



# EPA Puget Sound Financial and Ecosystem Accounting Tracking System (FEATS) v. September 2012 for Lead Organization Subawardees

*Photo by Rebecca Pirtle, Editor, Kingston Community News (Doe-Kag-Wats Estuary of the Suquamish Tribe)*

## PROJECT INFORMATION

<b>1. Federal Grant Number</b>	PA-01J276-01	<b>*2a. Reporting Period Start Date:</b>	4/1/18	<b>*2b. Reporting Period End Date:</b>	9/30/18
<b>3. Subaward Organization (Name and complete address including zip code)</b>			<b>4. Subaward Project Manager Contact Information</b>		
Name: Upper Skagit Indian Tribe Address 1: 25944 Community Plaza Way Address 2: City: Sedro-Woolley State: WA Zip Code: 98284-			Name: Jon-Paul Shannahan Phone: (360) 854-7089 Ext: Fax: (360) 854-7042 Email: jonpauls@upperskagit.com		
<b>5a. EPA Program</b>	<b>5b. Subaward Project Title and Contract No.</b>		<b>*6. Collaborating Organizations/Partners</b>		
LO - Tribal	Skagit River juvenile steelhead survival and residualization / 16EPA PSP442		Seattle City Light, US Forest Service, Washington State Fish and Wildlife		

<b><u>Subawardee Submission Instructions:</u></b>  LO fills in the white boxes. Subawardee fills in the yellow boxes (boxes with asterisks). Refer to guidance document for how to fill out the boxes. After filling out the yellow boxes, save and e-mail it to your LO Project Manager for approval. LO will roll up the information and submit to EPA for approval.	<b>LO Project Manager:</b> Dani Madrone <b>LO:</b> NWIFC <b>Phone:</b> 360.528.4318 <b>email:</b> dmadrone@nwifc.org  <b>LO Program Coordinator:</b> <b>LO:</b> <b>Phone:</b> <b>email:</b>  <b>EPA Project Officer:</b> Lisa Chang	<b>*7a. Name/Title of Person Submitting Report</b>	Jon-Paul Shannahan Managing Biologist
		<b>*7b. Date Report Submitted</b>	10/31/18

## FUNDING/COST ANALYSIS

8a. Total Assistance Amount Awarded:	184100	8b. Funding Year (Federal Fiscal Year Funds Appropriated)	FY 2016 ----- ----- -----	*9. Amount Spent To-Date:	184100	*10. Amount Reimbursed To-Date:	183334
11. Match Amount Required	0	*12. Total Match Amount Spent and Documented To-Date:		*13. Have you experienced any cost overruns or high unit costs?			
*14. What issues or questions do you need the LO Project Manager to respond to?							

## BUDGET UPDATE

	15a. APPROVED BUDGET			*15b. SPENT TO-DATE		
	LO (EPA) Funds	MATCH	TOTAL	LO (EPA) Funds	MATCH	TOTAL
Personnel	88098	0	\$88,098.00	90221.09		\$90,221.09
Fringe Benefits	25549	0	\$25,549.00	4078		\$4,078.00
Travel	0	0	\$ 0.00	0		\$ 0.00
Equipment	7532	0	\$7,532.00	9001		\$9,001.00
Supplies	11950	0	\$11,950.00	11669		\$11,669.00
Contracts	0	0	\$ 0.00	0		\$ 0.00
Other	2000	0	\$2,000.00	2855.76		\$2,855.76
<b>TOTAL DIRECT CHARGES</b>	<b>135129</b>	<b>0</b>	<b>\$135,129.00</b>	<b>135217</b>		<b>\$135,217.00</b>
Indirect Charges	48971	0	\$48,971.00	48882		\$48,882.00
<b>TOTAL</b>	<b>184100</b>	<b>0</b>	<b>\$184,100.00</b>	<b>184100</b>		<b>\$184,100.00</b>
*Explain Any Discrepancies:	We expended more then budgeted on Equipment because of a large cottonwood that fell across the Illabot PIT antenna that required more repairs than anticipated.					

## ECOSYSTEM GOALS ADDRESSED

16a. Primary Goal	Healthy Species
16b. Additional Goals	-----

## DIRECT THREATS ADDRESSED

17a. Primary Threat	-----
17b. Secondary Threat(s)	-----

## LINKAGES TO PUGET SOUND ACTION AGENDA (Version Adopted August 2012)

18a. Primary Strategic Initiative	Tribal Habitat Priorities
18b. Sub-Strategies Employed	6.4
18c. Near-Term Actions Supported	

## LINKAGES TO EPA PUGET SOUND PERFORMANCE MEASURES

19. Measure(s)	-----
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## LINKAGES TO PUGET SOUND DASHBOARD INDICATORS

20a. Primary Indicator	-----
20b. Secondary Indicators	-----

## PROJECT LOCATION

21a. Latitude	48.444147	21b. Longitude	-122.327628
21c. Hydrologic Unit Code	17110007 - Lower Skagit	-----	-----
21d. Action Area	Whidbey	-----	-----

## MEASURES OF SUCCESS (Key Outputs)

*22a. Description (e.g., “shellfish beds reopened”)	*22b. Unit (e.g., “acres”)	*22c. Project Target (“number”)	*22d. Project Measure To-Date (“number”)

## PROJECT MILESTONES

**Instructions:** In the tables below, please explain your progress toward meeting agreed outputs for the period, **reasons for slippages**, and any additional information including **reflections, lessons learned, and/or thoughtful analysis**. When appropriate, include analysis and information of **cost overruns or high unit costs**, and changes to work plan or budget not requiring prior approval from EPA. We encourage photo documentation - please attach to the report as a separate document.

<b>23a. Subaward Work Plan Component/Task:</b> Skagit River juvenile steelhead survival and residualization					
<b>23b. 2012 Action Agenda Near-Term Action(s) Supported:</b>					
<b>*23c. Estimated Costs:</b>					
<b>Actual Costs to Date:</b>					
<b>(If required to report – contact your Project Manager)</b>					
23d. Sub-Task No.	23e. Sub-Task Description (include due date)	*23f. Date of Status	*23g. Status	23h. Outputs/Deliverables	*23i. Remarks
1.1	Apply for ESA take permits and HPA requests	2/1/17	COMPLETED	Permits obtained	Permits were obtained for 2017 work window.
1.2	Project Management	4/30/18	CURRENT	FEATS reports	
1.3	Amend previously developed project QAPP to reflect any changes or modifications to the study protocol. Get approved amended QAPP	1/15/18	COMPLETED	Approved QAPP Addendum	We completed our QAPP addendum and it was approved January 2018.
1.4	Purchase equipment. Modify and/or fix screw traps and weir fence panels	4/15/17	COMPLETED	Equipment purchased, modified and repaired	We modified debris drives of smolt traps and replaced fatigued hardware (nuts and bolts).

1.5	Maintain PIT antenna array in Hansen Creek and Illabot Creeks	12/30/18	COMPLETED	Annual maintenance of PIT antennas	During summer low flows we replaced antenna components that were not operating to specification. During August, however, a wind storm caused a large cottonwood to fall across the Illabot PIA antenna. We were able to clear the cottonwood from the line and repair most of the upper PIT antenna. We are seeking additional funding to complete repairs to the line.
1.6	Training for surgical implanting of acoustic tags	4/3/17	COMPLETED	USIT staff trained in procedures for surgical implantation in February or March	We conducted a surgical training in collaboration with Bellingham Technical College (BTC). We trained 6 USIT staff on safe handling and surgical tagging of fish following published guidelines. We also provided training for staff from Sauk-Suattile tribe and for faculty at BTC. BTC students observed and asked questions during training to provide opportunity to observe acoustic tagging.
1.7	Install and operate tributary smolt traps to collect fish for acoustic data	6/30/17	COMPLETED	Traps installed and operated between April and May with three sets per week	Smolt traps were installed on 3/31/2017 and removed on 6/20/17 in Hansen Creek and Illabot Creek. We captured 233 O. mykiss in Hansen and 455 O. mykiss in Illabot. A total of 98 O. mykiss were tagged with JSATs.
1.8	Implement in-river survival and residualization: deployment and operation of acoustic receivers	7/15/17	COMPLETED	Place 10 acoustic receiver lines within the Skagit Basin (April-July)	We installed 12 acoustic receiver lines. During the field season we lost 3 receivers (1 stolen, 2 damaged). All other receivers operated above expectations. Preliminary probability of detections estimates are well above the anticipated 30% (the lowest measured probability of detection was 45%). Receivers also maintained at least a 100 m detection range throughout the study period where detection

					ranges were assess during mobile acoustic sruveys.
1.9	Implement in-river survival and residualization: conducting acoustic mobile work	7/15/17	COMPLETED	Mobile tracking surveys conducted in at least 50 km of Skagit River.	We complected 7 mobile surveys along 80 km (Marblemount to Fir Island) and detected 27 JSAT tagged O. mykiss in the mainstem river. This information will inform residualization rates. We also evaluated detection efficiencies and detection range during the mobile work. Detection ranges decrease in the lower stretches of the River that can be attributed to the construction and traffic noise.
1.10	Implement tributary survival and residualization: mark and recapture	10/1/17	COMPLETED	Fish collected twice over the year in a mark/recapture survey in July and September. Scale and tissue samples taken from tagged fish.	Two seperature Mark/recapture surveys were conducted, O. mykiss abundance were estimated and 455 O. mykiss were PIT tagged in Hansen and 375 O. mykiss were PIT tagged in Illabot. Our goal was to PIT tag 300 O. mykiss in each stream. Scales and Tissues samples were taken.
1.11	Implement tributary survival and residualization: resight and recovery	1/1/18	COMPLETED	Mobile resights conducted through the five reaches of the tributary during winter and spring flows.	We completed quarterly mobile PIT telemetry surveys as specified in the new QAPP. We are able to detect PIT tagged individuals and estimate seasonal survival. We also were able to estimate instream movements. As part of this work, we plan to partner with US Forest Service to assess detection efficiency and to better asses movements in streams.
1.12	Estimate in-river survival and residualization	10/30/17	COMPLETED	Depending on detection rates, we will estimate apparent survival or survival with residualization. Similar to the tributary output, we will build encounter histories to estimate survival and	We have completed analysis of in-river survival and residualization rates. We are now in the process of completed a final report.

				residualization from a multi-state resight/recovery model. These rates will be compared to flow and temperature.	
1.13	Estimate tributary abundance, survival and residualization	1/1/18	COMPLETED	Abundances will be estimated twice (July and September) using mark-recapture techniques that will be corrected for capture efficiency. Overall watershed abundance will be estimate through spatial modeling techniques from the reach level data. Summertime survival will be estimated from both abundance estimates using a multi-state mark recapture model. During winter and spring, as flows permit, we will track tagged individuals using resight/recovery techniques to identify live and dead fish. Resight/Recovery detections will be used to estimate winter survival. Both techniques along with detections at PIT antennas will be used to develop an encounter history so to estimate survival and residualization.	We have completed analysis of tributary survival and residualization rates. We are now in the process of completed a final report.
1.14	Develop final report and commincate findings	9/30/18	CURRENT	Final report; Present findings to cooperators	We are finalizing the report and going through internal revisions.

**CHALLENGES AND SOLUTIONS (specific to reporting period)**

<b>*24a. Task No., Sub-Task No.</b>	<b>*24b. Challenge</b>	<b>*24c. Solution</b>

**HIGHLIGHTS/LESSONS LEARNED/REFLECTIONS**

\*25.