Kenai-Russian River Collaborative Public Process

Working Together to Reduce Human-Bear Conflicts

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- **Review this Discussion Guide** to see what types of management actions are being considered for the Kenai-Russian River area and to spark public discussion about what some of the pros/cons of those different options would be.
- **Attend a public forum** on October 25 (Soldotna), October 26 (Cooper Landing) or October 27 (Anchorage) to participate in discussion about management actions that may be proposed for the Kenai-Russian River area. Each evening forum is scheduled for 6:00-9:00 p.m. Location details on project website.
- **Visit the project website** at: https://projects.ecr.gov/kenai-russianriver/
- **Submit a comment via email or mail**: Email your comment to comments-alaska-chugach-seward@fs.fed.us Please put "Kenai-Russian River Comment" in the email's subject line. Or, you can mail a written comment to Jan Caulfield, 114 S. Franklin St., Ste. 203, Juneau, AK 99801
- **Tell people about this public process** and encourage them to become involved.
- **Email the project's facilitator**, Jan Caulfield at janc@gci.net with questions about the public process.

Discussion Guide

This document is intended to help guide discussion during the October 25-27 public forums – and also to stimulate public comments (see ways to comment, listed above). Each major topic area raised by the public during the April 2011 public forums is addressed.

Topic Areas

- Fish Waste Management - page 4
- Temporal (Nighttime) Access Closures – page 10
- Spatial Access Closures – page 13
- Bear Management (Behaviors & Population) – page 14
- Education – page 17
- Regulations – page 20
- Enforcement – page 21
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- Trails & Visibility – page 24

For each topic, the Discussion Guide presents three sections of information:

I. **Summary of public comments** (from April 2011 public forums and comments submitted since that time).

II. **Summary of the work agencies have done to initially evaluate the comments and suggestions** – and considerations to discuss with the public.

Options are being evaluated in terms of effectiveness, feasibility, appropriateness, cost, and other considerations. *For most topics, a preliminary finding or agency recommendation is presented for public response.*

III. **Specific questions to discuss with the public** at the October 25-27 forums.

Topic: Fish Waste Management / Disposal

I. Public Comments / Suggestions (from April public forums and emails)

The wide range of public comments related to fish waste management has included:

- General – Fish waste management needs to be clearly addressed and the public well educated about what is required or recommended.
- Grinder: Pursue mechanical grinder technology; install at location(s) that will be convenient to and used by anglers (e.g. at fish cleaning tables).
- Vendor: Work with vendor/concessionaire to collect fish waste and reuse/dispose; may provide fish cleaning / freezing services; business may be able to use waste profitably and fund their services.
- Facilities: Provide facilities to support fish cleaning and disposal (e.g. fish cleaning house at campground); need water at these locations.
- Fish cleaning tables:
  - Offer more cleaning tables at strategic locations.
  - Specifically, put tables back on the Russian River.
  - Keep tables off of the Russian River.
  - Adjust table locations as necessary for changing conditions (e.g. water flow).
- Manual removal of carcasses: Support this, especially in low water years when carcasses accumulate; requires funding and/or volunteers.
- Fish waste disposal:
  - Return waste to stream system; important nutrients for ecosystem (e.g. rainbow trout productivity).
  - Identify appropriate disposal locations and facilities or infrastructure; coordinate with other agencies and Borough.
  - Consider disposing of waste in-river away from high public use areas (either upstream or downstream), to attract bears away. Several specific locations were suggested.
- Take Out Whole:
  - Asking people to take fish out whole *is not* working – There is concern that many people are not opting to take their fish out whole; or are taking their fish out of the KRRC but are disposing of the waste improperly elsewhere
  - Asking people to take fish out whole *is* working
- Stop/Chop/Throw:
  - Stop/Chop/Throw *is not* working and should be reconsidered – issues with waste size, increases bear interactions with human since bears cannot grab a whole carcass and retreat to forest cover
  - Stop/Chop/Throw *is* working

- Monitoring of fish waste management strategies: It will be difficult to monitor the effectiveness of different fish waste management strategies; many variables (run size, water level).

II. Initial Evaluation of Management Options

Current Fish Waste Management Approach at the KRRC: Anglers are currently asked to take out fish whole and/or gut & gill, and responsibly dispose of carcasses off-site. If anglers prefer to fillet their harvested fish onsite, they are encouraged to take fish to the cleaning tables provided at the confluence and ferry and to chop (into numerous pieces) and throw into fast moving currents (also referred to as "Stop, Chop and Throw"). Infrequently, agencies have manually removed fish carcasses and waste that accumulates along the shore (manual removal was used only one day in 2011 season).

Quantity of Fish Waste to Manage: The estimated annual weight of fish waste generated in the KRRC averages 114,000 thousand pounds (minimum 58,000; maximum 179,000 thousand pounds), based on harvest data from 1991-2010.[3] Approximately 25% of the harvest takes place in the clear waters of the Russian River and 75% on the Kenai River main stem.

Consideration of Marine Derived Nutrients (MDN): Adult salmon returning to spawn transport nutrients from marine to freshwater ecosystems. MDNs provided by returning salmon play an important role in freshwater and terrestrial ecosystem production, as well as future salmon production. Sockeye, Chinook, coho, and pink salmon spawn throughout the Upper Kenai River watershed and contribute a significant amount of MDN (through deposition of eggs and carcasses) to the watershed. The amount of MDN contributed by fish waste generated by the sport and subsistence sockeye fisheries in the Kenai-Russian River confluence area represents a relatively minor component of the overall MDN provided by all species of salmon in the Upper Kenai River watershed, and would not likely be a primary determinant in management decisions regarding fish waste management at the KRRC.

A. Management Options for Further Consideration

In response to public input, the agencies have been evaluating a number of options for management of fish waste (see six options listed below) – and it may actually be most effective to implement a combination of these options in the Kenai-Russian River area. Implementation would likely require additional staffing, new infrastructure, targeted public education, and/or new regulation(s).

[3] These estimates are based on data of the average, minimum and maximum harvests in the Russian and Kenai Rivers (1991-2010), and the assumptions that approximately 10% of fish would be taken out whole and cleaned elsewhere and that each fish cleaned at the KRRC would require disposal of an average of 2 lbs. of fish waste at the area.

Preliminary Finding – Additional efforts are needed for fish waste management at the Kenai-Russian River area to reduce availability of disposed fish carcasses as a potential food source for bears. At this stage in their evaluation, the agencies are most interested in a combination of options for on-site disposal of fish waste, but off-site disposal options are also being considered. However, agencies are eager to hear the public's comments regarding all of the options discussed below – and any additional ideas for fish waste management.

Under any of the fish waste management options being considered, the angler would always have the option of taking their fish away whole, to clean it and dispose of fish waste responsibly (as defined by solid waste standards in local area).

Option 1 – On-Site Grinding and Disposal into the Kenai River

Agencies are investigating options for grinding fish waste on-site with either a hydro-powered or electric grinder, and disposing of the ground waste it into the Kenai River. Considerations include:

- Location of one or more grinders – need to select location(s) with adequate angler access, parking, any necessary utilities.
- Need to determine whether it is better to have central location(s) for grinder(s) where anglers bring their fish to clean it and dispose of waste, or to have staff collect waste from decentralized cleaning/disposal locations and bring it to a central grinding facility.
- Location of grinder(s) or waste receptacles needs to be convenient for anglers, to promote proper disposal. Fish cleaning surfaces would be provided with any grinder or receptacle site to aid in the proper disposal process.
- Possible need for staff to monitor or undertake the waste disposal to ensure nothing goes into grinder that would damage it. Costs of staffing have not been estimated.
- On-site disposal of ground waste (small chopped pieces, but not slurry) into the river would require a permit from the Alaska Department of Environmental Conservation (DEC). DEC is developing a proposal to permit disposal of fish waste in freshwater, but not expected to be available to permit this activity until June 2012.

1A. Hydro-Powered Grinder(s)

- Design work is underway for a floating paddlewheel device to power a grinder.
- The hydro-powered grinder may work well on the Kenai River main stem (e.g., at Schooner Bend, which has existing access road). It would not work well on the Russian River.
- This option may not be bear resistant due to its unenclosed design.
- Cost has not yet been estimated.

1B. Electric-Powered Grinder(s)

- A centralized, enclosed grinding and waste disposal station with electric grinder is being considered.
- Construction cost estimated at $13,000 not including site preparation costs for building installation. Building (e.g., 8x20' metal shipping container) would be needed. Facility would likely need staffing; staffing costs not yet estimated. There would also be increased costs for utilities and long-term maintenance of this new facility.

Option 2 – On-Site Disposal – Manual Carcass Removal

Under this option, a crew would use rakes/shovels to manually push fish waste that has accumulated onshore into deeper, fast-moving water to assist in flushing the waste into the main stem Kenai River (covering the area from the falls down to the powerline, on both sides of the river). Staffing costs would depend upon the number of days/season this is required.

Some management agencies view manual carcass removal as an option that would be used only during a transition to another fish waste management approach, and don't view it as a long-term solution. Others suggest that augmenting the current fish waste disposal practice ("take it out whole", gut/gill only, or "stop, chop and throw") with removal of accumulated waste could be effective. The agencies will discuss this further during development of the five-year action plan, and welcome public comment.

Option 3 – Off-Site Disposal – Potential Fish Waste Utilization in a New Product

Agencies are considering options for transporting fish waste to an offsite location for grinding and disposal at an existing fish waste processing facility or for use in producing another product (e.g., fertilizer). Considerations include:

- Bear-proof fish waste receptacles would need to be picked up at the KRRC and transported daily to off-site facility (less frequently if refrigerated receptacles used). This would affect staffing costs.
- Location of receptacles would need to be convenient to anglers and combined with fish cleaning surfaces to promote proper disposal.
- Waste would need to be sorted to remove non-fish waste items to ensure no damage to grinding equipment. (It is expected that this would be accomplished by the waste processing facility).
- The cost for this option is estimated at approximately $24,000 for transport, grinding and disposal of 114,000 lbs. of fish waste at an offsite facility (average year). Estimate does not include cost of installing collection sites and receptacles, and staff time collecting and transporting waste.
- To create enough volume to make fish waste utilization economical (producing a secondary product such as fertilizer), it would be necessary to combine waste from the Kenai-Russian River with other entities to collect a higher volume.

Option 4 – Offsite Disposal – Solid Waste/Refuse Facility

Under this option, fish waste from the Kenai-Russian River area would be dewatered (drained) and disposed of at the Kenai Peninsula Borough landfill. Considerations include:

- Disposal quantity would be limited to 1,000 lbs. per week (not nearly sufficient as a stand-alone solution for waste disposal. However, this option could be considered in combination with other approaches.).
- Bear proof receptacles / collection site(s) needed.
- Cost for disposal of 1,000 lbs/week is estimated at $612, including transportation. Cost for staffing or contractor to collect and transport waste has not been estimated.

Option 5 – Offsite Disposal – Vendor

Arrange for a vendor to collect fish from anglers on-site (possibly a mobile unit), process and/or store fish, and dispose of waste off-site. Considerations include:

- Uncertain whether a processor would be interested in and able to provide processing services for sufficient quantities to effectively address fish waste management needs. However, this option could be considered in combination with other approaches.
- Convenience for anglers and campers (e.g., freezer storage).
- Need conveniently accessible collection site; parking and crowding considerations.
- The cost for this service would be user-funded; there may be public costs associated with providing collection site location, etc. Costs have not been estimated.

Option 6 – On-Site Processing Facility for Angler Use

Agencies are considering construction of a self-service processing facility for angler use. Freezer storage could also be considered as a service for campers. The facility could be installed on- or off-site. Considerations include:

- Providing a fish cleaning facility could encourage cleaning of fish away from river and proper disposal of waste.
- Disposal of waste generated by the facility would be required, either on- or off-site.
- Facility would need to be located with adequate parking, angler access, and utilities.
- Facility construction cost could range widely, from $25,000 to $2 million, depending upon design and features. Costs would also have to consider cost of waste disposal (e.g., transport and dispose off-site, or grinding/pumping for on-site in-river disposal). Facility would need to be staffed; costs not yet estimated. Utility costs and long-term maintenance costs would also need to be estimated and considered.

B. Options Not Recommended for Further Consideration

Based on evaluation to date, the following options are not recommended for further consideration in the five-year action plan:

- Fish waste management strategies used in 2010 and 2011 are not enough. The amount of fish waste that is still being regularly obtained by bears is a continuing problem.
- Attract Bears Away from KRRC – The agencies discussed a suggestion made by the public to dispose of fish waste at other locations to attract bears away from the highly used Kenai-Russian River area. However, they determined that this could cause public safety and other problems elsewhere and will not further consider this option.

III. Key Questions for Discussion at October Public Forums

- Which of the six options identified for further consideration (section II-A above) do you think would be the most effective on the Kenai and/or Russian River, considering both the sport fishery and the federal subsistence fishery? Why?
- Are there other options you would recommend?
- What location(s) would be best for the option(s) that you are recommending?
- Would you be willing to pay for these types of fish waste management services? If so, how much is reasonable to expect a n angler to pay?

Topic: Temporal (Nighttime) Closures

I. Public Comments / Suggestions (from April public forums and emails)

Comments about temporal closures (closing all access during specified time periods) as a management tool at KRRC included:

- Support considering nighttime closures. The following points were raised by those suggesting that nighttime closures be considered:
  - Times: Consider closing access for human use at 11:00-12:00 pm and reopen between 4:00-6:00 am.
  - Areas: Most comments did not specify which area(s) to close to night access. Several suggested closure only on the Russian River; others suggested closing the south side of the river at night to correspond with the ferry closure.
  - Some comments addressed closing only nighttime fishing; others suggested closing all access during specified night hours.
  - Rationale provided by members of the public supporting nighttime closure: Bears may change use patterns and reduce their day use of the KRRC; reduced risk of encounters with bears at night when visibility is poorer; nighttime compliance with regulations and suggestions for reducing attractants is lower; and fish would move farther upstream and reduce concentration (and angler congestion) at the confluence. Concerns about public, employee and emergency responder safety were also mentioned.
- Oppose nighttime closures. Other members of the public expressed their opposition to nighttime closures as they do not think it would be a necessary or effective tool for reducing human-bear conflicts and would unnecessarily restrict angler and other visitor access to the KRRC and fishery.

II. Initial Evaluation of Management Options

Preliminary Finding – In developing the five-year action plan, the RRICG will continue to evaluate the pros and cons of establishing a nighttime closure to access (not just closing to fishing). No preliminary findings or decisions have been made at this point. More data and analysis is needed regarding potential effects of a night closure, and whether it would be feasible to establish and enforce.

Considerations include:

- Affect on visitor access and use – The agencies are collecting data to estimate how many users would typically be affected if access to the Russian and/or Kenai Rivers was closed during selected nighttime hours. This information is not yet available. Effects on users who enter the Kenai River upstream from the KRRC and float through the area would also need to be considered.

- Potential effectiveness in reducing human-bear conflicts – A nighttime closure would reduce the exposure of humans to bears in low light conditions, which may reduce potential for human-bear conflicts – particularly if instituted in areas with dense vegetation and poorer visibility.

  However, it is uncertain whether and how a nighttime closure would affect bear distribution, behavior and times of bear activity in the KRRC. Some people suggest that a nighttime closure would allow bears to use the closure period to obtain food without human interference, and expect that the bears would leave the area when human users arrived in the early morning. However, this has not been tested and it is unclear whether establishing a nighttime closure would reduce the presence of bears on the rivers during the day.

  If a nighttime closure were to be instituted, it would need to be carefully evaluated under experimental conditions to see what the effects are on both bear and human use and behaviors. Using cameras to document bear activity during day and night hours prior to and during implementation of a nighttime closure may be useful to evaluate its effects.

- Potential affect on fishery – If angler effort were lowered at night (e.g., due to a nighttime closure), it is unlikely the closure would significantly alter when the escapement goal is attained or distribution of fish in the system. In general, it does not appear that adult sockeye salmon migrate primarily at night. Sockeye salmon do not consistently appear in greater numbers at night at the Russian River weir, nor at the Kenai River sockeye salmon sonar site.

- Location - If pursued, a nighttime closure could be applied to the entire KRRC or to selected sub-areas (e.g. only the Russian River from the confluence to the falls).

- Enforcement - If a nighttime closure was instituted, a change in scheduling of enforcement personnel would be required and additional personnel may be needed (costs have not been estimated).

- Timing – If implemented, it would be optimal to set a consistent time for a nighttime closure that would apply during the entire season, to minimize potential for confusion. Timing considerations would include the current patterns of human use (data not yet available), and the optimal timing for meeting the objectives of reducing human-bear conflicts during low light conditions while allowing for early morning access to the fishery.

- Costs – Any additional costs that might be associated with a nighttime closure (e.g. increased public education, increased staff for enforcement) have not been estimated.

- Note that some members of the public recommended a nighttime closure as a means to potentially reduce illegal behaviors (e.g., snagging, camping outside of campgrounds, fires). However, these issues are not related to the objective of the five-year action plan, which is to reduce the potential for human-bear conflicts.

III. Key Questions for Discussion at October Public Forums

- What is your overall reaction to a possible a nighttime closure to all access at the KRRC as a means to reduce the potential for negative human-bear conflicts?
- If you support the idea of a nighttime closure, what dates and hours would you suggest? Why?
- If you support a nighttime closure, do you suggest it apply to the entire KRRC area or just to specific locations? Which locations?

Topic: Spatial Closures

I. Public Comments / Suggestions (from April public forums and emails)

Public comments regarding potential spatial closures to fishing, camping or other uses at KRRC included:

- It is appropriate to close areas as needed to reduce human-bear conflicts or potential for conflicts.
- Alaska Recreation Management (ARM) should be given authority to more readily close an area, if necessary to respond to potential conflict.
- Concern about too-readily closing an area and denying angler/recreation access.
- Media announcements about any closure must be very specific and clear to avoid a perception that entire KRRC area or fishery is closed.
- Specific areas suggested for possible closure included:
  - Cottonwood Hole - heavy consistent bear use; concern that anglers do not manage attractants well at this location.
  - Upper Russian River, between access point 32 and the falls – The trail here is difficult and steep; heavy bear use; fish cleaned and disposed of here are an attractant.
  - Consider closing area between Sportsman's Landing and Jim's Landing to camping, to avoid people fishing right next to campsite.

II. Initial Evaluation of Management Options

Preliminary finding: Based on initial evaluation, it is recommended that agencies continue to close discrete areas only as needed in-season. Decisions to close an area would be made by land management agencies, based on clear criteria and to achieve a specific outcome of reducing human use of areas where the risk of an adverse encounter with a bear is particularly high. The five-year action plan must include a clear procedure for deciding on the need for a closure, with clear criteria.

The agencies do not recommend permanent closures for any specific areas. Closures should be made on an as-needed basis to respond to specific threats.

III. Key Questions for Discussion at October Public Forums

- What is your reaction to continuing to close discrete area to public access in-season, as necessary to avoid human-bear conflicts? (For example, in 2010 and 2011 the forested land along the Kenai River, downstream of the Ferry crossing has been closed to avoid such conflicts).
- Would you suggest other areas that should be considered for in-season closure to avoid human-bear conflicts?

Topic: Bear Management (Behaviors & Population)

I. Public Comments / Suggestions (from April public forums and emails)

The following public comments were provided on management of bear behavior and the overall bear population:

- Information on brown bear population: The public would like to have more information about brown bear population abundance and trends on the Kenai Peninsula, and about the number of bears that utilize the Kenai Russian River area.
- Displacement:
  - Use hazing to discourage bears from frequenting area used intensively by people; discourage daytime use (e.g. rubber bullets).
  - Any displacement should be done by experts; consider use of trained bear dogs.
  - Do not support, or question effectiveness of hazing.
- Relocation and/or removal:
  - Relocate (if possible) and remove problem bears (when necessary). Manage the bears, not the people.
  - Do not favor killing bears as a management measure.
- Hunting: Increase brown bear hunting on Kenai Peninsula; consider overlap in hunting and fishing season; increase hunting in the KRRC.
- Deterrence: Discourage use of gunfire as deterrent; promote use of bear spray, bear flares; make preferred deterrents available on-site.
- Bear Surveillance: USFS should track bear movements and warn people bears are in vicinity.

II. Initial Evaluation of Management Options

A. Management Options for Further Consideration

Preliminary findings – Agencies are preliminarily recommending the following actions regarding bear management at the KRRC:

- Continue to address situations with nuisance, habituated and/or dangerous bears at the KRRC as required. Continue and improve interagency communication and coordinated implementation of agency responses to these situations.
- Efforts to enumerate and identify brown bears using the KRRC should continue, to inform management actions and provide baseline information.
- It is beneficial for agency personnel to keep track of bear encounters and sightings in an attempt to inform anglers in the immediate vicinity of known

activity and to use information for in-season adaptive management (for example, to establish a needed area closure or to address a nuisance or dangerous bear).

- Educational messages must be developed regarding how to respond to bears in the vicinity and regarding bear deterrents that are most appropriate and potentially effective at the KRRC, particularly with regard to the responsible use of firearms and concerns about public safety when visitors to the area use guns to deter bears. Use of deterrents other than firearms should be encouraged.

B. Options Not Recommended for Further Consideration

Based on evaluation to date, the following bear management actions are not considered to be practical or likely to be effective in reducing potential for human-bear encounters at the KRRC:

- Hazing is time and personnel intensive and has a low success rate. Bears can easily move to avoid hazing. Successful hazing of bears would require full-time staffing of qualified personnel.
- Use of trained "bear dogs" would not be appropriate for the KRRC area. Dogs chase the bears, and with several campgrounds and a busy road in the vicinity, the probability is high that bears could be chased into groups of people and/or cause car collisions or other accidents.
- Relocation has been attempted many times to move bears away from problem areas, without success. In nearly all cases, the relocated bear moves into undesirable areas and is subsequently killed. Some bears that have been habituated to human generated attractants in the Russian River area have been killed rather than relocated. However, bears are killed by agency personnel only when a high-risk safety issue has been identified.

Bear Population – Kenai Peninsula and at KRRC – Information to Share

In 1993 the Alaska Department of Fish and Game (ADFG) attempted a population estimate by comparing known densities of bears in Alaska with expert knowledge of bears on the Kenai Peninsula. An estimate of 250-300 bears was based on an assumed density of 20 bears per 1000 km^2 in 13,848 km^2 of habitat. This area did not include much of the land south of Kachemak Bay and Kenai Fjords National Park. (Del Frate, 1993) Managers have maintained that the population has been stable to increasing since and some bears are now occasionally observed from the excluded areas.

ADFG believes that the bear population may have increased from that estimate but does not have any definitive information to produce a new population estimate. The Interagency Brown Bear Study Team investigated new techniques to estimate bear numbers using DNA however cost estimates were never budgeted.

In 2010 the USFWS Kenai National Wildlife Refuge in partnership with the USFS Chugach National Forest proposed and has been working to develop a "grid based"

population estimate across four million acres of the Kenai Peninsula using DNA. Analysis is currently underway and there is not a result to share at this time.

In 2007, 2008 and 2009, ADFG and USFS conducted a pilot study to determine the minimum number of bears using the Russian River area. Samples of hair collected opportunistically from rub trees and vegetation along bear trails provided DNA-based identification of 39 different brown bears that visited the Russian River area during these years. Preliminary DNA analysis indicates that possibly only two individuals used the Russian River area in multiple years, and that most bears were likely transient animals.

Regulation of bear hunting: Specific to the KRRC, all hunting is closed from June 1 to July 31 by Board of Game regulation within 150 yards of the Russian River, from Lower Russian Lake to the confluence. On the Kenai Peninsula in general, ADFG continues to explore ways to maximize bear hunting opportunity. Currently, drawing hunt permits are allocated to "regions" on the Kenai Peninsula. More permits are allocated to areas occupied by humans, and hunters are encouraged to hunt in areas frequented by problem bears.

III. Key Questions for Discussion at October Public Forums

- Open to any additional comments regarding bear management topics that the public would like to offer.

Topic: Education

I. Public Comments / Suggestions (from April public forums and emails)

There is public support to continue and increase education efforts. There are constantly new visitors to educate. Specific ideas included the following.

- One-on-one education is highly valued and thought to be most effective. Ideas suggested:
  - Increase Stream Watch presence as volunteer on-site educators (extended hours, increase numbers, emphasize positive interactions with area users, locate at key access points such as top of stairs)
  - Educate campers at the campground: ARM contact station, campground hosts
  - Increase angler-to-angler education; specifically ask them to spread the word to others on the river
  - More agency educators, that can also enforce if necessary
- On-site orientation session(s) - Require attendance at a KRRC-specific education program (similar to Katmai NP "Bear School") or web-based video.
- Partnerships for education - Provide education materials through partnerships / collaboration with sportsman's organizations, tourism businesses / lodging, Chambers of Commerce, retailers / vendors.
- Web-based Information - Provide more information on the web; link with sportsman's organizations, tourism business, vendors and other websites
- Publications - Magazines (Hunt Alaska; Fish Alaska; Alaska Airlines); newspaper inserts; format on-site publications as "pocket-size"
- Signs –
  - Signs useful; like rhyming signs on stairs
  - Signs not useful
  - Post white-board(s) continually updated with wildlife sightings and status of wildlife activity
- Other education ideas / comments:
  - Publicize Successes - "This is working; help us keep it going"
  - Evening campground programs
  - Concern that AM radio is not effective
  - Use videos / slide shows at high public use areas (e.g. ferry line)

II. Initial Evaluation of Management Options

Considerations:

- A strong and aggressive educational component is needed to complement all of the management strategies that get adopted through this public process. However, the agencies believe that education alone will not sufficiently decrease the potential for human/bear conflicts.
- All public information tools must provide the same key consistent messages.
- Need to provide education about how to appropriately react in case of a bear encounter, and responsible use of bear deterrents such as bear spray and firearms at this high public use area.
- Education efforts should be expanded to anglers that fish upstream of the Kenai-Russian River Complex (to control fish waste that would flow downstream to KRRC).
- **C**osts for the potential education approaches, including staffing, have not been estimated.

A. Management Options for Further Consideration

Preliminary Finding – The following actions (many of which were suggested by the public at the April forums) are recommended as the most effective approaches to enhance the current education tools and delivery. These various public education approaches should be pursued, as funding and staff capacity permits:

- Create an interagency Russian River website that is a comprehensive site for visitor information.
- Enhance one-on-one educational strategy through the addition of onsite interpreters (river walks on scheduled timeframes).
- Enhance peer-to-peer educational strategies (e.g., angler-to-angler).
- Enhance our visitor's guide publication to be concise yet comprehensive. (NOTE: New comprehensive "one-stop" Visitors Guide was distributed to all visitors in 2011, based on recommendations made at the April 2011 public forums.)
- Create an interagency sign plan that is visually appealing and consistent in the KRRC (signs include interpretive, regulatory, safety, and directional).
- Manage staff and volunteer message & delivery through annual interagency collaboration, training, and in-season accountability.
- Boost and manage Alaska Recreation Management (ARM) messaging to visitors through annual interagency collaboration, staff training, and in-season accountability.
- Pursue partnerships to encourage wider distribution of educational messages through the use of traditional and alternative methods (e.g., podcasts, public service announcements, publications, news stories, videos, etc.)

B. Option Not Recommended for Further Consideration

Based on evaluation to date, mandatory attendance at a "Bear School" presentation specific to the Kenai-Russian River area is not considered to be practical, due to the numbers of visitors/anglers and the layout of the area (e.g., no captive audience at any one location, such as a visitor center).

III. Key Questions for Discussion at October Public Forums

- Which are the "top three" public education approaches / tools you think will be most effective.
- How can we increase peer-to-peer education?
- Are there additional ideas for public education that we should consider?

Topic: Regulations

I. Public Comments / Suggestions (from April public forums and emails)

Comments regarding existing regulations at the Kenai-Russian River area included:

- Support the consistent food storage regulations.
- Retained fish regulation is ridiculous; cannot move to land fish and also keep within 12' of stringer.
- Do not over-regulate anglers.
- Prefer education over more regulation.
- Important to have consistency in regulations on different land ownerships.

Suggested additional regulations included:

- Require all backpacks be on backs (not on ground).
- Do not allow coolers on the ferry or on the Russian River.
- Limit the amount of "baggage" brought down to river.
- Require bear-proof storage of any salmon not under directly physical control of a responsible person.
- Require bear-proof storage of any human food not under directly physical control of a responsible person.

II. Initial Evaluation of Management Options

Preliminary finding – It is recognized that some of the management actions included in the KRRC five-year action plan will need to be supported by regulations and enforcement activities. Specific management actions need to be determined before any regulations are considered, adopted or revised for the KRRC area. Discussion of what regulations are needed and warranted on the Kenai-Russian River will occur as the five-year action plan is developed.

Regulations related to land management would need to be promulgated by the agency with management authority over the land area affected. Regulations pertaining to fishery or game management would need to be considered and acted upon by the Board of Fisheries or Board of Game, respectively.

III. Key Questions for Discussion at October Public Forums

- Open to any additional comments regarding regulations that the public would like to offer.

Topic: Enforcement

I. Public Comments / Suggestions (from April public forums and emails)

Comments about enforcement at KRRC recommended emphasizing and increasing enforcement of existing rules. Specific suggestions included:

- Promulgate and enforce regulations to minimize improper handling and disposal of fish, fish waste and human foods.
- Enforce rules in campgrounds; sets expected tone for use of entire KRRC area.
- Increase weekend and holiday enforcement.
- Address unregulated parking.
- Enforce fishing licenses, limits.
- Make penalties substantial, as deterrent.
- Put law enforcement where there are usually bears (e.g. Cottonwood Hole, falls, confluence).
- As alternative to fines, require volunteer service at KRRC.
- Include public in enforcement.

II. Initial Evaluation of Management Options

Public safety and protection of agency resources is an important aspect of management of the KRRC. Federal law enforcement officers from the Kenai National Wildlife Refuge and Chugach National Forest protect visitors, government property and natural/cultural resources on federal public lands. At the KRRC, federal officers respond to emergency situations, violations in progress, and provide investigative support across agency boundaries. State officers from the Alaska State Troopers, Alaska Wildlife Troopers, and River Rangers (Alaska State Parks) also support the public safety and resource protection efforts at the KRRC.

Preliminary finding – It is recognized that the KRRC is a highly used recreation area that warrants a presence by law enforcement personnel. However, resources are limited and it is expected that staffing resources will continue to be limited over the next five years. As a part of the development of the five-year action plan, the agencies will improve coordination of interagency enforcement activities and identify opportunities that could result in a greater level of services between June-September.

III. Key Questions for Discussion at October Public Forums

- Open to any additional comments regarding enforcement that the public would like to offer.

Topic: Infrastructure & Facility Management

I. Public Comments / Suggestions (from April public forums and emails)

Suggested improvements to KRRC infrastructure and facility management related to reducing attractants or potential for human-bear conflicts included:

- Install electric fencing around areas where bears must be excluded (e.g. tent campsites, fish cleaning tables, dumpsters).
- Provide more bear-proof food storage & garbage containers in campgrounds and at dump stations (e.g. Sunrise).
- Provide bear-proof containers for disposal of fish waste; remove/empty frequently.
- Provide or rent out bear-proof containers for retained fish, convenient to the river.

II. Initial Evaluation of Management Options

Preliminary finding – Based on public input, the RRICG discussed a variety of ideas related to infrastructure. Their preliminary findings include:

- Bear-proof food storage and garbage containers have already been installed at the Kenai River ferry and will be installed at all campsites in the Russian River Campground by 2012.
- The USFS and USFWS will communicate with an appropriate vendor to consider providing or renting personal food storage and retained fish containers for use on river.
- In 2012, the USFS will be evaluating the need for campground improvements, which could include access, sites, and/or facilities needed to improve fish waste management (see p. 4).
- Management actions specific to the campground that could be considered in the five-year action plan include:
  - Remove or trim vegetation to increase sight distances for brown bears and humans in the campground and along the fishing trail.
  - Identify areas where habitat enhancement may facilitate the unimpeded movement of brown bears to bypass the campground.
  - Clean fire pits daily.
  - Allow only hard-sided camping vehicles.
  - Redesign the campground to centralize all cooking and garbage facilities.
  - Strictly enforce food-storage regulations.

III. Key Questions for Discussion at October Public Forums

- Are there any other infrastructure needs / ideas related to minimizing human-bear conflicts you would like to suggest for consideration? Any other needs in the ferry parking lot area? Or on the river corridor?
- What are your thoughts about the suggested actions for campground management listed above?

Topic: Trails & Visibility

I. Public Comments / Suggestions (from April public forums and emails)

Suggestions related to trails and visibility at KRRC included:

- Clear vegetation to improve visibility on trails.
- Raise boardwalks to improve visibility and possibly discourage bear use.

II. Initial Evaluation of Management Options

In 2009 and 2010 the USFS did minimal clearing along KRRC trails to increase sight distance. During July 2011, technicians accomplished moderate vegetation clearing which seemed to increase visibility in many areas along the Russian River Anglers Trail from the confluence (access #10) to the white trail (access #32).

Preliminary finding:

- In 2012, the USFS plans to clear more vegetation to increase visibility. The project will begin in early July.
- There is no plan to raise the boardwalks or take other measures to keep bears off of them, but this could be considered in future infrastructure planning.

III. Key Questions for Discussion at October Public Forums

- Did you notice any difference in visibility and your sense of being able to see and avoid bears after vegetation clearing was done in the 2011 season?
- Are there areas along the Kenai River (ferry access) – or other areas at the KRRC – where the vegetation needs to be cleared and visibility improved? If so, where?