

## Alaska Sustainable Salmon Fund (AKSSF) 2008 Framework for Southcentral Region

<b>GOAL 1 – HABITAT</b> <b>Protect and restore freshwater, estuarine, and marine salmon and steelhead habitats to maintain resource productivity.</b>		
<b>Objective 1A. Identify, protect, and manage spawning, rearing, incubation, overwintering, and migration habitats to mitigate or prevent human-induced perturbations beyond the bounds of natural variation.</b>		
<b>Strategic Focus for Southcentral region, for Objective 1A.</b> Projects proposed under Objective 1A will be judged to be of higher strategic importance if there is a potential threat to or high potential for human alteration of the habitat. Potential threats of particular strategic concern in the Southcentral region include: <ul style="list-style-type: none"> <li>- Urbanization, including rapid growth in the Matanuska Susitna Valley.</li> <li>- Mining.</li> <li>- Hydroelectric and hydrokinetic development.</li> <li>- Transportation and energy development.</li> <li>- Development involving significant use of water from salmon waterbodies.</li> </ul>		
Information Need/Actions	Priority	Comments / Context
(1A-1 - SC) Quantify flow requirements for life stages of salmon and steelhead and secure reservations of water on important salmon- and steelhead-producing systems.	High – Include in 2008 Call	
(1A-2 - SC) Catalog anadromous water bodies.	High – Include in 2008 Call	The Catalog of Waters important to anadromous waters is more complete in SC than in WW and AYK. However, there may be need for additions in areas subject to potential threats.
(1A-3 - SC) Identify and analyze the location and patterns of important spawning, incubation, rearing, overwintering, and migration habitat, including site-specific habitat characteristics (e.g., vegetation, substrate, hydrology/hydraulics, water quality). (Note: Characterizing salmon and steelhead movement in watersheds to inform and improve fish habitat conservation measures has been identified as an important focus for this habitat assessment work in the Southcentral region.)	High – Include in 2008 Call	Analyzing habitat “patterns” gives predictive capability to assessing habitat values in areas not previously investigated.  Understanding fish movement is particularly important for large SC watersheds for fish passage and for habitat conservation.

**GOAL 1 – HABITAT (Continued)****Objective 1A - Continued**

<b>Information Need/Actions</b>	<b>Priority</b>	<b>Comments / Context</b>
(1A-4 - SC) Evaluate the individual and cumulative effects of human activities on salmon and steelhead habitat and on the beneficial uses of salmon and steelhead.	High – Include in 2008 Call	In SC, there is a need to evaluate the potential effects of large resource development projects on fish production and resultant effects on the users and economy that benefit from those effected fisheries.
(1A-5 – SC) Establish baselines for water quality and quantity.	High – Include in 2008 Call	Although water quantity is addressed in 1A-1, collecting baseline quantity data is inextricably linked to collecting water quality data. Quantity data is also used for purposes other than securing water reservations (the focus of 1A-1). For large development projects, expected that the project would pay for this baseline work for the project footprint area.
(1A-6 – SC) Evaluate estuarine conditions and cycles that affect salmon and steelhead productivity in estuarine areas that have been subject to human-induced perturbations.	High – Include in 2008 Call	There is interest in understanding conditions in estuarine areas affected by human-induced change (e.g., Knik Arm), in addition to estuaries not subject to human-caused change (see 1C-1 below.)
(1A-7 – SC) Develop watershed and basin-wide plans to protect important salmon and steelhead habitat or restore degraded habitat.	High – Include in 2008 Call	

**GOAL 1 – HABITAT (Continued)**

**Objective 1B. Restore and protect fish habitat and fish passage that has been degraded by human activity.**

**Strategic Focus for Southcentral Alaska, for Objective 1B.**

The following will be considered in evaluating the strategic importance of projects proposed under Objective 1B:

- Project cost relative to resource benefit. (“Resource benefit” includes consideration of the degree to which the habitat has been deleteriously altered and the potential benefits relative to increasing salmon production that might be realized if the habitat is restored.)
- Project would provide a public education / outreach benefit.
- Project capitalizes on an opportunity (e.g., road reconstruction provides opportunity for culvert replacement).
- Project is part of an existing basin-wide management or restoration plan or strategy.

For information need/action 1B-2, it is most appropriate to use AKSSF funding for lower cost restoration projects and/or to leverage other funding sources to accomplish larger, more expensive projects.

Information Need/Actions	Priority	Comments / Context
(1B-1 - SC) Identify, assess, prioritize, and plan for restoration and maintenance of fish passage and riparian, spawning, and rearing habitats that have been degraded by human activity.	High – Include in 2008 Call	
(1B-2 - SC) 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).	High – Include in 2008 Call	The intent is to focus on high priority opportunities that meet the strategic focus and where the responsible party does not have the financial capability to correct a problem or where there is no responsible party.
(1B-3 – SC) Review and analyze the effectiveness of mitigation / restoration projects to continue to improve mitigation / restoration techniques.		Not high priority for 2008; already funding this type of effectiveness monitoring for stream bank restoration techniques on the Kenai River. Do not anticipate additional projects of this type needed in short-term.

**GOAL 1 – HABITAT (Continued)**

**Objective 1C. Detect and predict short- and long-term changes in environmental conditions, and how these changes affect salmon and steelhead distribution and productivity.**

Information Need/Actions	Priority	Comments / Context
(1C-1 - SC) Evaluate ocean, freshwater, and estuarine conditions and cycles that affect salmon and steelhead productivity.		
(1C-2 – SC) Detect and evaluate effects of climate change on salmon and steelhead habitat and distribution.		

**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 and productivity. Evaluate escapement goal approach and the biological goal ranges to achieve sustained yield.**

**Strategic Focus for Southcentral region, for Objective 2A.**

Projects proposed under Objective 2A will be judged to be of higher strategic importance in the Southcentral region if they address one or more of the following strategic priorities:

- Obtain credible escapement estimates for poorly assessed stocks.
- Evaluate stocks that have declined in abundance.

<b>Information Need/Actions</b>	<b>Priority</b>	<b>Comments / Context</b>
(2A-1 - SC) Obtain reliable temporal/spatial estimates of escapements by age/sex/length for highly-utilized stocks.	High – Include in 2008 Call	Noted that in SC, there is a lot of escapement data on systems, but it is important that data and gaps should be filled. There is good coverage for sockeye, but not for coho, chum, pink, or steelhead.
(2A-2 - SC) Develop data analyses, databases, or models for establishing escapement goals.		
(2A-3 - SC) 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.	High – Include in 2008 Call	
(2A-4 - SC) Estimate freshwater juvenile salmon production for highly-utilized stocks.	High – Include in 2008 Call	
(2A-6 – SC) Collect and evaluate data regarding harvest by stock by brood year for wild stocks.	High – Include in 2008 Call	

**Objective 2B. Identify and catalog stock aggregations and meta-populations.**

<b>Information Need/Actions</b>	<b>Priority</b>	<b>Comments / Context</b>
(2B-1 – SC) Collect additional genetic baseline material to fill in gaps in Southcentral baseline data. (Proposer must demonstrate through consultation with the agency genetics labs that a gap in baseline data exists.)	High – include in 2008 Call	

**GOAL 3 – SALMON MANAGEMENT SYSTEMS**

**Improve and maintain effective, biologically sound management systems to regulate human activities that affect salmon and steelhead.**

**Objective 3A. Implement management systems for wild and enhanced fish production to achieve cultural, social, and/or economic benefits within acceptable biological limits.**

<b>Information Need/Actions</b>	<b>Priority</b>	<b>Comments / Context</b>
(3A-1 - SC) Evaluate the effect of management actions on cultural, social, and/or economic benefits.		
(3A-2 - SC) Collect and analyze data, and develop databases and models, for forecasting and other fishery management needs.	High – Include in 2008 Call	
(3A-3 SC) 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.		Funding is also available through Federal Subsistence Program to sufficiently address this need in the Southcentral region.

**Objective 3B. Minimize adverse impacts to wild stocks from enhancement.**

<b>Information Need/Actions</b>	<b>Priority</b>	<b>Comments / Context</b>
(3B-1 - SC) Assess effects of interactions between wild and hatchery (enhanced) stocks.	High – Include in 2008 Call	Note that “interactions” includes both genetic and ecological interaction. Quantifying straying rates would be one element of the assessment of genetic interactions; quantifying interbreeding rates and the effects on population fitness and productivity would be others.
(3B-2 - SC) Develop, implement, and evaluate fish culture practices that minimize adverse interactions with wild stocks.	High – Include in 2008 Call	
(3B-3 - SC) Determine appropriate levels of enhancement.		

**GOAL 3 – SALMON MANAGEMENT SYSTEMS (Continued)**

**Objective 3C. Identify, assess, and minimize interaction and impacts of invasive species, including aquatic plants.**

Information Need/Actions	Priority	Comments / Context
(3C-1 - SC) Determine the effects and potential effects of invasive species on wild salmon and steelhead.		Invasive species issues in SC region include: reed canary grass, pike, and Atlantic salmon (potential). However, there are other funding sources currently available for this work.
(3C-2 – SC) Implement measures to control invasive species effects on wild salmon and steelhead.		