

Regional Stormwater Monitoring Program Quarterly Report (Revised)

For April 1 through June 30, 2016

Purpose of Revision

Table 1 was revised to report the actual status of the RSMP budget at the end of State Fiscal Year 2016 (FY16). In July through September, Ecology received invoices for work done prior to June 30, 2016 on RSMP projects. Ecology retroactively applied these payments to FY16, the time period in which the costs were incurred. This is standard practice for all state agencies at the end of each fiscal year, in order to ensure incurred costs are attributed to the fiscal year in which the related work was completed. The Pooled Resources Oversight Committee requests the RSMP Coordinator continue to issue a revised 2nd quarter report each year.

Additionally, unspent money that had been encumbered for the streams sampling, training, and lab analysis but remained unspent were unencumbered in this revision, and returned to Status and Trends revenue line (Table 1), for the start of State Fiscal Year 2017.

RSMP accomplishments and key decisions reported for the quarter

- The final two effectiveness studies scopes of work were negotiated and contracting is underway.
- RSMP marine nearshore sediment team's contracts were let this quarter to US Geological Survey (USGS) and Washington State Department of Natural Resources (WDNR) for marine sediment monitoring. One remaining scope of work is under development with King County.
- The small streams data analysis team has a standing weekly call. Water and sediment chemistry data results are now complete in EIM.
- The first eight effectiveness studies continue to produce study designs, progress reports, and monitoring results.

RSMP budget for the previous quarter and anticipated for the coming quarter

Table 1 shows detail for each RSMP component and for the whole program. Encumbrances in excess of projected revenues will be for projects spanning multiple years. Ecology's program administration expenses are limited to 5% of the total RSMP revenue and are not separately accounted for by the three RSMP components; indirect charges are applied quarterly. The total balance and anticipated expenditures for the coming quarter include Ecology's administrative 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 RSMP 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)		RSMP total (4-year project total: \$10,615,198)		
	Apr-Jun 2016	July-Sept 2016 <i>(anticipated)</i>	Apr-Jun 2016	July-Sept 2016 <i>(anticipated)</i>	Apr-Jun 2016	July-Sept 2016 <i>(anticipated)</i>	Ecology's Apr-Jun administration expenses	Apr-Jun 2016	July-Sept 2016 <i>(anticipated)</i>
Balance at start of quarter	\$197,800	\$560,984	\$2,590,912	\$3,650,578	\$310,841	\$414,548	-	\$3,162,628	\$4,654,305
Revenues	\$592,910	\$299,266	\$1,085,228	\$489,580	\$116,206	\$53,108	-	\$1,794,344	\$841,954
Expenditures	\$229,726	\$456,251	\$25,561	\$879,105	\$12,499	\$28,025	\$34,881	\$302,667	\$1,383,381
Balance at end of quarter	\$560,984	\$403,999	\$3,650,578	\$3,261,053	\$414,548	\$439,631	-	\$4,654,305	\$4,112,878
Encumbrances	\$986,323	\$597,423	\$3,706,368	\$3,428,861	\$72,369	\$49,781	-	\$4,765,060	\$4,076,065

RSMP Activities

Status and Trends Monitoring

King County is leading the multi-agency team of scientists to analyze the streams data. Washington State Department of Fish and Wildlife (WDFW) is managing the nearshore marine monitoring project. The U.S. Geological Survey (USGS) is leading the nearshore sediment monitoring project. The Ecology/Dept. of Health BEACH coordinator is conducting the marine nearshore bacteria data compilation and analysis project.

Small streams water quality and watershed health

The stream analysis team lead (King County) held multiple conference calls to coordinate data analysis. This quarter, the benthos and periphyton taxa were received and reviewed, and habitat metrics generated by Ecology's Environmental Assessment Program (EAP) staff. The water quality index score was generated and loaded to EIM by Ecology. GIS watershed boundaries above each sampled site are being drafted by USGS. Early data compilation and data deliverables are being assembled this quarter.

Marine mussel contaminant monitoring

WDFW assessed the post-deployment condition of the mussels, including mortality assessment.

Marine nearshore sediment chemistry

Contracts with USGS and WDNR were completed. The team will finalize the Quality Assurance Project Plan (QAPP) and conduct the sampling this summer.

Nearshore bacteria

BEACH staff began analysis of the compiled indicator bacteria data set for the Puget Sound nearshore.

Effectiveness Studies

A second round of RSMP effectiveness studies solicitation began this quarter, and is described on the RSMP Effectiveness Studies website. Letters of Interest (LOIs) are being developed by study proponents, and due to the RSMP Coordinator on July 18th.

Eight of the original 10 RSMP Effectiveness Studies are active on tasks such as site preparation, monitoring, QAPP development, or literature reviews. Lakewood submitted a progress report detailing progress compiling business source control survey responses this quarter. An amendment to the Bellingham LID hydrologic performance study was negotiated to extend the project, cover equipment purchases and final report. Sites preparation and hydraulic measurements are taking place this summer.

The final 2 of the original 10 RSMP Effectiveness Study's scopes of work were finalized this quarter, and will be signed next quarter.

- King County's study to assess PCB treatment/sequestration in bioretention soils. King County will coordinate this field effort with USFWS assessment of plant and fungi impacts of performance of bioretention soil mix, but the agreement is separate for the PCB sampling and analyses.
- King County assessment of catch basin inspection effectiveness.

Source Identification Information Repository (SIDIR)

Lakewood's consultant is almost done compiling 2015 IDDE data from PARIS submitted by permittees. An intern with Ecology was able to assist with hand data entry over the winter. The compilation database is expected this summer.

Communication

This is a new section for this quarterly report. Since 2014, the RSMP Coordinator and SWG Project Manager have prepared materials and given many talks on the RSMP that would fall under this heading. In this quarter, both the

SWG and PRO-C discussed ways to fill the need for a communication strategy to share progress, results and findings from the RSMP studies with permittees, stormwater managers, and other stakeholders and decided to contract with the Association of Washington Cities (AWC) to support the RSMP Coordinator. Also, a table of costs by project was added to the RSMP Administration webpage.

RSMP contracts and agreements

Several modifications of agreements and two new agreements were finalized this quarter with the following partners:

- New agreements with the RSMP marine sediment team members; WA State Department of Natural Resources \$95,260 and USGS \$102,640.

In the coming quarter, Ecology expects to complete agreements with:

- A new agreement with King County for marine sediment monitoring and lab analysis for 10 of the 40 sites, for \$40,165.
- Amendment with Bellingham's hydrologic monitoring of bioretention study (\$95,666) to extend the monitoring timeframe through 2017 and increased costs for equipment and analysis.
- New agreements with King County (catch basin cleaning and PCB entrainment in bioretention) for two effectiveness studies totaling \$ 260,305 and \$ 191,225.
- New agreement with Association of Washington Cities to develop an RSMP Communication strategy, products and findings conference in 2017. Costs for this contract will be distributed proportionally amount the three RSMP accounts: 34% Status and Trends, 60% Effectiveness Studies, and 6% Source Id.

RSMP deliverables received in the previous quarter

All contract scopes of work and deliverables that have been reviewed and approved by the RSMP Coordinator are posted to the RSMP website: <http://www.ecy.wa.gov/programs/wq/stormwater/municipal/rsmp/rsmp.html>

Status and Trends

- Ten select sediment samples that were below detection limits for PAHs were re-run at a lower detection limit to explore data gained at the lower threshold. The cost was, \$3,250 and results were received from MEL, and analysis is underway by the RSMP Coordinator.
- Ecology calculated the metrics for habitat, water quality index, benthos and periphyton.
- Marine nearshore caged mussel post-retrieval data on survival, completeness of the field sampling, and biological metrics.

Effectiveness Studies

- Equipment bids for monitoring LID facilities in the Bellingham LID hydrologic performance study.
- Lakewood's business source control study monthly progress reports.
- Redmond's paired watershed study data; continuous raw flow data for 2015 and field site info.

SIDIR

- Progress on hand entry required population of IDDE incident tracking database.

RSMP deliverables expected in the coming quarter

Status and Trends

- Ecology will finish the stream watershed health (habitat and benthos) data QC review and upload data to EIM.
- Marine nearshore caged mussels chemistry results a quality assurance review are anticipated next quarter.

- Final QAPP for marine nearshore sediment chemistry monitoring.
- Presentation on the marine bacteria indicator data analysis.

Effectiveness Studies

- Redmond paired basin retrofit study field site photos.
- Bellingham LID hydrologic study field site photos and preliminary field measurements.
- Technical Advisory Committee meeting and survey response data for the Lakewood business source control study. Study progress reports and the data request is anticipated.
- Draft and final QAPP for USFWS plant and fungi performance study in bioretention soil mix.
- Draft and final QAPP for King County study on PCB treatment/sequestration in bioretention soil mix.
- Field sampling and progress reports for King County Echo Lake Highway 99 retrofit study.
- Field sampling and progress reports for King County Hylebos Regional Facility retrofit study.
- Puyallup's literature review and draft protocol for raingarden/bioretention sampling.
- Technical Advisory Committee meeting and draft survey for the King County catch basin cleaning effectiveness study.

SIDIR

- Final standardized IDDE incident database, and draft summary report.

RSMP issues that need to be resolved or for which stakeholder input is desired

No issues were identified this quarter.