

Alaska Sustainable Salmon Fund Statement of Work

I. Project Title: Instream Flow Protection: Southeast – Phase 9 - FFY09

II. Project Number: 44563 **PCSRF Objective:** HP&R

III. Principal Investigator

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IV. Project Period: 12/1/13 – 11/30/14

V. Project Description

1. Synopsis

This project will quantify and protect instream flows needed to sustain salmon and steelhead habitat and production for priority salmon- and steelhead-producing water bodies in Southeast Alaska (SE AK). The primary tool used to protect instream flows will be the preparation and submission of reservations of water applications. A reservation of water for instream use is a water right that protects specific instream water uses and keeps later water users from appropriating water that may affect the instream use. This project will also update the existing prioritization of water bodies in SE AK. *See related AKSSF projects 45040, 45107, 45213, 45766, 45822, 45326 (800), 45979, 44552, 44567, and 44915.*

2. Introduction

The rivers and lakes of SE AK support some of North America's most productive salmon and steelhead sport, commercial, and subsistence fisheries. Salmon and steelhead migration, spawning, rearing, and ultimately production in these water bodies are dependent on sufficient seasonal quantities of water.

Numerous state and federal mechanisms can be used to protect instream flows. The primary mechanism used in this project is the Alaska Water Use Act (AS 46.15). The Alaska legislature amended AS 46.15 in 1980 in recognition of the economic, social, and other benefits of retaining water in rivers and lakes. This amendment provided the opportunity for the private sector and government agencies to legally secure reservations of water under Alaska law (AS 46.15.145) and regulation (11 AAC 93.141-147) to maintain instream flow rates in rivers or water levels in lakes for a variety of purposes, including the protection of fish and wildlife habitat, migration, and propagation.

Alaska water law is based on the doctrine of “prior appropriation,” giving the first appropriator of water from a given water source a priority of right over subsequent appropriators on a “first-in-time, first-in-right” basis. Adjudications are the administrative determinations of the validity and amount of the water right, including the settlement of conflicting claims among competing appropriators, performed by the Alaska Department of Natural Resources (DNR). Once agreement has been reached between ADF&G and DNR on flows to be reserved, the decision goes out for public notice. If no further administrative actions are needed, DNR, in consultation with ADF&G, prepares a “Finding of Fact, Conclusion of Law, and Decision” document that describes the information and rationale used for their decision. If the DNR adjudication decision is challenged, there is an administrative appeal process that ultimately will result in a Commissioner decision. If that, too, is appealed, judicial remedy may result. Assuming DNR is successful in its determination of the amount of water to be granted, DNR will issue a Certificate of Reservation of Water, the legal document that establishes the water right. The certificate will include a description of the water right and any conditions placed on it, including the priority date which establishes the seniority of the water. With a certificate of reservation, the permit holder has a legal standing to assert that right against conflicting uses of water from others who do not have water rights or who are junior in priority.

The primary activities of this project include obtaining and analyzing the biological and hydrologic data needed to quantify the instream requirements of salmon and steelhead and preparing reservation of water applications for submittal to DNR. The biological, hydrologic, and other information collected, analyzed, and summarized in this project will also be available for use by ADF&G staff dealing with water development and fisheries management issues.

3. Location

Site: Thorne River Gage		
Latitude: 55.705839 N	Longitude: 132.626844 W	
Site: Peterson Creek Gage		
Latitude: 58.489783 N	Longitude: 134.77475 W	
Site: Windfall Creek Gage		
Latitude: 58.509822 N	Longitude: 134.7353 W	
Site: Douglas Regional ADF&G Office		
Latitude: 58.276093N	Longitude: 134.392716 W	

4. AKSSF Objective

VI. Objectives

1. Project Objectives

- Update and maintain the regional prioritization of instream flow needs for salmon- and steelhead-producing water bodies in SE AK
- Obtain the biological, hydrologic, and other information needed to quantify instream flow requirements of salmon and steelhead in priority water bodies
- Prepare, file, and adjudicate reservation of water applications to protect salmon and steelhead habitat, including the conversion of previously filed multiple-reach reservation applications into single-reach applications per new DNR requirements

2. Methods

The process for prioritizing water bodies in SE AK for instream flow protection was developed through AKSSF project 45040. The regional prioritization will be updated with this project through consultation with staff from ADF&G and other resource agencies.

Final selection of water bodies will be based on the importance of a water body to salmon and steelhead production; the likelihood for competing out-of-stream uses; whether existing hydrologic and biological data for a water body are adequate for performing an instream flow analysis; the availability of resources to collect additional site-specific data if needed; and whether other state and federal statutory mechanisms would provide better or more cost effective protection than a reservation of water right acquired under Alaskan law.

Fish distribution and periodicity data (seasonal use of habitat for migration, spawning, incubation, and rearing) by species and life stage will be compiled and summarized from the *Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes* and its associated *Atlas*, input from biologists from ADF&G and other agencies, and scientific literature.

Hydrologic data needed to characterize the natural intra- and inter-annual variability in stream flows and quantify instream requirements will be obtained, when available, from the United States Geological Survey (USGS) Water Resources of Alaska website for historic streamflow data. When hydrologic data are limited or not available, data will be collected by project staff in accordance with standard sampling protocols developed by the USGS and through consultation with USGS staff and other hydrologists as appropriate.

DNR Reservation of Water application forms will be prepared to comply with state law (AS 46.15.145) and regulations (11 AAC 93.141-147) and following protocols established by the Statewide Aquatic Resources Coordination Unit. Applications will include maps and legal descriptions identifying the location of the water body to be reserved; maps and legal descriptions of gaging stations within the water body; a description of inter- and intra-annual variability in stream flows; and the requested flows to be reserved during specified time periods accompanied by supporting

documentation that justifies and describes the data and analyses used to develop the requested flows. Some applications accepted by DNR under previous AKSSF projects were filed with requested flows for multiple stream reaches in one application. DNR now requires that each reach be filed under a separate application. This project will also begin converting these multiple-reach applications into single-reach applications.

This project will be evaluated based on the number of reservation of water applications prepared, successfully filed with DNR, and adjudicated.

VII. Benefits

The rivers and lakes of SE AK support some of North America’s most viable and productive salmon and steelhead fisheries. Salmon and steelhead are dependent upon sufficient quantities of water to meet their spawning, rearing, incubation, overwintering, and migration habitat requirements. This project will benefit salmon and steelhead populations (including those used for important subsistence fisheries) throughout SE AK by legally reserving water needed to sustain salmon and steelhead habitat and production.

VIII. Products, Milestones, and Timelines

December 1, 2013 – November 30, 2014: Prepare, submit, and adjudicate reservation of water applications; visit stream gage sites approximately every two months to take discharge measurements, survey transducer and staff gage elevations, and download transducer data

IX. Budget

ADF&G SF	Total
100 Personnel	\$157,964
200 Travel	\$19,160
300 Contractual	\$3,400
400 Supplies	\$5,250
500 Equipment	\$0
Subtotal	\$185,774
600 Indirect @ 14%	\$26,008
Total	\$211,782

Budget Narrative:

The State of Alaska salary calculator was used to estimate personnel costs.

Instream Flow Quantification and Protection												
FY 14 (Dec 1, 2013 to Jun 30, 2014)												
Employee Tasks:												
	Sowa	Prepare reservation of water applications, operate and maintain stream gages, and adjudicate ROWs										
	Hass	Prepare reservation of water applications, operate and maintain stream gages, and adjudicate ROWs										
Line 100												
	PCN	Title	Name	R S	Months	Salary & Bene/Month	OT	RS	Months	Salary & Bene/Month	Total	
	11-4344	FB III	Sowa	18 E	0.5	9336	0	18 F	5	9687	53,101	
	11-4342	FB II	Hass	16 J	5.5	8731	0	NA	NA	NA	48,019	
											\$101,120	
Line 200												
	Name	Days	# Trips	Purpose	Dest	Total Lodging	Total Airfare/trip	Total Airfare	Per diem/trip	Total Per diem	Total Ground Transportation	Total
	FB III, Sowa	2	3	Maintain stream gage	Jnu-Haines	100	265	795	120	360	650	1905
	FB II, Hass	2	3	Maintain stream gage	Jnu-Haines	100	265	795	120	360	0	1255
	FB III, Sowa	2	3	Maintain stream gage	Jnu-Hollis	100	750	2250	120	360	1000	3710
	FB II, Hass	2	3	Maintain stream gage	Jnu-Hollis	100	750	2250	120	360	0	2710
											\$9,580	
Line 300												
	Item	Description									Total	
	Minivan lease	7 months @ \$50/month									350	
	WISKI annual fee	Hydrologic software package annual fee									1200	
	SAS annual fee	Statistical software package annual fee									1000	
	ArcGIS annual fee	Mapping and spatial analysis software									600	
											\$3,150	
Line 400												
	Item	Description									Total	
	Discharge equipment	Current-meter, rod									100	
	Transducer cable	In-Situ type brand for transducer									250	
	Transducer	In-Situ brand for measuring river stage									500	
	Stream gaging supplies	Pipes, conduit, hardware									250	
	Personnel protection	Safety supplies, gloves, waders									200	
	Food for field camp	One 3-day trip, 3 people, \$16/day/person									175	
	Cases, dry bags	Transport for scientific equip									75	
	Equipment repair	Repair and calibration of discharge equipment									100	
	Computer	Rugged field computer									1000	
											\$2,650	
Line 500												
	Item										\$0	
										TOTAL	\$116,500	

Instream Flow Quantification and Protection													
FY 15 (July 1, 2014 to Nov 30, 2014)													
Employee Tasks:													
	Sowa	Prepare reservation of water applications, operate and maintain stream gages, and adjudicate ROWs											
	Hass	Prepare reservation of water applications, operate and maintain stream gages, and adjudicate ROWs											
Line 100													
	PCN	Title	Name	R S	Months	Salary & BeneMonth	OT				Total		
	11-4344	FB III	Sowa	18 F	3.5	9880	0				34,581		
	11-4342	FB II	Hass	16 J	2.5	8905	0				22,263		
											\$56,844		
Line 200													
	Name	Days	# Trips	Purpose	Dest	Total Lodging	Airfare/trip	Total Airfare	Per diem/trip	Total Per diem	Total Ground Transportation	Total	
	FB III, Sowa	2	3	Maintain stream gage	Jnu-Haines	100	265	795	120	360	650	1905	
	FB II, Hass	2	3	Maintain stream gage	Jnu-Haines	100	265	795	120	360	0	1255	
	FB III, Sowa	2	3	Maintain stream gage	Jnu-Hollis	100	750	2250	120	360	1000	3710	
	FB II, Hass	2	3	Maintain stream gage	Jnu-Hollis	100	750	2250	120	360	0	2710	
												\$9,580	
Line 300													
	Item						Description					Total	
	Minivan Lease						5 months @ \$50/month					250	
												\$250	
Line 400													
	Item						Description					Total	
	Discharge equipment						Current-meter, rod					100	
	Transducer cable						In-Situ type brand for transducer					250	
	Transducer						In-Situ brand for measuring river stage					500	
	Stream gaging supplies						Pipes, conduit, hardware					250	
	Personnel protection						Safety supplies, gloves, waders					175	
	Food for field camp						One 3-day trip, 3 people, \$16/day/person					175	
	Cases, dry bags						Transport for scientific equip					50	
	Equipment repair						Repair and calibration of discharge equipment					100	
	Computer						Rugged field computer					1000	
												\$2,600	
Line 500													
												\$0	
												TOTAL	\$69,274

Line 600: Indirect (\$26,008)

ADF&G's federally negotiated indirect rate through June 30, 2014, is 14.93% excluding equipment and pass-through funds; however, indirect will be recovered at a reduced rate of 14% for this project.

X. Match Budget

ADF&G SF (35%)	Total
100 Personnel	\$74,124
200 Travel	\$0
300 Contractual	\$0
400 Supplies	\$0
500 Equipment	\$0
Subtotal	\$74,124
600 Indirect	\$0
Total	\$74,124

Match Budget Narrative:

The State of Alaska salary calculator was used to estimate personnel costs.

Line 100: Personnel (\$74,124)

Shawn Johnson, FBIII, will implement, administer, and fulfill reporting requirements, prepare and review reservation of water applications, and assist with stream gaging projects:

- FY14: 3 months @ \$10,020/month = \$30,060
- FY15: 1.2652 months @ \$10,220/month = \$12,930

Joe Klein Environmental Engineer II, will perform final review of reservation of water applications, review AKSSF reporting documents, supervise staff working on project, and ensure project is carried out following ADF&G policies and procedures:

- FY14: 1.25 months @ \$12,330/month = \$15,413
- FY15: 1.25 months @ \$12,577/month = \$15,721