



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



Mulberg Creek Impoundment

**3rd Quarter Report
July 1, 2011 – September 30, 2011
October 11, 2012**

**Prepared for
Washington State Department of Ecology**

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Work performed throughout the quarter:

Task 1 – Project Administration and Management

- Mason County Public Health (MCPH) prepared and submitted 2nd Quarter 2012:
 - Quarterly report
 - Payment vouchers
 - Fiscal forms
- MCPH will be drafting the final report for this project in the coming quarter.

Task 2- O&M Enhancement

- This quarter, 1,886 additional parcel records were pulled and verified this quarter. In addition, MCPH has scanned 1,886 records this quarter. To date, MCPH has verified, scanned and indexed 8867 parcels files within the Hood Canal study area.
- Parcel records associated with 40 new septic permits, 124 record requests and 268 OSS records associated with property reviews for building permits were verified, updated in Carmody and scanned this quarter. To date, MCPH has verified, scanned and indexed 612 new septic system permits, 2020 septic records associated with records requests and 2279 septic records associated with parcel review for building permits.
- Under this grant, MCPH has validated 13,778 on-site septic system records, had their information updated into Carmody and then scanned into Land Records.
- MCPH proposed to add additional areas in the Hood Canal Watershed for verification, scanning and indexing prioritized by population density and closeness to surface water. ECY approved this request as an amendment to the grant. The additional areas and the number of parcels that we have processed this quarter are as follows:

Area	Number of Parcels	Number of Parcels Validated and Updated	Percent Complete
Union	473	473	100%
Tee Lake	91	91	100%
Lake Deveraux	47	47	100%
Trails End Lake	494	0	0%
Lake Cushman	2879	1275	44.2%

Task 3- O&M Education

- MCPH sent out 5655 O&M reminders within the Hood Canal Watershed. These were sent out to all homeowners on certain postal routes, using 'every door direct mailing' (EDDM). The reminders were sent to postal routes in Trails End/South Shore, Twanoh State Park/South Shore, Northshore, Old Belfair Highway, Elfendahl Pass/Sand Hill and the Belfair Post Offices.

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- Within the timeframe of this grant, MCPH has sent out 17108 reminders within the Hood Canal Watershed.

Task 4- Water Quality Monitoring

- MCPH requested ECY to allow for additional monitoring due to potential changes to the 303(d)-delisting policy. This request included 10 additional samples from Twanoh, Twanoh Falls, Mulberg and Holyoake Creeks, to further assess if they meet the water quality standard for fecal coliform and to determine if they should be removed from the 303(d) list for fecal coliform. ECY approved MCPH’s request with a grant amendment during this quarter.
- MCPH continued performing monthly monitoring at the three 303(d) listed streams that did not meet the water quality standard; Big Bend, Deveraux and Trails End, which were monitored in July, August and September. Deveraux Creek did not have surface water flow in August or September.
- MCPH also monitored 4 streams that MCPH recommended for delisting Holyoake, Mulberg, Twanoh Falls, Twanoh. These streams were monitored twice in July, once in August and twice in September. This enhanced monitoring schedule was crafted to allow us to collect 10 samples from within a 12 month period prior to the completion of the grant.
- MCPH took a total of 22 ambient samples this quarter from 7 monitoring locations.
- The following is a summary of the monitoring results to date for the three streams that did not meet the extraordinary water quality standard in the first year of monitoring and the four streams that met the water quality standard, but may not be eligible for delisting pending a policy decision from ECY. Not included in this table is data pertaining to field parameters, flow/loading rates, nutrients and stream segmenting.

303(d) Stream Monitoring Summary

303(d) Stream	Site ID	GEO-MEAN	90th Percentile	# of Samples	# of samples >100 FC	% of Samples >100 FC	Meets WQ Standard*	MIN	MAX
Deveraux	DE-01	21	210	23	7	30%	Exceedance	2	900
Trails End	TE-01	18	170	25	5	20%	Exceedance	2	300
Big Bend	I-73	39	158	24	5	21%	Exceedance	8	1600
Mulberg	MU-01	13	206	18	2	11%	Exceedance	2	500
Holyoake	HO-01	18	58	17	1	6%	NAP	4	170
Twanoh Falls	TF-01	7	42	18	1	6%	NAP	2	110
Twanoh	TW-01	8	68	18	2	11%	Exceedance	2	300

* Based on the Extraordinary Primary Contact Water Quality Standard which requires that fecal coliform levels cannot exceed a geometric mean value of 50 colonies/100mL, with not more than 10% of all samples exceeding 100 colonies/100mL.

- Monitoring results from all 7 streams have continued to be low this quarter. Big Bend and Twanoh each had a single fecal coliform sample result greater than 100 FC/100mL.
- MCPH has two monitoring events remaining as part of this project.
- MCPH will be spending some considerable time preparing and entering all other data (field parameters, nutrients and flows) for the final EIM upload in the coming quarter.

- MCPH identified a data error with the multiprobe that appears to have prevented the unit from saving any data since August, 2011. Staff is verifying that the data cannot be retrieved.

Task 5- Septic System Sanitary Surveys

- MCPH attempted to make initial contact at 97 sites this quarter. MCPH performed a second site visit at 65 sites and a third site visit at 59 sites. MCPH performs multiple site visits in an attempt to make contact with the owners, many of which are seasonal.
- MCPH completed 53 sanitary surveys this quarter and attempted surveys at those sites visited in the bullet above.
- MCPH has performed 11 dye tests this quarter and identified 1 failing OSS based on elevated fecal coliform levels (sample collected under the Northshore HCPIC- G1000122) and positive dye. MCPH is awaiting results on the other dye tests.
- MCPH identified 2 failing OSS through field work associated with this grant this quarter:
 - ◆ One OSS failure was identified through investigation and discussion between MCPH and the O&M specialist for a condominium. The failure was associated a broken transport line in Big Bend Creek. The Condos have a mile-long pressurized transport line that crosses through multiple properties and through Big Bend Creek before reaching the drainfield, which is on the north side of Dalby RD. This site has a Larger On-site Septic System. The transport line has been repaired. However, the transport line still crosses directly through the creek.
 - ◆ The second OSS failure is located on Northshore RD. This is the site that MCPH identified as failing through a dye test with elevated fecal coliform levels. MCPH is working with the owners to identify how the OSS is failing. This is a vacation site that is not being occupied during the repair process.
- This quarter, utilizing MCPH's permit database, there were 4 non-shoreline OSS repairs and 4 shoreline OSS repairs within the study area.
- MCPH is winding down on initiation of dye tests, in anticipation of drafting of the final report.
- MCPH will continue sanitary surveys into the beginning of November.