

**ATTACHMENT E. Non-scientific, Non-technical or Habitat Enhancement Project Report Form
(Revised 11.21.19)**

*Please refer to the Reporting Policy for all reporting due dates and requirements.

1. Project Number: *See, Reporting Policy at II. C. 1.*

Project # 19190124

2. Project Title: *See, Reporting Policy at II. C. 2.*

Prince William Sound (PWS) Instream Flow Protection

3. Principal Investigator Name(s): *See, Reporting Policy at II. C. 3.*

Principal Investigator:

Ann Marie Larquier

Habitat Biologist III

Alaska Department of Fish and Game

Principal Investigator:

Angela Coleman

Forest Hydrologist

U.S. Forest Service

Chugach National Forest

4. Time Period Covered by the Report: *See, Reporting Policy at II. C. 4.*

EVOSTC Fiscal Year February 1, 2019 - January 31, 2020.

5. Date of Report: *See, Reporting Policy at II. C. 5.*

March 2020

6. Project Website: *See, Reporting Policy at II. C. 6.*

ADF&G/USFS- N/A

USGS- Eshamy Creek streamgage:

https://waterdata.usgs.gov/ak/nwis/uv/?site_no=15237030&PARAMeter_cd=00065,00060

7. Summary of Work Performed: *See, Reporting Policy at II. C. 7.*

The Prince William Sound Instream Flow Protection Project (project) was initiated in spring 2019. The objective of this project is collect the hydrologic data needed to file reservation of water applications on up to two lakes and four streams to maintain and protect healthy habitat for fish species and the services of subsistence and passive use affected by EVOS.

Office based project management, field planning, and software and equipment procurement took place in March 2019 through January 2020. This included development, submittal, and issuance of Fish Habitat Permits for streamgage installation sites, development of a cooperative agreement for agencies to share resources such as boat transportation and equipment, and purchasing of software, acoustic Doppler velocimeters (ADV) and pressure transducers for streamflow measurement.

Field work to establish the streamgaging network commenced in late July 2019. A streamgaging network consists of an index gaging station(s) that is continuously operated over the full study period and an associated network of semi-permanent discharge measurement stations where instantaneous discharge measurements are collected. For this project, Eshamy Creek and Shrode Lake are the sites classified as index stations and Shrode Creek, Jackpot Creek, and Gumboot Creek are classified as discharge measurement stations.

On July 29, 2019 United States Geological Survey (USGS) installed a continuous recording streamflow gaging station (streamgage) on Eshamy Creek (NO. 15237030 ESHAMY C AT ESHAMY LAKE OUTLET NR WHITTIER AK) at the outlet of Eshamy Lake (60.4518, -148.1080). The USGS made three additional visits to the streamgage during this reporting period on September 5, 2019, November 4, 2019, and January 3, 2020 to collect a discharge measurement, download data, and maintain station equipment. Data for this site is available from the National Water Information System (NWIS) website (<https://waterdata.usgs.gov/ak>) and is also summarized in Table 1.

Table 1:

USGS Site Name & Number	Date	Discharge (cfs)
ESHAMY C AT ESHAMY LAKE OUTLET NR WHITTIER AK No. 15237030	7/29/2019	18.1
	9/5/2019	122
	11/4/2019	25.8
	1/3/2020	18.1

On August 15, 2019, ADF&G and USFS installed a lake gage at Shrode Lake. Two additional visits were made to Shrode Lake to collect a discharge measurement, download data, and maintain station equipment. Data for this site is summarized in Table 2.

Table 2:

Site Name	Date	Method	Discharge (cfs)	Total Width (ft)	Mean Depth (ft)	Water Temp (F)
Shrode Creek	8/15/2019	ADV	10	52.9	0.45	68.8
	9/25/2019	ADV	72	56.6	1.24	53.3
	11/12/2019	ADV	53	62.0	1.00	42.7

On September 26, 2019, after visiting Shrode Lake, ADF&G and USFS staff also visited Jackpot Creek and Gumboot Creek discharge measurement stations to collect instantaneous streamflow measurements. Data for these sites is summarized in Table 3.

Table 3:

Site Name	Date	Method	Discharge (cfs)	Total Width (ft)	Mean Depth (ft)	Water Temp (F)
Jackpot Creek	9/26/2019	ADV	45	65.0	1.15	52.2
Gumboot Creek	9/26/2019	ADV	4	13.5	0.75	53.4

For this project, measurement records from each discharge measurement station would be extended using the USGS index gage at Eshamy Creek or the ADF&G/USFS gage at Shrode Lake to obtain multiple years of record if the relationship between the stations proves to be statistically robust. To-date, with only two to four discharge measurements at each site, that statistical relationship cannot yet be analyzed.

Due to unusual decisions outside of the control of the PIs, it is unlikely that the original project objectives will be met due to defunding of the project by the EVOSTC. At this time, the current remaining funding will only cover operation of the Eshamy Creek streamgage by USGS through September 30, 2020. It is important to continue data collection at this site so that at least one complete water year (October 1-September 30) will be recorded. As this project was not renewed, there is no remaining funding for field work by ADF&G/USFS. After the water year is complete, water records will be summarized and submitted via final report but no reservation of water applications are anticipated to be filed due to lack of data.

See tables 1-3 for preliminary streamflow data. Too few data points have been collected to-date to allow for interpretation. Typically, at least ten instantaneous discharge measurements are needed in combination with a continuous streamflow record from a streamgage to initially assess streamflow relationships through statistical analysis.

8. Response to EVOSTC Review, Recommendations and Comments: <i>See, Reporting Policy at II. C. 10.</i>

Since this is the initial year of the project, no review comments were received.

9. Budget:

See separate submittals for ADF&G and USFS budget tables.

Budget Category:	Proposed FY 17	Proposed FY 18	Proposed FY 19	Proposed FY 20	Proposed FY 21	TOTAL PROPOSED	ACTUAL CUMULATIVE
Personnel	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Travel	\$0.0	\$0.0	\$720.0	\$0.0	\$0.0	\$720.0	\$647.3
Contractual	\$0.0	\$0.0	\$6,750.0	\$20,250.0	\$0.0	\$27,000.0	\$6,750.0
Commodities	\$0.0	\$0.0	\$500.0	\$0.0	\$0.0	\$500.0	\$547.0
Equipment	\$0.0	\$0.0	\$12,000.0	\$0.0	\$0.0	\$12,000.0	
Indirect Costs (will vary by proposer)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
SUBTOTAL	\$0.0	\$0.0	\$19,970.0	\$20,250.0	\$0.0	\$40,220.0	\$7,944.3
General Administration (9% of subtotal)	\$0.0	\$0.0	\$1,797.3	\$1,822.5	\$0.0	\$3,619.8	
PROJECT TOTAL	\$0.0	\$0.0	\$21,767.3	\$22,072.5	\$0.0	\$43,839.8	
Other Resources (Cost Share Funds)	\$0.0	\$0.0	\$30,000.0	\$0.0	\$0.0	\$0.0	\$30,000.0

COMMENTS: Project received preliminary 5 year approval, but then was not renewed during October 2019 Trustee Council Meeting. Since Line 500-equipment/commodities had not been purchased yet, funds were released back to EVOS. Approval was received to rollover/encumber \$20,250 in contractals to EVOS FY20 to complete USGS streamgaging contract. See revised RSA reflecting these changes. o expenditures besides contractals anticipated in FY20 or 21.