

Alaska Sustainable Salmon Fund Statement of Work

I. Project Title: Instream Flow Protection: Southeast – Phase 8

II. Project Number: 44552 **PCSRF Objective:** HP&R

III. Principal Investigator

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

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 (SEAK). Preparing and submitting reservation of water applications will be the primary tool used to protect instream flows. The existing prioritization of water bodies in SEAK will also be updated. *Related AKSSF projects: 45040, 45107, 45213, 45766, 45822, 45326 (800), 45979, 44563, 44567, 44915.*

2. Introduction

The rivers and lakes of SEAK support some of North America's most productive salmon and steelhead fisheries. Many of these fisheries are utilized for subsistence. 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 that will be used in this project is the Alaska Water Use Act (AS 46.15). The Alaska legislature amended this Act in 1980 in recognition of the economic, social, and other benefits of retaining water in rivers and lakes. This

amendment provides 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. The main 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 the Alaska Department of Natural Resources (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.

AKSSF project 45040 developed a regional prioritization of instream flow needs for salmon-producing water bodies throughout SEAK. During the subsequent instream flow projects, reservation of water applications for 120 stream reaches within 42 watersheds (6th level hydrologic units) throughout SEAK were completed and successfully filed with DNR (accepted as complete and given a priority date). Many of these river systems support important subsistence fisheries (e.g., Alek River, Chilkoot River, Klawock River, Hasselborg Creek, Situk River, Sitkoh Creek, Maybeso Creek) and steelhead populations (e.g., Situk River, West Fork Situk, Sitkoh Creek, Harris River).

It is important to note that 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. With an established water right, the permittee 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. Priority for reservation applications is based on the date they are submitted to and accepted by DNR.

3. Locations

- | | | |
|------------------------|------------------------|-------------------------|
| • Chilkoot River Gage: | Latitude: 59.33547 N | Longitude: 135.559791 W |
| • Cowee Creek Gage: | Latitude: 58.654672 N | Longitude: 134.915233 W |
| • Thorne River Gage: | Latitude: 55. 705839 N | Longitude: 132.626844 W |
| • Peterson Creek Gage: | Latitude: 58.489783 N | Longitude: 134.77475 W |
| • Windfall Creek Gage: | Latitude: 58.509822 N | Longitude: 134.7353 W |

4. AKSSF Objective

Southeast: 1A-1

VI. Objectives

1. Project Objectives

- Update and maintain the regional prioritization of instream flow needs for salmon- and steelhead-producing water bodies in SEAK
- 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

2. Methods

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

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 from the United States Geological Survey (USGS) Water Resources of Alaska website for historic streamflow data when available. 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 Water Resources Division (WRD) and through consultation with USGS WRD staff and other hydrologists as applicable.

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 SARCU. 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.

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

VII. Benefits

The rivers and lakes of SEAK 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 SEAK by legally reserving water needed to sustain salmon and steelhead habitat and production.

VIII. Products, Milestones, and Timelines

- December 1, 2012 – November 30, 2013: Prepare, submit, and adjudicate reservation of water applications
- December 1, 2012 – November 30, 2013: Visit stream gage sites approximately every two months to take discharge measurements, survey transducer and staff gage elevations, and download transducer data

IX. Partners
DNR

X. Budget

ADF&G SF	Total
100 Personnel	\$148,207
200 Travel	\$21,340
300 Contractual	\$3,585
400 Supplies	\$10,200
500 Equipment	\$0
Subtotal	\$183,332
600 Indirect @ 3%	\$5,500
Total	\$188,832

ADF&G SF Budget Narrative:

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

Fiscal Year 2013 (December 1, 2012 to June 30, 2013)											
Haines (Chilkat River, Chilkat Lake, Mosquito Lake, Big Boulder Creek); Hollis (Ratz Creek, Thorn River)											
Employee Tasks:											
Jarrod Sowa, FB III, will prepare and adjudicate reservations of water applications and operate and maintain stream											
Jason Hass, FB II, will prepare and adjudicate reservations of water applications and operate and maintain gages.											
Line 100											
PCN	Title	Name	RS	Months	Salary and benefits /month	OT	RS	Months	Salary and benefits/month	Total	
11-4344	FB III	Sowa	18 E	5.5	\$8,999	0	NA	NA	NA	\$ 49,495	
11-4342	FB II	Hass	16 G	3.5	\$8,090	0	16 J	1.5	\$ 8,393	\$ 40,903	
										\$90,398	
Line 200											
Name	Days	# Trips	Purpose	Destination	Total lodging	Airfare/ trip	Total airfare	Per diem/trip	Total per diem	Total ground transportation	Total
FB III, Sowa	2	4	Maint/install streamgage	Jnu-Haines	\$ 400	\$ 250	\$1,000	\$ 120	\$ 480	\$ 200	\$ 2,080
FB II, Hass	2	4	Maint/install streamgage	Jnu-Haines	\$ 400	\$ 250	\$1,000	\$ 120	\$ 480	-	\$ 1,880
FB III, Sowa	2	4	Maint/install streamgage	Jnu-Hollis	\$ 400	\$ 625	\$2,500	\$ 120	\$ 480	\$ 600	\$ 3,980
FB II, Hass	2	4	Maint/install streamgage	Jnu-Hollis	\$ 400	\$ 625	\$2,500	\$ 120	\$ 480	-	\$ 3,380
FB III, Sowa	2	1	Stream flow records training	Jnu-Anch	\$ 100	\$ 400	\$ 400	\$ 120	\$ 120	\$ 100	\$ 720
FB II, Hass	2	1	Stream flow records training	Jnu-Anch	\$ 100	\$ 400	\$ 400	\$ 120	\$ 120	-	\$ 620
										\$12,660	
Line 300											
Item	Description										Total
WISKI	Annual license fee										\$ 1,000
ArcGis	Annual license fee										\$ 600
SAS	Annual license fee										\$ 1,000
Minivan Lease	7 months @ \$44.50/month										\$ 312
Equipment repair	Repair and calibration of discharge equipment/transducers										\$ 250
											\$3,162
Line 400											
Item	Description										Total
Discharge equipment	Current meter, rod, aquacalc										\$ 1,000
Transducers	In-Situ brand transducers with cable										\$ 2,500
Stream gaging supplies	Galvanized pipe, hardware										\$ 400
Personnel protection	Safety supplies, gloves, waders, wading boots										\$ 600
Data retrieval system	Rugged Reader for downloading transducer data										\$ 1,000
Cases, dry bags	For transport of scientific equipment										\$ 250
Computer	Ruggedized field laptop										\$ 3,000
											\$8,750
										FY 13 TOTAL	\$114,970

Fiscal Year 2014 (July 1, 2013 to Nov 30, 2013)												
Employee Tasks:												
Jarrod Sowa, FB III, will prepare and adjudicate reservations of water applications and operate and maintain stream gages.												
Jason Hass, FB II, will prepare and adjudicate reservations of water applications and operate and maintain stream gages.												
Line 100												
PCN	Title	Name	R S	Months	Salary and benefits /month	OT						Total
11-	FBIII	Sowa	18 E	3.5	\$9,179	0						\$ 32,126
11-	FB II	Hass	16 J	3	\$8,561	0						\$ 25,683
											\$57,809	
Line 200												
Name	Days	# Trips	Purpose	Destination	Total lodging	Airfare/ trip	Total airfare	Per diem/trip	Total per diem	Total ground transportation	Total	
FB III, Sowa	2	2	Maint/install stream gage	Jnu-Haines	\$ 200	\$ 250	\$ 500	\$ 120	\$ 240	\$ 100	\$ 1,040	
FB II, Hass	2	2	Maint/install stream gage	Jnu-Haines	\$ 200	\$ 250	\$ 500	\$ 120	\$ 240	\$ -	\$ 940	
FB III, Sowa	2	2	Maint/install stream gage	Jnu-Hollis	\$ 200	\$ 625	\$1,250	\$ 120	\$ 240	\$ 300	\$ 1,990	
FB II, Hass	2	2	Maint/install stream gage	Jnu-Hollis	\$ 200	\$ 625	\$1,250	\$ 120	\$ 240	\$ -	\$ 1,690	
FB III, Sowa	5	1	USGS ADCP training	Jnu-TBD	\$ 500	\$ 500	\$ 500	\$ 360	\$ 360	\$ 300	\$ 1,660	
FB II, Hass	5	1	USGS ADCP training	Jnu-TBD	\$ 500	\$ 500	\$ 500	\$ 360	\$ 360	\$ -	\$ 1,360	
											\$ 8,680	
Line 300												
Item	Description										Total	
Minivan Lease	5 months @ \$44.50/month										\$ 223	
Equipment repair	Repair and calibration of discharge equipment										\$ 200	
											\$ 423	
Line 400												
Item	Description										Total	
Discharge equipment	Current meter,rod										\$ 200	
Transducers cable	In-Situ type cable for transducer										\$ 200	
Stream gaging supplies	Pipes, conduit, hardware										\$ 200	
Personnel protection	Safety supplies, gloves, waders										\$ 375	
Food for field	Two 3-day trips, 3 people, \$19.44 day/person										\$ 350	
Cases, dry bags	For transport of scientific equipment										\$ 125	
											\$ 1,450	
											FY 14 TOTAL	\$68,362

Line 600 Indirect (\$5,500)

ADF&G's federally negotiated indirect rate is 14.90% excluding equipment and pass-through funds; however, indirect will be recovered at a reduced rate of 3% for this project.

XI. Match Budget

ADF&G SF (33%)	Total
100 Personnel	\$62,315
200 Travel	\$0
300 Contractual	\$0
400 Supplies	\$0
500 Equipment	\$0
Subtotal	\$62,315

ADF&G SF Match Budget Narrative:

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

Line 100 Personnel (\$62,315)

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

- FY13: 3 months @ \$9,468/month = \$28,403
- FY14: 1.5 months @ \$10,020/month = \$15,029

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:

- FY13: 0.883 month @ \$12,088/month = \$10,673
- FY14: 0.666 month @ \$12,330/month = \$8,210