

## Deliverable D5.2: Semi-Annual Project Report

### Regional Stormwater Monitoring Program: Effectiveness Studies

Send progress report to: Brandi Lubliner  
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*Instructions: Please fill out the light grey boxes*

#### 1. General Information

Contract / Grant Agreement Number:	C1500071
Project Title:	Effectiveness Monitoring of the South 356th Street Retrofit and Expansion Project, Federal Way, WA.
Your Organization:	King County Water and Land Resources Division
Your Project Manager:	Kate Macneale - KC; Brandi Lubliner - Ecology
Reporting Period:	2015 Q3/Q4
Date this Form was Completed:	2/9/2016

**2. Briefly Describe Task and Milestone Achievements** (for current report period only) and check the box associated with each task to verify completion.

#### Task 1: Planning

Percent of Task Completed:	20% (95% cumulative)
Deliverable	D1.1: revised Draft QAPP
Description of your Achievements:	The Draft QAPP was revised and is currently being reviewed by the King County Project Team. Once reviewed the revised draft QAPP will be distributed to the RSMP Coordinator and the RSMP liaison.

#### Task 2: Field sampling, data collection and chemical analysis

Percent of Task Completed:	5% (15% cumulative)
Deliverable	D2.2: Documenting Progress
Description of your Achievements:	Significant achievements in Q3 and Q4 of 2015 include the installation of the remaining flow meters and the collection of flow data from all seven sampling locations. Much of the fall was spent analyzing flow data and troubleshooting apparent problems. By the end of Q4, preliminary flow data indicated most flow meters were collecting reliable flow data. Additional adjustments were made in Q1 of 2016, but those will be described in the next semi-annual report. The preliminary flow data have been used to set initial pacing schedules depending on the amount of precipitation forecasted. "Documenting Progress" deliverable (D2.2) includes some examples of the trouble shooting that was done to refine flow measurements, a log of site visits and pictures of the sampling locations and field observations.

#### Task 3: Final Report

Percent of Task Completed:	0%
Deliverable	None
Description of your Achievements:	No activities this period

#### Task 4: Dissemination of Findings

Percent of Task Completed:	0%
Deliverable	None
Description of your Achievements:	No activities this period

#### Task 5: Project Management

Percent of Task Completed:	9% (10% cumulative)
Deliverable	D5.2: Semi-annual Progress Report
Description of your Achievements:	The project manager coordinated with the project team during while revising the QAPP, reviewed preliminary data and discussed trouble shooting strategies with field staff, and managed the budget. This report documents the progress of this project.

**3. Tasks/Milestones not achieved and why:**

The QAPP was not finalized in 2015 as planned. Preliminary flow measurements suggested there may be significant challenges in measuring flow at some of the locations, and we focused on those issues until they were resolved. We were concerned that if certain locations could not be sampled reliably, the study design would need to be revised significantly. By the end of Q4, we were able to resolve most of the problems, and it appears that the remaining flow-measurement problems were resolved in early January 2016. The revised QAPP will be submitted to Ecology by February 12, 2016.

**4. Potential Future Challenges to Performance (time delays, staff changes, etc.):**

Because of our delay in finalizing the QAPP, it may be difficult to sample the target number of storms this wet season (n=10). The preliminary flow data indicate the flows are quite different at each location, and therefore meeting the storm and sample criteria for all sites during 10 storms will be challenging.

**5. General Comments:**

This site is complex in a number of ways that may make it difficult to generalize the results so they are applicable to similar facilities. For example, the inflows to the bioretention facilities flow through an open ditch before entering the facilities. During small storms, runoff infiltrates into the ditch and does not reach the bioretention facilities. During larger storms, when runoff does reach the facilities, there may be some "pre-treatment" as sediment settles in the ditch. Our analysis will be biased towards moderate to large storms and inflows may be less contaminated than would be expected.

**6. List the cumulative totals for all "outputs" (numerically measurable accomplishments) under this contract or grant to date:**

(Example: 2000' of riparian area planted, 200 technical assistance visits, etc)

Approximately 3 months of 1) flow data from all seven sampling locations and 2) depth data from the two bioretention facilities. These data have been critical for informing our understanding of flow dynamics through the systems and for determining the pacing schedule for the autosamplers.