Stormwater Action Monitoring Quarterly Report October 1 through December 31, 2017

SAM accomplishments and key decisions reported for the quarter

- Ecology launched a new website in December 2017, work continues to migrate important content to the new platform. This quarter the SAM Coordinator worked to carryover the highest priority Stormwater Action Monitoring (SAM) content.
- Scopes of work for three new source identification projects and three effectiveness studies are being finalized by the SAM Coordinator and study leads. Contracting is anticipated next quarter.

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

Table 1 shows detail for each SAM component and for the whole program. Encumbrances in excess of projected revenues are for projects spanning multiple years. SAM program management expenses are not separately accounted for by the three SAM components; indirect charges are applied quarterly. The total balance and anticipated expenditures for the coming quarter include Ecology's expenses. Revenue is expected in the 3rd quarter (August) of each calendar year.

Table 1. Summary of revenues, expenditures, encumbrances, and available funds for each SAM component

Reported and projected income and expenditures	**Status and trends** (4-year project total: $3,638,710)		**Effectiveness studies** (4-year project total: $6,299,238)		**SIDIR** (4-year project total: $677,250)		**SAM total** (4-year project total: $10,615,198)		
	Oct-Dec 2017	Jan-Mar 2018 *(anticipated)*	Oct-Dec 2017	Jan-Mar 2018 *(anticipated)*	Oct-Dec 2017	Jan-Mar 2018 *(anticipated)*	Ecology's Oct-Dec expenses	Oct-Dec 2017	Jan-Mar 2018 *(anticipated)*
Balance at start of quarter	$1,108,932	$1,038,190	$4,194,920	$4,087,694	$555,262	$553,840	-	$5,713,999	$5,478,488
Revenues	$0	*$0*	$0	*$0*	$0	*$0*	-	$0	*$0*
Expenditures	$70,742	*$140,342*	$107,226	*$367,787*	$1,422	*$1,260*	$56,121	$235,511	*$574,389*
Balance at end of quarter	$1,038,190	*$897,848*	$4,087,694	*$3,719,907*	$553,840	*$552,580*	-	$5,478,488	*$4,904,099*
Encumbrances	$526,473	*$382,488*	$2,684,412	*$2,705,075*	$0	*$350,000*	-	$3,210,886	*$3,437,563*

SAM contracting activities

Contract scopes of work and deliverables that have been reviewed and approved by the SAM Coordinator are posted online.

- The USGS marine nearshore sediment project was extended to allow time to complete the final report. No new projects were signed this quarter, but scopes of work are underway, see Summary by Topic.

SAM issues being resolved or for which stakeholder input is desired

SAM's websites (www.ecology.wa.gov/SAM) as part of Ecology's new web platform are still under construction. If you are having a hard time finding projects contact SAMinfo@ecy.wa.gov.

SAM summary by topic

Communications project

Association of Washington Cities (AWC) completed three more SAM project factsheets and published an article entitled "Pool Party" (page 7) on Battle Ground's perspective on the value of SAM in AWC's CityVision Magazine Sept/Oct 2017. Three more factsheets are expected next quarter, as well as an outline for a GIS story map, and a survey evaluating stormwater managers & local decision-makers knowledge of SAM.

Receiving water projects

SAM is monitoring and assessing the impacts of stormwater runoff in urban and urbanizing areas in the Puget Sound nearshore and small stream environments. The three active projects are Puget lowland streams, nearshore mussels, and urban nearshore sediment.

- The SAM Scientist wrote a technical memo containing additional spatial analyses for the urban Puget Sound shoreline mussel data. Round 2 Mussels were deployed at 40 locations in December and will be retrieved in late February 2018.
- The nearshore sediment and Puget lowland small streams projects are both are anticipated to publish final reports early in 2018.

Following delivery of recommendations for all SAM receiving water studies, SWG will plan future trends monitoring.

Effectiveness study projects

SAM is monitoring the effectiveness of BMPs and management actions to reduce stormwater runoff destructive flow and transport of pollutants to receiving waters. In addition to the 10 active effectiveness monitoring projects, SAM staff have been working with 3 project leads to turn the approved project proposals into detailed scopes of work. The intent is to complete contracting next quarter.

Source Identification Project

Stormwater Work Group (SWG) approved three new Source ID study proposals this quarter, and they are quickly being turned into detailed scopes of work this quarter. The intent is to complete contracting next quarter.

Table of approved SAM deliverables and next quarter anticipated activity

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

Communications	Deliverables approved Q4 2017	Anticipated deliverables Q1 2018
Association of Washington Cities	Three factsheets and article in AWC's CityVision titled "Pool Party".	Three factsheets, story map/GIS product outline, survey to assess knowledge of SAM after first year of communication strategy.
Receiving water agreements	**Deliverables approved Q4 2017**	**Anticipated deliverables Q1 2018**
Streams – King Co	The complete report was reviewed by each team member a couple times. The SAM Coordinator and staff compiled team comments and revised the draft report.	Publication of final report (King County), presentation of recommendations to Freshwater Work Group and SWG, and nested basins memoranda (USGS).
Streams – USGS		
Streams – Ecology Environmental Assessment		
Nearshore sediment - USGS	Revised draft report including additional analysis of the data by marine drift cell categories, a comparison to Ecology's Marine Sediment trend program and SAM trend program recommendations.	Publication of final report on the status of nearshore sediment chemistry (USGS). Memo on microplastics in sediment samples (USGS).
Nearshore sediment - DNR	Contract completed this quarter.	
Nearshore sediment – King County	Contract completed this quarter.	
Marine mussels - WDFW	Map and list of sites for Round 2 SAM mussel sampling winter of 2017-18. Mussel cages deployed in December.	Mussel cages retrieval in February. Completed deployment and retrieval datasheets.
Source ID Contract	**Deliverables approved Q4 2017**	**Anticipated deliverables Q1 2018**
NA	NA	NA

SAM contracts deliverable activity Oct – Dec 2017

Effectiveness studies contracts	Deliverables approved Q4 2017	Anticipated deliverables Q1 2018
Catch basin inspection and maintenance	None, however SAM Coordinator provided the project team responses to annual report questions for permittees with alternative schedules for catch basin cleaning.	October TAC meeting notes, catch basin data analysis, and program design and cost analysis.
Paired urban watershed restoration	None	Remaining WY 2017 monthly progress reports, and physical and biological monitoring data.
Hylebos Creek in Federal Way, regional bioretention retrofit	None	Toxicity lab data & semi-annual progress report.
LID Retrofit of Hwy 99 at Echo Lake	None	Final report, posting to KC website, and final progress report.
Stormwater source control at small businesses	Completed	NA
LID bioretention hydrology performance – older facilities	Quarterly progress report with last of monitoring data.	Quarterly progress report. Technical memo on performance compared to modeled expectations is expected, and WWHM models of each bioretention.
LID bioretention hydrology performance – current design (2012+) facilities	None	Site selection checklist & evaluation, progress report.
Effectiveness of bioretention soil to capture and treat PCBs	None	Monitoring progress for July-Dec 2017.
Field test of plants and fungi on bioretention performance	Bioretention soil chemistry deliverable not approved due to improper sampling technique.	Revised soil chemistry results for bioretention set up. All baseline analyses (microbiology, chemistry, and toxicity) using conditioning water. Year 1 report on hydraulic, water quality, and toxicity monitoring.
Rain Garden and bioretention protocol and survey	None	Version 2 training materials, tech memo, results Version 2 survey, plan for data, TAC meeting, and Version 3 final protocol.