



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:	10/31/2018	*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 2017 Noncompetitive Tribal Projects for Restoration and Protection of Puget Sound / 17EPA PSP440		*6. Collaborating Organizations/Partners		

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

FUNDING/COST ANALYSIS

8a. Total Assistance Amount Awarded:	\$182,250.00	8b. Funding Year (Federal Fiscal Year Funds Appropriated)	FY 2017 ----- ----- -----	*9. Amount Spent To-Date:	\$109,580.06	*10. Amount Reimbursed To-Date:	\$109,580.06
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	\$54,176.00		\$54,176.00	\$42,152.38		\$42,152.38
Fringe Benefits	\$12,083.00		\$12,083.00	\$10,143.74		\$10,143.74
Travel	\$0.00		\$ 0.00			\$ 0.00
Equipment	\$11,500.00		\$11,500.00			\$ 0.00
Supplies	\$15,563.00		\$15,563.00	\$21,738.04		\$21,738.04
Contracts	\$69,405.00		\$69,405.00	\$24,210.00		\$24,210.00
Other	\$0.00		\$ 0.00			\$ 0.00
TOTAL DIRECT CHARGES	\$162,727.00		\$162,727.00	\$98,244.17		\$98,244.17
Indirect Charges	\$19,523.00		\$19,523.00	\$11,335.89		\$11,335.89
TOTAL	\$182,250.00		\$182,250.00	\$109,580.06		\$109,580.06
*Explain Any Discrepancies:	\$11,500 was intended for the equipment line item was included in the supplies line item when the initial budget was generated by the finance department. I believe it is because the intended purchases were not considered equipment.					

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 the Qwuloolt restoration Project and climate change in the Snohomish River estuary and Whidbey Basin drainage					
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.	9/30/2018	CURRENT	Outputs: Reporting on project updates, budgets, and task accomplishment. Deliverables: FEATS reports and updates.	two FEATS reports have been completed

1.2	Develop QAPP Addendum if required	9/30/2018	COMPLETED	<p>Outputs: Continued development of a monitoring plan for the Snohomish Estuary and Whidbey Basin drainage.</p> <p>Deliverables: NWIFC approved QAPP.</p>	Using existing QAPP this will be the last year we are able to use the current QAPP and it will have to be updated next year
1.3	<p>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.</p>	3/31/2019	COMPLETED	<p>Outputs: Expand and formalize collaboration on monitoring across restoration projects and throughout the rest of the estuary.</p> <p>Deliverables: Estuary Working Group presentation on monitoring results, strategies and collaborative opportunities.</p>	We worked with NOAA NWFSC and Snohomish County Surface Water Management Dept staff to conduct monitoring effort in Snohomish River Estuary in 2018. And worked with the Washington Dept of Fish and Wildlife to develop a story map for the estuary
1.4	<p>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. If determined to fall within scope of the STORET database, applicable data will be uploaded.</p>	3/31/2019	CURRENT	<p>Outputs: Completion of 2018 restoration project and system-wide monitoring efforts as well as long-term monitoring efforts. 2018 system-wide fish sampling data file (assemblage composition, abundance, distribution). 2018 bird surveys of the Qwuloolt restoration site and reference sites. One Qwuloolt site specific bathymetric surveys and Snohomish Estuary-wide bathymetry. Applicable data will be uploaded to STORET determined to</p>	Vegetation surveys were completed by the end of 2018 and sediment monitoring, reading of SETs, was completed in November 2018. Some FY 2017 funds were used to help pay for estuary monitoring efforts in the 1 st quarter of 2019. A draft QAPP for collection of bathymetric data at the Qwuloolt site has been completed and will be submitted to the NWIFC for review and approval in April. Once the QAPP is approved we will conduct a bathymetric survey of the Qwuloolt site. We are behind in working to hire a contractor to conduct a multibeam sonar survey of the entire estuary. We plan on having a contractor hired to do the work by the end of July.

				be within the scope of the database.	
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	PLANNED	<p>Outputs: Data to assess estuary-wide and restoration including specific changes to bathymetry, fish catch numbers and lengths by species, bird species and counts, and water chemistry data.</p> <p>Deliverables: Completion of Snohomish Estuary monitoring report for the 2018.</p>	We are behind in conducting analysis and report writing, one of the principle investigators (PIs) no longer works at NOAA NWFSC so we went from four PIs in 2016 to 2 in 2018. This has resulted in increased work load for the remaining PIs. At Tulalip we have hired an additional staff person to help the PI have more time to devote to data analysis and write up. We plan on having final report in the Fall of 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	9/30/2018	COMPLETED	<p>Outputs: Reporting on project updates, budgets, and task accomplishment.</p> <p>Deliverables: FEATS reports and updates.</p>	This is the 2nd FEATS report for this task
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	9/30/2018	COMPLETED	<p>Outputs: Continued stream gauging on the Tulalip Reservation. Continuous, precise, quantifiable records of maximum, minimum, and mean daily discharge available by telemetry from the four stream gauges and made readily available using standard USGS protocols (e.g. real-time flow conditions). Gauging data can be downloaded from the USGS National Water</p>	The portion of the hydrologic monitoring of reservation streams funded by this grant have been completed all of the data from the stream gauges can be

<p>(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.</p>			<p>Information System for Washington State webpage, https://waterdata.usgs.gov/WA/nwis/current/?type=flow</p>	<p>viewed on the USGS's washington state streamflow website.</p>
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<p>23a. Subaward Work Plan Component/Task: Monitoring of chemical and morphological changes to soils in post-breach estuary restoration sites</p>					
<p>23b. 2012 Action Agenda Near-Term Action(s) Supported:</p>					
<p>*23c. Estimated Costs: Actual Costs to Date: (If required to report – contact your Project Manager)</p>					
23d. Sub-Task No.	23e. Sub-Task Description (include due date)	*23f. Date of Status	*23g. Status	23h. Outputs/Deliverables	*23i. Remarks
4.1	<p>Identify vegetation, dig pits, classify soil, and install sensors at three sites: Review existing QAPP and provided addendum to any changes in methods that are required. Obtain elevation data using high-accuracy post-processed or RTK GLONASS enabled GPS. Survey vegetation Excavate a soil pit and complete a UDSA-NRCS Pedon Description Sheet</p>	4/30/2019	CURRENT	<p>-Approved QAPP addendum, if required. -Centimeter-accuracy data relating to the elevation at which the soil sensors are to be installed. -Vegetative survey data that directly correlate with soil data and Completed vegetation datasheet, identifying species</p>	<p>The initial collaborator, Snohomish County, denied permission to install sensors at the Smith Island Restoration Site due to political concerns resulting in a distinct desire to not collect data relating to soil conductivity/salinity. Some equipment was procured before access was denied, but additional purchases were</p>

	<p>Collect constant-volume samples and take soil salinity/moisture/temperature measurements from each discernable horizon or every 40 centimeters NRCS Pedon Description Sheet</p> <p>Install data loggers and continuous soil salinity/moisture/temperature sensors at five depths.</p>			<p>presence, abundance, and vigor.</p> <p>-Soil Pedon descriptions following US standards for Soil Surveys & Completed USDA-NRCS Soil Pedon Description Sheet</p> <p>-Discrete measurements of soil salinity, moisture, temperature, and bulk density for each soil horizon or every 40 centimeters. Completed datasheet recording discrete soil salinity, moisture, temperature, and bulk density for each sample depth.</p> <p>-Soil salinity/moisture/temperature instrumentation deployed. Initial readings of soil salinity, moisture, and temperature at five depths.</p>	<p>delayed until this issue could be resolved.</p> <p>The Smith Island dike was breached on August 10, 2018 causing the site to no longer be a desirable option for this study.</p> <p>We have received permission from the Port of Everett to install these sensors at the Blue Heron Slough Restoration Site. Additional equipment has been purchased and modifications to electrical enclosures that protect data loggers are underway. We are optimistic that pits can be dug and sensors installed in 2019.</p>
4.2	<p>Return every 3 months to download sensor data and verify that sensors and loggers are functioning properly. Annually repeat vegetation survey for established pits.</p>	4/30/2019	PLANNED	<p>Downloaded data for review and analysis. Soil salinity, moisture, and temperature data from two existing sensor pits at the Qwuloolt site as well as newly established monitoring locations. Vegetative survey data that directly correlate with soil data. Completed vegetation datasheet, identifying species presence, abundance, and vigor. Compatible data will be stored publicly in STORET database.</p> <p>Deliverable: Sediment data that is compatible with STORET will be uploaded.</p>	<p>Since no pits were able to be installed under this grant in 2018, there is no data to be downloaded. Data downloads from the pits installed at the Qwuloolt site in 2017 were downloaded on a regular basis and discussed in more detail in the FY16 FEATS. The continued success of the sensors installed at Qwuloolt make us optimistic for future projects.</p>

4.3	Two reports will be written as products of this grant. The first report will compile and review soils and vegetation data collected during pit excavation. This is discrete data, collected at a single moment in time, but provides us with important baseline information to compare sites and change over time. This will include data collected from the four pre-breach pits at the Qwuloolt site. The second report will compile and review data downloaded from soil sensor data loggers. This continuous data will be reviewed to identify trends over time for each soil sensor pit as well as trends across sensor pits.	4/30/2019	PLANNED	<p>Compilation, review, and analysis of all discrete data collected. Compilation, review, and analysis of all continuous data collected.</p> <p>Deliverables: A final report presenting the results and conclusions drawn during the review and analysis process. A report presenting the results and conclusions drawn during the review and analysis process.</p>	<p>Since no pits were able to be installed under this grant in 2018, there is no data from which to write these reports. Reports will be written for the pits installed at the Qwuloolt as outlined in more detail in the FY16 FEATS.</p>
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CHALLENGES AND SOLUTIONS (specific to reporting period)

*24a. Task No., Sub-Task No.	*24b. Challenge	*24c. Solution
1.5	One of the PI's left NOAA NWFSC and we are down from 4 PIs in 2016 to 2 in 2018 resulting in it taking us longer to get all the monitoring work, analysis, and report writing done.	We just hired, march 2019, a Field Biologist to assist the Tulalip PI with the monitoring effort and allow for the PI to spend more time on data analysis and write up. The Field Biologist is currently working on a different project that will end in June 2019 so the needed help will not be fully relized until the end of June 2019.

HIGHLIGHTS/LESSONS LEARNED/REFLECTIONS

*25.

