



Stormwater Action Monitoring Quarterly Report July 1 through September 30, 2022

SAM accomplishments and key decisions reported for the quarter

- Signed a new contract with City of Olympia to evaluate the key parameters controlling infiltration rates of old bioretention facilities (pre-2005).

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

Table 1 shows the SAM budget for each account. Revenue is expected in August each year from 2020 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)
	Jul-Sept 2022	Oct-Dec 2022 (anticipated)	Jul-Sept 2022	Oct-Dec 2022 (anticipated)	Jul-Sept 2022	Oct-Dec 2022 (anticipated)	Jul-Sept 2022	Oct-Dec 2022 (anticipated)	Ecology’s Jul-Sept expenses
Balance at start of quarter	1,906,488	ND	83,821	ND	4,093,886	ND	178,786	ND	
Revenues	719,222	ND	127,307	ND	1,403,544	ND	0	ND	
Expenditures	261,679	ND	50,140	ND	24,297	ND	23,445	ND	31,398
Balance at end of quarter	2,364,031	ND	160,988	ND	5,473,133	ND	155,341	ND	
Encumbrances	2,445,177	ND	226,003	ND	3,234,486	ND	135,605	ND	

ND – Not done. These fields were not estimated at the time and would not make sense to calculate in hindsight.

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:

- Signed new or amended Jul-Sept
 - Olympia’s infiltration of bioretention was signed in August for \$614,159.

SAM summary by topic

Communications

Routine deliverable and contracting updates to SAM website.

Receiving water projects

SAM monitors the impacts of stormwater runoff in urban and urbanizing areas in the Western Washington small streams and nearshore environments. There are two active stormwater receiving water monitoring in Puget Sound region and one stream monitoring in Lower Columbia region. Key updates are:

- Clark County published the Lower Columbia Urban Streams (LCUS) 2021 water year report, see SAM website.

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 at the end of this quarter. Key updates are:

- A new SAM project with City of Olympia was contracted to conduct a controlled field study of infiltration rate of old bioretention facilities (pre-2005) and provide key performance information these facilities over time and maintenance thresholds (FP8).
- The [Individual Tree Hydrology SAM Fact sheet](#) was published.
- Scope of work development will start next year on the last Round 3 approved project: (FP4) Replacement and lifecycle costs of permeable pavements compared with conventional pavements (WSU-P).

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 projects.

- King County’s Mobile Business project will start their pilot outreach in King County.
- WSU’s Business Source Control project completed trainings this quarter.

SAM contract deliverable activity

Table 2: SAM’s contracts, end dates, and deliverable activity.

Receiving water agreements	Deliverables approved Q3 2022	Anticipated deliverables Q4 2022
Marine mussels (older design) – WDFW	QA QC’d dataset, data entry to EIM, draft report on old design sites and trends	Contract expired
Marine mussels – WDFW	Final report	Final report link, and SAM fact sheet
Puget small streams – USGS, Manchester lab, Rhithron lab	None received	Final 2020 Report, Q2 and Q3 quarterly reports, 2021 draft final report, 2022 Sampling completeness
Lower Columbia urban streams- Clark County	Draft 2021 Report, Q1-Q2 semi-annual progress report, Continuous data upload, Final 2021 Report.	2022 sampling completeness, Q3-Q4 semi-annual progress report, Continuous data upload
Source ID contracts	Deliverables approved Q3	Anticipated deliverables Q4 2022

	2022	
Improving business source control programs – WSU (Sept 2023)	Quarterly report, draft business inspection training agenda and curriculum	Draft business inspection training materials, and conduct 4 business inspection trainings. Final online training video.
Mobile business source control – King Co (Dec 2023)	draft and final IDDE mobile businesses data analysis report and database, progress report	Draft and final best practices for multi-jurisdiction coordination, draft and final tech memo of business listings, progress report.
Effectiveness study contracts	Deliverables approved Q3 2022	Anticipated deliverables Q4 2022
Paired watershed study – City of Redmond (Sept 2025)	WQ monitoring for 3months of WY22	WY 2021 draft and final report, TAC notes TAC notes, three WY2022 monthly progress reports, Opti Pond WY 22 discharge estimates.
Longevity of toxicity prevention - WSU Puyallup (Nov 2024)	Presentation to SWG	Progress report 6
Hydrologic benefits of individual trees - WDNR (Aug 2024)	Draft SAM fact sheet	Draft and final QAPP amendment, instrument installation email, and bi-annual report
Orifice control for bioretention - WSU Puyallup (Dec 2022)	Progress report 6	Modeling study plan and draft report Final modeling study report, SWG presentation, draft SAM fact sheet, data submittal
Evaluating stormwater education and outreach program - WSU (Feb 2023)	TAC#5, presentation to SWG	Final annotated bibliography, Quarterly status report, D5.4 (draft and final checklist and report template for guidance), D6.1-6.6(findings white paper, SAM fact sheet, and draft and final training manual), D5.5 pilot test summary, D5.6 final checklist and report template and checklist
Improving ditches and maintenance - WSU Puyallup (Sep 2024)	WQ portion of project on hold, looking for new sites	May close or amend contract if no sites found.
BMP maintenance condition - City of Bellevue (Apr 2024)	permittee survey	Survey results, Lit review draft and final, Ecology staff, Progress report
Hydraulic conditions of old bioretention facilities - City of Olympia (Jul 2023)	Contract signed.	Subconsultant and progress report, TAC kickoff meeting, draft QAPP
Lit review of particles in stormwater & treatment -WDNR (Nov 2023)	Refined scope, confirmed TAC members, TAC#1	Status report, literature synthesis, data sources, data summary tables, report outline, draft flow charts, draft white paper