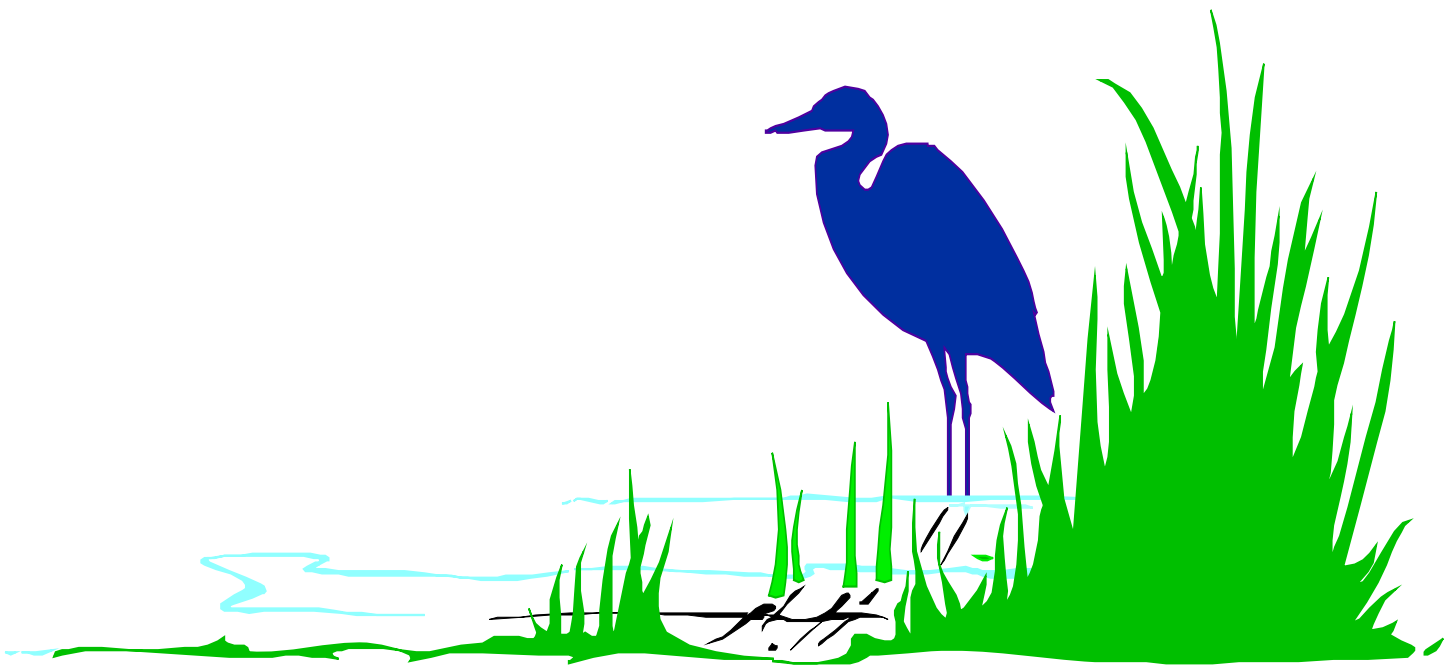


**Mason County Septic System Surveys
and Database Enhancement
Centennial Clean Water Fund
Grant # G0600378**

Quarterly Report: July 1, 2007 – September 30, 2007



**Prepared for
Washington State Department of Ecology**

**Prepared by
Mason County Public Health
Water Quality Program, Onsite Program,
And Environmental Health Manager**

Mason County Septic System Surveys and Database Enhancement
Grant # G0600378
Third Quarterly Report 2007
July 1, 2007 to September 30, 2007

Work performed throughout the quarter

Task 1 – Project Administration and Management

The grant was administered and managed. All project records have been maintained in excel spreadsheets and site folders. This report and the associated financial vouchers were created and submitted.

Task 2 - Shoreline Survey

Fecal Coliform*:

Staff has still been busy sampling along the shoreline, mainly focusing on the intensive nutrient sampling areas. Staff sampled 401 sites during this quarter.

Table 1. Fecal Coliform* Results since June 2005

Samples \geq 200MPN/100mL	63
Confirmations samples taken	33
Confirmation samples \geq 200MPN/100mL	11
Sanitary Surveys completed	8
Dye Tests completed	3
Failures Identified	1
Repairs completed	0
Sanitary Surveys needed	3

The failure that was identified last quarter has been capped and they have a design that has been reviewed by our onsite program. We are working on three Sanitary Surveys where we have not been able to make contact with the homeowner or the sampling information has been inconclusive. The sites with confirmation samples below the level to trigger a Sanitary Survey (ie. when both samples \geq 200MPN/100mL), will be resampled during wet weather. Since the tides are starting to be uncooperative during daylight hours, we are cutting back on sampling and will be working on data entry, reports and completing sanitary surveys.

Nutrients:

10 nutrient samples have been taken at fecal coliform sampling sites with elevated levels (\geq 900). Of these, 4 sites have nutrient levels of concern (\geq 0.50). 2 of the 4 sampling sites are associated with a failing drainfield, which will be sampled after the repair is completed.

In addition, staff has sampled the Hoodsport to Alderbrook sections for nutrients and fecal coliform since July 2007. Sampling has been completed in Section H, from Hoodsport to the Skokomish Reservation, Section AB, the Skokomish Reservation to Union and over halfway

through Section I, Union to Alderbrook. In total, 401 nutrient samples have been taken within these sections.

We have found 103 sites with nutrient levels of interest (≥ 0.50 mg/L). This does not include nutrient sampling that has been completed outside of the intensive nutrient sampling sections.

Table 2. Nutrient Results from the Intensive Nutrient Sampling Sections**

	Ammonia-Nitrogen	Nitrate + Nitrite-Nitrogen	Orthophosphate
Total sites of concern	5	44	62
$0.50\text{mg/L} \leq x < 1 \text{ mg/L}$	2	27	40
$1 \text{ mg/L} \leq x < 2 \text{ mg/L}$	1	10	18
$2 \text{ mg/L} \leq x$	2	7	4
Highest sample result	14.50	7.84	3.03

Nutrient and Fecal Coliform Results:

Table 3. Nutrient** and Elevated Fecal Coliform* Results

Fecal Coliform MPN /100mL H₂O	Sites with nutrient levels > 0.50 mg/L
$200 \leq x < 500$	1
$500 \leq x \leq 900$	5
$900 < x$	6

*Fecal Coliform data does not yet include results from the Annas Bay section (171 sample sites) as the data has not yet been verified.

** Nutrient data does not include samples from outside the intensive sampling sections

Task 3- Septic System Surveys

1 Sanitary Survey has been completed. 2 dyes test have been completed, one at Mike's Beach Resort on HWY 101 and one at Summertide Resort on Northshore Rd, neither of which had a hydraulic link identified. The septic system that was found to be failing last quarter is still pending repair. 4 septic systems have been replaced along the shoreline. 3 sanitary surveys need to be completed.

Task 4- Public Outreach

Both Onsite and Water Quality Programs held public meetings. Onsite presented on Septic Operation and Maintenance in conjunction with WSU Extension at PUD 3 on September 24, 2007. The Water Quality Program presented a summary explanation of the project and sampling results to date of the Hood Canal Pollution Identification Program to the Lower Hood Canal Watershed Coalition on July 9, 2007.

Task 5- Database Enhancement

No additional enhancements were added this quarter.