



DEPARTMENT OF
ECOLOGY
State of Washington

**Addendum to
Quality Assurance Project Plan**

**Yakima Area Creeks
Fecal Coliform
Total Maximum Daily Load Study**

March 2014

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Publication Information

Addendum

This addendum is on the Department of Ecology's website at <https://fortress.wa.gov/ecy/publications/SummaryPages/1403105.html>

This addendum is an addition to an original Quality Assurance Project Plan. It is not a correction (errata) to the original plan.

Activity Tracker code

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Original Publication

Quality Assurance Project Plan: Yakima Area Creeks Fecal Coliform Total Maximum Daily Load Study.

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Yakima Area Creeks Fecal Coliform Total Maximum Daily Load Study

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Fecal coliform bacteria (FC) sampling took place in Wide Hollow Creek in 2005-06 and again in 2010. The goal was to understand the distribution of FC in the watershed in order to direct implementation for clean-up in impaired areas. Currently, sampling is occurring in Wide Hollow Creek to evaluate Aquatic Life Use conditions (Quality Assurance Project Plan: Wide Hollow Creek Water Quality Study for Aquatic Life Use. Publication No: **13-03-101**).

Sampling is being performed at sites that the original FC study did not sample. With minimum effort, Ecology personnel will sample for FC, since they are visiting the sites anyway. Additional characterization of these sites may help direct implementation for the Yakima Area Creeks Fecal Coliform TMDL.

The task is simply to sample and verify distributions of FC at some of the original sites and all new locations, previously not sampled.

Four surveys are planned between March 2014 and the end of June 2014 when the Wide Hollow Creek Aquatic Life Use study sampling ends. Sites may be added or moved from this sampling plan depending on access. The field sampling procedures for FC bacteria will follow EAP protocol, SOP EAP030, located online at <http://www.ecy.wa.gov/programs/eap/quality.html>.

Laboratory services will be provided by Cascade Analytical in Yakima due to the short holding time needed for the sample analysis methodology. The following methodology and measurement quality objectives (MQOs) will be used for the FC analyses:

Laboratory Analyses	Method	Lab and Total Precision MQO	Lab Split Replicate MQO	Reporting Limit
Fecal Coliform–MF	SM 9222D	20% and 50%RSD ¹	40% RPD ²	1 cfu/100 mL

¹two-tiered: 50% of duplicates will have $\leq 20\%$ relative standard deviation (RSD) and 90% will have $\leq 50\%$ RSD

²laboratory splits will have $\leq 40\%$ relative percent difference (RPD)

Cascade Analytical will submit a QA memo to Ecology with sample results. The memo will summarize the QC procedures, sample transport and storage, sample holding times, and QA summary of lab splits (used to measure laboratory analytical precision).

The original sampling sites and the new sites are at the following locations:

Site ID	Site Description	Latitude	Longitude	Original Fecal Coliform sampling site will not sample	Original Fecal Coliform sampling site will sample	NEW SITE !!! Fecal Coliform sampling site will sample
37-FW-0B	Wide Hollow Creek blw Spring Ck.	46.5440	-120.4739			1
37-FW-0/37-SS-1	Wide Hollow Cr. at Union Gap Public Works.	46.5429	-120.4752	1		
37-FW-1/37-SS-5	Wide Hollow Cr. at manhole in Main St. in Union Gap.	46.5436	-120.4759	1		
37-FW-2	East Spring Creek at Union Gap Public Works	46.5427	-120.4715		1	
37-FW-2B	Un-named creek at Union Gap Mill	46.5436	-120.4752			1
37-IS-10	Drain at 4th St. and Pine St. in Union Gap.	46.5519	-120.4802	1		
37-FW-1B	Wide Hollow Creek at White St. in Union Gap	46.5496	-120.4806			1
37-IS-21	Yakima City stormwater outfall west side of RR tracks	46.5501	-120.4840			1
37-FW-1C	Wide Hollow Creek at Fines Diversion	46.5524	-120.4916			1
37-IS-22	Union Gap stormwater outfall (E5-41) under Ahtanum bridge	46.5578	-120.5031			1
37-FW-3	Wide Hollow Cr. at 3rd Ave. just downstream of DID #24 outfall	46.5587	-120.5090	1		
37-IS-12	DID #24 outfall L1 at 3rd Ave	46.55935	-120.5094		1	
37-IS-12B	DID #24 outfall L1 in turn lane at 3rd Ave., north of Ahtanum Rd.	46.5592	-120.5095	1		
37-SS-6	City stormwater outfall at 3rd Ave	46.5589	-120.5097		1	
37-FW-3B	Wide Hollow Creek upstream of 3rd Ave bridge	46.5595	-120.5099			1
37-IS-13	DID #24 outfall L2; near Pioneer Ln and Cornell Ave	46.5639	-120.5159		1	
37-IS-23	Spring Creek Irrigation District inflow	46.5635	-120.5202			1
37-IS-15	DID #4 outfall at Gardner's Nursery	46.5677	-120.5228		1	
37-IS-26	Yakima City stormwater outfall at 12th Ave bridge (NE corner)	46.5681	-120.5250			1
37-IS-20A	Naches and Cowiche Canal near 12th Ave	46.5681	-120.5287			1
37-FW-4 / 37-SS-7	Wide Hollow Creek at 16th Ave	46.5685	-120.5305		1	
37-FW-5	Wide Hollow Creek at gas station near airport upstream of 24th Ave	46.5739	-120.5477		1	
37-IS-20B	Naches and Cowiche Canal near 32nd Ave	46.5753	-120.5515			1
37-SS-8	City storm outfall at end of 34th Ave	46.5769	-120.5542		1	
37-IS-17	DID#40 outfall at 38th Ave and Logan Ave	46.5799	-120.5592		1	
37-FW-6	Wide Hollow Cr. at 44th Ave./Randall Park.	46.5782	-120.5676	1		
37-FW-6B	Wide Hollow Creek behind Bergren Screen Printing off 40th Ave	46.5786	-120.5656		1	
37-IS-17.5 / 37-SS-9	Randall Park Pond outlet on 44th Ave	46.5800	-120.5673		1	
37-SS-11B	Pipe outflow 300 feet downstream of 48th Ave and Wide Hollow Ck					1
37-SS-11	Wide Hollow Creek at 48th Ave/Randall Park	46.5791	-120.5723		1	
37-IS-33	Congdon Orchards discharge to Wide Hollow Creek	46.5840	-120.5901			1
37-SS-48	DID #48 outfall at 64th Ave	46.5833	-120.5939		1	
37-SS-38	DID #38 outfall at 64th Ave	46.5833	-120.5939		1	
37-SS-12	Wide Hollow Creek at 64th Ave	46.5834	-120.5940		1	
37-FW-8 / 37-SS-14	Wide Hollow Creek upstream of 80th Ave (20 m?)	46.5813	-120.6146		1	
37-SS-15	Wide Hollow Cr. at 91st Ave. & Wide Hollow Rd.	46.5822	-120.6295	1		
37-IS-16B	Wide Hollow Creek blw Yakima Valley Canal	46.5805	-120.6412			1
37-IS-16	Congdon Canal (Yakima Valley Canal Company) east of 101st Ave	46.5824	-120.6417		1	
37-FW-12 / 37-SS-16	Wide Hollow Creek at Dazet Rd	46.5798	-120.6464		1	
37-FW-13 / 37-SS-18	Cottonwood Creek at Dazet Rd	46.5792	-120.6464		1	
37-FW-14	Cottonwood Cr. at Moore Rd. (proposed background site)	46.5778	-120.6675	1		
37-FW-15/37-SS-17	Wide Hollow Cr. at Wide Hollow Rd.	46.5838	-120.6674	1		
37-FW-16	Tributary #2 at Stone Rd. near school. (proposed background site)	46.5873	-120.7095	1		
37-FW-17	Tributary #1 at Stone Rd. (proposed background site)	46.5832	-120.7149	1		
37-FW-18	Wide Hollow Cr. at Stone Rd. (proposed background site)	46.5749	-120.7411	1		
37-IS-18	DID #48 into ditch near Viola Ave. & 48th Ave.	46.5821	-120.5726	1		
37-IS-18B	DID #48 behind 48th Ave. (replacement site for 37-IS-18)	46.5846	-120.5733	1		
37-SS-2	City storm outfall at east end of Ahtanum Rd. (Phase II stormwater)	46.5570	-120.4714	1		
37-SS-4	Storm drain for Del Monte Foods 125, south of main building.	46.5982	-120.5054	1		
37-SS-13	Shaw Cr. west of 80th Ave., north of Nob Hill.	46.5868	-120.6150	1		
37-SS-13B	Shaw Cr. east of the corner of Wide Hollow Rd & 80th Ave.	46.5820	-120.6145	1		