

**Mason County Hood Canal Marine Recovery Area On-site Septic  
System Discovery and Pollution Abatement Project**  
**Centennial Clean Water Fund**  
**Grant # G1000278**



Twanoh Falls Creek – December 13, 2010 - monitoring/flooding event

**4<sup>th</sup> Quarter Report**  
**October 1, 2010 – December 30, 2010**  
**January 13, 2011**

**Prepared for**  
**Washington State Department of Ecology**

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**Quarterly Report, October 1, 2010 – December 30, 2010**

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## **Work performed throughout the quarter:**

### **Task 1 – Project Administration and Management**

Mason County Public Health (MCPH) prepared and submitted 3<sup>rd</sup> Quarter 2010:

- Quarterly report
- Payment vouchers
- Fiscal forms

### **Task 2- O&M Enhancement**

- Parcel records of 602 Hood Canal Shoreline parcels have been reviewed this quarter with 397 of those records scanned (with a total of 2821 records reviewed this year). Of those, 2014 will be updated in our O&M database, Carmody. The additional records that were reviewed were determined to be vacant or not have as-builts.
- Edits for the O&M database have been tracked in an Excel file that updates the data in Carmody.
  - ✓ The data that has been edited include installation date, type of system, if records (as-builts) are available, and if the drainfield is less than 100 feet from surface water.
- 2014 reviewed records have been scanned and indexed into Land Records. Also records associated with 293 new septic permits, 380 record requests and ~580 OSS records associated with property reviews for building permits were scanned this year.

### **Task 3- O&M Education**

- MCPH finished preparing for the Lower Hood Canal Watershed Coalition Presentation.
- MCPH presented to the Lower Hood Canal Watershed Coalition on 10/4/2010.
- Washington State University-extension and MCPH will be presenting on OSS and current projects in the Hood Canal area at the North Mason Timberland Library in Belfair on February 3, from 6-8pm.

### **Task 4- Water Quality Monitoring**

MCPH performed monthly monitoring on the study area 303(d) fecal coliform listed streams during the months of October, November and December. Overall, this monitoring is going well with staff becoming more familiar with tidal access ranges and improving on efficiency of monitoring.

The November monitoring event on day one (of two days of monitoring), was performed during a storm event. MCPH may request that these results are not included in the determination 303(d) status. None of the sample results from that day met WQ Extraordinary Contact Standard. MCPH will work with DOE to determine if the Water Quality Assessment has any data exclusion criteria.

Due to the storm-event that staff sampled in December, staff was not able to get flow data from most of the streams, as they were too swift and turbulent for staff to feel comfortable entering them

Here is a summary of the monitoring results to date (not included in this table are the data pertaining to field parameters, flow/loading rates and nutrients).

303(d) listed Stream	Site ID	GEO-MEAN	90th Percentile	MIN	MAX	# of samples >100 FC	# of Samples	% of Samples >100FC	Meets WQ Standard
Big Bend	BG-01	35	134	8	170	1	5	20%	Exceedance
Deveraux	DE-01	106	535	13	900	4	6	67%	Exceedance
Happy Hollow	HA-01	6	23	2	30	0	5	0%	NAP
Holyoake	HO-01	36	122	8	170	1	5	20%	Exceedance
Lilliwaup	LI-01	15	57	4	80	0	5	0%	NAP
Little Mission	LM-01	21	62	8	70	0	5	0%	NAP
Mulberg	MU-01	18	265	2	500	1	6	17%	Exceedance
Shoofly	SH-01	3	4	2	4	0	5	0%	NAP
Stimpson	ST-01	5	15	2	17	0	5	0%	NAP
Trails End	TE-01	42	192	23	300	1	5	20%	Exceedance
Twanoh Falls	TF-01	9	64	2	110	1	6	17%	Exceedance
Twanoh	TW-01	20	80	4	110	1	6	17%	Exceedance

\* Based on the Extraordinary Primary Contact Water Quality Standard which requires that fecal coliform levels do not exceed a geometric mean value of 50 colonies/100mL, with no more than 10% of all samples exceeding 100 colonies/100mL.  
NAP – No Apparent Problem

Staff will need to work with DOE staff to determine which data to include in the monthly monitoring count. If all data is included and MCPH is able to monitor monthly then staff is still on schedule to complete the first 10 consecutive months of monitoring in May, 2011. MCPH anticipates that if the November data or December data (due to no flow data) is not included, then MCPH may not complete the first year of monitoring until as late as August, 2011.

### Task 5- Septic System Sanitary Surveys

- MCPH spent a lot of time this quarter joining all of the existing databases (Carmody –MCPH OSS data, Assessor’s Parcel Data, Previous Lower Hood Canal Sanitary Surveys data, segment data, etc.). There were some issues with downloading the correct data from Carmody and then some additional issues regarding mis-matched data that resulted in having to re-join the data from the beginning.
- MCPH acquired and joined data for 3607 “developed” parcels (including all data available from those databases listed above).
- MCPH then performed analysis and ranking on all of these parcels to identify those that are most likely to contributing to poor water quality. Most of the ranking criteria received a score between 1-5, however the following categories all received scores of 30, because they were sites that MCPH determined posed the greatest risk: Sites where the drainfield is <100’ from surface water, sites where there is a known seepage pit or sites where there had been a failed service event from our O&M database.
- The minimum score was 2 and the maximum score was 92. The score of 2 represents a site where everything is known (system age, location and they have had proper O&M and no issues). Where the score of 92 represents a site with a seepage pit that has had an unsatisfactory O&M service event. The average score is 27. MCPH included 88.6% of the records in their selection of sites for

sanitary surveys. This includes sites that received a score of 36 or higher. Even though, MCPH is only planning on performing ~175 sanitary surveys, MCPH has identified 413 potential sites for sanitary surveys. In MCPH's experience it is necessary to prioritize at least twice the number of sanitary survey sites. This is due to a number of factors that can prevent a sanitary survey from being performed such as:

- Seasonal Use
  - OSS Repair/Replacement
  - Sites to be sewerred
  - Sites where access is denied
  - Sites where contact cannot be made with the occupant/owner
  - Sites that are vacant
- MCPH plans to actively pursue sanitary survey sites this quarter.