



Ken Koch
Water Quality Program
Washington Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

Dear Mr. Koch,

Mason County Public Health (MCPH) is pleased to request that the Washington Department of Ecology (ECY) in collaboration with the US Environmental Protection Agency remove nine streams that are currently on the 303(d) list for fecal coliform. MCPH requests that the nine streams are reclassified as Category 1. Meets Tested Standards.

The nine streams that currently meet the extraordinary water quality standard are Lilliwaup, Twanoh Falls, Stimson, Twanoh, Little Mission, Happy Hollow, Holyoke, Shoofly, and Mulberg. The three streams that did not meet the water quality standard are Trails End, Big Bend and Deveraux (See **Appendix A: Table 1. Site Descriptions, Fecal Coliform 303(d) Listing ID, Hydrologic Unit Code and Site Locations** for specific information on each stream and **Appendix B: Monitoring Locations and 303(d) Listed Stream Maps**).

Project History

MCPH, along with WRIA 16/14b Planning Unit have requested the removal of several of these streams during previous assessments. These requests were made for a variety of reasons, but mainly for one of the following:

- ECY could not provide the data that was originally used to place some of those waters on the 303(d) list
- It appeared that some determinations were based off of a single sample collect in 1991, or
- More recent data that ECY had collected demonstrated that some of the streams were meeting the water quality standard.

In response to the requested streams not being removed during the 2008 designation, MCPH applied for and received a grant from ECY. This grant (ECY-G1000278), in part, was designed to perform monitoring and where necessary, corrective actions at 12 streams that flow into Hood Canal and are on the 303(d) list for fecal coliform. MCPH drafted and ECY approved the Quality Assurance Project Plan (QAPP) for the collection of surface water quality data under this grant project.

The first year of monitoring (completed) was designed to determine if the 12 streams that are on the 303(d) list for fecal coliform are not currently meeting the Extraordinary Water Quality Standard. The second year will include segmented monitoring of those streams that did not meet the Water Quality Standard and sanitary surveys to identify and correct fecal coliform pollution sources. MCPH hopes that during ECY's next freshwater 'call for data' cycle that we will have the needed information to request removal of the remaining streams that are being monitored under this grant.

Mason County Public Health

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Monitoring Summary

MCPH has performed at least 10 monitoring events from within a consecutive 12 month period at 12 streams that are on the 303(d) list for fecal coliform. Data collected from these monitoring events was entered into ECY's Environmental Information Management database.

The initial monitoring dates were in either July or August of 2010, with the first phase (10 samples) of monitoring completed in May, 2011 (See **Appendix A: Table 3- Actual Data Collected by Month**). Monitoring was performed approximately monthly, timed so that staff could perform monitoring above the influence of marine waters. This included monitoring events in both November and December, 2010 which occurred during/after heavy rainfall. Even with data from those heavy rainfall events included in our data summary (when we would normally expect to see elevated levels of fecal coliform), the data collected still demonstrates 9 of the 12 streams are meeting the water quality standard as defined in ECY's Water Quality Program Policy 1-11 (see **Table 1 – MCPH 303(d) listed streams data summary** below).

All of the streams that were monitored based on current and previously collected data (See **Appendix A: Table 4 - Summary of Hood Canal 303(d) data from 1997-2008**) meet the geometric mean value portion of the extraordinary water quality standard, but some streams did not meet the 10% portion of the water quality standard. MCPH believes that part of this problem is the minimal number of samples that have been taken at these streams (with only 10 monitoring events, no more than 1 sample can be above 100).

Table 1 - Mason County Public Health 303(d) listed streams data summary

Creek	GMV	90th Percentile	MIN	MAX	# of samples >100 FC	# of Samples	% of Samples >100FC	Meets WQ Standard
Big Bend	37	162	8	1600	3	13	23%	Exceedance
Deveraux	28	205	2	900	6	14	43%	Exceedance
Trails End	30	274	2	300	4	13	31%	Exceedance
Happy Hollow	4	15	2	30	0	10	0%	NAP
Holyoke	15	62	4	170	1	10	10%	NAP
Lilliwaup	10	28	4	80	0	10	0%	NAP
Little Mission	10	52	2	70	0	10	0%	NAP
Mulberg	11	60	2	500	1	11	9%	NAP
Shoofly	3	4	2	8	0	10	0%	NAP
Stimson	3	12	2	17	0	10	0%	NAP
Twanoh Falls	4	17	2	110	1	11	9%	NAP
Twanoh	7	50	2	110	1	11	9%	NAP

GMV = Geometric Mean Values

NAP = No Apparent Problem

All Fecal Coliform results are MPN FC/100mL of water

Happy Hollow, Lilliwaup, Little Mission, Shoofly and Stimpson did not have a single monitoring that exceeded 100 FC/100mL during the monitoring performed by Mason County. Twanoh, Twanoh Falls,

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Mulberg, and Holyoke Creeks each had one event where the monitoring results were above 100 FC/100mL.

Twanoh, Twanoh Falls and Mulberg each had a result >100 fc/100mL during the November, 2010 monitoring event. Monitoring was performed on November 1 and 2, 2010. In the 48 hours prior to November 1, 2010, there was 0.36 inches of rain recorded at Union, WA (See **Appendix A: Table 5 - Precipitation Data Summary**). On November 1, 2010, the first day of monitoring that month, there was 2.15 inches of rain recorded at Union, WA. In the 48 hours prior to November 2, 2010, there was 2.25 inches of rain recorded. On November 2, 2010, there was an additional 0.16 inches of rain recorded. Considering this, it was not surprising to see that 5 (42%) of the 12 monitoring locations had results greater than 100 FC/100mL and 7 (58%) of the 12 sites had their highest fecal coliform results during that monitoring event.

In conclusion, MCPH hopes that the data collected under this project will provide the necessary justification(s) to remove the nine streams that are currently meeting the extraordinary water quality standard. The nine streams and their 303(d) listings are Lilliwaup (9889), Twanoh Falls (6964), Stimson (6959), Twanoh (6961), Little Mission (6962), Happy Hollow (40619), Holyoke (6965), Shoofly (6960), and Mulberg (45581). If the data collected is not sufficient to consider removal, please contact our office to help us determine what additional information would be needed.

MCPH will continue to monitor Trails End, Big Bend and Deveraux Creeks and perform pollution identification and correction activities in each drainage. MCPH hopes that during the next freshwater assessment we will be able to request that these streams are also removed from the 303(d) list.

Please feel free to contact me at (360) 427-9670 x544 if you need any additional information or have any questions.

Sincerely,

Amy Georgeson
Environmental Health Specialist III
Water Quality Program
Mason County Public Health
Information on Hood Canal: <http://tiny.cc/hoodcanal>

"Always working for a safer and healthier Mason County"

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Table 3 Summary of FC Monitoring from the Hood Canal 303(d) Creeks

Name	# samples	min	max	GMV	Meets GMV standard	# samples >100	% samples > 100	Meets % standard	Sampling Start Date	Sampling Finish Date	Data Source
Lilliwaup Creek	24	2	52	12.6	Yes	0	0%	Yes	1/27/2004	11/13/2006	MCPH
Lilliwaup Creek	13	1	350	19.6	Yes	3	23%	No	10/16/97	4/20/05	DOE
Big Bend Creek	14	1	290	15.1	Yes	3	21%	No	1/5/04	5/17/05	DOE
Twanoh Creek	17	1	216	9.1	Yes	4	24%	No	1/5/04	8/7/08	DOE
Twanoh Falls Creek	14	1	64	5.5	Yes	0	0%	Yes	1/5/04	5/17/05	DOE
Mulburg Creek	14	1	310	11.3	Yes	3	21%	No	1/5/04	5/17/05	DOE
Happy Hollow Creek	14	1	160	10.0	Yes	1	7%	Yes	1/5/04	5/17/05	DOE
Holyoke Creek	14	1	68	6.5	Yes	0	0%	Yes	1/5/04	5/17/05	DOE
Trails End Creek	3	3	18	6.0	Yes	0	0%	Yes	3/22/05	5/17/05	DOE
Deveraux Creek	12	1	532	9.1	Yes	2	17%	No	1/5/04	5/17/05	DOE
Little Mission Creek	31	2	1600	17.9	Yes	4	13%	No	11/15/2004	6/26/2007	MCPH
Little Mission Creek	12	1	510	13.0	Yes	2	17%	No	10/29/02	9/23/03	DOE
Stimpson Creek	37	2	240	12.3	Yes	3	8%	Yes	1/20/2004	6/26/2007	MCPH
Stimpson Creek	20	1	180	12.9	Yes	2	10%	No	10/29/02	9/7/04	DOE
Shoofly Creek	28	2	300	6.7	Yes	2	7%	Yes	1/20/2004	9/19/2006	MCPH
Shoofly Creek	8	2	76	11.3	Yes	0	0%	Yes	3/4/04	9/7/04	DOE

- All data is for Fecal Coliform colonies/100mL of water. MCPH uses MPN method, MCPH did not research what method was utilized for the data that was obtained from EIM, although it is likely to be membrane filtration.
- GMV is the Geometric Mean Value
- Cells colored blue represent sites that have had at least 10 monitoring events either as listed in EIM or from MCPH's existing data.
- Cells colored orange do not meet either the geometric mean value or percentile standard. These sites should all meet the Extraordinary Water Contact Standard.