



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

1. Federal Grant Number	PA-01J276-01	*2a. Reporting Period Start Date:	10/1/2018	*2b. Reporting Period End Date:	3/31/2019
3. Subaward Organization (Name and complete address including zip code) Name: Tulalip Tribes Address 1: 6404 Marine Drive Address 2: City: Tulalip State: WA Zip Code: 98271-			4. Subaward Project Manager Contact Information Name: Todd Zackey Phone: (360) 716-4636 Ext: Fax: () - Email: tzackey@tulaliptribes-nsn.gov		
5a. EPA Program LO - Tribal	5b. Subaward Project Title and Contract No. FY 2016 Noncompetitive Tribal Projects for Restoration and Protection of Puget Sound / 16EPA PSP440		*6. Collaborating Organizations/Partners		

<p><u>Subawardee Submission Instructions:</u></p> <p>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.</p>	<p>LO Project Manager: Dani Madrone LO: Northwest Indian Fisheries Commission Phone: 360.528.4318 email: dmadrone@nwifc.org</p> <p>LO Program Coordinator: LO: Phone: email:</p> <p>EPA Project Officer: Lisa Chang</p>	*7a. Name/Title of Person Submitting Report	Todd Zackey Project Manager
		*7b. Date Report Submitted	4/29/2019

FUNDING/COST ANALYSIS

8a. Total Assistance Amount Awarded:	\$184,100.00	8b. Funding Year (Federal Fiscal Year Funds Appropriated)	FY 2016 ----- ----- -----	*9. Amount Spent To-Date:	\$176515.37	*10. Amount Reimbursed To-Date:	\$176,515.37
11. Match Amount Required	\$0.00	*12. Total Match Amount Spent and Documented To-Date:		*13. Have you experienced any cost overruns or high unit costs?	no		
*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	\$87,647.00		\$87,647.00	\$88,120.25		\$88,120.25
Fringe Benefits	\$22,866.00		\$22,866.00	\$21,081.88		\$21,081.88
Travel	\$0.00		\$ 0.00			\$ 0.00
Equipment	\$0.00		\$ 0.00			\$ 0.00
Supplies	\$12,000.00		\$12,000.00	\$8,680.56		\$8,680.56
Contracts	\$32,000.00		\$32,000.00	\$32,983.95		\$32,983.95
Other	\$0.00		\$ 0.00			\$ 0.00
TOTAL DIRECT CHARGES	\$154,513.00		\$154,513.00	\$150,866.64		\$150,866.64
Indirect Charges	\$29,587.00		\$29,587.00	\$25,648.73		\$25,648.73
TOTAL	\$184,100.00		\$184,100.00	\$176,515.37		\$176,515.37
*Explain Any Discrepancies:						

ECOSYSTEM GOALS ADDRESSED

16a. Primary Goal	Healthy Habitat
16b. Additional Goals	Healthy Species Water Quality Water Quantity ----- ----- -----

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	A.1.1 A.1.2 A.6.1 A.6.3 A.6.4 B.2.2 B.5.3 D.4.2 D.4.1.1 A.7.1
18c. Near-Term Actions Supported	

LINKAGES TO EPA PUGET SOUND PERFORMANCE MEASURES

19. Measure(s)	Habitat Restored/Protected ----- -----
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LINKAGES TO PUGET SOUND DASHBOARD INDICATORS

20a. Primary Indicator	Estuaries
20b. Secondary Indicators	Wild Chinook Salmon Floodplains Freshwater Quality Stream Flows

PROJECT LOCATION

21a. Latitude	48°01'N	21b. Longitude	122°09'W
21c. Hydrologic Unit Code	17110011 - Snohomish	-----	-----
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.

23a. Subaward Work Plan Component/Task: Monitoring ecosystem response to restoration and climate change in the Snohomish River estuary					
23b. 2012 Action Agenda Near-Term Action(s) Supported:					
*23c. Estimated Costs:					
Actual Costs to Date:					
(If required to report – contact your Project Manager)					
23d. Sub-Task No.	23e. Sub-Task Description (include due date)	*23f. Date of Status	*23g. Status	23h. Outputs/Deliverables	*23i. Remarks
1.1	Engage in project management including, project reporting, grant budget management, and assuring all grant requirements are met. The Principle Investigator (PI) will be responsible for managing and coordinating the subcontract, the monitoring effort, ensuring QA/QC procedures are met, and the final project report.	3/31/2019	CURRENT	Reporting on project updates, budgets, and task accomplishment; FEATS reports and updates	This is the Fourth FEATS report

1.2	Develop QAPP Addendum if required	9/30/17	COMPLETED	Continued development of a monitoring plan for the Snohomish Estuary; QAPP addendum	Addendum to QAPP has been completed and was approved May 22, 2017.
1.3	Continue developing a cooperative and coordinated effort, pooling resources from all Snohomish estuary stakeholders and project proponents. The aim of the coordination is to conduct effective and relevant monitoring efforts, fill data gaps, implement adaptive management in light of changing climatic conditions, and seek further support to continue the necessary monitoring needs of the Snohomish estuary.	9/30/2018	COMPLETED	Meetings and coordination efforts with project collaborators. Estuary Working Group presentation on monitoring results, strategies and collaborative opportunities.	We have completed this task but continue to work on coordinate and pool efforts to continue our monitoring efforts in the Snohomish Estuary
1.4	NOAA NWSC will be contracted to assist with the data collection effort in the estuary and additional funding resources will be used to fund Tulalip staff for data collection efforts and Tulalip staff from the Tulalip Wildlife Program will be conducting the bird surveys. Data will be collected to assess the current conditions across the Snohomish Estuary system, the biological, physical, and water chemistry changes at the Qwuloolt estuary restoration project and long-term monitoring sites will be assessed to track long-term changes in the estuary. Across the estuary, biological data will be collected for fish assemblages residing in the estuary.	3/31/2019	COMPLETED	Completion of 2017 restoration project and system-wide monitoring efforts as well as long-term monitoring efforts. Summary of data collected in final report.	all data collection has been completed all final data will be provided in the final report in task 1.5
1.5	Report on conditions and trends of Snohomish Estuary habitats and restoration projects, with analysis and write-up primarily focused on Snohomish Estuary fish monitoring	3/31/2019	CURRENT	Assessment of the distribution, abundance, migration, and timing of Chinook and other salmonids. Completion of Snohomish Estuary monitoring plan and results from the 2016 AND 2017 sample year.	We are still behind in getting the final report completed. One of the principle investigators left NOAA NWFSC in the fall and we now have two PI's (1 at NOAA & 1 @ Tulalip) to complete all the reporting. This has pushed the ability of us to complete the final report to the end of June 2019

23a. Subaward Work Plan Component/Task: Monitoring water resources on the Tulalip Reservation

23b. 2012 Action Agenda Near-Term Action(s) Supported:

***23c. Estimated Costs:**

Actual Costs to Date:

(If required to report – contact your Project Manager)

23d. Sub-Task No.	23e. Sub-Task Description (include due date)	*23f. Date of Status	*23g. Status	23h. Outputs/Deliverables	*23i. Remarks
2.1	Engage in project management, including project reporting, grant budget management, and assuring all grant requirements are met	9/30/17	COMPLETED	Reporting on project updates, budgets, and task accomplishment. FEATS reports and updates.	This task has been completed and no further oversight is needed
2.2	Continue the USGS subcontract to operate the four stream gauges located on two streams on the Tulalip Reservation: Tulalip Creek (EF, WF, and mainstem) and Mission (Battle) Creek (mainstem). Use these gauge data to preserve, maintain, and archive critical baseline surface water flow data on the Tulalip Reservation for the management and preservation of adequate water supplies that meet the needs of fish, wildlife, plants and their habitats on the Tulalip Reservation. Flow data collected from the five stream gauges will be uploaded to STORET either by USGS staff or by Tulalip Tribes staff through the assistance of the NWIFC.	9/30/17	COMPLETED	Continued stream gauging on the Tulalip Reservation. Continuous, precise, quantifiable records of maximum, minimum, and mean daily discharge available by telemetry from the five stream gauges and made readily available using standard USGS protocols (e.g. real-time flow conditions). Gauging data uploaded to STORET.	Since the this grant application was submitted it was determined that the USGS stream gauge data does not need to be uploaded to STORET since it is already readily accessible via the USGS's streamflow webpage. Contracting funds have been expended for this task cover half the costs of the operation of the stream gauges covered by the Tulalip Tribes the other half of Tulalip funding will come from other funds.

23a. Subaward Work Plan Component/Task: Evaluating the use of beaver relocation as an ecosystem tool in headwater streams of the Snohomish River Basin

23b. 2012 Action Agenda Near-Term Action(s) Supported:

*23c. Estimated Costs:					
Actual Costs to Date:					
(If required to report – contact your Project Manager)					
23d. Sub-Task No.	23e. Sub-Task Description (include due date)	*23f. Date of Status	*23g. Status	23h. Outputs/Deliverables	*23i. Remarks
3.1	Update Quality Assurance Project Plan from FY 2013 if necessary. Coordinate with landowners in acquisition of captured beavers. Initiate trapping and holding. Release beaver at select sites	3/31/2019	COMPLETED	Release of pairs or families of beavers in at least 3 sites. Beaver relocation report summarizing findings from relocation efforts	Landowner coordination, education, and trapping assistance has been completed as well as the relocation to three sites of separate beaver families. A relocation report has been initiated.
3.2	Monitor success of beaver colonies at release sites. Attach and monitor GPS-based transmitters on relocated beavers.	3/31/2019	COMPLETED	Attaching GPS transmitters to captured beavers and post-release monitoring of beavers with these devices. Transmitter attachment and monitoring report discussing development of strategy for fixing GPS transmitters to captured beaver and for monitoring survival and movements of relocated beavers using these devices	The post relocation monitoring of beavers has been completed. One GPS transmitter attachment was attempted. A report detailing the GPS transmitter attachment methods and findings, though limited by the small sample size, as well as a post-relocation monitoring report has been completed.
3.3	Management of contracts, budget, and FEATS reporting	3/31/2019	COMPLETED	FEATS Reporting and project management	This is the fourth FEATS report and tasks 3.1-3.3 have been completed.

23a. Subaward Work Plan Component/Task: Monitoring of chemical and morphological changes to soils in post-breach estuary restoration sites					
23b. 2012 Action Agenda Near-Term Action(s) Supported:					
*23c. Estimated Costs:					
Actual Costs to Date:					
(If required to report – contact your Project Manager)					

23d. Sub-Task No.	23e. Sub-Task Description (include due date)	*23f. Date of Status	*23g. Status	23h. Outputs/Deliverables	*23i. Remarks
4.1	A Quality Assurance Project Plan will be composed by Tulalip Tribes Natural Resources Staff and approved by the NWIFC to ensure best practices are utilized and data quality control standards are clearly defined.	9/30/17	COMPLETED	Approved QAPP	QAPP has been completed and was approved May 22, 2017
4.2	Prior to the levee breach at the Qwuloolt site, soil classification and sampling was completed for five soil pits dug by an excavator. These samples were oven-dried at around 150°F until daily change in weight was less than 0.01 grams then stored for future salinity analysis. Under this funding, we will purchase soil temperature, moisture, and salinity sensors which will allow us to obtain salinity information for these samples.	9/30/17	COMPLETED	Completed UDSA-NRCS Soil Pedon Description Sheet for four soil pits classified at the Qwuloolt site prior to breach. Completed datasheet recording soil salinity, bulk density, and water content for each sample collected from the four pits excavated at the Qwuloolt site prior to breach.	Soils salinity, temperature, and moisture sensors have been purchased all soil pit data have been collected, processed, and data recorded.
4.3	Identify vegetation, dig pits, classify soil, and install sensors: Survey vegetation; Excavate a soil pit and complete a UDSA-NRCS Pedon Description Sheet; Collect constant-volume samples and take soil salinity/moisture/temperature measurements from each discernable horizon or every 40 centimeters; Install data loggers and continuous soil salinity/moisture/temperature sensors at five depths.	3/31/2019	COMPLETED	Completed vegetation datasheet, identifying species presence, abundance, and vigor. Completed UDSA-NRCS Soil Pedon Description Sheet. Completed datasheet recording discrete soil salinity, moisture, temperature, and bulk density for each sample depth. Initial readings of soil salinity, moisture, and temperature at five depths.	Vegetation has been identified, test pits dug, soils classified, and 2 sets of sensors were installed in early September. Follow-up intensive vegetation surveys associated with each pit were completed on October 5, 2018.
4.4	Return every 3 months to download sensor data and verify that sensors and loggers are functioning properly.	3/31/2019	CURRENT	Soil salinity, moisture, and temperature data across three months.	Initial check of sensors was conducted 2 weeks after installation (October 19, 2017) . Additional data downloads have occurred on February 20, 2018; June 12, 2018; September 24, 2018; and April 5, 2019. Winter

					high tides interfere with data logger accessibility; loggers are capable of storing nearly a year worth of data before overwriting the oldest data; moisture from rain threatens the reliability of the data loggers; and the electrical enclosures protecting the data loggers show no signs of impending failure. Therefore, we have determined that best course of action is to skip downloading data during winter.
4.5	Develop and write reports	3/31/2019	CURRENT	A document synthesizing our experience in developing and testing a low-cost methodology for continuously monitoring soil salinity, moisture, and salinity in tidally inundated ecosystems. A final report presenting the results and conclusions drawn during the review and analysis process.	The report reviewing the installation challenges and success of the low-cost methodology for continuously monitoring soil salinity, moisture, and temperature is complete. An update to include data downloaded in 2018 is in progress. The report presenting the results and conclusions drawn during the pit review and analysis process is in progress.

CHALLENGES AND SOLUTIONS (specific to reporting period)

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

HIGHLIGHTS/LESSONS LEARNED/REFLECTIONS

*25.