

Alaska Sustainable Salmon Fund*
FFY 08 Southeast Alaska Call for Proposals - Summary
September 16, 2008

The Alaska Department of Fish and Game (ADF&G) is issuing this Call for Proposals for projects funded with the Alaska Sustainable Salmon Fund (AKSSF) in Southeast Alaska.

Proposals must address the following AKSSF Goals:

- Goal 1 – Habitat
- Goal 2 – Stock Assessment
- Goal 3 – Salmon Management

The list of “AKSSF Goals and High Priority Information Needs/Actions” provided with this call was developed by ADF&G with the assistance of a multi-agency Science Panel and regional gap goal groups that advised the Science Panel.

This notice is a call for potential projects to fund through the AKSSF, not an offer of a contract. Funds are available for expenditure beginning no earlier than July 1, 2009 (unless justification for a start date no earlier than May 1, 2009 is provided in the project proposal), and may be expended through March 31, 2013. Projects that continue work previously funded by AKSSF may not contain a start date prior to when the previous project funds will be completely expended.

Congress mandated a 33% non-federal match requirement for the FFY 08 PCSRF appropriation. Non-federal match of 33% must be documented for each project proposal submitted for funding under this award. Please refer to the match guidance document available with this call for important information regarding the required match.

Directions

- **The deadline for proposal submission is 12 noon, October 31, 2008.** Proposals will not be accepted after the deadline or considered in this funding cycle.
- **To submit your proposal:**
 1. You are strongly encouraged to submit your proposal electronically by submitting them to Jan Caulfield, AKSSF facilitator, at janc@gci.net, with a cc to Sue Aspelund, AKSSF Program Manager at sue.aspelund@alaska.gov. Complete submittal instructions, copies of all required forms, reporting information, and miscellaneous AKSSF program guidance are provided at <http://www.adfg.state.ak.us/special/sssf/sssf.php>.
 2. You must submit the “Project Proposal Form” and “Statement of Work Form” (SOW). Entities utilizing a federally-approved indirect rate are encouraged to provide an Indirect Cost Statement (the Federally-Approved Rate Letter) with their submission as this will facilitate the project establishment process for approved projects. Others may benefit from the Indirect Cost Guidance document provided in the proposal submission

materials. If you do not have access to the Internet, you can request hard copy forms from ADF&G by contacting Cecelia Curtis at 907.465.4181.

3. The completed forms must be prepared and submitted in MS Word format.
4. The completed "Project Proposal Form" may not exceed 25 total pages in length. It must be submitted with 1" margins, single spaced, and in New Times Roman 12 point font, complete, and in the existing format. Please delete all brackets and bracketed language prior to submission. **All highlighted language is identical to sections of the required SOW and can be copied and pasted into the SOW, keeping in mind the differing total page length requirement for the SOW.**
5. The completed "Statement of Work" (SOW) may not exceed 10 total pages in length. It must be submitted with 1" margins, single spaced, and in New Times Roman 12 point font, complete, and in the existing format. Please delete all brackets and bracketed language prior to submission and follow formatting instructions exactly to enable processing efficiency. **All language in red must be retained in the submitted SOW.**
6. If you choose not to submit your proposal electronically, you may submit it to ADF&G in printed hard-copy. Five complete hard-copies of the proposal must be mailed to:

Sue Aspelund, AKSSF Program Manager
Office of the Commissioner
Alaska Department of Fish and Game
PO Box 115526
Juneau, AK 99811-5526

or hand-delivered to the ADF&G Commissioner's Office at:
1255 W. 8th Street
Juneau, AK 99801

Hard-copies must be received at the ADF&G Commissioner's Office by the deadline of 12 noon, October 31, 2008.

7. Proposals submitted via fax will not be accepted.

Additional Information Regarding Proposal Submission, Evaluation, and Selection

- There has been no preliminary determination of funding levels by goal. ADF&G reserves the right to set the AKSSF funding as necessary to ensure appropriate geographic coverage, avoid duplication, and achieve maximum program benefits.
- Responsiveness Criteria: To be responsive to this Call for Proposals, the proposal must:
 - ✓ Be for a project to be carried out in Southeast Alaska (south and east of Cape Suckling).
 - ✓ Be relevant to achieving one or more of the high priority information needs/actions of the AKSSF goals 1 - 3.
 - ✓ Include both the “Project Proposal Form” and “Statement of Work Form,” be submitted timely in the MS Word format, and submitted according to the format and length provided in the detailed instructions for these forms.
 - ✓ The Budget Narrative totals must equal exactly the figures provided in the Budget Table and contain adequate budget detail, both for the project and match budgets.
 - ✓ Contain match documentation as described in the Project Proposal and Statement of Work forms. If match will be provided by other than the proposing entity, signed documentation on letterhead by the third-party providing match must be submitted with the proposal submission.
- The purpose of the Project Proposal Form is to explain to scorers why the project is necessary and should be funded, how it meets the priority information needs/actions that it addresses, and the technical details of the project’s methodology for evaluation of project soundness and appropriateness. Make certain that in the Project Proposal Form you fully address all of the “Scoring Criteria for Project Proposals,” to make your case that the project merits funding. In contrast, the Statement of Work (SOW) serves a very different purpose: it becomes the instrument from which the project’s contractual agreements will be written if the project is selected for funding. The SOW requires far less technical detail and should not include the information used to convince scorers of the project’s validity. Do not simply cut and paste all information from the Project Proposal Form into the SOW (except as noted in the proposal form by highlighted text, keeping in mind that some pasted sections may need to be summarized to comply with the 10-page maximum length for the SOW). For questions regarding the difference between the purposes of the project proposal and the SOW forms, please contact AKSSF staff at 907.465.6139 or 907.465.4181.
- Project proposals will be scored and listed in ranked order by technical evaluators in accordance to the Responsiveness Criteria listed above and the “Scoring Criteria for Project Proposals” provided with this Call for Proposals. However, ADF&G reserves the right to make final determinations regarding which projects to fund and at what funding levels to provide maximum program benefits.

- Concurrent to this solicitation process, there may be other entities soliciting projects for funding with AKSSF funds. These Calls for Proposals will not result in duplicative funding for these projects. If your project is selected for funding in another AKSSF solicitation process, it will not receive funding under these Calls for Proposals.
- * *The Alaska Sustainable Salmon Fund (AKSSF) is the name given to the statewide program managed by ADF&G utilizing federal Pacific Coastal Salmon Recovery Funds (PCSRF) appropriated to the State of Alaska by Congress.*

Alaska Sustainable Salmon Fund*
Federal Fiscal Year 2008

Southeast Alaska Region

Goals, Objectives and High Priority Information Needs/Actions

This following document outlines the high priority objectives and information needs/actions for the FFY 2008 Alaska Sustainable Salmon Fund Call for Proposals for the Southeast Alaska Region. The three general categories for project funding are:

- Goal 1: Habitat
- Goal 2: Stock Assessment
- Goal 3: Management

In addition to identifying priorities for FFY 2008 within each of the general categories, the interagency Science Panel for Southeast Alaska also identified some specific approaches / examples for projects to meet each priority information need/action for salmon. However, responses to the FFY 2008 Call for Proposals need not be limited to the approaches/projects listed in the right hand column of the document. Proposals for other approaches/projects that would implement the priority information needs/actions for salmon are also encouraged.

Steelhead was recently added to the framework for the AKSSF but is not a species covered under this year's call. Projects related to steelhead will be solicited in subsequent funding cycles.

* The Alaska Sustainable Salmon Fund (AKSSF) was formerly titled the Southeast Sustainable Salmon Fund. The change was made to recognize that the fund is now statewide. This Call for Proposals is for the Southeast Alaska region east of Cape Suckling. There are separate Calls for Proposals for areas west of Cape Suckling. For more information on the AKSSF please go to: www.adfg.state.ak.us/special/ssf/ssf.php

Goal 1 -- Habitat

GOAL 1 – HABITAT Protect and restore freshwater, estuarine, and marine salmon and steelhead habitats to maintain resource productivity.	
Objective 1A. Identify, protect, and manage spawning, incubation, rearing, overwintering, and migration habitats to mitigate or prevent human-induced perturbations beyond the bounds of natural variation.	
Information Need/Actions	Approach / Examples for Addressing Info Need/Action
(1A-1) Monitor development projects or activities to ensure protection of salmon and steelhead habitat.	<ul style="list-style-type: none"> - Focus on funding the evaluation of potential effects for development projects for which there is not a permitting agency that has funding and regulatory responsibility. For example, this funding source is particularly significant for transboundary development projects (e.g., Canadian mining projects) that do not require State of Alaska permits, but in which the State has a significant habitat protection interest.
(1A-2) Quantify flow requirements for life stages of salmon and steelhead and secure reservations of water on important salmon- and steelhead-producing systems.	<ul style="list-style-type: none"> - Develop water quantity estimation models that meet Alaska Department of Natural Resources requirements for filing a reservation of water application. - Continue to collect water quantity and quality data in anadromous water bodies to obtain five years of records. - Continue to support preparation and adjudication of reservation of water applications which includes collection of water quantity and quality data to obtain five years of records.
(1A-4) Catalog anadromous water bodies.	<ul style="list-style-type: none"> - Focus on areas of highest risk (e.g., where there is more frequency of development permit need).

Southeast Region – Goal 1: Habitat

Objective 1A - Continued	
Information Need/Actions	Approaches / Examples for Addressing Info Need/Action
<p>(1A-5) Identify and analyze location and patterns of important salmon and steelhead spawning, incubation, rearing, overwintering, and migration habitat, including site-specific habitat characteristics (e.g., vegetation, substrate, hydrology/hydraulics, water quality) in freshwater, estuarine, or marine environments.</p>	<ul style="list-style-type: none"> - Collect information that provides site-specific habitat characteristics for Southeast Alaska salmon species and life stages. - Identify and analyze patterns of habitat arrangement in waterbodies, watersheds, and landscapes to allow a more predictive approach to identifying potential salmon habitat on a large-scale basis. - Focus identification and analysis of habitat on areas of highest risk of change or perturbation, including waterbodies most susceptible to effects of climate change. - Research and develop Habitat Suitability criteria for all life stages of salmon. - Better identify effects on variations of water quantity on different life-stages of fish. - Implement projects that help understand links between salmon habitat and salmon productivity. - Evaluate salmon use of naturally-turbid systems.
<p>(1A-6) Establish baselines for water quality and quantity for selected salmon and steelhead water bodies.</p>	<p><u>Water Quantity</u></p> <ul style="list-style-type: none"> - Establish stream gages in salmon-producing waterbodies for scientists and managers to make scientifically-sound water allocation and water quality decisions relating to water developments and land use practices that have the potential to impact water quantity and quality, salmon populations, and habitat. - Develop new models or improve existing models to provide Geographic Information System (GIS)-based approach for estimating seasonal and long-term flow predictions at ungaged sites with a measure of statistical confidence. <p><u>Water Quality</u></p> <ul style="list-style-type: none"> - Develop interagency program to collect system-specific information on water quality (particularly in regard to fine sediment and effects to spawning habitat). - Evaluate hydrocarbon loading in selected high-motor use salmonid waterbodies, and identify and implement actions to control water quality effects.

Southeast Region – Goal 1: Habitat

Objective 1B. Detect and predict short- and long-term changes in salmon and steelhead habitat.	
Information Need/Actions	Approach / Examples for Addressing Info Need/Action
(1B-2) Evaluate the individual and cumulative effects of human activities on salmon and steelhead habitat.	<ul style="list-style-type: none"> - Focus on evaluating cumulative effects of actions with potential regionally-broad impacts on salmon habitat or productivity (e.g., off-highway vehicles (OHV), loss of riparian zones, stormwater run-off).
(1B-4) Detect and evaluate effects of global climate change on salmon and steelhead habitat.	<ul style="list-style-type: none"> - Improve snow, rainfall, and temperature distribution models to better predict changes in stream hydrology and temperature under climate change scenarios. - Develop a regional risk assessment for watershed hydrograph sensitivity to predicted climate change to provide a base for a strategic climate change stream discharge monitoring network. - Develop geomorphic models to predict response of stream morphology and physical habitat to predicted changes in frequency-magnitude characteristics of salmon streams under climate change scenarios. - Link hydrologic model predictions to watershed water quality models to better predict physicochemical habitat conditions under climate change scenarios. - Compile and maintain legacy data sets. - Analyze response and resilience of salmon habitats to global climate change (especially changes in hydrology).

Southeast Region – Goal 1: Habitat

Objective 1C. Restore habitat and fish passage that has been degraded by human activity.	
Information Need/Actions	Approach / Examples for Addressing Info Need/Action
(1C-1) Identify, assess, prioritize, and plan for restoration of fish passage and riparian, spawning, and rearing habitats that have been degraded by human activity.	<ul style="list-style-type: none"> - Determine priorities for restoration based on a strategic planning process for fish passage remediation and habitat restoration opportunities (e.g., watershed restoration plan). - Determine effects of partial fish passage on salmon movements. - Consolidate existing road condition surveys into a common database to determine fish passage remediation needs. - Characterize salmon movement in watersheds to inform and improve fish passage models and structure design. - Develop interagency guidance/acceptance for fish-friendly off-highway vehicle road-stream crossing structures once problem sites are identified. - Apply U.S. Forest Service upstream fish habitat assessment protocol to state and private land road-stream crossings to prioritize crossings for remediation.
(1C-2) Restore fish passage and riparian, spawning, and rearing habitats that have been degraded by human activity. The restoration project must include monitoring (commensurate to the project scale) that documents the project has been implemented as planned (e.g., built as designed, revegetated as planned, etc.).	
(1C-4) Review and analyze effectiveness of mitigation/restoration projects to continue to improve mitigation/restoration techniques.	<ul style="list-style-type: none"> - Develop protocols for determining effectiveness for restoration activities. - Bring technical expertise to Alaska to assist in testing, demonstrating, and implementing innovative restoration techniques that are successful elsewhere.

Southeast Region – Goal 2: Stock Assessment

Goal 2 – Stock Assessment

GOAL 2 – STOCK ASSESSMENT Collect information needed to sustain high potential productivity of wild salmon and steelhead stocks.	
Objective 2A. Assess salmon and steelhead escapements. Estimate and periodically evaluate escapement goal approach and the escapement goal ranges to achieve sustained yield and maintain production.	
Information Need/Actions	Approaches / Examples for Addressing Info Need/Action – by Species
(2A-1) Obtain reliable temporal/spatial estimates of escapements by age/sex/length.	<p>Chinook</p> <ul style="list-style-type: none"> - Analyze the available stock-recruit data for the Alsek, Taku, Unuk, Blossom, and Keta rivers to develop revised escapement goal ranges and production parameters for these stocks. - Continue annual mark-recapture projects (Chilkat, Taku, Stikine and Unuk). Conduct periodically on other systems to revise expansion factor and calibrate various survey methods. - Initiate periodic surveys for non-indicator stocks (e.g., Wilson, Farragut, Harding and Martin). - Continue to collect and analyze age/sex/length and coded-wire tag inspection data annually on all eleven key escapement systems. <p>Sockeye</p> <ul style="list-style-type: none"> - Continue base escapement enumeration for major sockeye stocks. - Continue mark-recapture program for Chilkat River sockeye. - Significant improvements to the Crescent Lake sockeye escapement enumeration program - Repeat mark-recapture program for McDonald Lake.

Southeast Region – Goal 2: Stock Assessment

Information Need/Actions	Approaches / Examples for Addressing Info Need/Action – by Species
<p>CONTINUED (2A-1) Obtain reliable temporal/spatial estimates of escapements by age/sex/length.</p>	<p>Coho</p> <ul style="list-style-type: none"> - Auke Creek Weir operations. - Chuck Creek Weir operations. - Development of an additional full indicator stock in the southern inside area. - Chilkat coho escapement mark-recapture project. - Evaluate assumptions of tag loss and mortality in the Taku River mark-recapture estimate using radio-telemetry. - Evaluate an expansion factor for the Berners River escapement estimate. - Conduct aging validation studies, where feasible, for additional long-term indicator stocks (Ford Arm Lake and the Taku and Chilkat Rivers). <p>Chum</p> <ul style="list-style-type: none"> - Continue aerial and foot surveys of chum salmon escapement region-wide. <p>Pink</p> <ul style="list-style-type: none"> - Maintain the existing coverage of surveyed streams and train new observers.
<p>(2A-2) Identify the limiting factors for depressed stocks.</p>	<p>Sockeye</p> <ul style="list-style-type: none"> - Genetic stock identification of commercial fisheries to assess catch of McDonald Lake sockeye. - Evaluate effects of hatchery outplant enhancement of depressed sockeye runs, including assessment of abundance and biological characteristics of wild and hatchery smolts and adults. <p>Chum</p> <ul style="list-style-type: none"> - Disappearance Creek weir operations. <p>Chinook, coho and pink – None</p>

Southeast Region – Goal 2: Stock Assessment

Information Need/Actions	Approaches / Examples for Addressing Info Need/Action – by Species
<p>(2A-3) Collect and evaluate data regarding harvest by stock by brood year, for hatchery and wild stocks.</p>	<p>Chinook</p> <ul style="list-style-type: none"> - Continuation of wild stock coded-wire tagging programs for Chilkat, Taku, Stikine, Chickamin, and Unuk rivers Chinook salmon. - Continuation of the genetic stock identification program for Southeast Alaska Chinook salmon fisheries for the troll, sport, and District 108 and 111 gillnet fisheries. - Initiate a data standard project for the minimum level of coded-wire tagging for releases of Alaska hatchery Chinook salmon. - Sampling of commercial and recreational fisheries to obtain the coastwide standard for fishery sampling for coded-wire tag recovery. <p>Sockeye</p> <ul style="list-style-type: none"> - Continuation of Northern Boundary stock identification program to meet Pacific Salmon Treaty obligations until the Northern Fund can support it. - Continuation of the stock identification program for the District 111 gillnet fishery to estimate hatchery and wild contributions and satisfy Pacific Salmon Treaty harvest sharing obligations. - Continued development of cost-effective genetic stock identification methods that can be routinely applied in Southeast Alaska fisheries. <p>Coho</p> <ul style="list-style-type: none"> - Smolt enumeration and coded-wire tagging at Auke Creek. - Smolt enumeration and coded-wire tagging at Chuck Creek. - Fund coded-wire tagging of smolts in the Chilkat River. - Coded-wire tagging of smolts on an additional indicator stock in the southern inside areas. - Sampling of commercial and recreational fisheries to obtain the coastwide standard for fishery sampling for coded-wire tags. <p>Chum</p> <ul style="list-style-type: none"> - Adequate sampling and processing of otoliths from Southeast Alaska fisheries. <p>Pink – None</p>

Southeast Region – Goal 2: Stock Assessment

Information Need/Actions	Approaches / Examples for Addressing Info Need/Action – by Species
<p>(2A-4) Develop data analyses, databases, or models for establishing escapement goals or for fishery management needs.</p>	<p>Chinook</p> <ul style="list-style-type: none"> - Revise escapement goals for the Alsek, Taku, Unuk, Blossom, and Keta Chinook stocks using the improved stock-recruit databases available from stock assessment projects conducted over the past decade or more. <p>Sockeye</p> <ul style="list-style-type: none"> - Use existing methods or, where needed, develop alternative methods and/or models for setting escapement goals. <p>Coho</p> <ul style="list-style-type: none"> - Update escapement goals for Ford Arm Lake and the Berners River. <p>Chum</p> <ul style="list-style-type: none"> - Use traditional methods or develop and evaluate alternative models for estimating sustainable escapement goals for Southeast Alaska chum indicator stocks or stock groups. (Chum indicator stocks include southern southeast summer run, northern southeast inside summer run, northern southeast outside summer run, Cholmondeley Sound fall run, Port Camden fall run, Security Bay fall run, Excursion River fall run, and Chilkat River fall run.) - Compile a chum salmon escapement by stock group database. <p>Pink</p> <ul style="list-style-type: none"> - Update stock recruitment databases and models for pink salmon.
<p>(2A-5) Develop, evaluate, and implement methods to estimate escapement, including evaluating existing escapement estimates and developing cost-effective technologies to estimate a larger proportion of total escapements-</p>	<p>Chinook</p> <ul style="list-style-type: none"> - Explore the use of DNA-based ratio expansion methodologies for estimating escapements. <p>Sockeye</p> <ul style="list-style-type: none"> - Develop escapement enumeration program for Crescent River sockeye salmon. <p>Coho, chum and pink – None</p>

Southeast Region – Goal 2: Stock Assessment

Objective 2A - Continued	
Information Need/Actions	Approaches / Examples for Addressing Info Need/Action – by Species
(2A-6) Estimate freshwater smolt production and/or marine survival for key stocks of interest.	<p>Chinook</p> <ul style="list-style-type: none"> - Freshwater smolt production and marine survival research on five wild Chinook stocks: Chilkat, Taku, Stikine, Unuk, and Chickamin. <p>Coho – See projects recommended for 2A-3. Sockeye, chum and pink – None</p>
Objective 2B. Assess stock status to apply in management systems to achieve escapement goals.	
(2B-1) Determine genetic baselines for management, conservation, and restoration efforts.	<p>Chinook and sockeye</p> <ul style="list-style-type: none"> - Develop methods to delineate stock groups needed for management. <p>Coho, chum and pink – None</p>
Objective 2E. Assess the affect of hatchery production on wild salmon stocks.	
(2E-1) Quantify straying rates.	<p>Chinook</p> <ul style="list-style-type: none"> - Annual sampling of biological data, including sampling for coded-wire tags, in the eleven wild escapement indicator stocks. (Chinook indicator stocks include those from the following rivers: Situk, Alsek, Chilkat, Taku, Stikine, King Salmon, Andrew, Unuk, Chickamin, Blossom, Keta.) <p>Coho</p> <ul style="list-style-type: none"> - Quantify straying rates for coho salmon. <p>Chum</p> <ul style="list-style-type: none"> - Ensure adequate sampling of chum salmon indicator stocks. (Chum indicator stocks include southern southeast summer run, northern southeast inside summer run, northern southeast outside summer fun, Cholmondeley Sound fall run, Port Camden fall run, Security Bay fall fun, Excursion River fall run, and Chilkat River fall run.) <p>Sockeye and pink – None</p>
(2E-2) Develop methods to determine acceptable straying rates.	<p>All Species</p> <ul style="list-style-type: none"> - Determine the fitness and productivity effects on wild populations of alternative enhancement practices in specific areas, locations, or programs.

Southeast Region – Goal 2: Stock Assessment

Objective 2E - Continued	
Information Need/Actions	Approaches / Examples for Addressing Info Need/Action – by Species
(2E-3) Assess impacts of large-scale enhancement on wild stocks.	<p>Chinook – See projects recommended under 3A-11.</p> <p>Sockeye</p> <ul style="list-style-type: none"> - Continuation of feasibility work on parentage analysis. - Determine enhancement strategy (fry, fed-fry, fingerling) to be utilized for testing effects of supplementation. - Evaluate effects of hatchery outplant enhancement of sockeye runs, including assessment of abundance and biological characteristics of wild and hatchery smolts and adults. <p>Coho</p> <ul style="list-style-type: none"> - Evaluate predation by coho salmon on other salmon species. - Develop information on impacts on wild coho stocks near hatchery release sites. <p>Chum and pink – none</p>

Goal 3 –Management

GOAL 3 –MANAGEMENT Maintain effective and biologically-sound salmon and steelhead management systems to regulate human activities that affect salmon and steelhead.	
Objective 3A. Develop and implement management systems for wild and enhanced fish production to achieve cultural, social, and economic objectives within acceptable biological limits.	
Information Need/Actions	Approaches / Examples for Addressing Info Need/Action – by Species
(3A-2) Conduct ethno-historic and ethnographic research describing patterns of subsistence use of wild salmon and steelhead, and investigate changes in those patterns of use through time.	Chinook and Coho: <ul style="list-style-type: none"> - Conduct ethno-historic and ethnographic research describing patterns of subsistence use of wild Chinook and coho salmon in selected Southeast Alaska communities (Haines, Angoon, Craig, Kake, Hoonah, Yakutat, Wrangell and Petersburg). Pink, chum and sockeye– None
(3A-3) Collect and analyze information to forecast and manage inseason to achieve management objectives.	Chinook and Coho: <ul style="list-style-type: none"> - Support Pacific Salmon Commission Chinook Model improvement effort. - Refine techniques for defining inseason abundance for the Southeast Alaska Chinook fishery. Chum <ul style="list-style-type: none"> - Conduct feasibility study to improve preseason forecasting for chum salmon, hatchery and wild. Pink <ul style="list-style-type: none"> - Maintain existing coverage of surveyed streams and train new observers. - Maintain Southeast Alaska Coastal Monitoring (SECM) sampling for juvenile pink salmon and associated environmental conditions. Sockeye and coho – None.
(3A-11) Evaluate hatchery marine survivals and production strategies, and determine effective production and harvest strategies.	All Species <ul style="list-style-type: none"> - Continuation of research contrasting segregated hatchery brood lines with additional wild donor stock genetic input. - Continue the evaluation of age-0 smolt production strategies. - Establish a data standard for the minimum level of coded-wire tagging for releases of Alaska hatchery Chinook and coho salmon (see 2A-3). - Evaluate the costs and benefits of different release strategies (e.g., parent hatchery vs. off-site release).

Objective 3C. Develop management tools to meet the Annexes of the Pacific Salmon Treaty, revised for 2009-2018.	
Information Need/Actions	Approaches / Examples for Addressing Info Need/Action – by Species
(3C-1) Develop stock assessment programs to implement abundance-based management and allocation of Chinook, sockeye, and coho stocks between Alaska and Canada on the Taku, Stikine and Alsek transboundary rivers.	<p>Chinook</p> <ul style="list-style-type: none"> - Continuation of annual mark-recapture projects for Chinook salmon on the Taku and Stine rivers. - Continue funding the Stikine and Taku rivers coded-wire tagging projects beyond 2008. - Continuation of the Chinook salmon genetic stock identification program for Districts 108 and 111. - Analysis of samples collected from the Taku and Stikine rivers to develop additional separation of these two stocks in mixture samples from fisheries. - Examine feasibility of using GSI techniques to estimate inriver abundance of Klukshu River Chinook salmon in the Alsek River. <p>Sockeye</p> <ul style="list-style-type: none"> - Continue the Taku and Stikine rivers sockeye salmon mark-recapture projects (Alaska’s share) beyond 2008. - Continue the District 111 sockeye salmon stock identification program. Examine the feasibility of using GSI techniques to replace scale pattern analysis methods. - Examine the feasibility of using GSI techniques to estimate inriver abundance of Klukshu River sockeye salmon in the Alsek River. - Improve the Stikine Management Model. <p>Coho</p> <ul style="list-style-type: none"> - Support the Taku River coho salmon mark-recapture project. <p>Pink and chum – None</p>
(3C-2) Develop more comprehensive stock assessment projects and analysis to meet allocations for sockeye, pink, coho, and chum salmon in the Northern Boundary Area (southern Southeast Alaska and northern British Columbia).	<p>Sockeye</p> <ul style="list-style-type: none"> - Continue implementation of the new Northern Boundary Area sockeye stock identification project. <p>Chinook, coho, pink and chum – None</p>

Objective 3C - Continued	
Information Need/Actions	Approaches / Examples for Addressing Info Need/Action – by Species
(3C-3) Fill significant data gaps to implement several obligations required of Alaska regarding the Chinook chapter in the current Pacific Salmon Treaty Agreement, such as escapement, wild-stock coded-wire tagging, incidental mortality, and stock contribution (genetic and coded-wire tag) estimation programs.	<p>Chinook</p> <ul style="list-style-type: none"> - Continuation of annual escapement estimation and biological sampling projects for Chinook salmon in Southeast Alaska on all eleven indicator systems. - Continuation of coded-wire tag projects on five wild systems(Chilkat, Taku, Stikine, Unuk, and Chickamin) - Continuation of the genetic stock identification program for fisheries in Southeast Alaska that harvest Chinook salmon; provide finer stratification of stock composition by time and area. - Information needed for implementing the total mortality provisions of revised 2009 – 2018 Chinook chapter. - Maintain expertise of Alaska members of the Chinook Technical Committee. - Fund sampling of commercial and recreational fisheries to obtain the coastwide standard for fishery sampling for coded-wire tags. <p>Sockeye, coho, pink and chum – None</p>