



CLARK COUNTY WASHINGTON

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**PUBLIC WORKS
CLEAN WATER**

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564.397.4345

January 12, 2020

Angela Vincent
WA Department of Ecology
PO Box 47775
Olympia, WA
98504-7775

Dear Ms. Vincent:

RE: Clark County National Pollutant Discharge Elimination Systems (NPDES) Municipal Stormwater Permit WAR04-4001 Requirement S8.A.3.a.i. Submittal

Under the 2019 permit, condition S8.A.3.a.i requires Clark County to submit the "Site verification report and final Table 6 and Figure 2" before January 31, 2020.

This letter covers the report submittal and G19 certification.

If you have any questions, please contact me at (564) 397-4581.

Sincerely,

Rod Swanson
NPDES Permit Manager

Copies: Greg Shafer, PE, Interim Clean Water Manager

Attachment: G19 Certification
Site verification report



For other formats, contact
the Clark County ADA Office

Voice 564.397.2322
Fax 360.397.6165

Relay 711 or 800.833.6388
Email ADA@clark.wa.gov

Final Site Selection for Status and Trends Monitoring of Urban Streams in the Lower Columbia Region

Chad Hoxeng, 2019

Background

Section S8.3 of the Phase I Municipal Stormwater Permit (August 2019) states that Clark County shall prepare to conduct regional urban streams status and trends monitoring in the Lower Columbia River Basin. To meet this requirement, Clark County is updating the Quality Assurance Project Plan for Status and Trends Monitoring of Urban Streams in Clark and Cowlitz Counties in the Lower Columbia River Region (LC Urban Streams QAPP). Submitting the "Site verification report and final Table 6 and Figure 2" of the LC Urban Streams QAPP fulfills requirement S8.3.a.i of the Permit. Table 6 is the final list of trend and status locations and dates of active monitoring.

Purpose

Fulfill requirement S8.3.a.i of the Permit by submitting to Ecology Table 6 and Figure 2 of the LC Urban Streams QAPP.

Final Site Selection

Field Reconnaissance

The list of site locations in the draft LC Urban Streams QAPP (July 1, 2019 version 1.0, LC Urban Streams QAPP Template) was field verified by Clark County during the summer of 2019. Each site was evaluated for QAPP site selection criteria including accessibility, safety, and a natural channel with dry season flow.

Unsuitable Site Locations

Four of the original 23 locations in the draft LC Urban Streams QAPP were found to be unsuitable for monitoring due to the stream not existing or little or no dry season flow. These sites included:

- Clark Co Site #85 (unnamed tributary to Vancouver Lake)
- Clark Co Site #31 (Blanford Road unnamed tributary)
- Clark Co Site #26 (Cemetery Creek)
- Cowlitz Co Site #xx (unnamed creek near Burcham Road)

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JAN 21 2020

WA State Department
of Ecology (SWRO)

Three of the original 23 locations listed in the draft LC Urban Streams QAPP were “nested”, meaning they were locations within the same stream system and deemed by Ecology not suitable for this type of monitoring.

Two sites were moved downstream from the location in the draft QAPP due to safety and accessibility and include:

- Clark Co Site #3 (Burnt Bridge Creek at 112th)
- Clark Co Site #46 (Gee Creek at rest stop)

Coordination with Ecology

Clark County coordinated with Ecology to resolve unsuitable site locations. Clark County conducted additional field reconnaissance and found nine additional site locations that would be suitable for the project. Of these nine locations, six were added to the final list as status sites and the remaining three will serve as backup alternative sites in case any of the final status sites become unsuitable for monitoring.

Ecology toured nearly all of the site locations with Clark County staff over a two day period in December of 2019. Clark County staff and Ecology met after the site location visits and discussed each site location in detail and came up with the following final list of trend and status locations.

Table 6. Final list of trend and status locations and dates of active monitoring.

	Stream	Site Code	10/1/20- 9/30/21	10/1/21- 9/30/22	10/1/22- 9/30/23	10/1/23- 9/30/24	10/1/24- 9/30/25
Trend Sites	Burnt Bridge Creek	BBC050	x	x	x	x	x
	Campen Creek	CMP010	x	x	x	x	x
	Cougar Creek	CGR020	x	x	x	x	x
	Mill Creek	MIL010	x	x	x	x	x
	Westover Creek	WST020	x	x	x	x	x
Status Sites	Allen Canyon Creek	ALN040	x				
	Curtin Creek	CUR020	x				
	Packard Creek	PCK010	x				
	Dwyer Creek	DWY020		x			
	Ostrander Creek	OST020		x			
	Suds Creek	SUD010		x			
	Cold Creek	CLD010			x		
	Woodburn Creek	WBN030			x		
	Woodin Creek	WDN010			x		
	Currie Creek	CRE010				x	
	Gee Creek	GEE045				x	
	Indian Creek	IND010				x	
	Lalonde	LAL030				x	
	Fisher Creek	FSH020					x
	Rockwell Creek	RCW010					x
	Tenny Creek	TEN055					x
	Whipple Creek	WPL065					x
Alternate Sites	Breeze Creek	BRZ010	Alternative sites will be monitored only if any future status site become unsuitable for monitoring				
	McCormick Creek	MAC050					
	Morgan Creek	MOR010					

Table 3. 2016 National Land Cov

			Shrub/ Scrub	Woody Wetlands	Total Area (km2)
	Stream	Site Code			
Trend Sites	Burnt Bridge @ 18th	BBC050	0.4	1.1	21.97
	Campen Creek	CMP010	2.9	0.1	5.35
	Cougar Creek	CGR020	0.0	0.0	7.47
	Mill Creek	MIL010	2.4	2.2	30.10
	Westover Creek	WST020	3.4	0.9	3.32
Status Sites			0.9	2.7	9.58
	Allen Caynon Creek	ALN040	0.0	0.0	6.08
	Cold Creek	CLD010	2.1	1.1	6.56
	Currie Creek	CRE010	0.9	0.7	21.04
	Cutin Creek	CUR020	1.5	4.5	12.76
	Dwyer Creek	DWY020	1.3	3.9	2.94
	Fisher Creek	FSH020	1.5	3.0	24.05
	Gee Creek	GEE0045	2.9	0.0	0.96
	Indian Creek	IND010	0.0	0.1	3.82
	LaLonde Creek	LAL030	10.5	0.9	66.67
	Ostrander Creek	OST020	0.4	1.0	6.02
	Packard Creek	PCK010	0.0	0.0	1.68
	Rockwell Creek	RCW010	0.0	0.0	1.96
	Suds Creek	SUD010	0.0	0.0	2.40
	Tenny Creek	TEN055	1.4	3.4	12.10
	Whipple Creek	WPL065	0.6	2.2	2.91
	Woodburn Creek	WBN030	3.8	3.9	17.67
	Woodin Creek	WDN010			
Alternate Sites	Brezee Creek	BRZ010	9.2	0.2	8.51
	McCormick Creek	MAC050	0.8	2.1	10.57
	Morgan Creek	MOR005	3.9	3.0	19.52

Table 4. 2016 National Land Cover Data (NLCD) Imperviousness data for all sites selected for Status and Trend Monitoring of Urban Streams in Clark and Cowlitz Counties in the Lower Columbia River Region.

	Stream	Site Code	LAT	LONG	% Impervious Watershed	Total Area (km2)
Trend Sites	Burnt Bridge @ 18th	BBC050	45.63469	-122.62404	86.00	21.97
	Campen Creek	CMP010	45.57714	-122.31537	47.44	5.35
	Cougar Creek	CGR020	45.73306	-122.62757	97.07	7.47
	Mill Creek	MIL010	45.73306	-122.62757	49.95	30.10
	Westover Creek	WST020	46.16571	-122.92018	51.88	3.32
Status Sites	Allen Caynon Creek	ALN040	45.70861	-122.64144	31.07	9.58
	Cold Creek	CLD010	45.66208	-122.66797	99.41	6.08
	Currie Creek	CRE010	45.62874	-122.43926	42.76	6.56
	Curtin Creek	CUR020	45.72227	-122.59089	78.78	21.04
	Dwyer Creek	DWY020	45.63247	-122.46157	58.85	12.76
	Fisher Creek	FSH020	45.59223	-122.48811	66.03	2.94
	Gee Creek	GEE045	45.80095	-122.70699	34.84	24.05
	Indian Creek	IND010	46.16535	-122.96877	29.14	0.96
	LaLonde Creek	LAL030	45.70901	-122.64054	98.63	3.82
	Ostrander Creek	OST020	46.19484	-122.88734	5.30	66.67
	Packard Creek	PCK010	45.72202	-122.59098	33.23	6.02
	Rockwell Creek	RCW010	45.71838	-122.63949	99.63	1.68
	Suds Creek	SUD010	45.70957	-122.66999	99.55	1.96
	Tenny Creek	TEN055	45.69352	-122.6513	98.91	2.40
	Whipple Creek	WPL065	45.73754	-122.69249	69.58	12.10
	Woodburn Creek	WBN030	45.60404	-122.38679	31.95	2.91
	Woodin Creek	WDN010	45.7427	-122.54663	54.24	17.67
Alternate Sites	Brezee Creek	BRZ010	45.8606	-122.66966	14.58	8.51
	McCormick Creek	MAC050	45.85124	-122.69182	21.68	10.57
	Morgan Creek	MOR005	45.75739	-122.50696	44.59	19.52

Table 6. Final list of trend and status sampling locations and date of active monitoring.

	Stream	Site Code	10/1/20- 9/30/21	10/1/21- 9/30/22	10/1/22- 9/30/23	10/1/23- 9/30/24	10/1/24- 9/30/25
Trend Sites	Burnt Bridge Creek	BBC050	x	x	x	x	x
	Campen Creek	CMP010	x	x	x	x	x
	Cougar Creek	CGR020	x	x	x	x	x
	Mill Creek	MIL010	x	x	x	x	x
	Westover Creek	WST020	x	x	x	x	x
Status Sites	Allen Canyon Creek	ALN040	x				
	Curtin Creek	CUR020	x				
	Packard Creek	PCK010	x				
	Dwyer Creek	DWY020		x			
	Ostrander Creek	OST020		x			
	Suds Creek	SUD010		x			
	Cold Creek	CLD010			x		
	Woodburn Creek	WBN030			x		
	Woodin Creek	WDN010			x		
	Currie Creek	CRE010				x	
	Gee Creek	GEE045				x	
	Indian Creek	IND010				x	
	Lalonde	LAL030				x	
	Fisher Creek	FSH020					x
	Rockwell Creek	RCW010					x
	Tenny Creek	TEN055					x
	Whipple Creek	WPL065					x
Alternate Sites	Brezee Creek	BRZ010	Alternative sites will be monitored only if any future status site become unsuitable for monitoring				
	McCormick Creek	MAC050					
	Morgan Creek	MOR010					

Certification

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for willful violations.


Shawn Hennessee

County Manager

1/13/2020
Date

