Kenai National Wildlife Refuge
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COMPATIBILITY DETERMINATION

The National Wildlife Refuge System Administration Act of 1966, as amended (16 U.S.C. 668dd-668ee) states that "The Secretary is authorized, under regulations as [s]he may prescribe, to – (A) permit the use of any area within the [National Wildlife Refuge] System for any purpose, including but not limited to hunting, fishing, public recreation and accommodations, and access wherever [s]he determines that such uses are compatible' and that "… the Secretary shall not initiate or permit a new use of a refuge or expand, renew, or extend an existing use of a refuge, unless the Secretary has determined that the use is a compatible use and that the use is not inconsistent with public safety." A compatible use is defined as "A proposed or existing wildlife-dependent recreational use or any other use of a national wildlife refuge that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the national wildlife refuge." The compatibility determination is to be a written determination signed and dated by the Refuge Manager and Regional Chief of the National Wildlife Refuge System, signifying that a proposed or existing use of a national wildlife refuge is a compatible use or is not a compatible use.

Applicable compatibility regulations in 50 CFR Parts 25, 26, and 29 were published in the Federal Register October 18, 2000 (Vol. 65, No. 202, pp 62458 – 62483).

Use: Fishing

Refuge: Kenai National Wildlife Refuge

Establishing and Acquisition Authorities: The Refuge was first established as the Kenai National Moose Range by Executive Order 8979 on December 16, 1941. The boundaries were modified, purposes expanded, and name changed to Kenai National Wildlife Refuge under the provisions of the Alaska National Interest Lands Conservation Act (ANILCA) on December 2, 1980 (Public Law 96-487 Stat. 2371).

Refuge Purposes: The Executive Order purpose was primarily to "… protect the natural breeding and feeding range of the giant Kenai moose on the Kenai Peninsula, Alaska…". ANILCA purposes for the Refuge include: "(i) to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to moose, bear, mountain goats, Dall sheep, wolves and other furbearers, salmonids and other fish, waterfowl and other migratory and nonmigratory birds; (ii) to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats; (iii) to ensure to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity with the refuge; (iv) to provide in a manner consistent with subparagraphs (i) and (ii), opportunities for scientific research, interpretation, environmental education, and land management training; and (v) to provide, in a manner compatible with these purposes, opportunities for fish and wildlife oriented recreation." The Wilderness Act of 1964 (Public Law 88-577) purposes are to secure an enduring resource of wilderness, to protect and preserve the wilderness character of areas within the National Wilderness Preservation System,

and to administer this wilderness system for the use and enjoyment of the American people in a way that will leave them unimpaired for future use and enjoyment as wilderness.

Policy (FWS 603 2.8) directs that pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA. The Executive Order purpose to protect Kenai moose, however, is treated as complimentary to the broader ANILCA purpose of conserving fish and wildlife populations; therefore, no special attention is given the Executive Order purpose in this compatibility review process.

Sec. 4(a) of the Wilderness Act provides that the purposes of the Act are to be within and supplemental to the purposes for which national wildlife refuges are established and administered. These purposes are applied to the approximately 1.3 million acres of Congressionally designated wilderness within the Refuge. While these purposes do not apply to the remaining approximately 700,000 acres of Refuge lands that are not designated as wilderness, we must consider the effects of uses on any Refuge lands that might affect the wilderness areas.

National Wildlife Refuge System Mission: The National Wildlife Refuge System Mission is "To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Description of Use: Fishing is one of the most popular recreational activities on the Refuge and takes many forms, from fly fishing from the bank for sockeye salmon at the crowded confluence of the Kenai and Russian Rivers, to casting a fly from a canoe for a rainbow trout in a remote Wilderness lake, to ice fishing for lake trout using bait and a "tip up". Fishing is experienced by the very young to the elderly, from local residents to people traveling from around the world. Some anglers release almost all of their catch while others depend on preserving much of what they catch to eat in the coming months. Fishing occurs in lakes and ponds and rivers and smaller streams using a variety of techniques.

The following are the most commonly sought sport fish species on the Refuge: king (Chinook) salmon, coho (silver) salmon, sockeye (red) salmon, pink (humpback/humpie) salmon, rainbow trout, Dolly Varden, Arctic char, and lake trout. Arctic grayling and northern pike, though not indigenous to the Kenai Peninsula, have become established and are sought by some anglers. Other fishes that may be commonly found within Refuge waters include Arctic lamprey, Pacific lamprey, eulachon (hooligan), longnose sucker, slimy sculpin, starry flounder, coastrange sculpin, ninespine stickleback, threespine stickleback, round whitefish, and occasionally chum (dog) salmon.

The Refuge has about 1,500 miles of streams and rivers, the most notable being a significant portion of the Kenai River watershed which drains about 2,148 square miles from 10 major tributaries. Approximately 54 % of this watershed is within the Refuge. The Refuge also has 808 lakes that are larger than 10 acres in size including Tustumena Lake (72,770 acres) and Skilak Lake (24,696 acres).

Fishing is considered to be part of the Refuge's purposes for providing opportunities for wildlife-oriented recreation, as well as one of the National Wildlife Refuge System's "priority public uses" to provide for fishing opportunities when compatible with refuge purposes. Because of this, the Refuge has worked hard over time to improve facilities and information availability that help facilitate angling opportunities. These efforts are done cooperatively with the Alaska

Department of Fish and Game. Fisheries are managed on the Refuge consistent with a Refuge step-down management plan (June 1995) and ADF&G manages sport fisheries according to regulations developed through a public process, primarily by the Alaska Board of Fisheries. Both the Refuge and State may adopt closures that can impact fishing opportunity. Generally the State will close certain areas for resource reasons, such as to protect spawning fish, while the Refuge may enact temporary closures, such as for safety reasons if a problem bear is routinely found in a popular area. Both agencies have also adopted closures to protect sensitive habitats that have been affected by Refuge users.

The following data have been taken from the statewide harvest survey for waters within and adjacent to Kenai NWR from 1985 to 2005. Sport fishing effort (angler days) during this period averaged 325,295 for the Kenai River, 63,840 for the Russian River, 39,2412 for the Kasilof River, 4,825 for the Swanson River, 5,137 for the Canoe System, 3,439 for Hidden Lake, 2,479 for Skilak Lake, 1,206 for Tustumena Lake. The average for all Kenai Peninsula freshwater was 527,938 angler days, and while there is no absolute correlation, approximately 84% of the Peninsula freshwater is on the Refuge.

The following information has been collected by the Alaska Department of Fish and Game and is based upon extrapolation of numbers presented in bar graphs and is therefore approximate. Sonar counts and sport harvest of early run king salmon on the Kenai River from 1986 to 2005 ranged from approximately 7,000 to 27,000 fish and 1,000 to 15,000 fish, respectively. For late run the estimates include 29,000 to 57,000 and 8,000 to nearly 20,000 fish, respectively. Early run fish are those entering the River before July 1. Most sport caught king salmon are caught downstream of the Refuge boundary; however, the Refuge provides significant spawning and rearing habitat critical for this species.

Sonar counts for sockeye salmon on the Kenai River from 1986 to 2005 range from approximately 500,000 to 1,600,000 fish and harvest averages around 194,000 fish per year. This fishery occurs along the length of the Kenai River with substantial effort occurring within the Refuge. Sockeye salmon returning to the Russian River have averaged between approximately 15,000 and 86,000 fish for the early run between 1986 and 2005, and from approximately 35,000 to 157,000 for the late run. A weir on the Russian River provides these estimates annually. Harvest of the early run has ranged from approximately 11,000 to 154,000 over the same time period and for the late run, approximately 12,000 to over 56,000 sockeye salmon. All of this fishing effort either occurs on the Refuge or within Chugach National Forest. The thread of the Russian River (roughly defined as the middle of the peak current or flow) is the boundary between the Refuge and Forest. Many of the anglers using the Russian River area reach the site by parking on the Sterling Highway side and taking a ferry across the Kenai River to the mouth of the Russian River. This ferry and parking area has been managed by the Refuge under contract for several decades. The facilities here are operated seasonally (roughly Memorial Day to Labor Day) and may support over 50,000 anglers annually.

Coho salmon have only been recently enumerated on the Kenai River with an estimate of approximately 43,000 to 200,000 entering annually between 1999 and 2004. Sport harvest has averaged about 50,000 fish annually since 1986, but has ranged from a low of about 16,000 fish in 1997 to over 85,000 fish in 1994. Coho salmon are harvested from shore and from boat from late July through October and are caught both on and off Refuge.

Rainbow trout catch has increased dramatically over the years on the Kenai River, from about 9,000 in 1986 to nearly 160,000 in 2004; however, the harvest of trout has remained relatively constant at a thousand or so fish, primarily due to conservative strategies that have focused on

catch and release management. Similar trends in catch and harvest have been observed with the Dolly Varden fishery on the Kenai River.

Lake trout, caught from Refuge lakes have averaged approximately 200 to 1,500 per year for Hidden Lake, 50 to 700 for Skilak Lake, and 20 to 450 for Tustumena Lake, from 1987 to 2005.

Within the Swanson River and Swan Lake Canoe Systems, there is an estimated average of just over 4,000 angler days of effort per year (1988 to 2005) with an apparent slight downward trend over time and a harvest ranging from approximately 700 to 5,100 fish per year over time. Coho salmon are also popular sport fish on the Swanson River with an annual harvest between approximately 800 to 6,300 fish, but generally between 2,000 to 3,000 fish per year.

Trends in angler participation are predictably increasing as more people move to or visit the Kenai Peninsula. One study conducted by the U.S. Fish and Wildlife Service's Kenai Field Office examined visitor use at a popular Kenai River boat launch (Jim's Landing) both in 1999 and again in 2004. The results showed a 28% to 34% increase in guided anglers and a 30% to 40% increase in unguided anglers using the area during this five-year period. A new study initiated at the same time, using video counts at the Russian River Ferry crossing, counted 15,424 anglers in boats passing this section of River between June 18 and September 30, 2004; 29% of these were guided anglers; 53% unguided; and 18% unknown. Additionally, the same study revealed 8,218 non-anglers (on scenic float trips) and 1,263 visitors involved in unknown activities during the same time period.

The Refuge limits the number of commercial fishing guides on the Upper Kenai River (from Russian River to Skilak Lake) at no more than 20 and issue 5-year permits via a competitive bid process. These are highly sought after permits and this area of the Kenai River is fished primarily through non-motorized drift boats and rafts. Additionally, any of the approximately 400 current Kenai River guides may receive incidental fishing permits for the Upper Kenai River for up to three trips per year. Most guided anglers practice catch and release for trout and char, but occasionally harvest sockeye or coho salmon when they are available. Below Skilak Lake the Refuge has historically issued permits without limit, and currently upwards of 100 guides may use this area from time-to-time. The outlet of Skilak Lake has become increasingly popular for rainbow trout, but is also good for Chinook, sockeye, and coho salmon, as well as Dolly Varden. Other permits (a dozen or so) are issued to commercial operators to operate elsewhere on the Refuge, such as the upper Kasilof River or within the Canoe Systems.

A variety of categories of fishing occur within the State of Alaska, including sport fishing, commercial fishing, personal use fishing, and subsistence fishing. This compatibility determination only addresses sport fishing done either for recreation and/or food. There currently are no commercial or personal use fisheries on the Refuge, though fish stocks from the Refuge are important to such fisheries. Additionally, federally regulated subsistence fishing is addressed under a separate compatibility determination for subsistence.

Availability of Resources: Administering the Refuge to facilitate the hundreds of fishing guides, and hundreds of thousands of anglers that use the Refuge each year is a monumental task. Refuge management must consider needs for habitat protection, permit issuance, outreach and providing information to the public, facility maintenance (boat launches, campgrounds, access trails, and outhouses), law enforcement, and general safety (bears, parking, boating). The Refuge has been able to respond to the growing interest and participation in Refuge fishing activities through increased staff and funding over time. Currently, however, the trend may challenge the ability of

the Refuge and the State to accommodate the potential increased demand. It is likely that the interest and participation in fishing will continue to increase while Refuge staffing and operational funding may remain stable or decrease. Through management adjustments such a scenario may be acceptable for a time; however, in the long run it would not be. Long-term declines in staff and funding may eventually lead to closing of facilities and perhaps areas, should habitat damage or safety or other resource issues not be manageable within available budgets. Because the use is both a Refuge purpose and priority public use, efforts to find additional resources through partnerships with State agencies and interested organizations, and other innovative ways to address growing management problems, would be undertaken before any significant use restrictions would be imposed.

Anticipated Impacts of the Use: Because of the magnitude of use, fishing on the Refuge results in a large variety of direct and indirect impacts. Many are minor, such as the removal of fish generally from the environment, reducing food availability for bears, mink, otters, eagles, etc. Such removal is considered minor under normal well-regulated conditions; however, it can be a concern if harvest is great in localized areas. It is also important to protect weak stocks of fish to ensure genetic diversity and at times this can be challenging since large amounts of harvest (primarily from commercial fishing) occurs outside of Refuge boundaries and with limited information on potential impacts to rarer species and weaker stocks. Some impacts can be considered moderate, such as disturbance from noise and activity from many thousands of visitors to wildlife during sensitive times of the year (moose calving, bird nesting, etc.); litter; and concentrations of human waste along water bodies where restroom facilities aren't readily available. Some of the impacts can become significant, such as when use levels result in trampled riverbanks to the point that vegetation is killed, the banks become unstable, and are washed away during high water – eliminating valuable habitat especially important to juvenile fish. Additionally, anytime there are high public use levels of any kind, there are related indirect impacts to wildlife, habitats, and other Refuge users. Some of these include such things as collisions with vehicles and wildlife, killing of bears or other wildlife in defense of life or property, accidental wildfires, poaching and other illegal activity, traffic accidents, theft and other crimes against visitors, tree cutting and vandalism of government property, pollution from outboard motor gas or oil or other sources. These indirect impacts are also part of Refuge management programs that address outreach and information transfer, monitoring, search and rescue activities, law enforcement, maintenance, and area/habitat restoration.

Public Review and Comment: This compatibility determination has been prepared while revising the Refuge's Comprehensive Conservation Plan and Environmental Impact Statement. Future revisions can be accomplished outside of this planning process if deemed necessary and would be completed with public notice and involvement. Legal notice of the draft compatibility determination was published in the Anchorage Daily News and the Kenai Peninsula Clarion on February 25, 2007, which initiated a 45-day public comment period. The notice was also posted on a bulletin board at the Refuge headquarters for the same time period, made available starting February 28, 2007 on a list server fws-akrefugescompatibility@lists.fws.gov to 137 addresses, and made available on the Regional Refuge Planning web site at http://alaska.fws.gov/nwr/planning/completed.htm.

Comments on some or all of the (15) compatibility determinations were received from: The State of Alaska, The Wilderness Society, The National Wildlife Refuge Association, Friends of Kenai National Wildlife Refuge, Alaska Trappers Association, Defenders of Wildlife, Kenai Field Office (FWS), and The Humane Society of the United States.

The State of Alaska supported the draft compatibility finding but recommended some changes in the text. Harvest and escapement information has been updated as available. The Wilderness Society and Defenders of Wildlife expressed compatibility concerns associated with fishing activities. Defenders were particularly concerned about wildlife access to riparian areas with heavy concentrations of anglers, and with bear-angler conflicts. The Wilderness Society was also concerned about impacts and felt more monitoring was needed and stated that fishing may not be compatible because of long-term health and viability of the brown bear population.

Kenai NWR does receive intense fishing pressure at a few locations and during specific times of the year, and the impacts associated with this activity are notable; however, the level of impacts occurring, and amount of habitat affected, does not approach the threshold of compatibility. Impacts are being addressed through education, regulation, management changes, and enforcement. The long-term health of the Kenai Peninsula brown bear population is also a consideration for management of many Refuge programs, including fishing. Current evidence points to a stable to increasing brown bear population both on the Refuge and in adjacent areas. Defense of life or property killings of brown bears are reported on occasion incidental to fishing activities but are not a primary factor. Additionally, collaborative efforts between State and Federal agencies to educate the public on how to avoid human-bear conflicts are being implemented. Monitoring of the effectiveness of associated activities is ongoing.

Determination (check one below):

_____ Use is Not Compatible

____X____ Use is Compatible With Following Stipulations

Stipulations Necessary to Ensure Compatibility: The fishing regulations for the Kenai area are some of the most complex and comprehensive for any body of water in the world. These regulations are developed largely by the Alaska Board of Fish through an open public process. The Refuge works with the Board through the Alaska Department of Fish and Game and a Master Memorandum of Understanding. State regulations are always acceptable and facilitated by the Refuge unless they are incompatible with Refuge management plans, goals, or objectives. Refuge Officers enforce State fishing regulations as well as specific Refuge or other Federal regulations. State fishery management is designed to protect, maintain and improve the fish, game and aquatic plant resources of the state, and manage their use and development in the best interest of the economy and well being of the state, consistent with the sustained yield principle. The State's management principle, and resulting regulations, has worked well to sustain area fisheries over time and will likely do so in the future.

Refuge-specific regulations help mitigate indirect impacts from high levels of fishing activity, such as regulations on camping, litter, fires and firewood cutting, etc. Additionally, guides and other commercial operators are issued special use permits that include permit conditions to help ensure overall compatibility and safety of the activity. General permit conditions for Refuge guides and outfitters include stipulations on lawful operations, liability insurance, use reporting, use area requirements – including sanitation, stipulations on structures and fire, archaeological resources, wildlife, and other conditions such as use of aircraft, addressing natural hazards, and limitations on fuel caches, structures, and unattended property. Additionally, guides and outfitters utilizing watercraft have 12 more special conditions of their permits, including limits on motors and boat wakes, required safety equipment, and restrictions on use in some areas. Upper River fishing guides also have additional stipulations to reduce crowding and conflict, reduce

human waste along the River, provide a buffer around nesting sea birds while motoring, giving a right-of-way to the Russian River Ferry, and other protective measures.

Emergency, temporary, and permanent closures of areas are also employed as necessary to protect resources, following the regulatory standards outlined in 50 CFR 36.42. Such closures are used primarily to protect habitat, but also may be used for safety or other administrative reasons.

Justification: Fishing is a component of one of the Kenai NWR purposes, and is a recognized priority public use by law – to be facilitated if compatible. The fishing program at the Refuge is one of the best in the world, in terms of size, opportunity, public interest, and diversity. State and Federal management programs for decades have worked successfully to sustain this quality fishing opportunity. Impacts to other resources and opportunities have been recognized and addressed through regulations, permits, area closures, facility development and maintenance, restoration projects, and other management efforts. Long-term public interest and political support for properly administering the fishing program at Kenai NWR is likely given such support historically.

Signature (Refuge Manager): **/s/ Robin L. West 6/13/07**
Signature and Date

Concurrence (Regional Chief): **/s/ Todd J. Logan 8/14/07**
Signature and Date

Mandatory 15-year Re-evaluation Date: **8/14/22**