

STAFF ANALYSIS FRFR06-09

ISSUES

FRFR06-09, submitted by the State of Alaska,¹ requests that the Federal Subsistence Board (Board) reconsider and rescind its decision of November 17, 2006 on Fisheries Request for Reconsideration FRFR06-02/03/08² that provided the community of Ninilchik with a customary and traditional use determination for all fish in the waters north of and including the Kenai River drainage, within the Kenai National Wildlife Refuge and Chugach National Forest within the Kenai Peninsula district (referred to from here forward as the Kenai River area). The State maintains that reconsideration is required because the Board's interpretation of information, applicable law, or regulation was in error or contrary to existing law. The Board's action on FRFR06-02/03/08 on November 17, 2006 dispensed with all claims associated with the customary and traditional uses of Hope, Cooper Landing, and Ninilchik raised in FRFR06-02/03/08.

A threshold analysis for FRFR06-09 was reviewed by the Board on April 9, 2007 to determine if the FRFR would be accepted for reconsideration (FWS 2007). The Board accepted one claim from the FRFR. Specifically, the criteria fulfilled and the claim that the Board accepted is summarized as follows:

Criterion 2. The existing information used by the Board is incorrect.

Claim 2.1

The Board did not require any evidence, as to any species, to support its incorrect assumption that fish stocks harvested by Ninilchik households in waters located outside of and far way from the customary and traditional use areas were the same specific fish stocks as those fish located within the customary and traditional use areas. As a result, the Board made an overly broad, incorrect determination, creating a preference for Ninilchik for all salmon, Dolly Varden, rainbow trout, lake trout, steelhead, Arctic char, grayling, and burbot wherever found within the Kenai River area, although no customary and traditional harvest by that community of the fish stocks within those areas had been shown.

DISCUSSION

During the Board meeting on November 17, 2006, one member of the Board, the Chair, made reference to "several different systems that could be defined as the same fish stock" (FSB 2006a:167) as justification for supporting a positive customary and traditional use determination for Ninilchik for all fish in the Kenai River area. The Chair did not elaborate on what he meant by "fish stocks." However, three of the five Board members who voted for the motion provided rationale for their votes without reference to fish stocks (FSB 2006b:164), which means that, for at least those three, the Chair's comments about

¹ The State of Alaska's request for reconsideration dated January 16, 2007 and supplemented on March 8, 2007 can be found in Appendix A of the Threshold Analysis for FRFR06-09.

² FRFR06-02/03/08 dated November 16, 2007 can be found in Appendix B of the Threshold Analysis for FRFR06-09.

fish stocks were not the deciding factor for their votes.³ With undue emphasis on one aspect of Board deliberations on November 17, 2006, in which stock considerations arose, perspective may be lost on the body of information brought to bear on the larger question of a customary and traditional use determination. For example, the following excerpt from the transcript of that meeting captures the basis for the Forest Service motion for a positive customary and traditional use determination, which preceded the later discussion on stock considerations:

ANILCA, Title VIII makes it very clear that the continuation of subsistence opportunity for rural residents is the top priority for the use of fish and wildlife resources. Just because there is controversy or because a fishery is fully allocated is not relevant in providing the ANILCA priority for subsistence. I've reviewed the Staff analysis, listened and read comments from agencies and the public and considered the new information summarized in the staff analysis and believe that there is substantial evidence that a customary and traditional use determination should be made for Ninilchik in the Kenai River drainage and in other areas north of the Kenai, as has been proposed. I've looked at the figures in Table 1; these numbers indicate to me that there is long-term use by Ninilchik of the Federal waters. I recognize that Ninilchik residents more often fish closer to home and often in salt waters, but that doesn't really matter in these considerations. Although there is no threshold number to simplify our task, I do believe that there is sufficient use of these Federal waters for a customary and traditional use determination. In fact, concerning Ninilchik's use of the Kenai River we have a huge amount of information. I'm told that there's more information for this issue than for practically any customary and traditional use determination we or the State has ever made. In total, when I look at the data it seems clear that Ninilchik residents use the Federal waters portion of the Kenai River as well as the Swanson River area and do so in fairly substantial numbers over a long period of time. For me, each of the eight factors in our regulations for making customary and traditional use determinations are either specifically or generally met and they describe an overall pattern of use by Ninilchik residents (FSB 2006a:159–160).

ANILCA provides a priority for the taking of fish and wildlife resources to be used for the customary and traditional personal or family purposes listed in 16 U.S.C § 3113. When making its decision regarding this priority, the Board only needs to “make a reasonable decision even though the information available to it is limited; complete certainty is not required.”⁴ The Administrative Procedure Act requires all Board factual determinations to be supported by substantial evidence.⁵ According to Title VIII of ANILCA, “the underlying substantive policy [is] to promote the subsistence lifestyle.”⁶ Though such lifestyle is comprised of several aspects (physical, economic, traditional, cultural, and social),⁷ all of them depend on a right “to live off the land—to hunt and fish at will for sustenance.”⁸ A restrictive customary and

³ The Board members' justifications were made, beginning with Dr. Kessler (FSB 2006a:159–160), then Mr. Cesar (FSB 2006a:160–161), Mr. Oviatt (FSB 2006b:161), Ms. Gottlieb (FSB 2006a:163–164), Mr. Edwards (FSB 2006a:165–166), and last, Mr. Fleagle (FSB 2006a:166–168). Mr. Oviatt said during the vote that, “I'm going to vote aye. And I was swayed by our Chair, and I'm going to vote aye” (FSB 2006a:169), however, he did not note which part of what the Chair said had swayed him.

⁴ *State of Alaska v. Kenaitze Indian Tribe*, 83 P.2d. 1060, 1068 (Alaska 2004). See also *Ninilchik Traditional Council v. U. S.*, A96-31-CV (JWS) @ 16 (D. Alaska 1996).

⁵ The amount of evidence required by the “substantial evidence” standard is not high – the phrase “substantial evidence” is defined as “such relevant evidence as a reasonable mind might accept as adequate to support a conclusion” (*Richardson v. Perales*, 402 U.S. 389, 401 [1971]).

⁶ *Kluti Kaah v. State of Alaska*, No. A90-004-CV (HRF) @ 13 (D. Alaska 1990).

⁷ ANILCA § 801(1); 16 U.S.C. § 3111(1).

⁸ *Katie John v. U. S.*, No A90-0484-CV (HRH) @ 3 (D. Alaska 1994).

traditional use determination would burden subsistence users with high evidentiary thresholds. Such an approach is at odds with ANILCA and the Federal Subsistence Management Program.

In this case, the Board is reconsidering its decision on FRFR06-02/03/08 in order to clarify for the record the reference to stocks. Some Board members may choose to either provide an improved rationale for their decision or change their decision. While the Board's factual determinations must be supported by substantial evidence, the nature of that evidence is largely left to the discretion of the Board. Consequently, the Board could find substantial evidence of customary and traditional use of a particular fish stock based on the community's demonstrated harvest of a co-resident stock. This is because subsistence users are necessarily opportunistic by nature—they may target one fish species, but will certainly retain and use another if it is caught. Thus, evidence of fishing activities by the community, even in the absence of specific information regarding the species taken, could be sufficient to support a positive customary and traditional use determination for the community for different commonly-utilized stocks. The community need not necessarily provide specific data regarding the take of each species and stock for each drainage or stream system. Indeed, as described above, to require such a high evidentiary burden would, for many communities, effectively contravene the subsistence priority that Congress intended to provide when it passed Title VIII.

Existing Federal Regulations

COOK INLET AREA

<i>Fish other than salmon, Dolly Varden, trout, char, grayling, and burbot</i>	<i>Residents of the Cook Inlet Area</i>
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<i>Kenai Peninsula District—Waters north of and including the Kenai River drainage within the Kenai National Wildlife Refuge and the Chugach National Forest.</i>	<i>All fish</i>	<i>Residents of the communities of Hope, Cooper Landing, and Ninilchik</i>
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<i>Waters within the Kasilof River drainage within the Kenai National Wildlife Refuge</i>	<i>All fish</i>	<i>Residents of the community of Ninilchik</i>
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Proposed Federal Regulations

COOK INLET AREA

<i>Fish other than salmon, Dolly Varden, trout, char, grayling, and burbot</i>	<i>Residents of the Cook Inlet Area</i>
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<i>Kenai Peninsula District—Waters north of and including the Kenai River drainage within the Kenai National Wildlife Refuge and the Chugach National Forest.</i>	<i>All fish</i>	<i>Residents of the communities of Hope and Cooper Landing, and Ninilchik</i>
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*Waters within the Kasilof River drainage All fish
within the Kenai National Wildlife
Refuge*

*Residents of the
community of Ninilchik*

Extent of Federal Public Waters

The areas affected by this RFR include Federal public waters north of and including the Kenai River drainage in the Kenai Peninsula District within the Kenai National Wildlife Refuge (Kenai Refuge) and the Chugach National Forest. Federal jurisdiction includes all non-navigable waters north of and including the Kenai River drainage within the Kenai Refuge and the Chugach National Forest, all navigable and non-navigable waters within the exterior boundaries of the waters north of and including the Kenai River drainage within the Kenai Refuge and the Chugach National Forest, and inland waters adjacent to the exterior boundaries of the Kenai Refuge and the Chugach National Forest (Map 1).

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3. The phrase “Kenai River area” means waters north of and including the Kenai River drainage in the Kenai Peninsula District.

Regulatory History

Brief pre-Alaska statehood regulatory history

Until 1952, freshwater streams in the Kenai Peninsula were open to subsistence fishing, but commercial fishing decimated the salmon populations and salmon stocks began a steady decline. In 1952, all streams and lakes of the Kenai Peninsula were closed to subsistence fishing under Territory of Alaska regulations. Only rod or hook or line were allowed for “personal use” (Fall et al. 2004:25–26).⁹

After 1952, subsistence salmon users in the Cook Inlet Area harvested fish under personal use and sport fish regulations with allocation priorities directed toward the sport fisheries for the Chinook, sockeye, and coho runs and the commercial fisheries for the sockeye, chum and pink runs (Braund 1980:15–18).¹⁰

Brief State of Alaska regulatory history

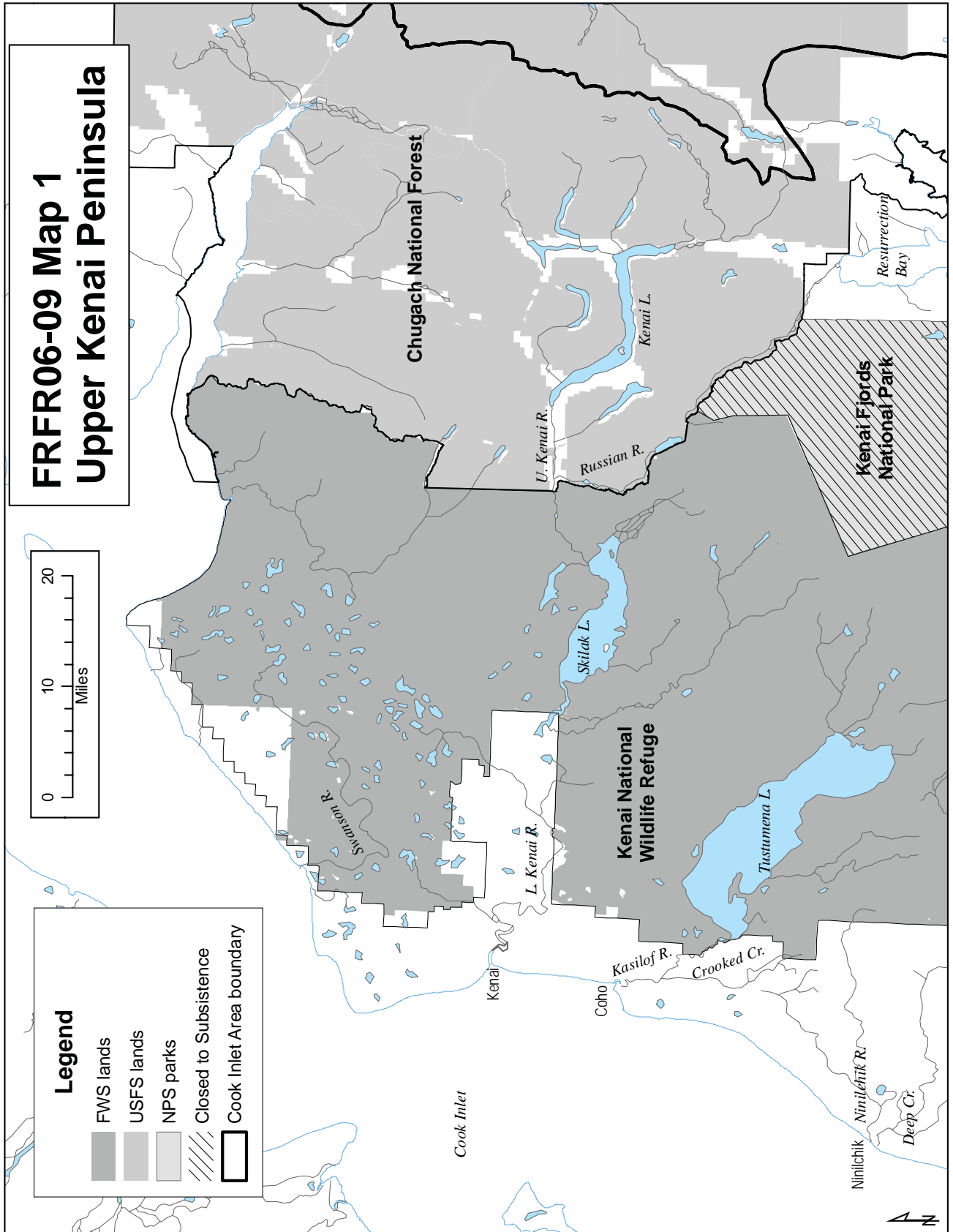
Cook Inlet subsistence fisheries were affected by the passage of the 1978 subsistence priority law. Throughout the 1980s and 1990s, various court decisions affected the opening of different fisheries (Fall and Stanek 1990:7–8, Fall 2000, pers. comm.).¹¹ The State has classified most of the Cook Inlet Area, including the Kasilof River drainage, as a nonsubsistence area since 1992 (5AAC 99.015(3)). The only State subsistence fisheries in Cook Inlet occur in road-inaccessible areas.

There are three personal use fisheries in Cook Inlet (Kasilof River, Kenai River, and Fish Creek) (Pappas and Marsh 2005). Legal gear for all of these fisheries is dip nets. All of these fisheries are open to all residents of Alaska and require a household permit. All of these fisheries occur in marine and

⁹ See Proposal FP06-09 staff analysis, Appendix B, Table 1 for a summary of the history of Cook Inlet subsistence and personal use salmon fishing regulations.

¹⁰ See Proposal FP06-09 staff analysis, Appendix B, Table 1 for a summary of the major regulatory actions for Cook Inlet subsistence and personal use fishing.

¹¹ See Proposal FP06-09 staff analysis, Appendix B, Tables 2 through 4 for the regulatory history of seasons, methods, and harvest limits affecting the users.



intertidal waters, outside of Federal public lands. These fisheries target sockeye salmon, the species of greatest abundance and with the best stock assessment information. Annual harvest limits for the head of household are 25 salmon and 10 flounder, and 10 salmon for each additional household member. Incidentally caught coho, pink, and chum salmon may be retained as part of the annual limit. For the Kasilof River, there is an additional season for set gillnets. No retention of Chinook salmon is allowed in the Kasilof River dip net fishery, while Chinook salmon may be retained in the Kasilof River set gillnet fishery as part of the annual limit.

The State administers several educational fisheries in Cook Inlet under the provisions of 5 AAC 93.210. Educational fisheries are based upon applications that address standards set out in regulation. Specific provisions for these fisheries have varied, but have allowed permit holders to operate set gillnet gear. The NTC has participated in an educational fishery since 1993. Educational fisheries are also provided to the Ninilchik Native Descendants and Ninilchik Emergency Services (Nelson et al. 1999, Fall et al. 2004). Since 1993, the total annual salmon quota has been 2,000. Of this total, 280 (1993–2002) or 255 (2003–2006) could be coho salmon. The current limit of coho salmon is 255. The full coho harvest is generally not reached, but it was exceeded in 2004. The Chinook limit has been 120–270 from 1993–2005. The current limit of Chinook salmon is 270. The Chinook limit has been exceeded in the past, but not the overall salmon quota. The average total salmon harvest has been 880 fish per year. The largest harvest was 1,508 in 2001 (Gilbertson 2006, pers. comm.).

Federal Subsistence Board regulatory history

In 2001, the Board considered Proposal FP02-11a, submitted by NTC, Stephen Vanek and Fred H. Bahr, that requested a positive customary and traditional use determination for all fish and all shellfish in the Cook Inlet Area for residents of the Kenai Peninsula District. The Board deferred making decisions on the use of fish in the Cook Inlet Area until the completion of a FWS funded study, *Cook Inlet Customary and Traditional Subsistence Fisheries Assessment* (Fall et al. 2004), because the Board felt that historical, contemporary, community and area specific harvest use information was needed to properly analyze customary and traditional patterns of use in the Cook Inlet region.

During the 2001 cycle, there was also a staff analysis for the combined proposals, FP01-13/33, on the customary and traditional use portion for salmon only. The intent was to make a customary and traditional use determination for the other species and begin an analysis of seasons, harvest limits, and methods and means in the following year. At their fall 2000 meeting, the Southcentral Alaska Regional Advisory Council reviewed the analysis of the customary and traditional use of salmon by residents of 29 communities, at that time determined to be rural. However, during their December 2000 meeting, the Board deferred action until after a decision on the Kenai Peninsula rural determination RFR. A decision on the Kenai Peninsula rural RFR was made on June 28, 2001, rescinding the May 2000 decision making the whole Kenai Peninsula rural and reverting to the 1991 rural determinations. During the 2002 regulatory cycle, therefore, the customary and traditional use analysis for salmon was revised to include only communities determined to be rural as a result of the June 2001 RFR decision and an analysis of the use of the other requested fish species was incorporated. A decision on the customary and traditional use of shellfish also was deferred.

In December 2001, the Board also considered Proposal FP02-11b through 14b for seasons and harvest limits for fish harvests in the Cook Inlet Area (FSB 2001:97–105). The Board adopted regulations that would allow the take of salmon, Dolly Varden, trout, and char with seasons, harvests, possession limits, and methods and means that would be the same as for the taking of fish under State of Alaska sport

fishing regulations (FSB 2001:102–105). The modification of the proposal was considered an “interim step” while needed information gathering and further analysis continued (FSB 2001:103).

In January 2006, the Board considered Proposal FP06-09, which was a deferred and combined proposal from the 2002 regulatory cycle: FP02-11a, submitted by NTC, Stephen Vanek and Fred H. Bahr, requested a positive customary and traditional use determination for all fish and all shellfish in the Cook Inlet Area for residents of the Kenai Peninsula District. The Board deferred making decisions on the use of fish in the Cook Inlet Area until the completion of a FWS funded study, *Cook Inlet Customary and Traditional Subsistence Fisheries Assessment* (Fall et al. 2004), because the Board felt that historical, contemporary, community and area specific harvest use information was needed to properly analyze customary and traditional patterns of use in the Cook Inlet region.

At the January 2006 Board meeting, the Board applied the eight factors to determine specific community’s use in Cook Inlet as prescribed in §___ 16 (50 CFR 100.16(b) and 36 CFR 242.16(b)). Those customary and traditional use determinations for Cook Inlet are largely based upon information provided by Fall et al 2004. The Board made a positive customary and traditional use determination for: 1) Hope and Cooper Landing for all fish in the Federal public waters of the Kenai Peninsula District, north of and including the Kenai River drainage within the Kenai National Wildlife Refuge and the Chugach National Forest; and 2) Ninilchik for all fish in the Federal public waters of the Kasilof River drainage. During consideration of FP06-09, both ADF&G and NTC indicated that they could provide additional relevant information; hence, the Board’s portrayal of the current customary and traditional use determinations as “interim.” The *intent* in using the word interim was to “signal to everybody that we’re not done yet, we’re just starting, and that’s all it was meant to do” (FSB 2006b:507–508). The Board decision provided an opportunity to gather more information on the historic and current use patterns on Federal lands and to integrate the two BIA-funded studies (FSB 2006b:500–501).

On November 17, 2006, the Board made a decision on FRFR06-02/03/08,¹² which requested reconsideration of its decision made January 6, 2006 on Proposal FP06-09.¹³ The Board adopted new regulations that added Ninilchik to the communities of Hope and Cooper Landing that have a customary and traditional use determination for all fish in the Federal public waters of the Kenai River area (FSB 2006b).

The Southcentral Alaska Subsistence Regional Advisory Council (SCRAC) did not meet to formulate a recommendation for FRFR06-09, however, the SCRAC considered FRFR06-02/03/08 in October 2006 and voted to support a recommendation adding Ninilchik to the customary and traditional use determination for the use of all fish in the Kenai River area (SCRAC 2006).

New Information Provided to the Board in FRFR06-02/03/08

Two sources of new information were provided in the staff analysis for FRFR06-02/03/08 presented to the Board at its meeting November 16 and 17, 2007 when the Board reconsidered Ninilchik’s customary and traditional use of fish in the Kenai River area.

First, ADF&G provided new information regarding the estimated percentage of Ninilchik households fishing in the Kasilof and Kenai river drainages and the Swanson River (Fall et al. 2006). In 2003, ADF&G Division of Subsistence conducted a survey of 100 randomly-selected year-round households

¹² See FRFR06-09 Threshold Analysis, Appendix B for the staff analysis for FRFR06-02/03/08.

¹³ See FRFR06-09 Threshold Analysis, Appendix C for the staff analysis for FP06-09.

in Ninilchik. Among other questions, they were asked to indicate the locations of noncommercial fisheries in which their members had participated in 2002/2003 and in their lifetimes (Fall et al. 2006:1). The lifetime-use data did not appear in the written report that was produced by Fall et al. (2004) and is supplemental information provided to the Board October 5, 2006 (Fall et al. 2006).

The new ADF&G data from Fall et al. 2006 on the lifetime uses of the Kasilof River drainage/Tustemena Lake area indicated that 30% (estimated 173 households [the confidence interval was not established]) of Ninilchik households had fished some portion of the Kasilof River drainage in their lifetime (Fall et al. 2006)¹⁴. Fall et al. (2006:1) noted, however, that there are limitations to these data and the data cannot be used to infer lifetime uses of Federal public waters. As a result, the new information provided by ADF&G does not provide anything new that would change the Board's decision in January 2006. No further analysis of the Board's decision on Ninilchik's use of the Kasilof (a claim in FRFR06-02) is required since the new information does not provide contradictory information.

The Board determined in January 2006 that Hope and Cooper Landing had a positive customary and traditional use determination for all fish in the Kenai River area. There was no new information provided for Hope and Cooper Landing, thus no further analysis on the Board's decision regarding the customary and traditional use determination for Hope and Cooper Landing (a claim in FRFR06-03) is required.

At the time, the Board found that Ninilchik did not have a positive customary and traditional use determination for the Kenai River area, but as noted previously, this determination was made with the intent of revisiting this determination. The new information from ADF&G provides information on lifetime uses of Ninilchik households of the Kenai River area that contributes to reconsideration of that decision (a claim in FRFR06-08).

Second, NTC provided supplementary, new information regarding NTC's research conducted in 1994 and 1999 (NTC 1994 and 1999) that validated the methodology used by NTC in conducting their research, as well as provided copies of the original individual use area maps and survey responses from their research (Wolfe 2006a; NTC 2006). NTC's new information also does not change the existing customary and traditional use determination for Ninilchik in the Kasilof River drainage, but rather strengthens the Board's decision. NTC does not provide any new information on Hope and Cooper Landing. NTC provided new information on the methodology of their 1994 and 1999 research, maps, and analysis by Dr. Robert Wolfe that could be used by the Board to reconsider the customary and traditional use determination for Ninilchik for the waters of the Kenai River area (a claim in FRFR06-08).

In addition, the Board also heard many hours of testimony from the public, and anthropologists Dr. James Fall, ADF&G Division of Subsistence and Dr. Robert Wolfe of Wolfe and Associates.

Community Characteristics

The only community under consideration in this RFR is Ninilchik. According to the 2000 U.S. Census, Ninilchik had 772 residents. In subsistence use studies conducted on Ninilchik, the Happy Valley census designated place (CDP) was also included, which in the 2000 census had 489 residents (U.S. Census 2001). In 2005, the population of Ninilchik and the Happy Valley CDP were estimated at 785 and 477 respectively (ADCED 2005), indicating only a slight increase in population in Ninilchik and a decrease in the Happy Valley CDP.

¹⁴ All expanded household numbers in this analysis are estimates.

Brief history of Ninilchik

Long-term residents of Ninilchik trace their origins to the descendents of Alaska Natives (predominately Sugpiaq from Kodiak Island) who married Russian American Company employees and settled on the Kenai Peninsula in the Ninilchik area in 1847 (Wolfe 2006a, b); Arndt 1993). The children of these “mixed marriages” between the Russians and the Alaska Natives were commonly called “Creoles” by the Russians (Fall et al. 2004:33). By 1861, Ninilchik had become a Creole settlement because all of the original Russians had died (Arndt 1993:42). The U.S. Census in 1880 enumerated the population at Ninilchik as 53 “Creoles” (Fall et al. 2004:33). During the last 160 years, the Ninilchik population has increased and become connected by marriage and birth with other Dena’ina, Kenaitze, and Sugpiaq (Alutiiq) groups in the Cook Inlet Area. By 2005, from the 53 people counted in 1880, the Ninilchik tribe numbered about 652, of which about 333 members live in the Ninilchik tribal area (Wolfe 2006a) (which includes Happy Valley [Williams 2006]). There is some discrepancy with the 2000 census data, which states that 128 Natives lived in Ninilchik and 46 in Happy Valley (Fall et al. 2004); it is unknown why there is this discrepancy. Population estimates from the Alaska Department of Labor for 2005 were 785 for Ninilchik and 477 for the Happy Valley CDP, for a total of 1,262 (ADOL 2005). The Ninilchik tribal government is the only local government in the Ninilchik area. There is no local municipal government (Wolfe 2006a) other than the Kenai Peninsula Borough.

The original Ninilchik inhabitants came to the Kenai Peninsula and settled within the traditional territory of two Alaska Native cultures and areas used by non-Native settlers. The traditional territory of the Dena’ina Athabaskans, which dates to around 1000 A.D, extends from Kachemak Bay on the Kenai Peninsula, west across Cook Inlet to the Stony River and northeast to the Susitna Basin. The traditional territory of the Sugpiaq (Alutiiq) includes the southern portion of the Kenai Peninsula, bridging the Sugpiaq territories of Prince William Sound with Kodiak Island and the Alaska Peninsula (de Laguna 1934, Krauss 1982, Stanek 1985).

Non-Native settlement of the Kenai Peninsula began in the 18th century with the Russians and the fur trade, and later mining efforts in Kachemak Bay. At the end of the 19th century, commercial fishing brought about new settlements, such as the herring saltery at Seldovia in 1896. The next major non-Native settlement period began during the Gold Rush era at the end of the 19th century.

With the construction of roads and local oil development after about 1950, the population of the Kenai Peninsula increased substantially through in-migration of people born outside Alaska. The Ninilchik area’s population also grew through in-migration, becoming more demographically diverse (Wolfe 2006a). Georgette (1983:183–184) concluded that Ninilchik’s expanding population accounts for an increasing diversity of values, beliefs, and resource harvest and use patterns among its residents. Reed (1985:96) noted that for many long-term Ninilchik residents resource harvesting was an important household economic strategy, but for newcomers resource harvesting was more for recreational purposes. These differences between Ninilchik residents contribute to the lack of a community-wide pattern of resource use, beliefs, and values. For long-term residents, “resource utilization was a tradition and production was family based . . . for others it was productive recreation or . . . leisure time” (Reed 1985:96).

Eight Factors for Determining Customary and Traditional Uses

A community or area’s customary and traditional use is generally exemplified through the eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost,

conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on an application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)).

It is important to note that customary and traditional use determinations are based on the *uses* of the resource and not on the *users*. The Federal subsistence management program applies to Federally-qualified rural users and does not differentiate between Alaska Native and non-Natives.

Long-term, consistent pattern of use, excluding interruptions beyond the control of the community

When making a customary and traditional use determination, one of the factors considered by the Board is a long-term consistent pattern of use, *excluding interruptions beyond the control of the community or area* (50 C.F.R. § 100.16(b)(1)). This is an important point to consider, because interruptions beyond the control of Ninilchik residents could affect their harvest and use of fishery resources in Federal public waters. First, subsistence fishing in the freshwaters of the Kenai Peninsula was prohibited from 1952 until the Federal Subsistence Board created a subsistence fishery in 2002 which mirrored the State sport fishing regulations. Second, since statehood, legal availability of fishery resources in Federal public waters has been defined by State sport fishing regulations, and these regulations do not provide for harvest of all species or harvest by traditional methods and means.

Brief history of fishing on the Kenai Peninsula

In 1878, the first commercial fish packing operation was established at the Kenai River and the first canneries were established in the 1880s. The fur trade had collapsed, the Russian era had ended, and more American non-Natives had moved in. Many Dena'ina fished fall runs of coho salmon up-river along the Kenai and Kasilof river drainages at traditional settlements like Stepanka at Skilak Lake in the Kenai River drainage or camps along the Killey and other tributary rivers (both Skilak Lake and the Killey River are within the Kenai Refuge). The gold rush in the late 1890s brought the first major in-migration of Euro-Americans to the Kenai Peninsula with settlements created at Kenai, Knik, and Hope. With the arrival of the Euro-Americans came disease, which caused declines in the Dena'ina population. In the early 1900s, the annual subsistence cycle of the Dena'ina included commercial fishing in the inlet and the mouth of the Kenai River during the spring and summer, and going up-river in the fall to harvest the fall run of cohos, fish for freshwater fish, hunt moose, and trap furbearers. This continued until the 1940s with the creation of the Kenai National Moose Range. In the early 1940s, many Dena'ina continued their traditional pattern of going to the Stepanka camps. By this time, the Dena'ina population had been so decimated by disease that most Dena'ina were predominantly (but not exclusively) in Kenai (Fall et al. 2004:16–20). Some have argued that the Dena'ina—the Kenaitze—who lived in the Kenai Peninsula were not related to those who settled in Ninilchik. There were Kenaitze who married into families in Ninilchik as documented in public testimony (FSB 2006) and in *Agrafena's Children*, a history of

Ninilchik's families, where reference is made to the intermarriage between Ninilchik and Kenai people, and the intermingling of families (Leman 1993:576).

In the 1970s, land claim hearings were held attesting to traditional uses of lands and cabins along the upper Kenai River, and fishing between the Kenai River and Tustumena Lake into the mid-1940s (Fall et al. 2004:22). In 1941, the Kenai Moose Range was established and only those who had permits could use the cabins previously built by trappers and subsistence fishermen. As noted by Fall et al. (2004:22), "Despite these Federal rules, Alaska Natives continued their annual trapping, hunting, and fishing activities based from their ancestral locations." Homesteaders arrived in the Kenai Peninsula, including the Ninilchik area, in the early 1930s, 1940s, and after World War II and commercial and subsistence fishing became important aspects of their annual cycle. In freshwater, gillnets and seines were used in the Kenai, Skilak, and Tustumena lakes to harvest lake trout, grayling, whitefish, and char. Trappers in the upper Kenai River area maintained gillnets in the upper Kenai and caught salmon and trout. Other uses mentioned included taking coho salmon through the ice in the winter and steelhead below Skilak Lake in the late 1940s and early 1950s (Fall et al. 2004:20–21). Andrew Berg, who lived from 1869 to 1939 and was a guide on the Kenai Peninsula, documents his use of subsistence resources including harvesting trout in Tustumena Lake and Dolly Varden, salmon, and whitefish at the mouth of Indian Creek (in the Kenai Refuge draining into Tustumena Lake) (Cassidy and Titus 2003).

In 1952, gillnets were made illegal in many freshwaters, thus the Kenai Peninsula Dena'ina ceased using gillnets in the fall occupation at their upriver sites. The traditional Stepanka fishery (Skilak Lake) that had been a traditional, long-standing source of salmon for the Dena'ina (Kenaitze) Indians was closed. As a result of this closure, snagging became the primary harvest method. By 1973, snagging had become illegal. Local residents turned to sport fishing without snagging, and continued to fish the beaches of Cook Inlet with gillnets in the subsistence fishery. In the 1970s, sport fishing had grown and the Kenai had become a favorite spot for sport fishing. By the early 1980s the Alaska Board of Fisheries added more restrictions on subsistence and personal use fishing along the Cook Inlet beaches, closing beaches to subsistence gillnetting. By the mid-1990s, only two personal use fisheries remained at the mouth of the Kenai and Kasilof rivers (Fall et al. 2004:22–23; 30). Regulations relating to areas, seasons, and methods have changed consistently over the past 54 years, and have become more restrictive. The changing regulations have affected Ninilchik's access to fish resources over time and have encouraged changing and rather opportunistic approaches towards harvesting subsistence resources. For example, in the case of salmon, as conditions have changed, residents have done whatever they can to obtain salmon—trade it, buy it, or harvest it themselves under various regulatory regimes (Georgette 1983:186–187).

Other historic evidence of use of fish by the Dena'ina is provided in a 1975 study of historic sites in the Cook Inlet Region. Nine locations on Federal public lands are described which may have signs of fish camps or caches (Brelsford 1975:38–65, maps). One of these sites at the Russian River campground in the Refuge was thoroughly investigated and a faunal analysis completed, identifying salmon and other fish bones used by both the Riverine Kachemak and Dena'ina peoples (Corbett 1999:6).

Leman (1993:3–4) makes a number of references to fishing: outside of present-day Federal public waters, such as a fish trip at Humpy Point south of the Kasilof River (Leman 1993:218); an article about Ninilchik fisherman making fish traps by hand for river fishing (Leman 1993:374); a poem regarding sharing the first Chinook salmon of the year with everyone in the community (Leman 1993:72); and an article referencing how the Ninilchik people traditionally focused on the early-run Chinook salmon (Leman 1993:71). Reference is also made to the fact that Ninilchik residents often walked long distances—one reference to a man walking from Ninilchik to Homer, and another reference to a woman walking 40 miles packing furs from Ninilchik to Kenai (Leman 1993:362). Testimony at the January

2006 Board meeting noted that early settlers would walk long distances to harvest subsistence resources, including fish (FSB 2006).

Some documentation is available on the use of waters in the Kenai Refuge before 1952 from a 1994 Ninilchik subsistence survey, which mapped resource use over an individual's lifetime (NTC 1994). These maps showed use areas for salmon and nonsalmon that covered the entire Kenai Peninsula and represented use in the respondents' lifetime. This research was conducted with 25 NTC households, whose household heads were tribal members. Respondents marked areas used during their lifetime for particular subsistence resources. These maps were combined to create a map with all of the use areas combined.¹⁵ These lifetime-uses present patterns which are similar to those of other rural communities in Alaska in that the use areas are contiguous to the community and accessible by boat and ground travel rather than aircraft, showing an efficiency and economy of effort. Use areas are not always constant and adapt to new transportation networks, i.e., the construction of roads, which can become a more efficient means for accessing subsistence resources (Wolfe 2006a).

Prior to 1952, "active" Ninilchik households reported annual harvests per household as high as 30 chum salmon, 200 coho salmon, 40 Chinook salmon, 100 pink salmon, and 100 sockeye salmon. "Average" households reported harvesting 23 chum salmon, 68 coho salmon, 19 Chinook salmon, 34 pink salmon, and 48 sockeye salmon. Coho have been the most preferred salmon because they dry better and the run occurs when the weather is cooler, there are fewer bugs, and the cottonwood has stopped flying. After restrictions prohibiting subsistence fishing were instituted in 1952, fish harvests for home (subsistence) use decreased substantially.

In 1999, NTC reports that the average harvest for a fishing household in the Ninilchik tribe for the five year period 1996–1999 dropped to 2 chum salmon, 8 coho salmon, 5 Chinook salmon, 3 pink salmon, and 23 sockeye salmon (Wolfe 2006b:6). There are many reasons why the per household harvest of salmon may have decreased, including the prohibition of subsistence fishing in 1952, increasing population, influx of sport fishermen, increasing participation in a cash economy, and commercial fishing. ADF&G, Division of Subsistence, conducted studies in the 1980s of Ninilchik families, which documented the efforts made by families to procure salmon in the absence of stable subsistence fisheries and their difficulties harvesting adequate supplies of salmon. The case studies showed shifting harvest techniques from year to year, responding to changing restrictive regulations while at the same time competing with thousands of recreational visitors to the Kenai Peninsula. Adaptive strategies included commercial fishermen retaining fish from their commercial catch for home use, and some families participated in the State personal use dip net fishery. Some families also fished outside of the legal regulations. Fish also were obtained through educational fisheries (Georgette 1983).

In 2002/2003, Fall et al. (2004) conducted a survey of 100 households selected at random, constituting a 17% sample of the 577 known permanent households in that community. Based on the survey data, Fall and his co-authors at ADF&G Division of Subsistence described the community's pattern of use in terms of percentage of households. Community estimates were made using the findings from the random sample, expanding them to account for that portion of the community that was not surveyed. Thus, 1 surveyed household constitutes 1% of the sampled households and represents an estimated 5.77 households (1% of the total households, which equaled 5.77). As it pertains to harvest estimates, as an example, if the total number of moose harvested by the surveyed household equals 3, then the estimated community harvest would equal 17.31 (3 x 5.77). This method of expansion is used frequently in

¹⁵ This technique of gathering information on the use area of a community is also used by ADF&G Division of Subsistence (Wolfe 2006a).

analyzing survey results, and is the standard method of ADF&G Division of Subsistence in describing community harvest patterns. This method was also used in Fall et al.'s 1998 research in Ninilchik (Fall et al. 2000).

The following discussion uses percentages from the expansion of the sample survey data in order for the sample data to represent the whole community. Percentage figures are followed by the estimated number of Ninilchik households each percentage figure represents. In surveys conducted in 2003 by Fall et al. 2004, the 100 randomly selected year-round residents were asked: "Have members of this household ever participated in any of the following fisheries?" Included in the list were commercial, subsistence, personal use, and sport fishing. The locations were open-ended. If respondents responded yes, they were then asked where the harvest occurred, if the use was frequent (just about every year), intermittent (on and off over the years), or infrequent (one or two years only) and what was the average harvest for home use (Fall et al. 2004: Appendix A: page 20). Responses were then grouped and coded into Kasilof River drainage, Kenai River Drainage area, and Swanson River area. Fall et al. (2006:2) noted that the study findings for the Kenai River area are those portions "within the outer boundaries of the Kenai National Wildlife Refuge or the Chugach National Forest."

Federal Public Waters: According to the findings in Fall et al. (2006), 28% of Ninilchik's households (an estimated 162 households out of a community total of 577 households), have fished at some point in their lifetime in the Federal public waters of the Kenai River area or the Swanson River area. Of these estimated 162 households, 17% (98 households) of the community, reported frequent use, "about every year" of Federal public waters. Sport fishing or ice fishing accounted for all of this use (**Table 1**).

Federal Public Waters of Kenai River Area: Of the Federal public waters of the Kenai River area, 21% (an estimated 121 households) of the 577 households of the community of Ninilchik, said they had fished in these waters at some point in their lifetime. Frequent use "about every year" of Federal public waters was reported by 13% (an estimated 75 households) of the community. Sport fishing or ice fishing accounted for all of this use. Another 4% (an estimated 23 households) of the 577 Ninilchik households reported intermittent use of the Kenai River ("on and off over the years") and 4% (an estimated 23 households) reported infrequent use ("1 or 2 years") (**Table 1**).

Federal Public Waters of the Swanson River Area: Thirteen percent (75 households) of the 577 households of the community of Ninilchik reported some use of the Swanson River area. "Frequent use" was reported by 10% (an estimated 58 households) of the 577 households of the community of Ninilchik (Fall et al. 2006:5) (**Table 1**).

Lifetime use data for Hope and Cooper Landing was collected, but has not been tabulated by ADF&G, Division of Subsistence, although the questions were asked in their survey conducted in 2000 (Fall et al. 2002).

Ninilchik's percentages of lifetime use of the Kenai River area are consistent with other research conducted in Alaska. In 1992 and 1993, ADF&G, Division of Subsistence, analyzed 1988 Tongass Resource Use Cooperative Study (TRUCS) data and made intensity of use maps as part of the Tongass Subsistence Studies project. In TRUCS, about 1450 households living in 30 Southeast Alaska communities were interviewed. Respondents were asked to draw lines on mylar maps showing where they hunted, fished, or gathered during their residence in the community; mapping was done by species or resource category. In the 1992 and 1993 analysis, subsistence use was categorized on these maps according to the percentage of households that used an area (by species or resource category) during the time they lived in the study community. The analytic maps provided a measure of intensity of use based

Table 1. Characteristics of sampled Ninilchik households that have ever fished in Federal public waters of the Kenai River area¹ or Swanson River areas.

	Kenai River area	Swanson River area	Any Federal public waters
Number of households in random sample using areas ²	21	13	28
Total number of Ninilchik households	121	75	162
Percentage of all Ninilchik households ³	21%	13%	28%
Percentage of users with “frequent use” ⁴	60%	75%	62%
Total number of Ninilchik households	75	58	98
Percentage of all Ninilchik households ³	13%	10%	17%
Percentage of users with “intermittent use” ⁵	20%	8%	15%
Total number of Ninilchik households	23	6	23
Percentage of all Ninilchik households ³	4%	1%	4%
Percentage of users with “infrequent use” ⁶	20%	17%	23%
Total number of Ninilchik households	23	12	35
Percentage of all Ninilchik households ³	4%	2%	6%

Source: Adapted from Fall et al. 2006:6.

¹ Federal public waters within the Kenai Refuge and Chugach National Forest including the upper Kenai River, Skilak Canyon, Russian River, Kenai Lake, Kenai Lake streams, Kenai Mountain streams.

² Of the 100 households interviewed. This is 17.3% of the study area’s population in 2003; weighting factor=5.77.

³ Total number of Ninilchik households = 577.

⁴ Frequent = “about every year.”

⁵ Intermittent = “on and off over the years.”

⁶ Infrequent = “1 or 2 years.”

on the mapped data provided by respondents. Other research in many Southeast Alaska communities had documented extensity of use. Intensity of use was categorized by less than 1%, 1–5%, 5–10%, 10–15%, 15–20%, 20–25%, and greater than 25%. In general, only a small amount of the total community use area was found to be used by more than 25% of the households interviewed. This research finding was unexpected at the time and may result from a number of characteristics of subsistence harvesting in Southeast Alaska: 1) a good deal of subsistence harvesting is specialized, meaning that not all households hunt seals or deer and not all households catch salmon or halibut, 2) high harvesting households account for a large portion of total fish and wildlife taken for subsistence, and a relatively small number of high harvesting households may account for most of the use of a community’s subsistence use area, and 3) cultural factors may determine geographical use, for example, clan members may mainly harvest in their clan areas or family members may be site loyal and not use the whole of a community subsistence use area (Schroeder 2006, pers. comm.).

Contemporary Ninilchik fish harvests

The history summarized above, ethnographic reports, NTC (1994 and 1999) and Fall et al.’s (2006), lifetime use information indicate that salmon have been consistently used by the residents of the Kenai Peninsula, including Ninilchik, from subsistence, personal use, commercial, or sport fisheries. Their use of salmon is based on three traditions, the uses of fish by the Dena’ina, the Sugpiaq (Alutiiq), and the early settlers and homesteaders. In a 1980 study of the Cook Inlet subsistence salmon fishery, Braund

(1980:79) noted the diversity of users, where a core group with a history of significant use exists in all Cook Inlet communities.

The historic pattern of use of fish resources continues today by Ninilchik residents. A recent ADF&G study documenting resource uses in 1998 in Ninilchik (and Happy Valley CDP) found that 96% of households harvested subsistence resources, with a per capita harvest of 164 pounds. Salmon was a core resource with 26% of the per capita pounds used annually in these households (Fall et al. 2000:137). Ninilchik residents harvested an estimated 45,560 pounds of salmon in 1998 and freshwater fish also were harvested. Nonsalmon fish made up 2% to 30% of the per capita pounds of fish harvested and species other than salmon ranged from 0.5% to 8%. The highest harvests were char (estimated at 699 pounds), of which 665 pounds were Dolly Varden. Trout were also harvested (estimated at 233 pounds) (ADF&G 2001). Georgette (1983:185) noted that Ninilchik residents have found that competing with crowds of nonlocal sport fishermen for Chinook salmon have made harvesting Chinook salmon difficult.

In 2002/2003, ADF&G Division of Subsistence conducted a subsistence use study, *The Cook Inlet Customary and Traditional Subsistence Fisheries Assessment* (Fall et al. 2004), which provided a thorough review and assessment of Cook Inlet's subsistence fisheries, both past and present for Ninilchik (as well as other communities not under reconsideration in this analysis); and documented household use, harvest, harvest locations, and other information pertinent to subsistence fishing in Cook Inlet. In the 2002/2003 study, as in the 1998 study, Ninilchik's uses also included the Happy Valley CDP.

Similar to the 1998 study, salmon was by far Ninilchik's most important fishery resource in ADF&G's 2002/2003 study as well. Salmon contributed about 60% of all fish harvested in Ninilchik. Freshwater fish harvests were relatively small with less than 3% to 8% of the fish harvested. Marine fish, primarily halibut, provided the remainder of the fish harvests (Fall et al. 2004:44–45).

In ADF&G's 2002/2003 study, 69% of Ninilchik household's harvested salmon and 60% fished for nonsalmon in freshwater. The majority of these harvests occurred outside of Federal public waters of the Kenai Peninsula. Of freshwater fish harvested, Ninilchik harvested Dolly Varden, rainbow trout, pike (pike were introduced illegally in the early 1970s in the Soldotna Creek drainage [Nelson 2005, pers. comm.]); and lake trout. Ninilchik households were not reported to have harvested grayling, whitefish, steelhead, and burbot in the 2002/2003 study (Fall et al. 2004:69). Grayling are available in Federal public waters. It was noted in the meeting between BIA and the NTC (Chen 2005) that the use of grayling in Cooper Lake in the Chugach National Forest is occurring today. Burbot has only a limited presence in Juneau Lake (near Cooper Landing) (Nelson 2001, pers. comm.).

A comparison was made by Fall et al. (2004) of the estimated harvests of all fish, as measured in pounds per capita to other recent years for which survey data were available. Estimated harvests by Ninilchik residents in 2002/2003 were similar to 1998, the other most recent study year (Ninilchik: 80.8 pounds in 1998, 81.7 pounds in 2002/2003) (Fall et al. 2004:54). Although there are limitations to using single years' harvest data, it is clear from these comparisons that the community of Ninilchik has a pattern of use of harvesting fish. What is unknown is what effect the prohibition of subsistence fishing has had on Ninilchik's fish harvest.

Seasons of use

Since statehood, salmon season openings have been regulated by the State (see Proposal FP06-09 staff analysis, Appendix B, Tables 2–5 for tables showing the regulatory history of the Cook Inlet Area affecting subsistence fisheries). As discussed in the previous section, these openings reflect the increasing

restrictions due to allocation issues with other users in the Cook Inlet area, particularly the allocation of the runs of Chinook, sockeye, and coho salmon to recreational users.

For the other species, harvests occurred throughout the year according to availability and associated activities, with some species targeted for ice fishing activities in the winter. Three harvest patterns of rainbow trout and Dolly Varden occur: the harvest in the winter months through the ice with rod and reel, the harvest in the summer months in local creeks and lakes, and the occasional harvest such as rod and reel salmon fishing associated with other activities and moose hunting.

Ninilchik households generally prefer harvesting Chinook salmon in May and June, sockeye in June and July, and coho in August. The preference was to harvest Dolly Varden in June through September and rainbow trout were preferred in June and September (Fall et al. 2004:52; NTC 2006). Prior to 1980, Ninilchik commercial fishermen were accustomed to fishing for “subsistence” coho salmon with noncommercial set nets later in the summer or fall. Ninilchik fishermen would participate in commercial fisheries during the mid-summer and then take coho salmon for both commercial and subsistence purposes in late August (Braund 1980:63). The 1978 Management Policy that made it illegal to fish the late coho salmon disrupted an important means of harvesting a subsistence resource. The Alaska Board of Fisheries changed the subsistence season in 1979 to a mid-summer fishery, and local residents were deprived of their customary subsistence fish—coho salmon (Braund 1980:64).

Methods and means

Subsistence fishing is typically characterized by the use of efficient gear, such as set gillnets, operated by family groups in traditional use areas accessible to families (Wolfe 2006*b*). Traditional methods used to harvest salmon by the Dena’ina in the past included dip nets, weirs, basket traps, nets, and spears (Osgood 1937:28–29). The traditional Sugpiaq (Alutiiq) methods included “traps, weirs, spears, hooks, and hook and line, and all were used in streams” (ADF&G 1992*a*: 18). Russell (1994:14) notes that Ninilchik residents used dry spruce as poles in fish traps. Villages also had cooperative nets located at the mouths of salmon streams or other strategic places (Braund 1980:58).

In the historic period, fish were taken with basket traps in the spring or in the winter through the ice with hook and line. Ninilchik residents also remember using fish spears made from straight pieces of wood to harvest fish upstream—but not at the mouth of the stream (Russell 1994:21). Since statehood, the permitted methods of harvest for salmon have been set gillnet and dip nets, with the exception of the fence weir in the Ninilchik educational fishery (Brannian and Fox 1996:10). Salmon retained for subsistence from commercial catches for subsistence purposes are identified as an additional method to obtain fish for home use (ADF&G 1992*b*:18; Fall et al. 2000 and 2004; Braund 1980). Rod and reel and dip net were also used (Fall et al. 2000 and 2004). Georgette (1983) reports that for many Ninilchik residents, fishing with rod and reel is not an efficient way to harvest salmon. Some Ninilchik residents reported never learning to successfully fish for salmon with a rod and reel; others said that they are just not able to catch enough fish with a rod and reel. Others said that using a rod and reel to harvest 30 or more salmon takes too much time. Using a rod and reel to take Chinook salmon and competing with the crowds of nonlocal sport fishermen is also difficult (Georgette 1983:185).

Braund (1980:58) notes that in the Ninilchik area, commercial set net fishermen supplied elderly people with salmon (primarily Chinook and coho) or, in the past, let the elders put their nets on commercial sites during subsistence openings. Current regulations have restricted Ninilchik from fishing with nets for coho salmon. In 1980, commercial fishermen from Ninilchik noted that “the primary subsistence fish were the early Chinook salmon and the late coho salmon (not sockeye, chum, or pink salmon)” (Braund 1980:63).

A change took place in the methods used to procure salmon for use in the home in Ninilchik between a study conducted in 1982 by ADF&G and 1998 by Fall et al. (2000). In 1982, Ninilchik residents primarily obtained salmon through removal from their commercial catches (52.9%); in 1998 this dropped to 23.9%. At the same time, rod and reel harvests moved from last place among gear types from 10.9% to first place at 39.2% in 1998. The percentage of Ninilchik households harvesting salmon with a rod and reel increased from 33.3% in 1982 to 50.5% in 1998, while there was a drop in removal from commercial catches (33.3% to 9.95) and a rise in personal use methods from 16.7% to 24.8% of households. These changes were due to changes in regulations, which have contributed to inconsistent harvest methods by Ninilchik households. The emergence of the personal use dip net fisheries in the Kenai and Kasilof rivers have evolved and become a good method for obtaining salmon for home use (Fall et al. 2000:207).

In Fall's 2002/2003 study, there were two distinct differences in the gear type used to take salmon for home use. In Ninilchik, commercial removal contributed 24.6% of the salmon for home use. Ninilchik had 35.9% of salmon harvested in subsistence/personal use fisheries (of number of salmon), but rod and reel still accounted for the largest portion of the salmon harvest (38.5% by number of salmon harvest) (Fall et al. 2004:50).

Rod and reel and hook and line ice fishing are the current methods for harvesting of the nonsalmon species in freshwater areas, which includes the Kenai River area (Fall et al. 2004).

Areas of use

Significant regulatory actions relating to this proposal include the 1952 action prohibiting freshwater subsistence fishing and the 1977 adoption of the Comprehensive Management Policy for the Upper Cook Inlet creating a priority for early Chinook and late coho stocks to recreational fishing. These actions ended the use of freshwater areas and more desirable stocks that had been used previously for the subsistence harvest of fish. Building the Sterling Highway to Homer in 1951 and the increasing population on the Peninsula were likely factors in these decisions (Braund 1980:15, Reed 1985:69).

Regulatory actions in 1952 prohibited subsistence fishing except by rod and reel in waters of the Kenai Refuge and the Chugach National Forest. In addition to freshwater sport fisheries, Ninilchik residents have had opportunities in marine waters, including subsistence net fisheries for late coho salmon until 1978, homepack from commercial harvests, personal use fishing with dip nets at the mouths of some rivers since 1981 and with gillnets since 1985, and educational fisheries. The rapid growth of the Kenai Peninsula, increased infrastructure, influx of Euro-Americans, construction of roads, as well as regulatory restrictions on subsistence uses have had a significant effect on the subsistence use patterns of Kenai Peninsula communities. Research conducted by Fall et al. (2004) documented fish harvest locations in 2002/2003 for Ninilchik (and other communities not under consideration in this RFR) including specific information regarding fish harvests from Federal public waters (Fall et al. 2004:58–59; 113). Fall et al. (2000) also documented fish harvest areas for Ninilchik in an earlier 1998 study, but not whether or not the harvest occurred in Federal public waters. It should be noted that these two years of data provided similar results, and are likely indicative of recent use patterns of the studied communities (Fall et al. 2004). This information supplements historical information, consideration of the regulatory restrictions, and public testimony. NTC (1999) also provided maps of individual fish harvest areas.

Ninilchik (includes Happy Valley CDP)

Harvest of nonsalmon species by Ninilchik residents generally occur in the lakes, creeks, and rivers near the community or area, unless associated with hunting or other harvesting activities. This pattern of use—where multiple activities occur, fishing for Dolly Varden and rainbow trout, and berry picking while

hunting—is common among subsistence users in Alaska. The largest percentage of salmon harvested by Ninilchik residents are harvested in State managed waters (Fall et al. 2004). Although the majority of fish harvested by Ninilchik residents occurs close to Ninilchik in State waters, this analysis is of Ninilchik uses of fish in Federal public waters and thus focuses on harvests in the Kenai River area. As stated earlier, this analysis is not revisiting the customary and traditional use determination the Board made in January 2006 for the Federal public waters of the Kasilof River drainage.

In the lifetimes of Ninilchik residents, much of the population on the Kenai Peninsula has changed from a large percentage of indigenous people, homesteaders, and commercial fishers, to a population dominated by newcomers who have full-time jobs and are interested in recreational fishing and hunting. Not surprisingly, hunting and fishing subsistence use patterns have changed as well. Long-term Ninilchik residents and their families now live in permanent homes and no longer move seasonally to hunt and fish. Their fish harvests are now generally concentrated close to their homes, particularly when fish are abundant.

As noted above in the discussion of long-term, consistent patterns of use, in Fall's 2002/2003 study, an estimated 162 Ninilchik households had fished in their lifetimes in portions of the Kenai River drainage or the Swanson River area within the outer boundaries of the Kenai Refuge or the Chugach National Forest. Of these 162 households, 73 households used the Kenai River every year, and 56 households used the Swanson River area every year (Fall et al. 2006:5).

Fall et al. (2000:121) conducted a survey in 1998 in Ninilchik that documented general use areas for fish harvests. For the 1998 study, surveys were conducted with 100 households selected at random, constituting a 19% sample of the 527 known permanent households in that community. In 1998, an estimated 2% of Ninilchik households (11 households) harvested salmon in wildlife Unit 15A on the Kenai Refuge, 3% (16 households) in Unit 15B on the Kenai Refuge, and 2% (11 households) in Unit 7 on the Kenai Refuge and the Chugach National Forest (Fall et al. 2000). These findings were not specific to drainages, but rather specific to game management units. The 1998 findings were consistent with the findings Fall et al.'s study (2004) done in Ninilchik for 2002/2003. Again, 100 randomly selected households represented a 17% sample of the total community of 577 households (Fall et al. 2004:11). These 100 surveys provided the data from which community estimates were made. In 2002/2003, 4% (estimated 23 households) of Ninilchik households harvested sockeye salmon in the Russian River. An estimated 1% (estimated 6 households) harvested rainbow trout and lake trout in Kenai Lake or Kenai Mountain streams on the Kenai Refuge (Fall et al. 2004:113). These were the only documented uses of fishery resources by the community of Ninilchik in the Kenai River area in 2002/2003.

Chinook and coho salmon and Dolly Varden also were taken from Ninilchik River and Deep Creek, both under State management and close to Ninilchik. Most Ninilchik residents took sockeye salmon from the lower Kenai River, and sockeye salmon were taken from the Kasilof and Ninilchik rivers; all of these fishing locations are outside of Federal jurisdiction (Fall et al. 2004:51, 113).

The 2002/2003 survey also asked respondents to name places that might be a "potential site for Federal subsistence fisheries." Ninilchik households said they would like to see a Federal subsistence fishery in the following locations: 8% (an estimated 46 households) in the Kenai Refuge, 4% (23 households) in the Kenai Fjords National Park (which is closed to subsistence fishing), 4% (23 households) in the upper Kenai River, 3% (17 households) in Skilak Lake, 2% (12 households) in the Chugach National Forest, 2% (12 households) in Kenai Lake, 2% (12 households) in the lower/middle Kenai River, 2% (12 households) in the Swanson Lakes, and 1% (6 households) each in Johnson Lake and the Russian River (Fall et al. 2004:140).

As noted, NTC conducted research (unpublished) of select NTC members' subsistence uses of fish and wildlife in 1999. NTC conducted face-to-face household surveys in 1999 to collect information on wildlife use patterns of 20 randomly selected Ninilchik tribal member households out of an estimated 61 households.¹⁶ Respondents were asked to draw areas used for subsistence harvests such as Chinook salmon, other salmon and nonsalmon fish during the last five years (1995 through 1999). The methods used for mapping subsistence uses were consistent with other ADF&G subsistence research (Wolfe 2006a, b). Of the surveyed households, the Upper Kenai River/Kenai Lakes were used by 32% to harvest salmon, 28% to harvest nonsalmon fish, and 16% to harvest Chinook salmon. Skilak Lake/Other were used by 20% to harvest salmon, 16% to harvest nonsalmon fish, and 8% to harvest Chinook salmon (Dyrdahl 2005).

Information from NTC presented at the Southcentral Council meeting in October 2005 indicated that Ninilchik tribal members harvest char and trout from Federal public waters, but specific drainages and levels of use were not provided (SCRAC 2005). Public testimony at the Southcentral Council meeting noted that fishing occurred in Skilak and Tustumena lakes and the Swanson River lake system. Trout was the only fish specifically mentioned in the testimony (SCRAC 2005). BIA staff met with NTC in September 2005, to see if additional information could be elicited from the survey regarding specific locations of fish harvests from Federal public waters on the Kenai Peninsula. Fish harvest locations in Russian, Summit and Hidden lakes, Swanson and Kenai rivers in the Kenai Refuge, and trout fishing through the ice were noted (Chen 2005).

Fall et al.'s reports in 2000 and 2004 and NTC 1999 each surveyed the harvests from one year and as such have limitations in determining a consistent pattern of use. However, there was consistency between the amounts reported harvested in Fall et al.'s 2000 and 2004 studies. Council member testimony presented at the October 2006 Southcentral Alaska Regional Advisory Council meeting in Homer noted that the Kenai River was preferred over the Kasilof River prior to the prohibition of subsistence fishing in 1952 because the Kenai River is slower moving than the Kasilof River and therefore easier to poll up (SCRAC 2006). Fall et al.'s research, NTC's research, and public testimony (SCRAC 2005, 2006 and FSB 2006), combined with the lifetime use data from Fall et al. 2006 all indicate some level of use by Ninilchik residents for harvesting fish in the Kenai River area. The data does not indicate that the Kenai River area has been a primary fishing location, but only that the Kenai River area has been used by Ninilchik residents both in the past and currently.

While Ninilchik's harvests are lower in the Kenai River area than in other areas closer to their community, it has been noted (in a legal opinion stated in a letter to the State of Alaska from the Secretary of the Department of the Interior) that there are no "unimportant" subsistence uses (USDOI 1986: 6-7):

Section 803 [of ANILCA] defines 'subsistence uses' to mean 'customary and traditional uses. . . of wild, renewable resources,' and Section 804 requires that 'nonwasteful subsistence uses' be given a preference over other uses. The plain meaning of these provisions dictates that all 'subsistence uses' as defined in Section 803 qualify for the Section 804 subsistence preference. To the extent that a particular population is relatively unimportant for subsistence purposes, this should be reflected in relatively low customary and traditional use of the population. Yet, however low the customary and traditional use might be (i.e., however 'unimportant' it might

¹⁶ The estimate of NTC households with NTC members is based on the number of households with an Alaska Native member cited in the U.S. Census in 2000. The census was conducted the year after the NTC research and could be slightly greater or less.

be), Section 804 requires that the opportunity to make the use be given an absolute priority over nonsubsistence uses.

Handling, preparing, preserving, and storing

Traditional fisheries provide the opportunity for the efficient harvest of a sizeable volume of fish that may be cut, dried, and smoked by the family (Wolfe 2006b). Traditional methods of processing and handling salmon included drying, smoking, fermenting, and storing in oil (Osgood 1937:42). Three of these methods, drying, smoking, and fermenting, were also mentioned in the 1979 survey of Cook Inlet subsistence permit holders (Stanek 1980:11).

Traditional Sugpiaq (Alutiiq) methods most commonly used to preserve salmon are drying and smoking. Women gathered driftwood from the beach for smoking fish (Russell 1994:13). Ninilchik residents use rotten spruce wood to smoke fish because rotten wood loses the strong flavor found in living trees. Drift cottonwood also is commonly used to smoke fish because cottonwood found on the beach is “clean,” without sap, and contains salt, making it a preferred wood for smoking. Mountain alder also is used for smoking fish. Spruce poles with their bark removed are used as racks for drying fish (Russell 1994:14–18). Other uses described are salting, pickling, canning, freezing, and eating the fish fresh (Stanek 1980:11).

Reed (1980 cited in ADF&G 1990:14) noted that Ninilchik residents smoke and can Chinook and sockeye salmon. Chinook salmon are considered superior for preserving because they are firmer and more oily, making them ideal for smoking and preserving (Georgette 1983:178–179).

The preferred and most commonly used method to preserve salmon in Ninilchik households according to the 2002/2003 ADF&G study was freezing (79% of households). Smoking and canning/jarring salmon were methods used by 53 and 58% of the community respectively. Pickling (17%), eating fresh (11%), salting (10%), drying (5%), and kippering (2%) were also methods used for preserving fish (Fall et al. 2004:115).

Handing down of knowledge of fishing

The Alaska Board of Fisheries, in compliance with an Alaska Superior Court order, established educational fisheries in the communities of Kenai in 1989 and in Ninilchik in 1993 (Fall et al. 2004:30). This permit allows Alaska residents accompanied by a NTC member to participate in this fishery (Brannian and Fox 1996:10). This educational fishery allows participation of some subsistence users in the Chinook and coho salmon harvests (Nelson et al. 1999:160). One purpose of the educational fisheries is to allow the handing down of traditional knowledge, as well as a way for obtaining subsistence fish. Since 1993, the total annual salmon quota has been 2,000. Of this total, the current limit of coho salmon is 255. The average total salmon harvest has been 880 fish per year (Gilbertson 2006, pers. comm.).

Sharing

Subsistence foods harvested within a household are commonly shared with other households in the extended family, according to local customs and traditions. Alaska Native groups like the NTC expect parents to provide subsistence resources to the young children. In turn, when the children are old enough, they are expected to work with parents harvesting and processing subsistence foods. Children grow up, marry, and continue these relationships with their families. As the parents age, the children then care for them and share the resources they harvest. Subsistence roles and social responsibilities evolve over time. The traditional system of harvesting and then distributing subsistence resources helps support the

network of families that make up the larger community. Networks of giving and receiving bind the family members together as well as bind the larger community (Wolfe 2006b:8).

Distribution and sharing of fish and wildlife resources among households occurs often in Ninilchik, though not in large quantities because of the scarcity of resources (especially large mammals). Georgette (1983:186) noted that several households interviewed in her research said they share subsistence resources with friends or neighbors who do not have time or equipment to harvest it themselves. Fish are shared more frequently than large mammals because of the scarcity of large mammals, which are only shared among close relatives. One long-term household said they distribute the first salmon of the season to friends and family; another household said they give away a lot of salmon to their older relatives. Others who were interviewed said they share subsistence resources with others if they think they need it. Leman (1993:72) cited a poem about the long-term residents' tradition of sharing the first Chinook salmon of the season with everyone in the community of Ninilchik.

Reliance upon a wide diversity of fish and wildlife resources

Ninilchik residents rely on a wide diversity of fish and wildlife resources. The average number of wild resources used by Ninilchik households was 8.6 in 1998. This is consistent with uses of other communities on the road system in the area such as Cooper Landing (8.3) and Hope (9.1), but is greater than in Kenai in 1991 (6.1) and 1993 (7.1). These uses are reflective of a heterogeneous community that is comprised of long-term residents and newcomers and a community that does not harvest marine mammals. In 1998, Ninilchik residents harvested 164 pounds per person of subsistence wild resources for home use (Fall et al. 2000:245). The pounds per person harvested are greater than other rural communities in the area such as Hope with 111 pounds per person harvested and Cooper Landing with 92 pounds per person harvested (Fall et al. 2000:242).

Effect of the Proposal

The effect of this request for reconsideration if the Board were to reverse its November 17, 2006 determination, would be to remove Ninilchik from the list of communities eligible to fish under Federal Subsistence Management regulations in the Federal public waters of the Kenai River area.

OSM PRELIMINARY CONCLUSION

Oppose FRFR06-09.

Justification

In January 2006, the Board applied the eight factors, considered the recommendations of the SCRAC, and heard public testimony to make customary and traditional use determinations for all fish in the Cook Inlet Area. During consideration of Proposal FP06-09, both ADF&G and NTC indicated they could provide additional information of relevance; hence, the Board's portrayal of their customary and traditional use determination made in January 2006 as "interim."

The original proposal analysis of FP06-09 was supplemented by new information contained in the staff analysis for RFRF06-02/03/08. The new information regarding lifetime uses by Ninilchik residents was provided by ADF&G (Fall et al. 2006). Fall et al.'s (2006) new information indicated that 28% of Ninilchik households (162) had fished in their lifetimes in the Federal public waters of the Kenai River or Swanson River areas. Data was provided about the frequency of this use: 62% of these households or

17% of all Ninilchik households had fished frequently in the Federal public waters of the Kenai River and the Swanson River area (Fall et al. 2006:5).

The new information provided by NTC (Wolfe 2006a, b) largely addressed questions regarding methodology. The results of the NTC surveys remain unchanged and reflect use by 20 NTC households.

These results largely complement the broader results of Fall et al. 2004 that pertain to historic and contemporary harvest use patterns of the entire community of Ninilchik.

Ninilchik residents have been prohibited since 1952 from subsistence fishing in the Federal public waters of the Kenai Peninsula and as a result their subsistence use of these areas has been interrupted beyond the control of the community. Despite this prohibition, Ninilchik residents have used the Kenai River area under consideration in the contemporary period, as demonstrated by the new information from Fall et al. 2006. This data showed frequent or intermittent lifetime use at the following levels: 97 Ninilchik households (17%) used the Federal public waters of the Kenai River and 57 households (11%) used the Swanson River area and 124 households (21% of all households) used the Federal public waters of the Kenai River and Swanson River area.

Specific data regarding grayling harvests were not collected in Fall et al.'s 2002/2003 study, but grayling are both available in Federally managed waters of the Kenai River area and commonly utilized by subsistence users. Chen (2005) noted that Ninilchik residents presently take grayling from Cooper Lake in the Chugach National Forest. Moreover, as previously discussed, it is well established that Ninilchik residents take other species throughout the Kenai River area. Consequently, it is reasonable to conclude, based on the available information on grayling use, the opportunistic nature of subsistence, and the demonstrated history and scope of fishing activities by residents of Ninilchik residents, that Ninilchik residents have customarily and traditionally used grayling in this area.

Ninilchik residents have demonstrated fulfillment of all of the eight factors determining customary and traditional uses and should have a positive customary and traditional use determination for the Kenai River area.

The staff analysis for FRFR06-02/03/08 provided all available information concerning Ninilchik residents' use of fish in the Kenai River area. This information, supplemented by testimony from the public and Dr. Robert Wolfe at the Board meeting November 16 and 17, 2007, provided a sound basis for Board decision making.

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