

# **On-site Sewage System Local Management Plan of the Whatcom County Health Department**



**Whatcom County Health Department**

**Environmental Health Division**

**509 Girard Street**

**Bellingham, WA 98225**

**(360) 676-6724**

**[www.whatcomcounty.us](http://www.whatcomcounty.us)**

# Whatcom County Health Department On-site Sewage System Local Management Plan

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## **Part 1 - Database Enhancement**

**Summary:** This section of the plan encompasses the current on-site sewage system (OSS) database environment. The description of fields within the database is provided, including a summary of how new OSS activities are tracked. There are over 20,000 OSS records in the OSS database, and the confidence of this data will increase as existing OSS are evaluated. After each OSS evaluation, the O&M Specialist or certified homeowner submits a Report of System Status (ROSS) to the Whatcom County Health Department (WCHD). This report contains information about the current status of the OSS including whether it is functioning satisfactorily, needs maintenance, or is failing. In addition, previously unknown OSS will be captured in the database as OSS Operation and Maintenance (O&M) regulations are implemented.

### **A. Inventory**

#### **1. Current Database**

The current database, developed in house by Whatcom County Health Department (WCHD), is known as Whatcom County Maintenance and Operation (WHAMO). The database platform is Microsoft Access and was originally created by manual data entry of existing paper records. The pertinent fields recorded within the database include:

- a) Site ID #: a unique identifying # assigned to each individual OSS
- b) OSS system type: conventional gravity, pressure distribution, etc.
- c) Site Status: A code assigned to the OSS based on how the OSS has been documented. Example of OSS documentation would include a permit, complaint investigation, septic tank pump out or survey.
- d) Building value: from the county assessor's database
- e) Tax parcel #: assigned by the assessor
- f) Site address: the physical address of the house utilizing the OSS
- g) Property owner address
- h) Plat file (if one exists)
- i) Water district (if one exists)
- j) Watershed of parcel
- k) Year residence was built
- l) Total assessed value of house and property
- m) Legal description of property
- n) Years since service: the # of years since the last septic tank pump out
- o) Years since permit: the # of years since WCHD issued the OSS permit
- p) Estimated latitude and longitude of the OSS

(Note: List of acronyms, Attachment A.)

The software interacts with both the County Assessor and GIS data for property and location information related to the OSS and is updated daily. Our in-house data specialist can modify and export data in a relatively short time frame due to the OSS records being centrally connected. Data records can be exported to any common format. In addition, data can be converted to different formats, depending on the application needed. OSS data can be plotted in the creation of GIS maps.

There is a backup procedure to ensure data is not lost. A "convenience" backup is made of the data every night. Rolling copies of the previous 30 days of work are maintained locally.

Formal procedures for backup and recovery of the database, in case of a catastrophic loss to the active data, are performed by the Whatcom County Information Technology Department nightly.

## **2. OSS Activities**

Each OSS record created is associated with past and/or new activity related to the OSS. Activities on record include:

- a) OSS application
- b) OSS permit
- c) Septic tank pump out
- d) OSS evaluation

These records are connected to digital copies of the original paper documents, if available.

## **3. Number/Age of OSS Records**

The number of estimated OSS in Whatcom County is approximately 30,000 based on two different models: Developed parcels in the county, minus sewer customers and the 2000 Census household data, minus sewer customers. For assumed systems without a permit history, age of the septic system can be approximated from assessor's data using the age of the structure itself.

Currently, a "known" OSS has at least a record indicating a WCHD inspection or a septic tank pump out. The number of "known" OSS in the WCHD OSS database is 21,162. When an OSS evaluation is completed, a Report of System Status (ROSS) is entered into the OSS database for that system. This reporting process is described in greater detail below in Section B. Records Maintenance. Through implementation of Operation and Maintenance (O&M) requirements, OSS without current records will become accounted for.

Ninety percent of the OSS in the database are categorized with a system “type”. Generic system “types” include conventional gravity, pressure mound, etc. The final inspection date on the permit is the determining factor for age of the system. The earliest OSS installation recorded in the database is February 21, 1966.

#### **4. Adding and Updating OSS Records**

WHAMO is currently updated through the OSS permitting process, inspections of systems as a result of complaints, pumper reports, and new O&M evaluation reporting procedures. In this process, the paper records are scanned into the database after the pertinent data is entered.

#### **5. O&M Implementation Plan**

In implementing O&M regulations, WCHD plans to utilize county tax parcel maps of the area to develop mailings lists of OSS owners and owners of parcels not serviced by sewer. Aerial photography overlay maps will be examined to ensure that suspect residences/ structures not previously identified as OSS sites are investigated.

Property owners will be notified through a mailout of their regulatory requirement to arrange for an evaluation of their OSS. A postage-paid post card and a list of licensed O&M specialists will accompany each O&M notification letter. In returning the postcard to WCHD, the property owner will check off one of the following responses:

- No OSS or sewer service currently on property (Property is undeveloped)
- Property served by sewer system
- Property served by OSS

O&M notifications will commence in the Drayton Harbor watershed, a designated Marine Recovery Area. Subsequently, all other watersheds along marine waters will receive O&M notifications. Notification activities will progress eastward from there.

WCHD plans to mail out 6,000 O&M notifications per year, beginning early 2008. It is expected that within five years, O&M notifications will have been mailed to all OSS owners within Whatcom County.

#### **6. Site Status Confidence**

While the OSS database provides valuable information about OSS in Whatcom County, several improvements are needed to increase the quality and reliability of the data.

Within the OSS database, all OSS are assigned a site status. The status is based on the amount and quality of information that exists for that OSS. For example, an OSS with a site status of A1 has a permit on file, with a record of a WCHD final inspection. Sixty six percent of the “known” OSS have a status of A1. Site status code B1 signifies that an OSS permit was approved for the site, but there is no record of an OSS final inspection. Code B2 signifies there is no current OSS record, but there is evidence of a building on the property. A site will be assigned an N1 status if WCHD field observations determine that there is a structure on site, but no plumbing. Currently, there are no N1 sites in the OSS database; however, such sites will be identified during efforts to find unknown OSS. A complete list of Site Status Codes can be found in Attachment B.

WCHD has great confidence in all sites with an A status. The postcard mail out, referenced above will add OSS to our inventory and increase our confidence in all data.

As existing OSS’s receive their required evaluations, the quality and quantity of the information associated with them will improve. As a result, the site status within the OSS database will improve. In some cases, due to an OSS evaluation, the site status can improve from B to A.

## **7. System Type Confidence**

Having an accurate system type designation for each OSS is important information, as it is the determining factor in required O&M evaluation frequency.

Current WCHD permits and ROSS forms clearly state the OSS system type.

## **8. OSS with No Documentation**

When postcards from the O&M notification referenced above are returned the OSS database will be updated and previously unknown OSS will be documented. WCHD expects to complete this postcard mail out by 2012.

# **B. Operation and Monitoring – Record Maintenance**

## **1. Report of System Status (ROSS)**

Effective April 2, 2007, as per *Whatcom County Code 24.05.160.Operation and Maintenance*, O&M evaluations are required:

- a) When a property is listed for sale
- b) Once every three years for conventional gravity systems: systems consisting of a septic tank and drain field only
- c) Annually for all other systems, unless more frequent as specified by the health officer

The initial evaluation of the OSS is required to be performed by a licensed O&M specialist. After the initial evaluation, homeowners may choose to perform their own OSS evaluation as allowed by WCC 24.05.160 after testing and certification is completed through WCHD.

In performing O&M evaluations, the O&M specialists and/or certified homeowners utilize a checklist to ensure that all OSS components are examined and tested (Attachment C). This checklist includes specific information on tanks, drainfield, flow and dye test results, pressure test height and proprietary treatment device information.

The results of the O&M evaluation and completed checklist are summarized on the Report of System Status (ROSS) form (Attachment D). The ROSS is a one page document indicating the Operational Status of the OSS as Satisfactory, Maintenance needed, or Failure. Other information contained is site address, tax parcel number, OSS Type, and Permit Status. If a permit is not on file with the WCHD, the O&M specialist is required to submit a site sketch of the parcel, including location of all structures and components for the initial evaluation.

Completed ROSS forms, checklists, and appropriate fees are submitted to WCHD. The ROSS information is entered into the database by the O&M clerical staff and the checklist is scanned. The ROSS information is reviewed by WCHD O&M staff and those that indicate “maintenance needed” or “failure” are followed up on (Attachment E).

## **2. Pumper Records**

Pumper report forms (Attachment F) are submitted by licensed pumpers on a monthly basis. Data includes OSS address, tax parcel number, date of pump service, name of company, tank volume, gallons pumped, disposal facility and any comments relating to observations or minimal repair performed as allowed.

Information included on the Pumper report form is generally used as an accountability method to compare volume of septage pumped with volume received at the treatment plant or at one of the land application sites. However, it can also be used as a crosscheck with corresponding ROSS information for minor maintenance that may have been performed on an OSS i.e. septic tank baffle repair, or condition of tank.



## **C. Resources**

WCHD currently has an in house Data Specialist who manages the database, a clerk who provides essential data entry and a Program Coordinator who reviews the data and proposes changes as necessary to accomplish the goal of the program.

Proposed improvements to the database could include electronic submission of ROSS documents and associated fees by O&M providers. Additional software and hardware will be needed to accomplish this.

## **Part 2 - Identification of Sensitive Areas**

**Summary:** Part 2 of the plan provides for a general description of the natural and human environments of Whatcom County. The main focus of this section, as per WCC 24.05.050 is to identify “any areas where OSS could pose an increased public health risk.” WA State DOH, in WAC 246-272A-0015 directs WCHD to consider the following ten categories in this task:

1. Shellfish protection districts or shellfish growing areas
2. Sole source aquifers designated by the United States Environmental Protection Agency (EPA)
3. Areas in which aquifers used for potable water as designated under the Washington State Growth Management Act, chapter 36.70A RCW are critically impacted by recharge
4. Designated wellhead protection areas for Group A public water systems
5. Up-gradient areas directly influencing water recreation facilities designated for swimming in natural waters with artificial boundaries within the waters as described by the Water Recreation Facilities Act, chapter 70.90 RCW
6. Areas designated by the Department of Ecology as special protection areas under WAC 173-200-090, Water quality standards for ground waters of the state of Washington
7. Wetland areas under the production of crops for human consumption
8. Frequently flooded areas including areas delineated by the Federal Emergency Management Agency and or as designated under the Washington State Growth Management Act, chapter 36.70A RCW;
9. Areas where nitrogen has been identified as a contaminant of concern
10. Other areas designated by the local health officer such as Marine Recovery Areas

WCHD has selected two sensitive areas: the Drayton Harbor Watershed (DHW) which has been designated as a Marine Recovery Area (MRA) and the Shoreline Management Area (SMA).

The DHW is designated a sensitive area because it meets two of the three criteria set forth by DOH for MRA designation;

- 1) It contains shellfish growing areas that have been threatened or downgraded by DOH,
- 2) Two tributaries are listed by the Department of Ecology under section 303(d) of the federal Clean Water Act for low dissolved oxygen or fecal coliform.

As a side note, the majority of the DHW is also within the Drayton Harbor Shellfish Protection District.

The SMA is designated a sensitive area because failing OSS within this area would increase the likelihood that untreated sewage may contaminate adjacent water bodies.

After thorough evaluation of each category, no other sensitive areas were designated.

# A. Description of the Jurisdictional Environment

## 1. Natural Environments

Whatcom County, located in the northwest corner of Washington State, is bordered by marine waters to the West, Okanogan County to the East, Skagit County to the South, and Canada to the North. It encompasses 2,182 square miles. The eastern portion of the county is mountainous (North Cascades Mountain Range), with nearly two thirds of the County's total land area lying within the Mount Baker National Forest. The western third of the county is made up of the foothills, relatively flat lowlands and marine waters. Elevations range from sea level in the west to thousands of feet above sea level in the eastern mountains. Mount Baker, a dormant volcano, is the most prominent peak of the North Cascade range, with an elevation of 10,788 feet. The Nooksack River is the major county waterway flowing west from the headwaters at Mount Baker, meandering through the lowlands and terminating in North Bellingham Bay. As shown in Figure 1, Whatcom County encompasses Water Resource Inventory Area 1 (WRIA 1) and includes (26) twenty-six watershed management areas. There are approximately 136 miles of marine shoreline and two islands: Lummi and Eliza.

Figure 1 - Drainage Area Map of Whatcom County



## 2. Human Environments

Whatcom County, according to 2005 data, has a population of approximately 180,800. With a land area of 2,182 square miles, there are approximately 85.3 persons per square mile. The western portion of the county is its most populous, including the incorporated municipalities of Bellingham, Blaine, Everson, Ferndale, Lynden, Nooksack and Sumas (Figure 2). This area encompasses 755 square miles.

Figure 2 – Western Whatcom County



The majority of non-federal land use distribution in unincorporated Whatcom County is dedicated to forestry and agriculture, at a combined rate of nearly 75%. Eleven percent of the land use is dedicated for residential uses. Review of the recent census information indicated there are 87,000 housing units in Whatcom County and approximately 30,000 of these units (35%) utilize OSS for wastewater treatment. The average household size is 2.51 and average family size is 3.06, as per the 2000 Census. The current median value for a home is \$260,000. The median family income is \$44,284; per capita income is \$24,896 (2005 data).

Drinking water supplies for the majority of the rural population consist of individual wells and small Group B public water systems (3 to 15 connections). Larger, Group A public water systems (more than 15 connections) are regulated by the Washington State Department of Health (DOH). Currently, there are 184 Group A and 199 Group B water systems in Whatcom County. The county's largest urban population, the city of Bellingham, relies on Lake Whatcom and the middle fork of the Nooksack River (via a diversion dam) for drinking water.

## B. Designating sensitive areas

Failing OSS pose a threat to public health and the environment. Hazards include the threat of human exposure to untreated sewage, contamination of drinking water supplies, degradation of surface and groundwater resources and contamination of shellfish resources. Human consumption of shellfish contaminated by failing OSS can lead to sickness and even death.

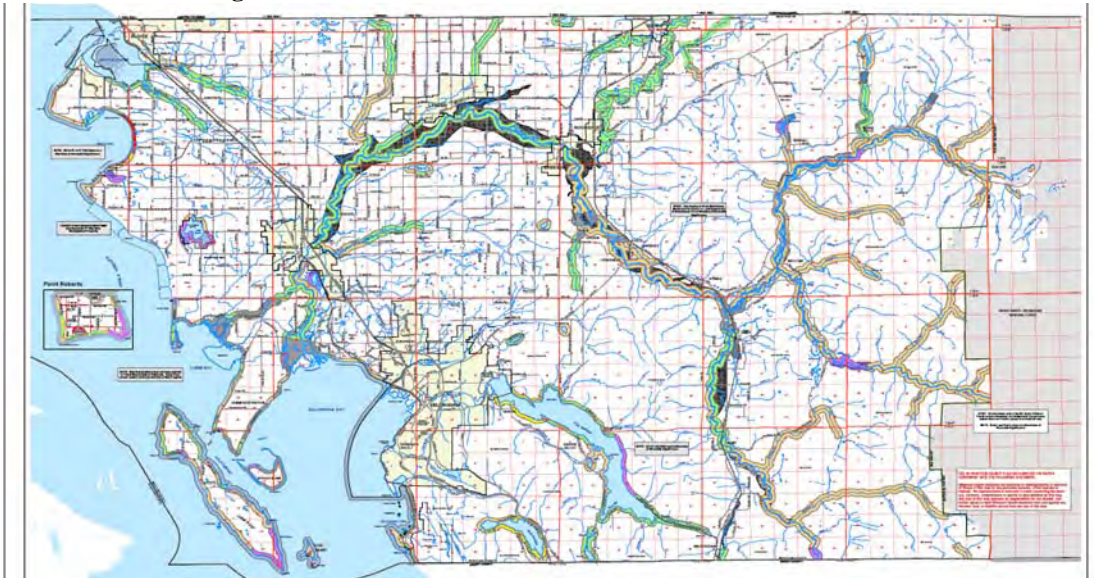
WCC 24.05.050 requires WCHD, within its Local Management Plan (Plan), to identify any sensitive areas where an OSS that is not properly sited, designed, installed, operated or maintained can pose an increased risk to public health. After consideration of these areas, the county-wide Shoreline Management Area and the Drayton Harbor Watershed, a designated Marine Recovery Area, have been designated sensitive areas by WCHD.

### 1. Sensitive areas designated by WCHD:

#### a) Shoreline Management Area

The Shoreline Management Program regulates all streams with a mean average flow of 20 cubic feet per second, all lakes over 20 acres in size, all marine shorelines, all associated wetlands and floodways, and has jurisdiction over upland areas within 200 feet of the Ordinary High Water Mark (OHWM) of the shoreline. The Shoreline Management Area (SMA) is shown in Figure 3.

Figure 3 - Shoreline Management Areas



**For the purposes of this Plan, WCHD considers the SMA to be a sensitive area because:**

- i) Failing OSS within this zone increase the likelihood that untreated sewage will contaminate adjacent water bodies. Any resulting surface water degradation creates a risk of human exposure to untreated sewage, contamination of drinking water supplies and contamination of shellfish resources.
- ii) Identifying and repairing failing OSS in this 200 foot zone will have the most immediate impact addressing potential OSS contamination in adjoining water bodies.
- iii) The SMA can be accurately plotted using GIS mapping. Administratively, the SMA is a well defined area to implement and track OSS O&M requirements.

WCHD proposes to initially implement O&M tracking and enforcement within the SMA portion of the Marine Recovery Area.

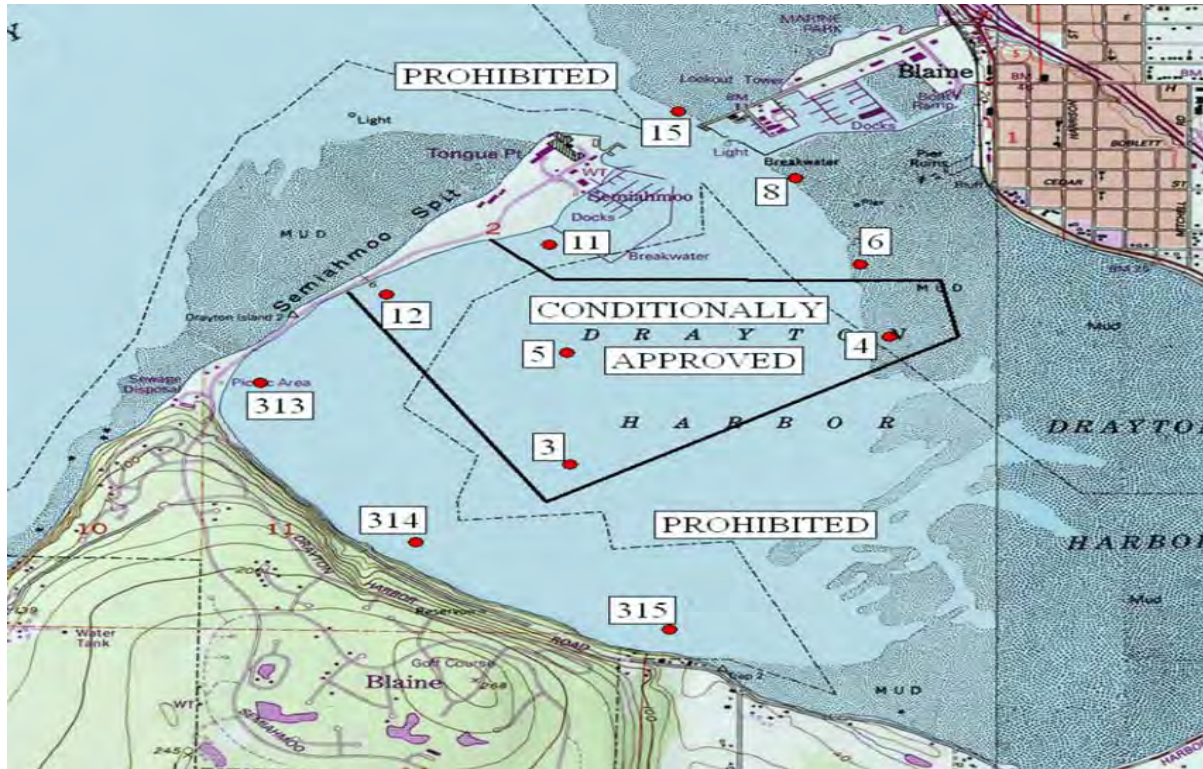
**b) Marine Recovery Area: Drayton Harbor Watershed**

RCW 70.118A requires that the local health officer propose a marine recovery area (MRA) for those land areas where existing on-site sewage disposal systems are a significant factor contributing to concerns associated with:

- i) Shellfish growing areas that have been threatened or downgraded by the Department of Health;
- ii) Marine waters that are listed by the Department of Ecology under section 303(d) of the federal Clean Water Act for low dissolved oxygen or fecal coliform; or
- iii) Marine waters where nitrogen has been identified as a contaminant of concern by the local health officer.

Most of Drayton Harbor is classified as prohibited for shellfish harvesting by the DOH, based on their on-going water quality monitoring program. Figure 4 represents the current Drayton Harbor Shellfish Growing Area, designated as conditionally approved by DOH.

Figure 4 - Drayton Harbor Shellfish Growing Area



Historically, Drayton Harbor supported productive shellfish beds. The first commercial oyster farm began operations there over a hundred years ago. In the early 1990's, the Lummi Nation annually harvested 30,000 pounds of clams from Drayton Harbor. The DOH initially downgraded a portion of Drayton Harbor's commercial shellfish harvesting area in 1994 based on water quality data and sewage disposal conditions in the area. Since the initial downgrade, citizens, businesses, tribes and local agencies have been involved in on-going efforts to address the probable sources of bacterial pollution within the bay. Those efforts have been summarized below:

- i) The 2007 Drayton Harbor Shellfish Protection District Recovery Plan Update, adopted by County Council Resolution 2007-024 in May 2007, recommends that WCHD establish an OSS O&M program within the Drayton Harbor watershed.
- ii) The 1999 Whatcom County Comprehensive Water Resource Comprehensive plan, prepared by the County Executive's Office, identifies failing OSS within Drayton Harbor Watershed as a potential source of non-point pollution to the Drayton Harbor Watershed. The plan calls for the establishment of a county-wide OSS O&M program.
- iii) The Drayton Harbor Watershed Management Plan (DHWMP) was completed in 1995 with Washington State Centennial Clean Water

Funds by the Drayton Harbor Watershed Management Committee. The plan identified several potential non-point pollution sources in the Drayton Harbor watershed which would require additional attention in order to improve Drayton Harbor's existing water quality. One potential non-point source identified in the plan was failing OSS.

- iv) An OSS survey of 250 OSS conducted in Drayton Harbor in 1997 by WCHD found a failure rate of 20%.

Despite efforts to locate and repair failing OSS and other non-point sources of bacterial contamination, the DOH currently classifies most of Drayton Harbor as prohibited for shellfish harvesting. A small area within the center of the harbor is classified as conditionally approved; however, this area is closed to harvesting for six straight days when the bay receives 0.75 inches of rainfall within a 24 hour period.

Marine waters near the mouth of Drayton Harbor, as well as segments of Dakota and California Creeks are on the US EPA 303D list for fecal coliform. Dakota and California Creeks are the major freshwater tributaries of Drayton Harbor.

Within a watershed, the contributing water courses of the basin all drain to a common receiving water body. Therefore, the surface water runoff to Dakota Creek, California Creek, un-named creeks, ditches and swales within the Drayton Harbor watershed all contribute to the water quality of Drayton Harbor.

Failing OSS may be a contributor to non-point source of pollution related to surface water degradation within the entire Drayton Harbor watershed. Therefore, the Drayton Harbor watershed will be designated a Marine Recovery Area. The response to this designation is outlined in Part 4 – Marine Recovery Area Strategy.

**The following nine areas were also considered for sensitive area designation, as per WAC 246-272A-0015 Local management and regulation:**

**c) Shellfish protection districts or shellfish growing areas**

The Drayton Harbor (Figure 5) and Portage Bay (Figure 6) Shellfish Protection Districts were considered for sensitive area designation. In addition, the shellfish growing areas of Birch Bay and Lummi Bay (tribal) were also considered.

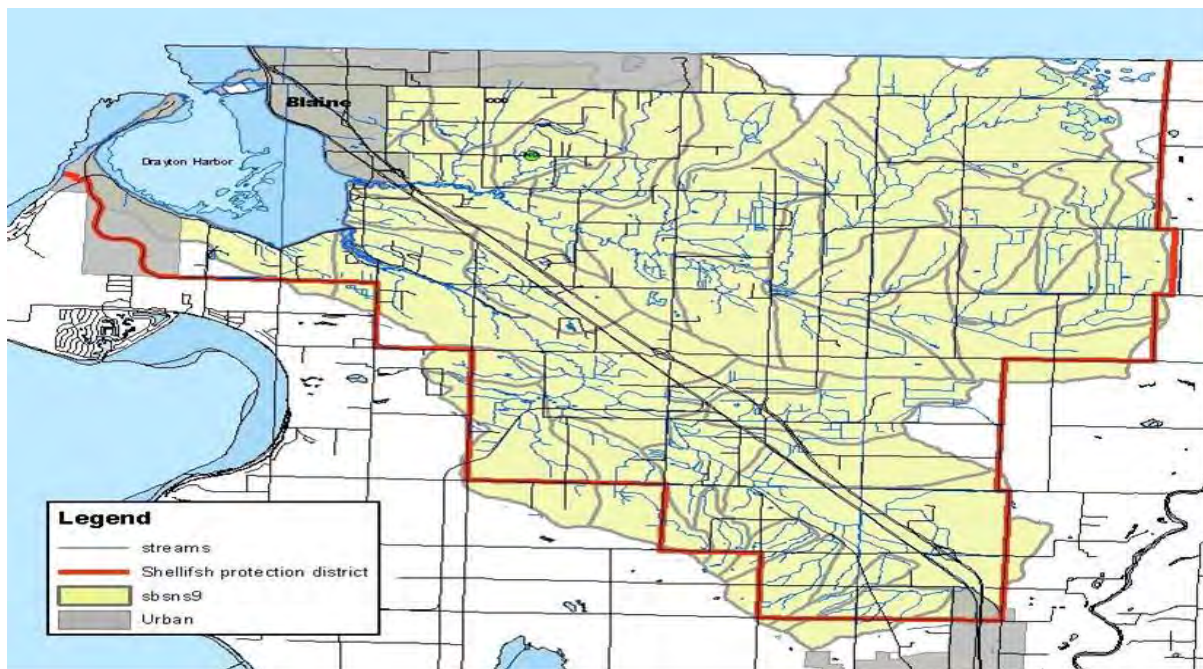
Currently, Portage Bay, Birch Bay and Lummi Bay have no restrictions for shellfish harvesting. Historically, shellfish were harvested from North Chuckanut Bay, however, DOH closed these beds in the mid



1990's due to poor water quality from undetermined non-point sources. DOH has not monitored North Chuckanut Bay since that time, and there are no plans to do so.

Despite the fact that the Portage Shellfish Protection District and other Whatcom County shellfish growing areas have not been designated as sensitive areas, all shellfish growing areas will receive an extra measure of protection through implementation of the countywide SMA designation.

**Figure 5 - Drayton Harbor Shellfish Protection District**



**d) Sole source aquifers designated by the United States Environmental Protection Agency (EPA)**

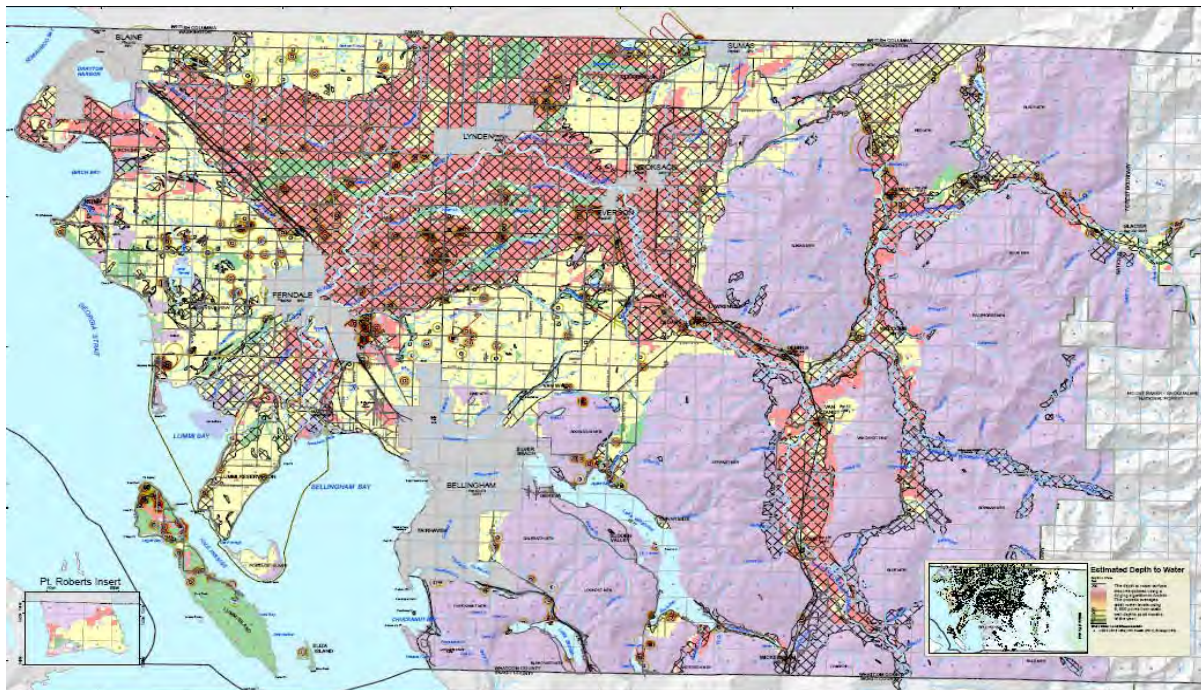
There are no designated sole source aquifers in Whatcom County.

Figure 6 - Portage Bay Shellfish Protection District



- e) Areas in which aquifers used for potable water as designated under the Washington State Growth Management Act, chapter 36.70A RCW are critically impacted by recharge

Figure 7 - Critical Aquifer Recharge Areas



On Figure 7, Critical Aquifer Recharge Areas, the various color shades indicate the level of susceptibility of that area to ground water contaminants, based on depth to water, soil permeability and hydrogeology:

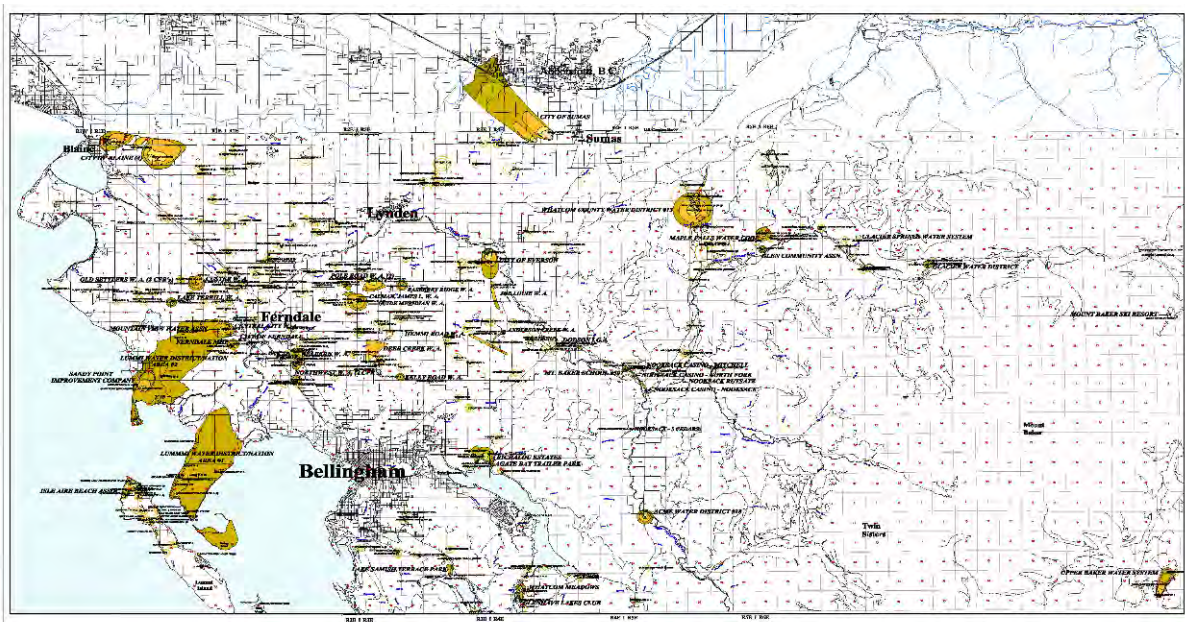
- i) Green = low aquifer susceptibility
- ii) Yellow = moderate aquifer susceptibility
- iii) Red = high aquifer susceptibility
- iv) Purple = susceptibility unassessed

As the graphic demonstrates, the majority of the most populated area of Whatcom County is designated as a critical recharge area. Current OSS regulations relating to siting criteria and treatment levels address potential contamination of these aquifers from OSS.

**f) Designated wellhead protection areas for Group A public water systems;**

Currently there are 184 Group A and 199 Group B public water systems within Whatcom County. Those wellheads that are mapped are shown in Figure 8. Group A systems have more than 15 connections; Group B systems have less than 15 connections. WAC 246.290 and 246.291 are the Group A and B regulations which ensure that public water systems are properly constructed, operated and maintained. These regulations help to ensure that OSS are not sited in close proximity to drinking water wells.

**Figure 8 - Whatcom County Well Head Protection Areas**



- g) **Up-gradient areas directly influencing water recreation facilities designated for swimming in natural waters with artificial boundaries within the waters as described by the Water Recreation Facilities Act, chapter 70.90 RCW;**

The up-gradient areas around Lake Whatcom, Lake Padden and Lake Samish meet these criteria. Lake Padden (Figure 9) is within the City of Bellingham, and therefore the residences in close proximity to it are serviced by the city sewer system.

Figure 9 - Lake Padden



The WCHD and City of Bellingham have an Interlocal Agreement whereby WCHD takes a proactive role in tracking and enforcing OSS O&M requirements in the Lake Whatcom Watershed (Figure 10).

Figure 10 - Lake Whatcom Watershed



The up gradient areas within 200 feet of Lake Samish are within the Shoreline Management Area. The Lake Samish Watershed is shown in Figure 11.

Figure 11 - Lake Samish Watershed

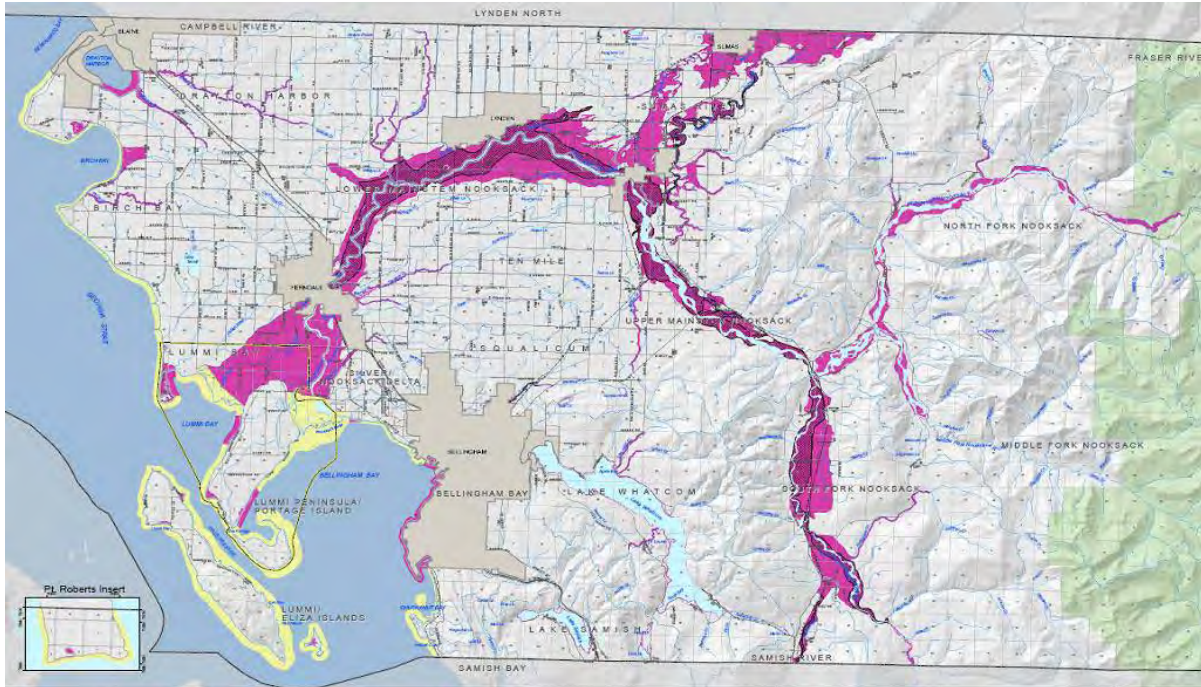


- h) Areas designated by the Department of Ecology as special protection areas under WAC 173-200-090, Water quality standards for ground waters of the state of Washington**

There are no areas designated in Whatcom County.

- i) Wetland areas under production of crops for human consumption**  
Some areas of Whatcom County utilized for growing blueberries, corn and cranberries are in designated wetlands. These wetland areas are either flooded or saturated during the rainy season. However, during the growing and harvest season, these areas are generally dry and therefore, little potential for crops to be contaminated by surface water runoff from failing OSS.
- j) Frequently flooded areas including areas delineated by the Federal Emergency Management Agency and or as designated under the Washington State Growth Management Act, chapter 36.70A RCW;**

**Figure 12 - Frequently Flooded Areas**



The Whatcom County Frequently Flooded Areas map is shown in Figure 12. The following color coding designations apply:

- i) Pink = Area inundated by 100 year flooding
- ii) Yellow = Velocity hazard in 100 year flooding
- iii) Black shading = floodway

Floodwaters can wash effluent out of a drainfield before it has been properly treated. The untreated wastewater has the potential to contaminate downstream surface water bodies. A significant portion of these frequently flooded areas also fall within the SMA, which has been designated a sensitive area.

**k) Areas where nitrogen has been identified as a contaminant of concern**

Nitrogen has been identified as contaminant of concern in the ground water of some areas of Whatcom County, according to recent groundwater studies (Hydrogeology, Ground Water Quality and Sources of Nitrate in Lowland Glacial Aquifers of Whatcom County..., USGS, 1999). Using the Sumas-Abbotsford aquifer as a model of groundwater in agricultural areas, it has been determined that agricultural activities are the leading contributor of nitrates to groundwater. Residential sources, including OSS, do contribute nitrates to the groundwater;

however, the rate of contribution is 1.5 to 3 times less than agricultural contributions. Residential nitrogen contributions from fertilizer were greater than from on-site sewage systems. Therefore, the amount of nitrogen contributed to groundwater by OSS is not considered significant to increase the risk to public health.

### **C. Coordination with planning entities within the jurisdiction.**

Currently WCHD coordinates with Whatcom County Planning and Development Services (PDS) by participating in Technical Review Committee venues for short and long plat reviews. In addition, a dedicated EH Staff member maintains an office at the combined Permit Center two days a week to review building permit applications and other land development proposals which utilize OSS. This overview ensures that land development proposals and proposed building projects comply with WCHD rules and regulations.

In designating sensitive areas for the purpose of this plan, WCHD has conferred with PDS to ensure consistency with the Whatcom County Critical Areas Ordinance and the Whatcom County Comprehensive Plan.

### **D. State Environmental Policy Act Review**

A SEPA checklist for this management plan has been completed in accordance with WAC 197-11-315 and a threshold determination made. No significant adverse environmental impacts will occur from this action therefore in accordance with WAC 197-11-340; a determination of nonsignificance has been made.



## **Part 3 - Operation, Monitoring and Maintenance in Sensitive Areas**

**Summary:** At the time of OSS permit issuance, homeowners are provided with information regarding proper OSS operation and maintenance. Monitoring and maintenance requirements whether inside or outside of designated sensitive areas require the initial OSS evaluation to be performed by a licensed O&M Specialist.

A Report of System Status (ROSS) document must be filed with WCHD upon completion of an evaluation. Initially all OSS are required to be evaluated by an O&M specialist. Thereafter, evaluations may be performed by either an O&M specialist or certified homeowner in accordance with the frequency outlined in WCC 24.05.160.

Enforcement action is initiated when a ROSS indicates a system is failing after the condition is verified through a WCHD site visit. ROSS forms indicating maintenance needed will be followed up by a WCHD letter to the home owner. The enforcement process for lack of compliance with O&M requirements includes the issuance of compliance letters, Notices of Violations, Civil Penalties, and Civil Suit, if necessary. A complete description of the enforcement process is located in Section C.2 Enforcement Activities.

### **A. Current O&M Requirements common to all areas throughout Whatcom County**

#### **1. Notification at Time of OSS Permit Issuance**

At the time of OSS permit issuance, the applicant is provided an O&M information packet that includes:

- a) A WCHD publication entitled “7 Ways to Save Thousands of Dollars in Septic System Repairs”
- b) Lists of WCHD licensed O&M specialists, pumpers, designers and installers.
- c) A WCHD publication entitled “Take Care of Your Septic System and Well Water”.
- d) An informational flier with specific maintenance information related to their system type, i.e.: conventional gravity, pressure mound, etc.

With this information, the OSS owner is made aware of their obligation to properly operate and maintain their OSS.

#### **2. Proprietary Treatment Devices**

Maintenance providers for proprietary treatment devices listed on the Washington State Department of Health list of registered on site treatment and distribution products are required to submit maintenance reports to WCHD. Currently, the WCHD receives some ATU maintenance reports.

#### **3. Report of System Status**

WCC 24.05 requires a complete evaluation of the OSS by a licensed O&M specialist or certified homeowner to determine functionality and maintenance needs. In conjunction with the evaluation, a Report of System Status (ROSS) form must be completed and submitted within one week to WCHD. A ROSS must be filed:

- a) At least once every three years for all systems consisting solely of a septic tank and gravity drainfield.
- b) Annually for all other systems unless more frequent inspections are specified by WCHD.
- c) At the time of property transfer, unless a current ROSS performed by a licensed O&M specialist is already on file with WCHD.

The completed ROSS form indicates whether the OSS is functioning satisfactory, maintenance is needed, or is failing.

#### **4. Homeowner OSS Evaluations**

Homeowners may choose to become certified to perform their own OSS evaluations, depending on OSS system type, in accordance with the frequency outlined in WCC 24.05.160. A description of this certification process can be found in Part 5 Planned Education.

#### **5. Septage Reporting**

Licensed septic tank pumpers in Whatcom County submit monthly “Pumper Report” forms which include OSS address, tax parcel #, tank volume, tank size, condition of the tank, and the septage disposal location. (Attachment F).

### **B. Sensitive area O&M requirements**

Operations and maintenance implementation will commence in the designated sensitive area within the Marine Recovery Area. Initial evaluation of all OSS shall be completed by a licensed O&M specialist.

### **C. Enforcement activities**

#### **1. Report of System Status Tracking**

Enforcement of the O&M portion of the OSS regulations will be performed by WCHD O&M staff. Four new dedicated positions were approved by the county in the 2007-08 budget. As OSS evaluations are received, the EH Clerk will enter the information into the database.

Tracking and enforcement of O&M requirements will be initiated in the Drayton Harbor Watershed, a designated marine recovery area. The Marine Recovery Area Strategy will be discussed in Part 4.

**a) Failing OSS**

When an evaluation indicates a failing OSS, WCHD will perform a site visit to confirm that the OSS is failing. WCHD will contact the homeowner via certified mail and provide protocol for repair/replacement of the OSS in accordance with WCHD OSS Enforcement Policy. WCHD places a high priority on OSS repair/replacement applications, and the application review will typically be started within 1 working day of submittal. In addition, the construction inspection of the repair/replacement is also typically done within 1 working day of notification. This allows homeowners to resolve the repair/replacement of failing OSS in a timely manner.

**b) Financial Assistance for Homeowners**

WCHD has researched funding opportunities available to assist low income and senior home owners to repair failing OSS. WCHD will apply for State Revolving Funds through the Washington State Department of Ecology during the next funding cycle. If awarded, both grants and low interest loans will be made available. WCHD has engaged in preliminary discussions with both the Treasurer's Office and the Opportunity Council for administration of the program.

**2. Enforcement Activities**

**a) Auditing of O&M Specialists and Certified Homeowners**

When an evaluation indicates the OSS system is functioning satisfactorily, no enforcement follow up is needed. However, random QA/QC audits of O&M specialists and certified homeowners will be initiated, in order to verify that evaluations are being performed as required.

WCHD will accompany O&M specialists during evaluations to confirm that the ROSS checklist is accurate and applied appropriately. In addition to confirming accuracy, the goal of this auditing process is to ensure that evaluations are being conducted in a consistent manner by all O&M specialists county-wide.

WCHD will also evaluate a portion of home owner ROSS submissions to confirm that the information submitted is correct.

Enforcement action will be taken against licensed O&M specialists and certified home owners who provide false information associated with a ROSS. Enforcement action can include administrative hearings, license suspension or revocation of certified status, and civil penalties.

**b) OSS with Maintenance Needed**

When an evaluation indicates maintenance is needed, WCHD will send a certified letter to the home owner indicating that the maintenance identified should be completed within 60 days. The letter educates the homeowner, stating that the completion of the maintenance may increase the longevity of the OSS and prevent costly repair/replacement in the future. If the deadline is not met an additional letter will be sent.

**c) Food Service Establishments**

WCC 24.05 currently requires annual inspections of OSS serving food service establishments. WCHD will require food service establishments with OSS to have a current ROSS filed with WCHD before their operating permit can be renewed.

**d) O&M of Proprietary Treatment Units**

Maintenance providers for proprietary treatment devices listed on the Washington State Department of Health list of registered on site treatment and distribution products are required to submit a ROSS to WCHD.

**e) Enforcement Process**

The WCHD will do everything possible to gain compliance through voluntary means, including an education program that informs OSS owners of the benefits of maintenance and routine evaluations. As outlined in Attachment G, Compliance Flow Chart, property owners will be given at least five months to comply with the requirement to have an evaluation prior to any penalties being assessed. During this time, educational letters outlining the new requirements and the timeline for compliance will be sent twice, in addition to other media advertising of the requirements. Although we will try to achieve voluntary compliance, the enforcement process outlined below is necessary to ensure that those who do not voluntarily submit a ROSS will be held to the same standard as those who do.

OSS owners, who do not submit a ROSS after WCHD notification, will receive a second O&M notification letter requiring the submittal of a ROSS within 60 days. If no ROSS is received within a 120 day time period from initial notification, the OSS owner will be sent a Notice of Violation (NOV) outlining a third deadline for the submittal of a ROSS. The NOV provides the OSS owner an opportunity to request an administrative hearing within 7 days to explain why a ROSS has not

been submitted. If requested, WCHD will conduct an administrative hearing to decide, based on information provided by the homeowner, to allow additional time to submit a ROSS. If no request for a hearing is received, civil penalties will be assessed from the date the NOV is sent until a ROSS is received by WCHD. An OSS owner may appeal any decision to the Hearings Examiner in accordance with WCC 24.07. The Whatcom County Prosecutors office may bring a Civil Suit and/or lien of the property for the collection of penalties (Attachment G).

**f) Additional Consequences of Non-compliance with O&M Requirements**

An “Application Hold” will be triggered in conjunction with the issuance of the NOV on any parcel where non compliance with a ROSS submission has occurred. Any Whatcom County permit applications requiring WCHD approval through Planning and Development Services (PDS) will not receive Health Department Approval. Once an evaluation is performed and a satisfactory ROSS is filed with WCHD, Health Department approval will be granted.

**D. Evaluation**

As O&M is implemented, the program will be evaluated on an annual basis in the following ways:

1. Comparing notification numbers vs. submitted ROSS documents.
2. Tracking the number of submitted ROSS documents specific to the Marine Recovery Area.
3. Tracking failure rates and number of repair permits issued.
4. Reviewing any trends in water quality data we receive.

**E. Resources**

Currently Whatcom County has budgeted four O&M staff to implement the requirements of this plan: a program coordinator, two environmental health specialists, and a clerk. Additional resources may be needed after program evaluations are conducted.

## **Part 4 - Marine Recovery Area Strategy**

**Summary:** Based on DOH established criteria, the Drayton Harbor Watershed is designated a Marine Recovery Area (MRA). Within this MRA, WCHD is required to identify and repair all failing OSS by 2012. In addition, all unknown OSS within the MRA must be identified and evaluated. Should the WCHD receive water quality data or other science based information indicating that a marine area is experiencing surface water degradation due to failing OSS, designation of additional MRA's will be considered.

O&M requirements will be initially implemented within the MRA. OSS owners will be notified via mail of the regulations and their responsibility to have their OSS evaluated. The post card mail out referenced below in section C.2 below will include all non-sewered parcels in an effort to locate previously unknown OSS.

Initial O&M evaluations must be performed by a licensed O&M specialist. OSS indicated on the ROSS as failing will be verified by a WCHD site visit to confirm the failure and ensure that the system is repaired. OSS indicated on the ROSS as maintenance needed, will be followed up with a certified letter.

By July 1, 2012, all 2,910 known OSS owners within the MRA will have been notified of their O&M requirements, all unknown OSS will be identified and evaluated, and all failing OSS will be identified and repaired.

### **A. Introduction**

In March 2006, the Washington State Legislature enacted Third Substitute House Bill 1458, which became RCW 70.118A. This law created a new type of management area called an MRA, to be defined based on a determination that additional requirements for existing OSS may be necessary to minimize OSS impacts on receiving waters. The law requires local health jurisdictions to establish MRAs in places where OSS are a significant factor contributing to concerns associated with the following areas:

#### **1. Shellfish growing areas that have been threatened or downgraded by the Department of Health**

Most of Drayton Harbor is classified as prohibited for shellfish harvesting by the Department of Health (DOH), based on their on-going water quality monitoring program. Therefore, the Drayton Harbor Watershed will be designated as an MRA.

As described in Part 2, Whatcom County has shellfish growing areas in Birch Bay, Lummi Bay, Portage Bay and Drayton Harbor. These shellfish growing areas, which are monitored by DOH, are classified as approved, with the exception of Drayton Harbor. The shellfish beds of North Chuckanut Bay were closed by the DOH in the mid 1990's and there are no plans to reinstate water quality monitoring there for the purposes of shellfish harvesting.

**2. Marine waters that are listed by the Department of Ecology under section 303(d) of the federal Clean Water Act for low dissolved oxygen or fecal coliform**

Marine waters near the mouth of Drayton Harbor, as well as segments of Dakota and California Creeks are on the US EPA 303D list for fecal coliform. Dakota and California Creeks are the major freshwater tributaries of Drayton Harbor.

**3. Marine waters where nitrogen has been identified as a contaminant of concern by the local health officer**

Whatcom County has no marine waters where nitrogen has been identified as a contaminant of concern.

The new law requires WCHD to adopt an MRA OSS Strategy for each MRA identified. This strategy must describe how WCHD will accomplish the following tasks by July 1, 2012, and thereafter:

- a) Find existing failing OSS and ensure that their owners make necessary repairs,
- b) Find unknown systems and ensure that they are inspected as required and repaired if necessary;
- c) Require O&M professionals or homeowners to submit reports to WCHD; and
- d) Develop and maintain an electronic database of all OSS within the MRA.

## **B. MRA Designation**

### **1. Drayton Harbor Watershed**

WCHD designated the Drayton Harbor Watershed (DHW) an MRA. DHW encompasses the entire Drayton Harbor Shellfish Protection District and failing OSS could impact water quality.

The MRA designation is based on the fact that WA Department of Health has designated most of Drayton Harbor as prohibited for shellfish harvesting. Despite on-going efforts to locate and repair failing OSS and other non-point sources of bacterial contamination, there is evidence of elevated fecal coliform counts within the harbor. Failing OSS may be a contributor of non-point pollution source to surface water degradation.

Segments of Dakota and California Creeks are on the US EPA 303D list for fecal coliform. Dakota and California Creeks are the two major freshwater tributaries of Drayton Harbor. For this reason, the entire DHW has been designated an MRA.

In early 2007, a Microbial Source Tracking Study (MST) was conducted within selected California Creek tributaries. The goal of the study was to determine the presence/absence of human and ruminant bacterial waste within those tributaries. The results of this study are due to be finalized in early 2008. If study results document the presence of human waste in specific drainages sampled, WCHD will initiate investigations to identify potential failing OSS in those areas.

The Whatcom County Stormwater Division oversees surface water monitoring projects in the DHW. There is a current focus on certain tributaries in the California Creek drainage, but monitoring programs are expanding in the Dakota Creek drainage as well. If water quality sampling information indicates potential contamination from OSS, WCHD will initiate investigations to identify potential failing OSS in those areas.

## **2. Additional MRA Designations/ Investigations**

Currently, the DHW is the only designated MRA within Whatcom County. As per RCW 70.118A.040, “the local health officer may designate additional marine recovery areas meeting the criteria of this section, ...” Therefore, should WCHD receive water quality data or other technical information indicating that a given area is experiencing surface water degradation due to failing OSS, consideration will be given to that area as a potential MRA.

The Whatcom County Stormwater Division and the Whatcom Conservation District coordinate surface water monitoring projects throughout various drainages of the Portage Bay watershed. If water quality sampling information indicates potential contamination from OSS in a sub area of the Portage Bay Shellfish Protection District or other sensitive area, WCHD will initiate preliminary investigations in that area to determine if an MRA designation is warranted. Such preliminary investigations may lead to the identification and repair of isolated failing OSS.

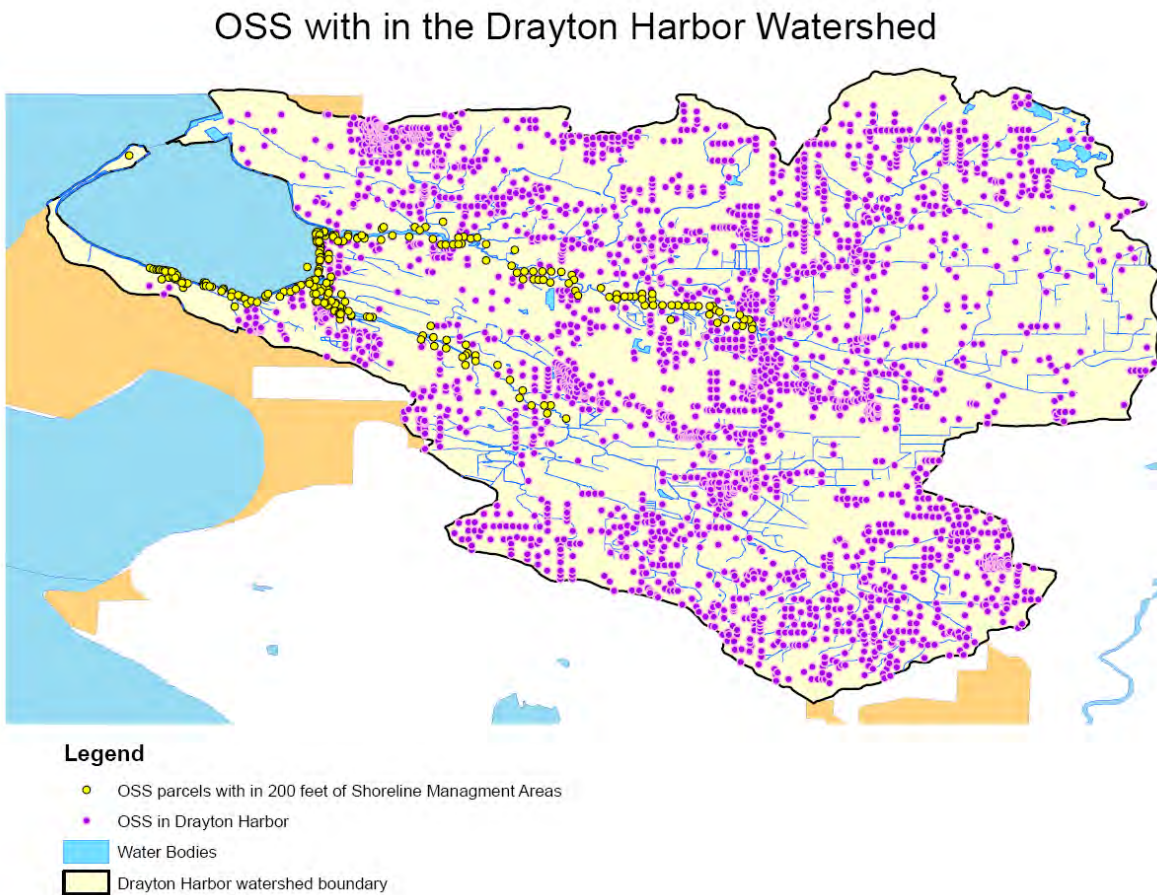


## C. MRA OSS Strategy

### 1. Initial Implementation in SMA

Initial implementation of O&M tracking and enforcement will occur within the SMA of the DHW. Failing OSS within this area would have the greatest potential impact to adjoining surface water bodies.

Figure 13 - OSS Within the Drayton Harbor Watershed



After initial implementation, O&M tracking will proceed to the rest of the DHW.

## **2. Implementation Process**

### **a) Mail Notification**

There are 183 documented OSS within the SMA as shown in Figure 13. WCHD will overlay the current SMA, tax parcel, and sewer district maps to determine a list of potential unknown OSS within the SMA. OSS owners who do not have a current ROSS on file, will be notified of their responsibility to have their OSS evaluated. A list of O&M specialists and educational material will be included.

After SMA implementation, the remaining documented and potential unknown OSS owners outside the SMA will be notified. These O&M notifications will include the postage-paid postcard referenced in Part 1 Database Enhancement.

Notifications throughout the entire MRA will be completed by the end of the first quarter of 2009

### **b) Locating Unknown OSS**

As mentioned in Part I, Database Enhancement, parcels not currently serviced by a sewer system will receive a postage-paid postcard in the implementation process. In returning the postcard to WCHD, the property owner will check off one of the following responses:

- No OSS or sewer service currently on property (Property is undeveloped)
- Property served by sewer system
- Property served by OSS

Therefore, by collecting data on all unsewered parcels within the MRA, WCHD anticipates locating OSS which had previously been unaccounted for within the OSS database.

WCHD follow-up will occur on parcels reported as vacant by the owner. Aerial photographs will be examined to confirm the vacant condition. If necessary, a WCHD site visit will be conducted to confirm the information. Vacant parcels will be documented within the OSS database.

### **c) OSS Evaluation/ ROSS Submittal**

The initial OSS evaluation must be performed by a licensed O&M specialist. The ROSS form must be completed and submitted to WCHD. OSS failures indicated on the ROSS will be verified and followed up to ensure that the OSS is repaired.

When an evaluation indicates maintenance is needed, WCHD will send a certified letter to the home owner indicating that the maintenance identified must be completed within 60 days. If the deadline is not met, an additional letter will be sent.

**d) Homeowner OSS Evaluations**

After the initial OSS evaluation performed by the O&M specialist, OSS owners who choose to perform their own evaluations may become certified to do so in accordance with WCC 24.05.160.

**e) WCHD Follow-up**

WCHD will evaluate the mail out list to determine which OSS owners have not complied with OSS O&M requirements and initiate enforcement.

**f) Enforcement**

The WCHD will do everything possible to gain compliance through voluntary means, including an education program that informs OSS owners of the benefits of maintenance and routine evaluations. As outlined in Attachment G, Compliance Flow Chart, property owners will be given at least five months to comply with the requirement to have an evaluation prior to any penalties being assessed. During this time, educational letters outlining the new requirements and the timeline for compliance will be sent twice, in addition to other media advertising of the requirements. Although we will try to achieve voluntary compliance, the enforcement process outlined below is necessary to ensure that those who do not voluntarily submit a ROSS will be held to the same standard as those who do.

OSS owners, who do not submit a ROSS after WCHD notification, will receive a second O&M notification letter requiring the submittal of a ROSS within 60 days. If no ROSS is received within a 120 day time period from initial notification, the OSS owner will be sent a Notice of Violation (NOV) outlining a third deadline for the submittal of a ROSS. The NOV provides the OSS owner an opportunity to request an administrative hearing within 7 days to explain why a ROSS has not been submitted. If requested, WCHD will conduct an administrative hearing to decide based on information provided by the homeowner to allow additional time to submit a ROSS. If no request for a hearing is received, civil penalties will be assessed from the date the NOV is sent until a ROSS is received by WCHD. An OSS owner may appeal any decision to the Hearings Examiner in accordance with WCC 24.07. The

Whatcom County Prosecutors office may bring a Civil Suit and/or lien of the property for the collection of penalties. (Attachment G).

**g) Additional Consequences of Non-compliance with O&M Requirements**

An “Application Hold” will be triggered in conjunction with the issuance of the NOV on any parcel where non compliance with a ROSS submission has occurred. Any Whatcom County permit applications requiring WCHD approval through Planning and Development Services (PDS) will not receive Health Department Approval. Once an evaluation is performed and a satisfactory ROSS is filed with WCHD, Health Department approval will be granted.

**D. Electronic data system of OSS within MRA**

O&M Specialists and certified homeowners are required to indicate the operational status of the OSS they evaluate. The evaluation process consists of a “report” and a “checklist”. The checklist is utilized to assure that all OSS components are evaluated (Attachment C). The checklist is used to complete the ROSS report (Attachment D).

The completed ROSS form indicates whether the OSS is functioning satisfactory, maintenance is needed, or is failing. For each ROSS submission, the operational status is entered into the OSS database. The checklist and report forms are also scanned into the database. The ROSS information can be retrieved from the database via a search of the OSS tax parcel number or site address.

**E. DOH contracts with Local Health Jurisdiction for Marine Recovery Area (3SHB 1458 section 8)**

WCHD will enter into a contract with the DOH subject to the requirements of the statute, to implement plans and to enhance our electronic data system as needed.

The current WCHD OSS database is adequate to begin the implementation of the O&M program. WCHD will collect, track, analyze, and provide quarterly reporting of the data acquired. As implementation of the plan progresses, we will evaluate the capacity of our database software and hardware and determine if more resources are needed.

As the WCHD O&M plan is implemented within the MRA, the following goals will be met:

1. All OSS owners within the designated MRA will be notified of their OSS O&M requirements by the first quarter of 2009.
2. All OSS within the designated MRA will be evaluated and repaired as necessary by July 1, 2012.
3. Enhancement of OSS database to provide the data and mechanisms needed for continued success in the program.

Four new WCHD staff have been hired to initially implement the O&M program beginning early 2008. An annual evaluation of the program will be performed to determine if more resources are needed.

## **Part 5 - Education**

**Summary:** WCHD currently provides an array of O&M educational brochures available to the general public at our office location, on our website, and specifically to the individual OSS owner upon permit issuance. In addition, WCHD provides presentations to realtors and other venues on the importance of proper O&M and the regulatory requirements.

WCHD is currently in development of two homeowner O&M classes.

- 1). Basics of On-site Sewage Systems and
- 2). How to Operate, Maintain, and Evaluate your Onsite Sewage System.

Homeowners who choose to evaluate their OSS will be afforded the opportunity to attend these classes and demonstrate competency. There is an incentive for homeowners to complete training and becoming certified to complete their own evaluation. If they choose to become certified, they will be able to avoid paying a licensed O&M Specialist to complete the evaluation.

Other educational offerings include quarterly meetings with licensed O&M providers, and coordinating with the Shellfish Protection Districts or other local interest groups.

Planned reminders include targeted mailings for implementation, O&M reminder messages in newsprint, and public service announcements on radio and television.

### **A. Current Education.**

WCHD provides:

1. An eight page informational brochure “The Care of your Septic System and Well Water” to the general public describing proper care of your on- site sewage system. This document, which was originally developed by Clallam County, is given out whenever an OSS permit is purchased.
2. Social marketing through advertising: Newspaper inserts and ads will be placed quarterly in local papers promoting OSS O&M.
3. Information on our website that includes answers to general O&M questions, local regulations, and links to the WA State Department of Health.
4. Presentations to Realtors regarding implementation of the new regulation and the “Report of System Status” evaluation process required at the time a property is offered for sale.
5. Quarterly OSS education venues specifically targeting residents within the Lake Whatcom Watershed through an Interlocal Agreement with the City of Bellingham.
6. Videos on OSS O&M have been made available to the public through the Whatcom County Library System.
7. WCHD ad in the phonebook yellow pages which references WCHD website and contact information.

8. O&M Displays at local events such as the Northwest Washington Fair and the Salmon Summit.

## **B. Planned Education.**

WCHD will provide:

1. All current efforts outlined above.
2. Homeowner O&M Classes to include:
  - a) Basics of On-site Sewage Systems: This 2 hour in-class session will teach the basic principals behind OSS as well as some of the specifics for the various types of OSS. Class attendees will learn:
    - i. How a septic system works
    - ii. What a baffle is
    - iii. What the different system types are
    - iv. What causes an OSS to fail
    - v. Why it is important to inspect an OSS
  - b) How to Operate, Maintain and Evaluate your Onsite Sewage System: Taking the “Basics of Onsite Sewage Systems” class will be a prerequisite to the evaluation class. Those OSS owners who choose to perform their own O&M evaluations will be required to take this class. Upon passing a written test, the OSS owner will receive a certificate acknowledging satisfactory completion. The class will have both a classroom and field component. Attendees of the class will learn:
    - i. How to measure scum and sludge in a septic tank
    - ii. How to inspect a drainfield
    - iii. How to clean an outlet filter
    - iv. What to look for in an OSS monitoring port
    - v. How to tell if a drainfield is failing
    - vi. How to fill out and submit a ROSS
3. An update and reorganization of information on the website for easier navigation by the general public.
4. Quarterly meetings with licensed O&M providers (specialists and pumpers) to ensure consistency with the delivery of O&M services.
5. A quarterly newsletter to the O&M industry.
6. Collaboration with the Drayton Harbor and Portage Bay Shellfish Protection Districts, as well as the Whatcom Conservation District to initiate O&M presentations and displays for local interest groups, including homeowner associations, realtors, small farm owners, salmon enhancement and various grass roots watershed advocacy groups.

### **C. Current Reminders**

At the time of OSS permit issuance, an O&M information packet is provided which includes:

1. A WCHD publication entitled “7 Ways to Save Thousands of Dollars in Septic System Repairs”.
2. A WCHD publication entitled “Take Care of Your Septic System and Well Water”.
3. An informational flier with specific maintenance information related to their system type, i.e. conventional gravity, pressure mound, etc.
4. Through the City of Bellingham Interlocal Agreement, postcards were sent countywide reminding homeowners to inspect and pump their tanks as needed.

### **D. Planned Reminders**

1. Targeted mailings for O&M implementation county-wide.
2. O&M reminder messages in newsprint, radio, and television

### **E. Measured effectiveness.**

1. Surveys of participants attending educational presentations.
2. Increased number of OSS failures discovered.
3. Increased number of ROSS documents received.
4. Increased number of licensed O&M specialists.
5. Identify the location and operational status of previously unknown OSS.

Development and implementation costs associated with homeowner education classes may require additional funding.

## **Part 6 – Plan Summary**

The following is a summary of the proposed activities, goals and necessary resources required to reach the goals established in Parts 1 through 5 of the OSS Local Management Plan

### **Part 1 – Database Enhancement**

<b>ACTIVITY</b>	<b>TIMELINE</b>	<b>COST</b>	<b>COST TYPE</b>	<b>FUNDING SOURCE</b>
Manage, backup and update existing OSS database	Ongoing	Data specialist staff time	Ongoing	State and local dollars
Enter OSS records into OSS database <ul style="list-style-type: none"> <li>• OSS applications</li> <li>• OSS permits</li> <li>• Septic tank pump outs</li> <li>• ROSS submission</li> </ul>	Ongoing	O&M support staff time	Ongoing	State and local dollars, ROSS submission fees
O&M Implementation <ul style="list-style-type: none"> <li>• Notifications</li> <li>• Follow-up</li> <li>• Enforcement</li> </ul>	County-wide notification by 2012	O&M staff time (Coordinator, EHS)	Ongoing	State and local dollars

### **Part 2 – Identification of Sensitive Areas**

<b>ACTIVITY</b>	<b>TIMELINE</b>	<b>COST</b>	<b>COST TYPE</b>	<b>FUNDING SOURCE</b>
Identify sensitive areas, including Marine Recovery Areas	Upon plan approval	O&M staff time	Ongoing	Local dollars
Coordinate with planning agencies	Ongoing	O&M staff time	Ongoing	Local dollars
SEPA Review of OSS Local Management Plan	1/08	\$350.00	One time	Local dollars



**Part 3 – Operation, Monitoring and Maintenance in Sensitive Areas**

<b>ACTIVITY</b>	<b>TIMELINE</b>	<b>COST</b>	<b>COST TYPE</b>	<b>FUNDING SOURCE</b>
Distribution of O&M information at time of permit issuance	Ongoing	OSS support staff time	Ongoing	Local dollars
Follow-up on ROSS submissions	Ongoing	O&M staff time	Ongoing	Local dollars
Auditing of O&M specialists and home owners O&M program evaluation	Annually	O&M coordinator staff time	Ongoing	Local dollars
Enforcement	On-going	O&M staff time	As needed	Local dollars

**Part 4 – Marine Recovery Area Strategy**

<b>ACTIVITY</b>	<b>TIMELINE</b>	<b>COST</b>	<b>COST TYPE</b>	<b>FUNDING SOURCE</b>
All OSS within the MRA will be documented and evaluated	7/1/12	O&M staff time	Ongoing	Local dollars

**Part 5 – Education**

<b>ACTIVITY</b>	<b>TIMELINE</b>	<b>COST</b>	<b>COST TYPE</b>	<b>FUNDING SOURCE</b>
Developing and implementing homeowner O&M classes	2008	O&M staff time	Ongoing	Local dollars
Producing and mailing out O&M notifications and educational material	Ongoing	\$10,000 per year	Ongoing	Local dollars
O&M educational presentations to watershed advocacy groups, homeowners' associations and other interested groups	On-going	O&M staff time	Ongoing	Local dollars
Organizing meetings with O&M specialists and pumpers	Quarterly	O&M coordinator staff time	Ongoing	Local dollars

In the implementation of the OSS Local Management Plan, adaptive management strategies will be applied. Therefore, should any aspect or content of the plan require modification, WCHD will revise as necessary.

Attachment A: List of Acronyms

**Acronyms used in the OSS Local Management Plan**

ATU = aerobic treatment unit

DOH = Washington State Department of Health

DHW = Drayton Harbor Watershed

EHS = Environmental Health Specialist

EPA = United States Environmental Protection Agency

MRA = Marine Recovery Area

O&M = Operation and Maintenance

O&M Specialist = Licensed Operation and Maintenance Specialist

OSS = On-site Sewage System

PDS = Whatcom County Planning and Development Services

RCW = Revised Code of Washington

ROSS = Report of System Status

SMA = Shoreline Management Area

WAC = Washington Administrative Code

WCC = Whatcom County Code

WCHD = Whatcom County Health Department

Attachment B: Site Status Code List

**OSS Site Status Code List**

A1 = Active, permitted, final inspected system

A2 = Active OSS with permit but not final inspected

A3 = Active OSS without permit

B1 = Likely OSS (Permit approved)

B2 = Likely OSS (No permit)

C1 = OSS under development

N1 = Absence of OSS confirmed

S1 = Sewer connection confirmed

Attachment C: OSS Evaluation Checklist



WHATCOM COUNTY HEALTH DEPARTMENT  
**ON-SITE SEWAGE SYSTEM  
 REPORT OF SYSTEM STATUS  
 CHECKLIST**

509 Girard Street  
 Bellingham, WA 98225  
 Telephone: 360-676-6724  
 Fax: 360-676-6771

Date of Inspection \_\_\_\_\_ Tax Parcel # \_\_\_\_\_

**Septic Tank**

Volume \_\_\_\_\_ Gallons \_\_\_\_\_ # of Compartments \_\_\_\_\_  
 Depth of floating mat in..... 1st compartment \_\_\_\_\_ inches ..... 2nd compartment \_\_\_\_\_ inches  
 Depth of sludge in..... 1st compartment \_\_\_\_\_ inches ..... 2nd compartment \_\_\_\_\_ inches  
 Inlet baffle condition.....  Satisfactory.....  Needs Repair  
 Outlet baffle condition.....  Satisfactory.....  Needs Repair  
 Effluent baffle screen accessible, in place.....  Yes.....  No  
 Outlet filter.....  Cleaned.....  Not Present  
 Watertight (no visual leaks), including risers.....  Yes.....  No  
 Risers and lids in good condition, lids secure.....  Yes.....  No  
 Settling, erosion or ponding problems.....  Yes.....  No  
 Septic Tank pumping recommended.....  Yes.....  No  
 Comments \_\_\_\_\_

**Pump Tank**

Volume \_\_\_\_\_ Gallons \_\_\_\_\_  N/A  
 Vault screen cleaned.....  Yes.....  No.....  N/A  
 Risers & lids secure & good condition.....  Yes.....  No  
 Pump tank pumping recommended.....  Yes.....  No  
 Depth of scum layer..... \_\_\_\_\_ inches  
 Depth of sludge layer..... \_\_\_\_\_ inches  
 Comments \_\_\_\_\_

**Distribution Box**

Equal distribution of effluent to each lateral.....  Yes.....  No.....  N/A  
 Comments \_\_\_\_\_

**Diversion Valve Switched**

.....  Yes.....  No.....  N/A

**Control Panel**

.....  N/A  
 Floats functioning properly.....  yes.....  No  
 Pump draw down \_\_\_\_\_ inches/minute  
 Timer adjustment needed.....  Yes.....  No  
 Timer settings..... \_\_\_\_\_ min on..... \_\_\_\_\_ hrs. off  
 Alarm working satisfactorily.....  Yes.....  No  
 Comments \_\_\_\_\_

**Drainfield**

- Graded properly for surface water runoff .....  Yes.....  No
- Downspouts diverted away from drainfield.....  Yes.....  No
- Evidence of vehicular or livestock traffic over drainfield.....  Yes.....  No
- Encroachment of drainfield from driveways, buildings, etc. ....  Yes.....  No
- Vegetative cover properly managed.....  Yes.....  No
- Monitoring ports.....  Yes.....  No
- Settling, erosion or ponding problems in drainfield area and/or monitoring ports.....  Yes.....  No

Comments \_\_\_\_\_

**Gravity Drainfield**    Type.....  Trench .....  Bed .....  Gravel .....  Gravelless/Chamber

**Pressure Drainfield**    Type.....  Trench .....  Bed .....  Gravel .....  Gravelless/Chamber

- Laterals flushed .....  Yes.....  No
- All laterals have equal flow and residual pressure .....  Yes.....  No
- Squirt height measured at distal end of each lateral ..... \_\_\_\_\_ inches

Comments \_\_\_\_\_

**Drainfield Dye Test**

Ran test for \_\_\_\_\_ minutes, Approximately \_\_\_\_\_ gallons ran through system  
Level in septic tank at start of test \_\_\_\_\_ inches. Level at end of test \_\_\_\_\_ inches  
Level returned to normal in \_\_\_\_\_ minutes

- Evidence of dye and/or effluent in drainfield area, monitoring port or surrounding area ....  Yes.....  No

Comments \_\_\_\_\_

**Mounds (including Glendon BioFilters)** .....  N/A

- Seepage around toe of mound observed.....  Yes.....  No
- Structural integrity and ground cover ok.....  Yes.....  No

Comments \_\_\_\_\_

**Aerobic Treatment Unit**    Manufacturer \_\_\_\_\_  N/A

- Air supply working satisfactorily.....  Yes.....  No
- Alarm working satisfactorily.....  Yes.....  No
- Settleable solids, sludge level measured .....  Yes.....  No
- Unit needs to be pumped .....  Yes.....  No

Comments \_\_\_\_\_

**Disinfection Unit**    Type \_\_\_\_\_  N/A

- Unit working as expected .....  Yes.....  No
- Chlorine tablets in place .....  Yes.....  No .....  N/A
- UV bulb replaced .....  Yes.....  No .....  N/A

Comments \_\_\_\_\_

**Sand Filter** .....  N/A

- All laterals have equal flow and residual pressure .....  Yes.....  No
- Squirt height measured at distal end of each lateral ..... \_\_\_\_\_ inches
- Laterals flushed (individually).....  Yes.....  No
- Grade and cover meet requirements.....  Yes.....  No
- Pump basin installed in sand filter (see pump tank).....  Yes.....  No

Comments \_\_\_\_\_

Attachment D: Report of System Status (ROSS) Form



Whatcom County Health Department  
**ON-SITE SEWAGE SYSTEM (OSS)  
 REPORT OF SYSTEM STATUS**

509 Girard Street  
 Bellingham, WA 98225  
 Telephone: 360-676-6724  
 Fax: 360-676-6771

Date of Inspection \_\_\_\_\_ Tax Parcel # \_\_\_\_\_  
 Site Address \_\_\_\_\_ City \_\_\_\_\_  
 Owner \_\_\_\_\_ Phone \_\_\_\_\_  
 Mailing Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

OPERATIONAL STATUS:  Satisfactory  Maintenance Needed  Failure

EVALUATION PERFORMED BY:  Operation & Maintenance Specialist  Homeowner  
 EVALUATION PERFORMED FOR:  Routine Compliance  Property Transfer

OSS SOURCE:  Residential  Single Family  Community  
 Commercial  Food Service  Other (type) \_\_\_\_\_

OSS TYPE:  Conventional Gravity  Pressure Distribution  Mound  
*Check all that apply*  ATU w/ Drip Irrigation  ATU w/ Mound  ATU w/ Pressure Distribution  
 ATU w/ Pressure Mound  Biofilter  Drip Irrigation  
 Holding Tank  Non-Pressurized Mound  Sand Filter w/ Mound  
 Sand Filter w/ Pressure Dist.  Other \_\_\_\_\_

**O&M SPECIALIST USE ONLY DURING INITIAL EVALUATION:**

PERMIT STATUS:  Permit on File with WCHD  No Permit on File – OSS Drawing Required  
(WCHD = Whatcom County Health Department) (Must use 8 1/2" x 11")

NOTES (please print clearly and attach more pages if necessary):

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

I certify that I have performed the required OSS evaluation on the above referenced property. The information submitted above is true and correct. Findings and determinations of this evaluation reflect conditions as they existed on the day the OSS was evaluated.

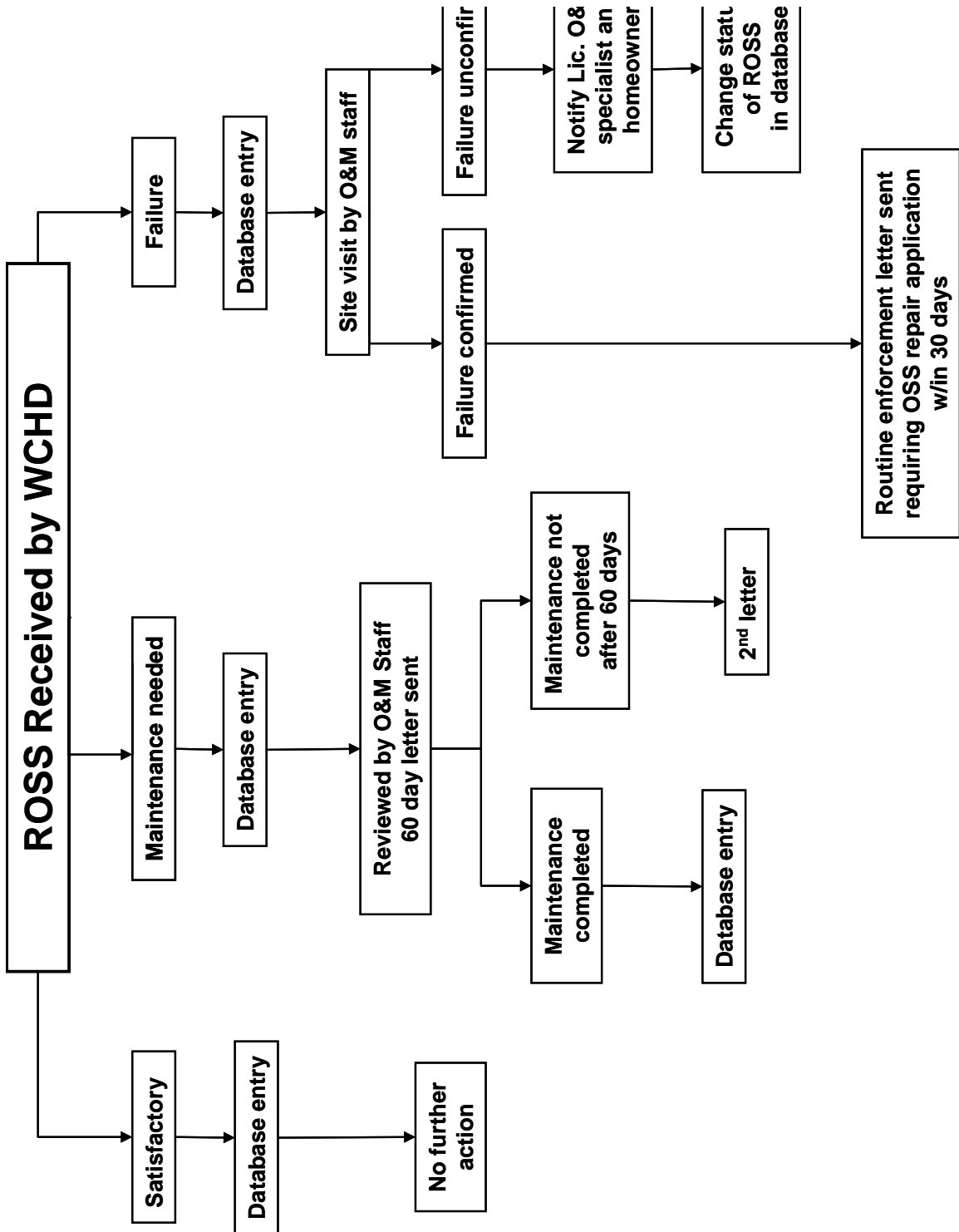
Signature \_\_\_\_\_ Print \_\_\_\_\_ Date \_\_\_\_\_

Mailing Address \_\_\_\_\_ Phone Number (\_\_\_\_) \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Office Use Only:  
 Received By \_\_\_\_\_ Date \_\_\_\_\_ Amount Paid \_\_\_\_\_ Receipt # \_\_\_\_\_

Attachment E. Ross Flow Chart



Attachment F: Pumper Report



WHATCOM COUNTY HEALTH DEPARTMENT  
**PUMPER REPORT FORM**

509 Girard Street  
Bellingham, WA 98225  
Telephone: 360-676-6724  
Fax: 360-676-6771

YEAR \_\_\_\_\_ MONTH \_\_\_\_\_

PUMPER COMPANY \_\_\_\_\_

DATE	NAME	ADDRESS	TAX PARCEL NUMBER	TANK SIZE	GALLONS PUMPED	DISPOSAL SITE
comments:						
comments:						
comments:						
comments:						
comments:						
comments:						
comments:						

All information must be legible & submitted to WCHD no later than one week after the last day of the month

<b>TOTAL</b>	
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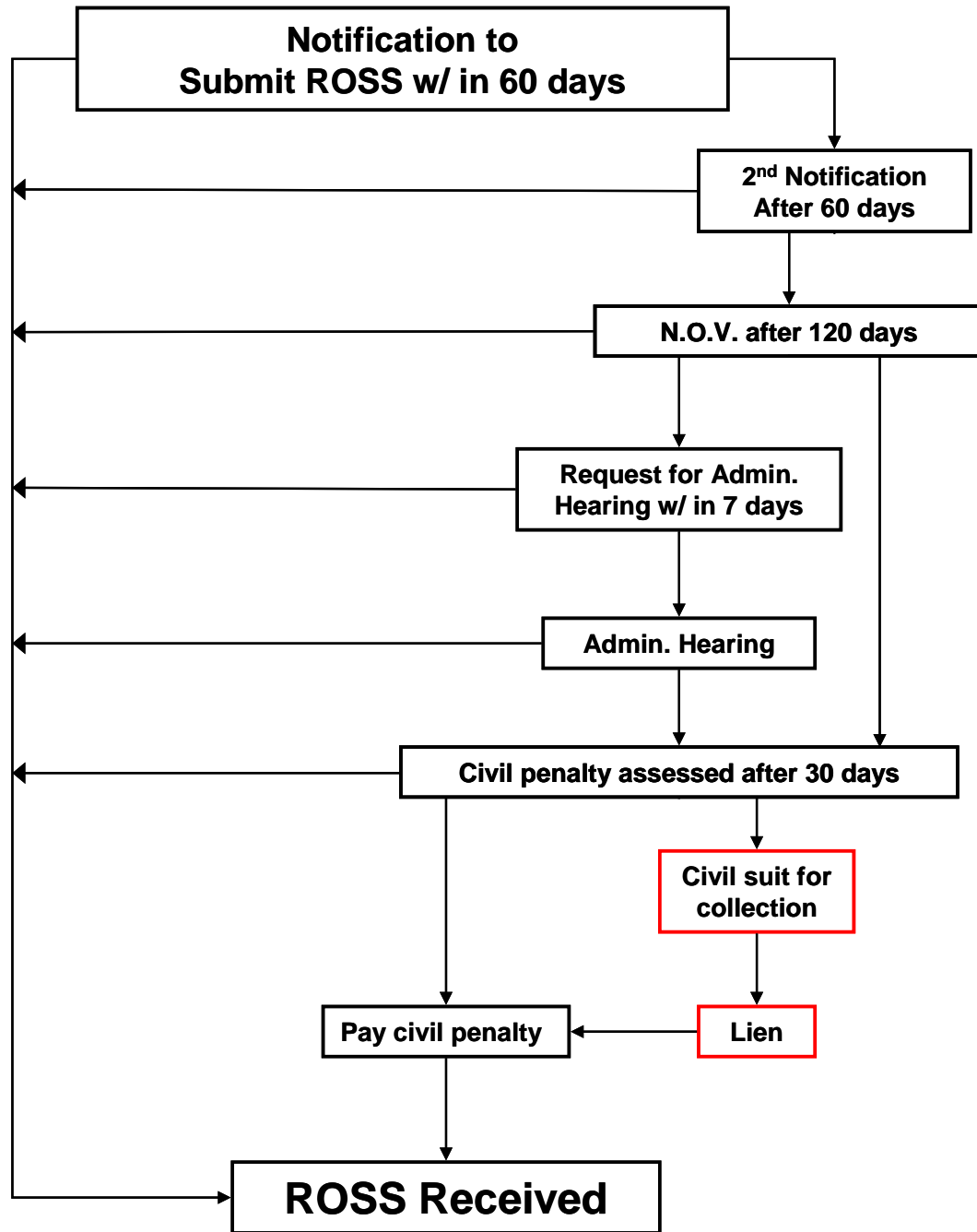
Signature of Licensed Pumper \_\_\_\_\_ Date \_\_\_\_\_

Health Department Review By \_\_\_\_\_ Date \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_



## Report of System Status (ROSS) Compliance



Key:  
**Red Border** – file forwarded to Prosecuting Attorney