this essential resource. It is further necessary to ensure the healthy conservation of Chinook salmon stocks for future subsistence harvests.

Federal management of Chinook salmon during the 2015 Yukon River fishing season is necessary to provide for the priority and opportunity for customary and traditional subsistence used of Chinook salmon, to preserve our social and cultural uses of Chinook salmon, and to ensure the healthy conservation of Chinook salmon stocks in light of anticipated low Chinook salmon run forecasts in 2015. Without federal management, the Tribe's ability to harvest Chinook for customary and traditional subsistence uses will be compromised by other regulatory requirements that do not prioritize subsistence uses.

The Tribe requests that the Board conduct an ANILCA 804 analysis for the Native village of Anvik as our Tribe qualifies as a rural community under ANILCA, and has engaged in customary and traditional subsistence uses of Chinook salmon since time immemorial. Chinook salmon also play a crucial role in our Tribe's social and cultural practices, and it is important to protect these practices. This determination is essential to our cultural, economic, nutritional, and spiritual reliance on this valuable resource.

The Tribe also requests the Board implement an allocation strategy, consistent with section 804 of ANILCA, which provides for equitable opportunity for customary and traditional subsistence uses of Chinook for the Native villages, communities and federally qualified subsistence users within the Yukon River drainage. Chinook harvest management for the Yukon is usually approached by limiting the area, time and gear for fishery openings. These blunt strategies have proven insufficient as methods for precise management of Chinook and fail to equitably allocate the Chinook resource between communities and subsistence users when harvestable surpluses are low. This management strategy also falls short of what is required for the conservation and rebuilding of the Yukon Chinook stocks. It is also essential that there is a management strategy for Yukon chum, red and silver salmon stocks that is consistent with ensuring conservation, rebuilding and the opportunity for subsistence uses of Yukon Chinook salmon. The Tribe requests Federal management of all Yukon salmon stocks as necessary to ensure conservation and subsistence uses of the Chinook stocks.

It is essential that the Board work closely with our Tribe and the other tribal governments on the Yukon River drainage in managing salmon and subsistence uses for the River. The Yukon River Inter-Tribal Fish Commission must be included in the co-management demonstration project the Secretary has committed to establish with the Kuskokwim tribes. Federal/tribal co-management through the inter-tribal fish commission is essential for effective management of salmon and subsistence use in the Yukon drainage. For the 2015 season, the Board should implement an Interim co-management system through temporary rules or a special action to fulfill tribal consultation requirements and the Secretary's policy as provided in the commitment to establish the demonstration project. The interim measure should meaningfully incorporate the tribal governments through the inter-tribal commission into all 2015 pre-season and in-season management actions and in the development and implementation of a Chinook allocation plan for the members and residents of tribal communities.

Respectfully,

  
Carl Jerue  
Chief



**Native Village of Marshall  
Marshall Traditional Council  
P.O. Box 110  
Marshall, AK 99585  
Phone: (907) 679-6302 Fax: (907) 679-6187**

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June 24, 2014

Office of Subsistence Management  
U.S. Fish and Wildlife Service  
1011 E. Tudor Road, Mail Stop 121  
Anchorage, AK 99503  
Attn: Tim Towarak, Chairman  
Fax: (907) 786-3898

**Re: Special Action Request for Limited Chinook Harvest for Marshall**

Dear Mr. Towarak:

The people of the Native Village of Marshall are historically customarily and traditionally dependent on Chinook salmon for sustenance, spirituality, and wellness. Our people have practiced stewardship of this precious resource. Please consider granting our Special Action Request per the ANILCA Section 804 to harvest Chinook for food security.

To date, adequate numbers of Chinook have passed the Canadian border meeting escapement goals and treaty obligations. According to the Alaska Department of Fish and Game Division of Commercial Fisheries News Release number 20, summer update number 7, 50% or more passing the Pilot Station sonar were Chinook of Canadian origin. With more pulses anticipated due to the early returns this season on the Yukon River, we the federally qualified subsistence users are asking you for an opportunity for a limited harvest of Chinook salmon on the Yukon River.  
Thank you.

Sincerely,

Nicholai Duny, President

Cc: file, KYUK, ADN, KTUU, KTVA



**Native Village of Marshall  
Marshall Traditional Council  
P.O. Box 110  
Marshall, AK 99585  
Phone: (907) 679-6302 Fax: (907) 679-6187**

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June 24, 2014

Office of Subsistence Management  
U.S. Fish and Wildlife Service  
1011 E. Tudor Road, Mail Stop 121  
Anchorage, AK 99503  
Fax: (907) 786-3898

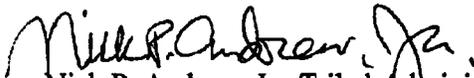
Re: ANILCA Section 804 Analysis Request

To Whom It May Concern:

Per the Special Action Request the Native Village of Marshall submitted to the Office of Subsistence Management-Anchorage June 23, 2014, the tribe is seeking an ANILCA Section 804 analysis be initiated for the Native Village of Marshall. As the letter stated, the people of the Native Village of Marshall are historically customarily and traditionally dependent on Chinook salmon for sustenance, spirituality, and wellness. Please contact me and I shall assist in the process.

Thank you.

Sincerely,

  
Nick P. Andrew, Jr., Tribal Administrator

Cc: file

**Iqurmiut Traditional Council**

P.O. Box 09  
Russian Mission, AK 99657  
Phone (907) 584-5511 • Fax (907) 584-5593

June 25, 2014

Office of Subsistence Management  
U.S. Fish and Wildlife Service  
1011 E. Tudor Road, Mail Stop 121  
Anchorage, AK 99503  
Attn: Tim Towarak, Chairman  
Fax: (907) 786-3898

Re: Special Action Request for Limited Chinook Harvest for Russian Mission

Dear Mr. Towarak:

The people of the Iqurmiut (Russian Mission) are historically customarily and traditionally dependent on Chinook salmon for sustenance, spirituality, and wellness, our people have practiced stewardship of this precious resource. Please consider granting our Special Action Request per the ANILCA Section 804 to harvest Chinook for food security.

To date, adequate numbers of Chinook have passed the Canadian border meeting escapement goals and treaty obligations. According to the Alaska Department of Fish and Game Division of Commercial Fisheries News Release number 20, summer update number 7, 50% or more passing the Pilot Station sonar were Chinook of Canadian origin. With more pulses anticipated due to the early returns this season on the Yukon River, we the Federally qualified users are asking you for opportunity for a limited harvest of Chinook salmon on the Yukon River.

Thank you.

Sincerely,

Wassily Alexie-President