



## King County

Department of Natural Resources and Parks  
Water and Land Resources Division

### Environmental Laboratory

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To: Brandi Lubliner, DOE  
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Subject: Field Activities for RSMP Streams – 4th Quarter, 2015  
Project #: SIC: F92AA

The following narrative summarizes the sample collection, field measurements and observations done at the routine WQ sites between September 28 and December 29, 2015.

#### 1. Collection Date and Time

Site ID	September	October	November	December
0001-WUGA	9/28/2015 9:02 *	10/28/2015 9:08	11/16/2015 9:17	12/28/2015 9:00
0002-WUGA	9/29/2015 10:21	10/27/2015 9:58	11/17/2015 10:38	12/29/2015 9:12 *
0003-WUGA	9/28/2015 10:10	10/26/2015 10:33	11/16/2015 9:57	12/28/2015 9:45
0008-OUGA	9/29/2015 10:07	10/27/2015 10:33	11/17/2015 10:18 *	12/29/2015 9:20
0009-WUGA	9/28/2015 12:17	10/26/2015 11:58	11/16/2015 11:10	12/28/2015 11:09
0018-WUGA	9/28/2015 13:21	10/28/2015 13:23	11/16/2015 13:16	12/28/2015 13:08 *
0024-OUGA	9/29/2015 13:31 *	10/27/2015 13:43	11/17/2015 13:12	12/29/2015 12:17
0034-WUGA	9/29/2015 12:01 *	10/27/2015 12:07	11/17/2015 12:40	12/29/2015 11:21
0036-WUGA	9/29/2015 8:53	10/27/2015 8:57	11/17/2015 9:23	12/29/2015 8:06
0038-OUGA	9/28/2015 10:51	10/28/2015 10:46 *	11/16/2015 10:48	12/28/2015 10:30
0039-OUGA	9/28/2015 12:28	10/28/2015 12:38	11/16/2015 12:05	12/28/2015 12:10
0040-WUGA	9/29/2015 12:55	10/27/2015 13:01	11/17/2015 12:25	12/29/2015 11:32
0042-WUGA	9/29/2015 11:07	10/27/2015 11:08	11/17/2015 11:40	12/29/2015 10:16
0045-OUGA	9/29/2015 11:12	10/27/2015 12:03	11/17/2015 11:30	12/29/2015 10:31
0048-WUGA	9/28/2015 11:31	10/26/2015 11:16	11/16/2015 10:30	12/28/2015 10:20 *
0050-WUGA	9/28/2015 13:04	10/26/2015 12:36 *	11/16/2015 11:50	12/28/2015 11:54
0055-WUGA	9/28/2015 9:02 *	10/26/2015 9:34	11/16/2015 9:23	12/28/2015 8:58
0072-OUGA	9/29/2015 14:08	10/27/2015 14:09	11/17/2015 13:40	12/29/2015 12:50 *
0074-OUGA	9/29/2015 12:30	10/27/2015 12:27	11/17/2015 13:15	12/29/2015 11:45

\* Field replicate collected

#### 2. Field Measurement Calibration and Quality Control Results

- a. All pre-deployment calibration and related QC checks were performed at the proper frequency and all results were acceptable. The thermistors in the YSI EXO sondes were checked against the NIST-certified reference thermometer in January, 2016. All sondes

were within +/- 0.02 degrees of the temperature of the reference thermometer thus easily met the QAPP requirement of +/- 1 °C.

- b. The precision of the field replicates and the accuracy of all post-deployment check standards were also all acceptable.

3. Additional Issues

- a. Flow measurements at sites 0072-OUGA and 0034-WUGA will be taken from the permanent flow gages near those sites. The gage # has been entered in the result comment field of the EIM file.
- b. Site 0008-OUGA is a braided stream with 2 distinct channels. Flow measurements are done in both and then summed for the reported value. Only one staff gage is installed, in the right channel.
- c. Due to heavy rain prior to the November sampling events, the flow rates for the following creeks were measured using a timed float method since the high water levels made it too dangerous to enter the stream to collect Swoffer measurements:
  - 0045-OUGA (Carey Creek)
  - 0040-WUGA (Kimball Creek)
  - 0024-OUGA (Mud Creek)
  - 0003-WUGA (North Creek)
  - 0009-WUGA (Swamp Creek)
  - 0018-WUGA (May Creek)

It was also necessary to use the timed float method at 0003-WUGA (North Creek) in December.

- d. Stage height measurements were missed at the following sites and dates:
  - 0050-WUGA on October 26, result was accidentally not recorded
  - 0074-OUGA on October 27, result was accidentally not recorded
  - 0050-WUGA on December 28, staff plate missing from site
  - 0001-WUGA on December 28, staff plate missing from site

Observations will be loaded to EIM to explain the missing stage height data.

- e. A beaver dam was observed downstream of Site 0018-WUGA during the September sampling event resulting in elevated water depth and reduced velocity. The dam was in place the remaining sampling events of 2015.