



Stormwater Action Monitoring Quarterly Report April 1 through June 30, 2020

SAM accomplishments and key decisions reported for the quarter

- SAM’s annual invoices and Ecology’s 2019 annual report on SAM activities were sent to permittees.
- Oystershell retrofit contract was amended to shorten contract period with reduced field sampling and budget.
- Puget Small Streams Quality Assurance project Plan has been published in June.

SAM budget for the previous quarter and anticipated in the next quarter

Table 1 shows the SAM budget for each account for the whole program. Revenue for 2020 is expected in August, and each year thru 2024. The Pooled Resources Oversight Committee (PRO-C) approves encumbrance of SAM funds. Encumbrances in excess of projected revenues are due to projects that span multiple years. Projected expenditures for the next quarter are based on anticipated approved deliverables and invoices and an estimate of Ecology’s expenses. Indirect charges are applied quarterly to the individual accounts while SAM management staff costs are applied proportionally at the end of each fiscal year.

Table 1. Quarterly summary of revenues, expenditures, encumbrances, and available funds for each SAM account.

Reported and projected income and expenditures	Puget Sound status and trends		Lower Columbia status and trends		Effectiveness studies		Source ID Projects		Admin Costs (Qtr)
	Apr-Jun 2020	Jul-Sept 2020 (anticipated)	Apr-Jun 2020	Jul-Sept 2020 (anticipated)	Apr-Jun 2020	Jul-Sept 2020 (anticipated)	Apr-Jun 2020	Jul-Sept 2020 (anticipated)	Ecology’s Apr-Jun expenses
Balance at start of quarter	\$1,616,231	\$1,748,907	\$0	\$14,134	\$3,291,345	\$3,339,429	\$562,878	\$452,004	
Revenues	\$200,207	\$549,941	\$14,134	\$122,333	\$332,567	\$1,104,531	\$0	\$0	
Expenditures	\$67,532	\$217,293	\$0	\$0	\$284,484	\$113,747	\$110,874	\$0	\$61,652
Balance at end of quarter	\$1,748,907	\$2,081,555	\$14,134	\$136,467	\$3,339,429	\$4,330,213	\$452,004	\$452,004	
Encumbrances	\$968,611	\$751,318	\$0	\$469,678	\$2,302,047	\$2,188,300	\$124,451	\$124,451	

SAM study solicitation process

The third round of project solicitation to gather a new set of SAM Effectiveness and Source Identification studies began on January 22nd. SAM Study Selection Subgroup (S4) reviewed total 16 of letter of interests (LOI) in March and nine of them developed and submitted full proposal for further review in May. Each proposal will get reviews from two to three S4 members, an Ecology stormwater planner or engineer and SAM staff. The nine full proposals and LOIs are available in SAM website.

SAM contracting activities

All contract scopes of work are reviewed and approved by the PRO-C and Ecology are posted online. The following contracting activities occurred this quarter:

ecology.wa.gov/SAM

- The USGS contract for watershed delineation was closed.
- The Oystershell retrofit in catch basin project was amended to unencumber \$89,616 in monitoring funds.
- The Bioretention alternative blends project was closed and \$55,915 of unspent funds were unencumbered.
- The Association of Washington Cities grant was extended another year and added \$21,083 more funds for additional tasks such as the SAM Round 3 study selection workshop, a City Vision article on bioretention, a winter 2020 communication products survey, and more study fact sheets.

SAM summary by topic

Communications project

Association of Washington Cities (AWC) reported the survey of stormwater managers like SAM products that are easiest to communicate findings with the public and elected officials - such as the websites, SAM booklet, SAM focus sheets and videos.

[Ecology's 2019 annual report](#) on SAM activities is published on the SAM administration webpage.

Receiving water projects

SAM monitors the impacts of stormwater runoff in urban and urbanizing areas in the Puget Sound small streams and nearshore environments. Ecology published Quality Assurance Project Plan (QAPP) for Puget Small Streams (PSS) study in June and next quarter the Puget Sound Streams project will begin field sampling. Nearshore mussel tissues collected from 2019-2020 monitoring were processed for chemical analyses. The second round (2017-2018) mussel monitoring report will be out in late 2020.

Effectiveness studies

SAM studies determine the effectiveness of operational or structural BMPs, maintenance and management actions, and outreach efforts to reduce stormwater runoff and transport of pollutants to receiving waters. There are 8 active effectiveness studies. Three studies are working on data analysis: bioretention fungal amendments, bioretention hydrology performance, and the oyster shell catch basin retrofits study. Four studies are in the sampling phase: bioretention longevity, mulch options for bioretention, individual tree hydrology-monitoring project and the Redmond Paired Watershed study for the 2019-2020 wet season. The WSU-led orifice control of bioretention study is getting a delayed start and may miss the 2019-2020 wet season.

Source Identification Projects

SAM projects on source control and source identification will improve illicit discharge detection and adapt our management solutions for pollutant sources in stormwater runoff. There are two active source identification projects. The spill hotline feasibility study is preparing the interview summary report. King County delivered the draft updated illicit connection illicit discharge (IC/ID) field screening manual this quarter and will begin to plan trainings in 8 locations in western Washington.

SAM contract deliverable activity

Project activities, contracting actions and meetings are summarized under each SAM category in this section.

Communications	Deliverables approved Q2 2020	Anticipated deliverables Q3 2020
AWC		SAM fact sheet for Puget Sound Streams improved study design.
Receiving water agreements	Deliverables approved Q2 2020	Anticipated deliverables Q3 2020
Marine mussels – WDFW	Biological metrics datasheet, Draft report for the 2 nd round monitoring (2017/18)	Final report for the 2 nd round monitoring (2017/18)
Puget small streams – USGS, Manchester lab, Rhithron lab	Site evaluation and selection memo	Email confirmation for data recording and equipment maintenance
Source ID Contracts	Deliverables approved Q2 2020	Anticipated deliverables Q3 2020
IC/ID Manual Update – King Co	Final updated IC/ID manual, Presentation to SWG, and revised schedule for upcoming trainings	Begin online training registration
Feasibility of regional spill hotline – King Co	Final interview research summary report and TAC Meeting	Quarterly Report and final matrix
Effectiveness study contracts	Deliverables approved Q2 2020	Anticipated deliverables Q3 2020
Paired watershed study – Redmond	Draft water year 2019 report	Final water year 2019 report and draft 4yr trend report
LID bioretention hydrology performance (current 2012+ facilities) – Olympia	Interim project meeting with SAM/Ecology,	Tech memo on modelling, models, and interim findings memo for SWG
Field test of plants and fungi on bioretention performance – USFWS	Year 2 report on hydraulic, water quality, and toxicity monitoring.	Interim results regarding accumulation/mobilization and final report
Longevity of bioretention toxicity prevention – USFWS	None	Progress report 2
Hydrologic benefits of individual trees - WDNR	Quarterly Report 6	Quarterly Report 7
Oyster shell catch basin retrofits – King County	None	Semi-annual project report
Mulch choices for bioretention - WSU Puyallup	Installation photos	Semi-annual report
Orifice control for bioretention - WSU Puyallup	TAC meeting note	Draft QAPP