

Regional Stormwater Monitoring Program Quarterly Report

For July 1 through September 30, 2015

RSMP accomplishments and key decisions reported for the quarter

- Stream watershed health monitoring was conducted at 87 sites. Field crews visited over 200 sites, some of them multiple times, to get this number. Plans were made to analyze all of the streams data in 2016.
- The team to conduct marine nearshore sediment monitoring in summer 2016 was assembled.
- More than 40 sites marine nearshore mussel monitoring were confirmed for suitability and permissions.
- The first six effectiveness studies continue to produce study designs and deliver monitoring results. A process for identifying a second round of studies next year is under development.
- The compilation and analysis of permittees' illicit discharge detection and elimination (IDDE) incident tracking reports in the Permit and Reporting Information System (PARIS) is underway.

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. The 2015 streams sampling was paid partly before August 2015 permittees' payments and partly (mostly) after, and effectiveness studies span 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. The total balance and anticipated expenditures for the coming quarter include Ecology's administrative expenses. Starting balances are based on figures from the revised April-June 2015 quarterly report.

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)		
	July-Sept 2015	Oct-Dec 2015 <i>(anticipated)</i>	July-Sept 2015	Oct-Dec 2015 <i>(anticipated)</i>	July-Sept 2015	Oct-Dec 2015 <i>(anticipated)</i>	Ecology's July-Sept administration expenses	July-Sept 2015	Oct-Dec 2015 <i>(anticipated)</i>
Balance at start of quarter	\$1,154,781	\$944,743	\$2,701,877	\$2,942,124	\$308,643	\$338,628	-	\$4,311,112	\$4,350,950
Revenues	\$169,496	\$0	\$240,247	\$0	\$29,985	\$0	-	\$439,728	\$0
Expenditures	\$379,533	\$505,123	\$0	\$432,247	\$0	\$30,029	\$20,356	\$399,889	\$987,399
Balance at end of quarter	\$944,743	\$439,620	\$2,942,124	\$2,509,877	\$338,628	\$308,599	-	\$4,350,950	\$3,363,551
Encumbrances	\$1,256,392	\$1,069,269	\$1,903,430	\$1,736,863	\$107,255	\$77,226	-	\$3,267,077	\$2,883,358

RSMP Activities

Status and Trends Monitoring

The RSMP Coordinator is managing the small streams monitoring and data management; Curtis de Gasperi of King County is leading the multi-agency team of scientists to analyze the streams data. Jennifer Lanksbury of Washington State Department of Fish and Wildlife (WDFW) is managing the nearshore marine monitoring project. Bob Black of the U.S. Geological Survey (USGS) is the project lead for the nearshore sediment monitoring project.

Small streams water quality and watershed health

Due to the drought only 87 of the planned 100 sites were successfully sampled for the Watershed Health Monitoring (habitat, bugs and sediment). Monthly water quality sampling continued thru the quarter at the 59 year long monitoring sites. King County, USGS, Ecology, and Puget Sound Partnership (PSP) scientists will work together to compile, analyze, interpret, and report on the results of this year's RSMP stream data, compare RSMP to other relevant studies, and make recommendations for long-term RSMP streams trend monitoring.

Marine mussel contaminant monitoring

WDFW confirmed 40 sites plus 5 additional back-up sites for RSMP sampling. WDFW also organized an effort to have 33 additional sites sponsored by other groups. The cages will be deployed in late October.

Marine nearshore sediment chemistry

USGS is coordinating the summer 2016 nearshore sediment sampling effort with Washington Dept. of Natural Resources (WDNR), Manchester Environmental Laboratory, and King County. Contract scopes of work are under development. USGS will finalize the Quality Assurance Project Plan (QAPP) for sampling and analysis. USGS, WDNR, and King County for nearshore sediment monitoring

Nearshore bacteria

A draft scope of work to describe options for gathering Puget Sound-wide bacterial data and a process for analyzing the data was developed and reviewed. It will be finalized in the coming quarter.

Effectiveness Studies

Four more effectiveness study agreements, two each with the City of Puyallup and King County, are expected to be completed in the two coming quarters. City of Puyallup for a study to assess performance of fungi in bioretention facilities; and a project to develop a regional protocol for assessing rain garden effectiveness that can be widely implemented by many types of organizations.

King County for a project to assess catch basin inspection effectiveness; and a study assessing poly-chlorinated biphenyl (PCB) cycling in rain gardens.

The Stormwater Work Group (SWG) has begun to define the process to identify a second round of studies in the first half of 2016. The process is expected to be more streamlined, support informed permittee voting, and include technical review in advance of a workshop.

Source Identification Information Repository (SIDIR)

A consultant for the City of Lakewood is compiling all of the IDDE data in PARIS submitted by permittees in March. Compilation and an initial summary and analysis of the data will be presented to the SIDIR subgroup in November. The purpose of the analysis is to identify patterns in illicit discharges and permittees' responses to inform methods and approaches and prioritize source control effectiveness studies.

RSMP contracts and agreements

Two interagency agreements/modifications were finalized this quarter with the following partners:

- The Cities of Lakewood and Bellingham agreements were adjusted to change (extend) due dates for deliverables with no change to the contract amounts.

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

- Amendments to agreements with King County and USGS for analysis of the streams data for a total of approximately, and a new agreement with EAP and PSP totaling approximately \$280,000 to conduct RSMP streams analysis.

- Redmond's agreement will be amended by \$265,680 to add hydrologic monitoring to be started in October. Another amendment will be need with Redmond early next year to add water quality monitoring.

RSMP deliverables received in the previous quarter

Deliverables sent to the RSMP Coordinator are reviewed, approved and posted to the RSMP website <http://www.ecy.wa.gov/programs/wq/stormwater/municipal/rsmp/rsmp.html>

Status and Trends

- Field and lab deliverables (for streams monitoring from April –June) from the monitoring partners were reviewed and approved by RSMP Coordinator and data were loaded to EIM.
- WDFW confirmed sites, purchased equipment, and trained volunteers for the mussel sampling effort.

Effectiveness Studies

- A draft study design was reviewed and approved for the City of Redmond paired urban watershed retrofit effectiveness study.
- Formation of the technical advisory committee for the City of Lakewood business source control study was reviewed and approved.
- USFWS provided a presentation and interim data report on the findings of the toxicity reduction study using bioretention soils.
- King County's Hwy 99 retrofits to Echo Lake project was approved for the following deliverables: a progress report, draft and final QAPP, website and semi-annual report.
- King County's Hylebos BMP retrofit study in Federal Way was approved for the draft QAPP and progress report.

RSMP deliverables expected in the coming quarter

In the coming quarter, we anticipate a larger number of deliverables, particularly for effectiveness studies.

Status and Trends

- Field and lab data deliverables for stream monitoring from July– September.
- QAPP for marine nearshore sediment monitoring and analysis.
- Caged mussel deployment at the marine nearshore sites.
- SOW for marine nearshore bacteria data compilation and analysis.

Effectiveness Studies

- Draft and final QAPP for the City of Redmond paired watershed study, and installation of hydrology equipment and initiation of hydrology monitoring data collection.
- PAH data and final report for the USFWS toxicity study.
- The final QAPP for the King County Hylebos BMP retrofit study and early flow sampling on the retrofitted pond and bioretention cells.
- Draft and final memo summarizing baseline Echo Lake water quality, early flow sampling progress for the King County Hwy 99 retrofit study at Echo Lake.
- Technical Advisory Committee meetings, study design and survey for the City of Lakewood business source control study.
- Site selection criteria, finalized sites, draft and final QAPP for the City of Bellingham LID hydrologic performance study.

SIDIR

- Preliminary compilation and analysis of IDDE data, and technical memo.

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

No issues were identified this quarter.