

## City of Lynnwood Status of Swamp Creek Coliform Bacteria TMDL Implementation March 31<sup>st</sup>, 2015

### 1) **Business Inspections:**

Each Permittee shall inspect commercial animal handling areas and commercial composting facilities to ensure implementation of source control BMPs for bacteria. *Commercial animal handling areas* are associated with Standard Industrial Code (SIC) 074 and 075 and include veterinary and pet care/boarding services, animal slaughtering, and support activities for animal production. Facilities where the degradation and transformation of organic solid waste takes place under controlled conditions designed to promote aerobic decomposition are considered *composting facilities* (definition in accordance with Chapter 173-350 WAC). All qualifying facilities shall be inspected by August 1, 2016. Permittees shall implement an ongoing inspection program to re-inspect facilities with bacteria source control problems a minimum of every three years.

*As of the writing of this report, the City has yet to complete the inspections required under the permit. However, the inspections are required no later than August 1, 2016, therefore the City is in compliance.*

*During the spring of 2015, the City intends to fill an open technician / inspector position. Fulfilling the inspection and implementation of this requirement will be the responsibility of that position. The City intends to meet this requirement within the timeline provided. Cooperation with the City's Business License department will be essential in obtaining the businesses, locations, and management personnel necessary for the success of this element.*

### 2) **Public Education and Outreach:**

Each Permittee shall conduct public education and outreach activities to increase awareness of bacterial pollution problems and promote proper pet waste management behavior.

*In 2014, the City engaged in a variety of activities designed to promote proper pet waste management. The City had an education coordinator responsible for education and outreach until July 2014, when that personnel left for a different position. It is our intention to permanently fill this position in Spring 2015. Activities performed during that time include:*

- *Distribution of free pet waste bag holders and bag refills at City Hall, during public outreach events, the National Night Out.*

- *Purchasing, re-stocking, and maintaining pet waste stations at 3 parks in the City.*
- *Published educational article in the City's newsletter – Inside Lynnwood in Fall 2014 issue.*
- *Created and published a "Pet Waste Pickup Program" brochure, distributed in City buildings, including City Hall, Permit Center, the Recreation Center, and the Lynnwood Library, as well as other public events.*
- *Maintained the City's website with educational material.*

**3) Operations & Maintenance:**

Each Permittee shall install and maintain animal waste collection and/or education stations at municipal parks and other Permittee owned and operated lands reasonably expected to have substantial domestic animal (dog and horse) use and the potential for pollution of stormwater.

*The City's Stormwater Division, whenever needed, coordinates with the Parks Department to purchase, re-stock, and maintain pet waste stations at 3 parks in the City. These Parks were targeted specifically due to their high use of dog-walkers, and proximity to pet-friendly apartments. Both Parks and Stormwater intend to purchase additional stations as budgets allow.*

*The City does not allow, nor have any parks used by horse owners.*

**4) IDDE:**

Permittees conducting IDDE-related field screening under S5.C.8 of the Phase I permit or S5.C.3 of the Western Washington Phase II permit shall screen for bacteria sources in any screened MS4 sub-basins which discharge to surface waters in the TMDL area.

*S5.C.3.c.i. requires field screening of 40% of Lynnwood's MS4 by December 31, 2017. The City will incorporate screening for bacteria sources as required by tis element.*

**5) Targeted Source Identification & Elimination:**

By February 2, 2014, each Permittee shall review the fecal coliform data collected per approved QAPPs under the 2007 Permit. The purpose of this review is to identify a minimum of one high priority area (such as a tributary or a stream segment) that will be the focus of source identification and elimination efforts during this permit cycle. Each Permittee shall prepare written documentation of this review and the identified high priority area; documentation shall be submitted with the Annual Report for 2014. Permittees shall begin to implement source identification and elimination efforts in the MS4 sub-basins discharging to the identified high priority area no later than August 1, 2014. Permittees are encouraged to address potential bacteria pollution sources not

associated with the MS4. Stormwater quality sampling for bacteria sources is required as part of this focused source identification and elimination effort. Permittees shall implement the schedules and activities identified in S5.C.8 of the Phase I permit or S5.C.3 of the Western Washington Phase II permit in response to any illicit discharges found. Each annual report's TMDL summary shall include qualitative and quantitative information about the source identification and elimination activities, including procedures followed and sampling results, implemented in the selected high priority area(s).

*The City complied with the February 2, 2014 deadline, and identified the Golde Creek sub-basin / tributary as our high priority area. This sub-basin was chosen as it routinely had higher bacteria counts than the other 3 locations we were sampling. See attached sampling results.*

*This sub-basin has no residential areas contributing to it. It is primarily newer (1995 and newer) commercial and business. There are large open ponds, and section of creek preserved as native growth protection. High amounts of waterfowl and other urban wildlife use this corridor. It is surmised that the majority of bacterial contamination derive from this source.*

*Adjacent to the Alderwood Mall Pond, which is the headwaters of Golde Creek, there is a wastewater pump station. On November 29, 2014 there was a failure of the pumps, resulting in a surcharge of several thousand gallons of untreated sewer into the pond, and thus Golde Creek. Immediate response was made (upon coming to the City's attention). The cause of the failure was rags in the pumps, causing them to overheat and stop. This is considered a one-time catastrophe, and is not likely to occur. Alarms have been installed in the pump station, to alert staff should such a failure occur in the future.*

*The stream corridor is mostly open from the City limits to I-5, with the exception of a few road crossing culverts. This section was walked by City staff in 2014 during the summer, and no obvious illicit connections or discharges were identified.*

*Staff have coordinated with Ecology staff Ralph Svrjek in our attempts to better identify sources. Neither Ecology staff, nor City staff feel they have adequate explanations behind the larger bacteria results. DNA typing was proposed by the City, but is discouraged by Ecology staff. The City may move forward with DNA typing in 2015 or 2016 regardless.*

**6) Surface Water Monitoring:**

Each Permittee shall review the fecal coliform data collected per approved QAPPs under the 2007 Permit and select surface water monitoring location(s) as appropriate for continued characterization and long term trends evaluation of fecal coliform. Each Permittee shall submit a draft revised QAPP to Ecology for

review and approval, no later than February 2, 2015. If Ecology does not request changes within 60 days, the draft QAPP is considered approved. At a minimum, the monitoring program shall:

- Begin by August 1, 2015.
- Collect 12 samples in at least one location per calendar year.
- Submit available data to the Environmental Information Management (EIM) database by May 31 of each year.
- Provide data summaries and narrative evaluation of the data in each annual report's TMDL summary.
- Be documented in a QAPP which follows *Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies*, July 2004, Ecology Publication No. 04-03-030.

Permittees shall follow Ecology-approved QAPPs unless changes are approved by Ecology. Permittees subject to multiple TMDL monitoring requirements may conduct an integrated monitoring program in accordance with an Ecology-approved QAPP. Snohomish County may combine the high priority area source identification and elimination requirement with the surface water monitoring requirement as documented in the County's microbial water quality assessment (MWQA), or similar, program per an Ecology-approved QAPP.

*The City of Lynnwood did not modify its previously QAPP which was in effect under the previous (2007) permit. As of this writing, no comments requesting changes have been received from WDOE.*

*Bacteria sampling at 4 different locations throughout the City occurs monthly. Sampling has not stopped in the time since it began in 2009, regardless of the status of the Municipal Permit. Sampling will continue in the same interval, at the same locations throughout the effective period of this permit as well.*

*The City intends to submit sampling results to the Environmental Information Management database by the deadline required.*

*Data summaries and narrative evaluation are included in this report / permit, per the requirement.*

Swamp Creek Bacteria TMDL Sampling for City of Lynnwood - 2014

Month	Station ID	Date	Time	Sample ID #	Air Temp (°F)	WA Temp (°F)	Weather	Description of Stream	Results (CFU/100mL)	Monthly Average (CFU/mL)
January	SC1	01/22/2014	9:06AM	SC1-1-69	44	40.5	Overcast, Cool	Clear, Flowing, Low	136	
	SC2	01/22/2014	9:21AM	SC2-1-69	44	40.0	Overcast, Cool	Clear, Brown, Still, Medium	44	
	GC1	01/22/2014	9:32AM	GC1-1-69	45	40.0	Overcast, Cool	Clear, Running, Low	24	
	TC1	01/22/2014	9:43AM	TC1-1-69	45	44.5	Overcast, Cool	Clear, Running, Low	2.5	
February	TC1	01/22/2014	9:43AM	TC1-2-69	45	44.5	Overcast, Cool	Clear, Running, Low	2.5	41.8 CFU/mL
	SC1	02/26/2014	10:24AM	SC1-1-70	48	40.0	Sunny, Broken Clouds, Cool	Clear, Running, Medium	195	
	SC2	02/26/2014	10:27AM	SC2-2-70	48	40.0	Sunny, Broken Clouds, Cool	Clear, Running, Medium	185	
	GC1	02/26/2014	10:40AM	GC1-1-70	47	39.5	Sunny, Broken Clouds, Cool	Clear, Flowing, Medium/High	75	
March	GC1	02/26/2014	10:52AM	GC1-1-70	51	43.0	Sunny, Broken Clouds, Cool	Clear, Running, High	11	
	TC1	02/26/2014	11:02AM	TC1-1-70	52	43.5	Sunny, Broken Clouds, Cool	Clear, Running, Medium	15	96.2 CFU/mL
	SC1	03/26/2014	9:16AM	SC1-1-71	47	43.5	Sunny, Broken Clouds, Cool	Clear, Flowing, Medium	336	
	SC2	03/26/2014	9:30AM	SC2-1-71	48	44.0	Broken Clouds, Overcast, Cool	Clear, Still, Medium/High	85	
April	SC2	03/26/2014	9:33AM	SC2-2-71	48	44.0	Broken Clouds, Overcast, Cool	Clear, Still, Medium/High	80	
	GC1	03/26/2014	9:43AM	GC1-1-71	48	47.0	Overcast, Cool	Clear, Flowing, Medium	435	
	TC1	03/26/2014	9:52AM	TC1-1-71	48	44.5	Broken Clouds, Overcast, Cool	Clear, Running, Medium	38	194.8 CFU/mL
	SC1	04/30/2014	9:12AM	SC1-1-72	61	50	Sunny, Warm	Clear, Running, Medium	52	
May	SC2	04/30/2014	9:25AM	SC2-1-72	61	54	Sunny, Warm	Clear, Still, Medium	275	
	GC1	04/30/2014	9:43AM	GC1-1-72	61	55	Sunny, Warm	Clear, Running, Medium	18	
	GC1	04/30/2014	9:42AM	GC1-2-72	61	55	Sunny, Warm	Clear, Running, Medium	18	
	TC1	04/30/2014	9:54AM	TC1-1-72	68	52.5	Sunny, Warm	Clear, Running, Medium/Low	20	76.6 CFU/mL
June	SC1	05/28/2014	9:15AM	SC1-1-73	57	54	Overcast, Cool	Clear, Still, Medium	348	
	SC2	05/28/2014	9:28AM	SC2-1-73	57	57	Overcast, Cool	Cloudy, Still, Medium	65	
	GC1	05/28/2014	9:41AM	GC1-1-73	58	57.5	Overcast, Cool	Clear, Flowing, Medium	180	
	TC1	05/28/2014	9:50AM	TC1-1-73	58	54.5	Overcast, Cool	Clear, Running, Low	175	160.1 CFU/mL
July	SC1	06/25/2014	9:02AM	SC1-1-74	60	59	Overcast, Warm	Clear, Running, Low	440	
	SC2	06/25/2014	9:04AM	SC2-2-74	60	59	Overcast, Warm	Clear, Still, Low	420	
	GC1	06/25/2014	9:25AM	GC1-1-74	62	62.5	Overcast, Warm	Cloudy, Still, Low	30	
	TC1	06/25/2014	9:45AM	TC1-1-74	62	62	Overcast, Warm	Clear, Flowing, Low	365	280.0 CFU/mL
August	SC1	07/23/2014	9:31AM	SC1-1-75	61	N/A	Rain, Overcast, Cool (Thunderstorm)	Dark, Brown, Flowing, High	10900	
	SC2	07/23/2014	9:45AM	SC2-1-75	63	63.5	Cloudy, Warm	Brown, Still, High	9320	
	GC1	07/23/2014	9:59AM	GC1-1-75	62	66	Cloudy, Warm	Brown, Still, High	9780	
	TC1	07/23/2014	10:16AM	TC1-1-75	63	62.5	Cloudy, Warm	Cloudy, Dark, Brown, Still, High	10640	10672 CFU/mL
September	SC1	08/20/2014	8:04AM	SC1-1-76	61	61.5	Cloudy, Cool	Clear, Flowing, Medium	12720	
	SC2	08/20/2014	8:17AM	SC2-1-76	62	63.5	Cloudy, Cool	Clear, Bubbles, Flowing, Medium	490	
	GC1	08/20/2014	8:28AM	GC1-1-76	61	63.5	Cloudy, Cool	Cloudy, Brown, Still, Medium	7250	
	TC1	08/20/2014	8:29AM	TC1-2-76	61	63.5	Cloudy, Cool	Clear, Running, Medium	270	
October	TC1	08/20/2014	8:46AM	TC1-1-76	62	60.5	Cloudy, Cool	Clear, Running, Medium	280	
	SC1	09/24/2014	10:31am	SC1-1-77	60	62	Rain	Clear, Flowing, Low	330	1724 CFU/mL
	SC2	09/24/2014	10:17am	SC2-1-77	60	61.5	Rain	Clear, Dark, Flowing, High	5600	
	GC1	09/24/2014	10:04am	GC1-1-77	60	62.5	Rain	Clear, Dark, Flowing, High	6050	
November	TC1	09/24/2014	9:52am	TC1-1-77	60	61.5	Rain	Clear, Running, High	13050	
	TC1	09/24/2014	9:53am	TC1-2-77	60	61.5	Rain	Cloudy, Brown, Running, High	9100	
	SC1	10/22/2014	8:38am	SC1-1-78	56	55.5	Rain, Cloudy, Cool	Cloudy, Brown, Running, High	8850	8510 CFU/mL
	SC1	10/22/2014	8:39am	SC1-2-78	56	55.5	Rain, Cloudy, Cool	Clear, Dark, Running, High	3375	

Month	Sample ID	Date	Time	Temp	Humidity	Wind	Weather	Observations	CFU/mL
October	SC2	10/22/2014	8:51am	56	56	56	Rain, Cloudy, Cool	Clear, Dark, Flowing, High	2000
	GC1	10/22/2014	9:01am	56	56.5	56.5	Rain, Cloudy, Cool	Clear, Dark, Running, High	1750
	TC1	10/22/2014	9:08am	56	56.5	56.5	Rain, Cloudy, Cool	Cloudy, Brown, Flowing, High	2904 CFU/mL
November	SC1	11/26/2014	8:52am	57	48.5	48.5	Cloudy	Clear, Bubbles, Running, Medium	290
	SC2	11/26/2014	9:07am	57	48.5	48.5	Cloudy	Clear, Dark, Flowing, High	40
	SC2	11/26/2014	9:08am	57	48.5	48.5	Cloudy	Clear, Dark, Flowing, High	55
	GC1	11/26/2014	9:19am	57	49	49	Cloudy	Clear, Running, Medium	1420
	TC1	11/26/2014	9:34am	57	50.5	50.5	Cloudy	Clear, Running, Medium	423 CFU/mL
	SC1	12/23/2014	8:29am	46	43.5	43.5	Cloudy	Clear, Bubbles, Flowing, Medium	30
December	SC2	12/23/2014	8:41am	46	42	42	Cloudy	Clear, Dark, Flowing, High	55
	GC1	12/23/2014	8:48am	44	45	45	Cloudy, Rain	Clear, Running, Low	20
	GC1	12/23/2014	8:48am	44	45	45	Cloudy, Rain	Clear, Running, Low	20
	TC1	12/23/2014	8:55am	43	45	45	Cloudy, Rain	Clear, Flowing, Medium	43 CFU/mL

# 2014 Bacteria Trend Golde Creek

