Clallam County On-Site Septic System Management Plan
June 12, 2007

The Clallam County Board of Health adopted this plan at a public hearing on June 19, 2007.

Prepared for Clallam County Environmental Health Services

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CLALLAM COUNTY
Environmental Health
SERVICES

WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

Washington State Department of
Health

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Executive Summary

Introduction

In July 2005, the Washington State Board of Health adopted Chapter 246-272A WAC, which requires local health departments to develop plans for the management of on-site septic systems (OSS) within their jurisdictions. In 2006, the Legislature enacted RCW 70.118A, which requires local health jurisdictions that border Puget Sound to identify Marine Recovery Areas (MRA) where OSS contribute to marine water quality problems, and to develop management strategies to find and repair all failing OSS within the MRA.

To help develop the plan recommendations, Clallam County Environmental Health Services (Clallam County EHS) elected to form an OSS Work Group composed of people who live and work in Clallam County, and ex-officio members from outside the county. This OSS Work Group began meeting in October 2006, and provided recommendations to the County on inspection requirements, creation of a Marine Recovery Area, funding options, and compliance activities. A list of OSS Work Group members can be found on page i of this plan.

Clallam County OSS Work Group Recommendations

The Clallam County OSS Work Group recommended that the County take the following actions to fulfill the requirements of Chapter 246-272A WAC and RCW 70.118A.

OSS Inspections

- The Work Group believed the frequency of the state's OSS inspection requirements is adequate: conventional gravity systems must be inspected at least once every three years, and all other systems must be inspected at least once every year. The Work Group did not recommend more frequent inspection requirements.
- For conventional gravity systems (which are required by state law to be inspected every 3 years), OSS owners who have received County-approved training may inspect their own systems.
- For pump systems (which are required by state law to be inspected annually) OSS owners who have received County-approved training may inspect their own systems (unless the manufacturer requires more frequent inspections and/or requires a certified inspector).
- The County should coordinate with the Washington On-Site Sewage Association (WOSSA) to develop the training for OSS owners. The County should pursue grants to offset some of the owners' costs for the trainings. Separate training should be offered for owners of conventional gravity systems and pump systems. All trainings should include:
    - ✓ Hands-on training (as opposed to classroom or video instruction only);
    - ✓ A certification process to denote who has successfully completed the course and when the certification must be updated through a refresher course.
- For any properties that do not have an as-built diagram for their property, a professional inspection will be required before the owner can begin conducting their own inspections.
- For community and commercial OSS, annual professional inspections should be required.
    - ✓ If owners of community or commercial systems can demonstrate that their waste production is comparable to typical single-family residential volumes and strength, and if the owners have received County-approved training, they may inspect their own systems.
    - ✓ Any fee or assessment for these systems would need to be based on volume and/or strength of waste so that it is comparable to the assessments or fees paid by homeowners (see financing recommendations below).

Marine Recovery Areas

- One MRA should be designated, with the same boundaries as the existing Clean Water District.
- OSS owners within the Marine Recovery Area should be required to get a professional inspection as the first inspection required under the new OSS plan. After this initial professional inspection, OSS owners who have received County-approved training may inspect their own systems.
- Clallam County should review its siting and design requirements for OSS in the MRA and revise them if necessary to address the specific environmental concerns in the MRA.
- The MRA should be a high priority for water quality monitoring to assist the County in early identification of failing OSS.

Areas Where OSS May Pose an Increased Threat to Public Health

- The following areas should be listed as sensitive areas in the OSS Management Plan:
    - ✓ Lake Sutherland (and its drainages)
    - ✓ Lake Pleasant
    - ✓ Lake Crescent
    - ✓ Lake Ozette
    - ✓ The Carlsborg area
    - ✓ Frequently Flooded Areas
    - ✓ Commercial and Recreational Shellfish Growing Areas
- Clallam County should review its siting and design requirements for OSS in sensitive areas and revise them if necessary to address the specific environmental concerns in each sensitive area.
- Sensitive areas should be high priorities for water quality monitoring to assist the County in early identification of failing OSS.
- The plan should be flexible enough to allow the County to identify new sensitive areas if data show that OSS are posing increased public health risks. The County should track all water quality monitoring data collected in the County, including Streamkeepers and Surfriders water quality monitoring data.

Compliance

- The County's compliance program should include five basic elements:
    1. A strong education program that informs OSS owners of the new requirements and the benefits of maintaining and inspecting their OSS.
    2. Incentives to encourage OSS owners to inspect their systems and supply the required reports to the County. The County should consider fee-based incentives (e.g. lower fees or assessments for those who submit required reports and higher fees or assessments for those who do not). Financial assistance should also be provided to low-income OSS owners.
    3. Simple reporting requirements. Required forms should be easy to complete and return to the County.
    4. Risk-based prioritization for compliance actions. Clallam County EHS should prioritize its efforts based on risk to public health and the environment. Thus, the County's highest priorities should be systems that are on shorelines, OSS near wells that could contaminate drinking water, etc.
    5. Penalties as a last resort to achieve compliance. Penalties should only be issued after warnings have been given and after education, incentives and other compliance actions have failed.

- The County should require proof of compliance when County permits are issued, including:
  - ✓ Building Permits;
  - ✓ Land Division (e.g. short plats, long plats, conditional use permits, site plans);
  - ✓ Variances to Critical Areas Ordinance or Certificate of Compliance to Critical Areas Ordinance;
  - ✓ Shoreline Permits;
  - ✓ Food Establishment Permits (new or renewal);
  - ✓ Certificate of Occupancy for commercial building permits;
- The County should require a seller to submit proof of a successful professional OSS inspection prior to the transfer or sale of property.

FINANCING

- The County should be funded to do the following tasks, in accordance with the new state law:
  - ✓ Developing and maintaining a database of records for all known OSS in the County;
  - ✓ Ensuring compliance with state inspection and repair requirements;
  - ✓ Providing ongoing education for OSS owners regarding proper OSS operation and maintenance;
  - ✓ Identifying areas where OSS could pose an increased public health risk, and developing risk-based operations and maintenance (O&M) requirements;
  - ✓ Designating a Marine Recovery Area (MRA) in land areas where OSS contribute to marine water quality problems, and developing a strategy for OSS management in the MRA;
  - ✓ Identifying existing failing systems in an MRA, and ensuring that the owner completes the necessary repairs; and
  - ✓ Identifying all unknown OSS within an MRA by 2012.
- Funding should also be provided for:
  - ✓ Financial assistance to low-income OSS owners to offset increased inspection costs;
  - ✓ Low-interest loans for OSS owners to pay for OSS repair and replacement;
  - ✓ Financial incentives to increase compliance with new inspection requirements. However, funding devoted to incentives needs to balance the need to keep the fee or assessment as low as possible.
- A fee or assessment should be collected via the property tax billing and collection process. All fees collected should be designated exclusively for implementation of the OSS plan; no funds should be diverted to the County's general fund.
- The fee should be assessed to all OSS in the County, but not to those on sewer systems.
- The fee should be in the range of $10-20 per year ($1.00 to $1.50 per month)

Implementation Plan

Based upon these recommendations, Clallam County EHS proposes to implement an OSS Management Strategy in two phases.

PHASE 1: START-UP PROGRAMS

Phase 1 will focus on developing the systems necessary for effective implementation. In particular, Clallam County EHS will undertake the following categories of activities in Phase 1:

- Make regulatory changes necessary to support the OSS Management Plan

- Develop new inspection programs
- Develop a new compliance program
- Create financial systems to fund the Plan's provisions
- Ensure that notification and tracking systems are sufficient
- Develop outreach and education materials and trainings
- Lay the groundwork for identifying all OSS in the Marine Recovery Area

More detail about these categories of activities, and specific activities in each category, can be found in Part 6 of this plan.

PHASE 2: PROGRAM IMPLEMENTATION

In Phase 2, Clallam County EHS will begin implementing the provisions of this Management Plan if and when sufficient funding is available. Clallam County EHS plans to conduct the following types of activities in Phase 2:

- Notify the public of new inspection requirements
- Ensure adequate inspection capacity
- Track inspection activity
- Identify all OSS in the Marine Recovery Area
- Address areas where nitrates are an issue
- Identify all OSS in areas where systems may pose an increased threat to public health
- Conduct public outreach
- Measure the effectiveness of new programs

More detail about these categories of activities, and specific activities in each category, can be found in Part 6 of this plan.

Introduction

Development of the OSS Management Plan

Legal Authority for this Plan

In July 2005, the Washington State Board of Health adopted Chapter 246-272A WAC, which requires local health departments to develop plans for the management of on-site septic systems (OSS) within their jurisdictions. This OSS Management Plan fulfills this requirement for Clallam County Environmental Health Services (Clallam County EHS).

In March 2006, the Legislature enacted Third Substitute House Bill (3SHB) 1458, which requires local health jurisdictions that border Puget Sound to identify Marine Recovery Areas (MRA) where OSS contribute to marine water quality problems, and to develop management strategies to find and repair all failing OSS within the MRA. Parts 4 and 6 of this plan fulfill this requirement for Clallam County EHS.

Process Used to Develop this Plan

To help develop the plan recommendations, Clallam County EHS elected to form an OSS Work Group composed of people who live and work in Clallam County, and ex-officio members from outside the county. This OSS Work Group began meeting in October 2006, and provided recommendations to the County on inspection requirements, creation of a Marine Recovery Area, funding options, and education and enforcement activities. A list of OSS Work Group members can be found on page i of this plan.

A Guide to the OSS Management Plan

In June 2006, the Washington State Department of Health released a document called On-Site Sewage System Management Plan Guidance for the Twelve Puget Sound Counties. This document created an outline for OSS Management Plans to follow. Therefore, this OSS Management Plan is laid out largely in accordance with that outline, as follows:

- Part 1 describes Clallam County's OSS database and activities the County plans to take to enhance it.
- Part 2 provides information about a variety of environmental and demographic trends in Clallam County, and describes how Clallam County identifies sensitive areas.
- Part 3 describes the Clallam County EHS' current OSS operations and maintenance (O&M) program, and the changes the Clallam County OSS Work Group recommends to comply with the new state law both County-wide and in sensitive areas.
- Part 4 describes how the OSS Work Group identified a Marine Recovery Area in Clallam County, the Work Group's recommendations for actions in that Marine Recovery Area, and current activities in the Marine Recovery Area. (Please note that Part 4 differs from the State's guidance document.)
- Part 5 describes the Clallam County EHS' current and planned OSS education efforts.
- Part 6 differs from the State's guidance document. It is an implementation chapter that shows how Clallam County EHS plans to implement the Work Group's recommendations, given available resources. This Part also includes information about the resources needed and timelines for implementation.

Vision for OSS Management in Clallam County

To guide its implementation of the On-Site Septic Management Plan, Clallam County EHS created the following vision for effective OSS management in the county:

Septic systems within Clallam County do not threaten public health or the environment because they are designed and installed properly, well-maintained and monitored, and affordable for residents to operate and maintain.

Clallam County ensures the safety and quality of on-site septic systems by:

- Reviewing all site evaluations and system designs, performing final inspections of installations and reviewing all as-built submittals;
- Providing ongoing public education and outreach programs, including meetings with and classes for OSS professionals and realtors;
- Identifying all septic systems and investigating complaints;
- Licensing OSS installers and pumpers, monitoring the workmanship of State-licensed designers, and ensuring that Clallam County staff maintain technical certifications;
- Developing rules and policies as necessary;
- Ensuring that all problem septic systems are repaired and that owners have access to the capital they need to maintain and repair their systems; and
- Ensuring that Environmental Health has adequate capacity and stable funding to accomplish its long-term management goals and provide effective permitting, enforcement, and education.

Part 1: Database Enhancement

Introduction

The new WAC 246-272A-0015 sets a number of requirements for jurisdictions to develop and maintain an electronic inventory of OSS. This part of the Plan shows how Clallam County EHS will comply with the following elements of WAC 246-272A-0015(1):

a) Progressively develop and maintain an inventory of all known OSS in operation within the jurisdiction.
f) Maintain records required under [Chapter 246-272A WAC], including of all operation and maintenance activities as identified.

Activities

INVENTORY

Current OSS Database

Description

Clallam County uses Tidemark Advantage Permit Plan software to store and query permit information, including OSS data. This software integrates the processing of about 20 different case types, including OSS permitting data and O&M data. All data are stored on an SQL Server which is backed up regularly by the Clallam County Information Technology (IT) department. The database is linked to the County's GIS and can export data and reports between Crystal Reports and Access. The Clallam County Department of Community Development (DCD) is currently working on a web interface so that anyone, including residents and professionals, can access as-builts for any parcel of land. Under a grant from the Department of Ecology, Clallam County EHS is entering all hard-copy records into the OSS database.

Calculating OSS Age

Calculating OSS age through the OSS database is simple, given that each OSS permit is assigned an issue date and a final permitting date when installation of the OSS is complete. These beginning and end dates for OSS

permits are stored in the database. In theory, the OSS permit must be issued before a building permit is issued and the OSS completed before a building permit is finalized; therefore, the permit end date indicates the age of the OSS. The earliest OSS installation recorded in the database is from July of 1968.

Maintenance

OSS data are maintained daily as an integral part of the county's permit process. Clallam County departments may create reports that can be periodically run against the database to facilitate consistent monitoring of countywide OSS information. Two Clallam County EHS permit technicians are responsible for entering and editing all OSS information in the permit database, and running prepared reports as needed. The Clallam County DCD GIS/Data Coordinator administers the permit application database, performs customizations as needed to support the permit process (including cross-departmental processes), and troubleshoots problems. The GIS/Data Coordinator creates custom reports as needed, which can then be run, with modifications, by other staff. Since the county's permit system is integrated across several departments, changes to the OSS database and processes are coordinated with Clallam County DCD.

Numbers of Recorded OSS and Total OSS

According to the development status data in the Assessor's database, there are 26,545 parcels in Clallam County with at least one residential unit. Approximately 10,000 of these parcels are within the city limits of Forks, Port Angeles, or Sequim, or within the boundaries of the Clallam Bay, Sekiu or Sunland Sewer Systems, making it likely that those parcels use sewer service. Therefore, assuming there is one OSS per parcel with a residential unit, there are approximately 18,400 residential OSS in Clallam County.[1] As of February 2007, Clallam County EHS had approximately 14,850 residential OSS permit records in its database, including all of the paper permits back to 1969 and records from Sanitary Surveys. Therefore, there are approximately 3,550 residential parcels with assumed OSS. Similarly, County records indicate a total of 500 commercial parcels and 400 records of commercial systems, meaning that there are approximately 100 commercial parcels with unknown OSS. Because of the variability in installation of community systems, the County is unable to use development status to estimate the number of unknown community OSS. Known, assumed and unknown OSS are defined further in the Glossary, page 19.

Reporting the Location of OSS

The database links OSS to parcels, rather than to map coordinates, and does not attempt to pinpoint the location of the OSS within a parcel. Instead, the County uses the as-built drawings to estimate the OSS location on a parcel. Mound systems also are visible on aerial photographs or on light detection and ranging (LIDAR) images.

The County's ability to report the location of each OSS relates to the age of the system. Because parcel numbers change as parcels are subdivided, it is sometimes difficult to link an older OSS to the parcel map because its parcel number no longer exists. If a parcel is still on the county map, however, reporting is simple. In general, most data from 1987 to the present day easily can be placed on a parcel and then converted into a map.

Clallam County DCD has embarked on two projects to help alleviate but not solve problems with retired and subdivided parcels:

1. Clallam County DCD is mapping all retired parcels back to 1987. However, it appears even after all data sources are exhausted, there will be some that are simply impossible to find. OSS on these parcels will not be able to be located any closer than their section or quarter section.

[1] Please note that this estimate may be low because some parcels within city limits may have septic systems.

2. Clallam County DCD has begun to implement procedures to link existing development permits to the correct "child" parcel when a parcel is subdivided. However, Clallam County DCD does not plan to correct previous errors in linking permit cases to parcels.

Capacity to Report OSS Type

Currently, the Clallam County EHS records the type of OSS for each system in its database, and uses 21 different categories to do so. Categorization of OSS is less consistent with older systems, and the Clallam County EHS assumes that any older system without categorical information is a conventional system. At the present time, septic systems are classified and coded within the OSS database as follows:

Table 1: Septic System Classification in OSS Database

Code	Septic System Type
AD	Alt Dosed
AF	Sand Line Pressure
AM	Mound
AO	General Alternative
AP	Pressure
AS	Sand Filter
AT	Aerobic Treatment Unit
BF	Biofilter
C	Conventional
DI	Drip Irrigation
DN	Denitrification
DT	Deep Trench
E	Experimental
GF	Recirculating Gravel Filter
GR	Graveless Chamber
PT	Pit Toilet
SM	Sand Filter Mound
SP	Sand Filter Pressure
T1	Treatment Std 1
T2	Treatment Std 2
TO	Tank Only

As of July 1, 2007, the classification types T1 and T2 will be replaced in Permit Plan with new classifications that reflect the new treatment-level definitions: A, B, C, D, E, and N.

Lastly, each OSS's user class is designated as "Individual," "Community," "Commercial," "Large on-site," or "connection to community system."

Adding and Updating Records in the OSS Database & Identifying Unknown OSS

All OSS records and data generated since 1987 have been entered into the database as part of the permitting process. Clallam County EHS has paper records for OSS permitted before 1987, and received a grant from the Department of Ecology that supports its work to enter these paper records into the database. This project began in May 2006 and is on-going. Permit technicians are also scanning as-builts for every OSS in the county that they have received.

Clallam County EHS learns of undocumented OSS through repair permit applications: periodically, the County receives an application for a repair permit for a system that it never permitted. While information related to the repair is entered into the database, due to staffing constraints the database records are not necessarily updated with information about the original system.

OPERATION & MONITORING – RECORD MAINTENANCE

Clallam County's Current O&M Requirements

Currently, Clallam County EHS requires owners of Glendon Biofilters, Aerobic Treatment Units, and commercial or community systems to have a service contract with a designer or other qualified O&M provider (with some exceptions for older community systems – see Section 3). When submitting a service report to Clallam County EHS, an O&M provider is required to provide at least the following information:

- Parcel number;
- Name, mailing address, and phone number of the property owner;
- Site address;
- System type;
- System designer;
- Date of installation;
- Description of whether or not a problem was identified;
- Description of whether or not action is needed; and
- O&M Specialist's name, address, and phone number.

There are also a number of required pieces of information for different types and parts of OSS. (To view an inspection reporting form, please see Appendix A.) O&M providers deliver their reports to Clallam County EHS on paper. The O&M database can report OSS service histories.

Local codes require O&M providers to report OSS failures to Clallam County EHS immediately. In turn, Clallam County EHS responds immediately to an OSS failure.

The Current Database System for Maintaining O&M Records, and its Uses

Clallam County EHS records O&M information in the permitting database described earlier in this section.

Clallam County EHS makes O&M data, and OSS data in general, available for use by realtors and designers/installers of OSS. Realtors frequently request as-built drawings and designers/installers also request OSS information. Clallam County EHS also creates individual packets for residents who sign up for Septic 101 classes who give the County their parcel numbers. These packets contain information about the septic system on the parcel and its O&M record. In addition, Clallam County EHS uses the database to track permit expirations and payments, generate statistics, and geographically track complaints.

Additional or Planned Changes (If Made to the Data Systems)

The existing Permit Plan database is a robust one that meets many needs. However, to best implement the new OSS requirements, Clallam County EHS envisions enhancing its database in the following ways if funding is available:

1. Allow OSS owners and users, the OSS industry, and internal users to input inspection reports over the internet.
2. Make OSS permit, inspection, and as-built records accessible over the internet to homeowners, realtors, and the OSS industry.
3. Ground-truth questionable OSS permits to verify that the systems have been installed and update the database accordingly. The goal is to have a database that is as accurate as possible.
4. Automate generation of lists of the following:
    a. Which parcels in the county have OSS;
    b. How many systems are being inspected on the necessary frequency; and
    c. Which systems are not being inspected.
5. Automate notification and reminder letters based on inspection status.
6. Track reported and repaired OSS failures.
7. Maintain lists of homeowners and OSS professionals who have been certified to conduct OSS inspections.
8. Automate notification and reminder letters for certification renewal based on certification status.
9. Begin recording GPS coordinates for all new and repaired OSS and add the locations to the database.
10. Create reports and maps of OSS in Clallam County, their type, and their status.
11. Track the inspection incentive program, if one is created.
12. Track compliance actions.

An estimation of the costs of these activities is discussed in Part 6 of this document. Clallam County EHS also plans to use its database to assist with identifying all OSS in the Marine Recovery Area (please see Part 4 for more information about the Marine Recovery Area proposed for Clallam County). Using information gained from inspection reports, a survey of OSS owners in the Marine Recovery Area (MRA), and site visits, Clallam County will create a map showing known and unknown OSS in the MRA. This map also will indicate whether OSS owners are in compliance with new inspection requirements and identify systems that are failing.

In addition, Clallam County DCD is working on three significant changes to its permit-tracking system, as follows:

1. The County is restructuring its review and approval process for land divisions. One result of this process will be significant improvement in the County's ability to maintain the digital relationship between permitted activities – such as installing an OSS – and the actual parcel upon which the activities are occurring, as parcels are split and reconfigured.
2. Clallam County DCD is integrating its GIS parcel layer with the parcel tables already in the permit database. This integration will help ensure that permit technicians have ready access to information about relevant conditions or limitations on every parcel, such as the presence of sensitive areas or appropriate zoning.
3. Clallam County DCD intends to grant online access to the permitting database for select purposes. This project could assist EHS with its proposal to allow service providers and OSS owners to submit O&M reports electronically.

Summary of Database Activities

Clallam County EHS plans to enhance its existing Permit Plan database in a variety of ways to simplify implementation of the new requirements and to improve EHS ability to measure the effectiveness of new programs. These enhancements are listed above.

Clallam County EHS also plans to work with DCD to develop a map that shows all known and unknown OSS in the Marine Recovery Area.

Lastly, Clallam County DCD plans three upgrades to the database:

1. Adoption of new procedures for linking OSS to parcels even when parcels are subdivided;
2. Integration of parcel data with the GIS system by the end of 2007; and
3. Development of online access to the database for select purposes.

Please see Part 6 for an estimate of resources needed and timelines to implement these activities. The timeline in Part 6 also prioritizes among activities proposed under this Plan.

Part 2: Identification of Sensitive Areas

Introduction

This section describes how Clallam County EHS identifies sensitive areas where OSS could pose an increased public-health risk. It also describes environmental and demographic characteristics of Clallam County, and how Clallam County EHS coordinates with other jurisdictions and agencies when making decisions about sensitive areas.

This part of the Plan satisfies the following elements of WAC 246-272A-0015(1):

b) Identify any areas where OSS could pose an increased public health risk. The following areas shall be given priority in this activity:
   - i) Shellfish protection districts or shellfish growing areas;
   - ii) Sole source aquifers designated by the USEPA;
   - iii) 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;
   - iv) Designated wellhead protection areas for Group A public water systems;
   - v) 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;
   - vi) 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;
   - vii) Wetland areas under production of crops for human consumption;
   - viii) 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;
   - ix) Areas where nitrogen has been identified as a contaminant of concern; and
   - x) Other areas designated by the local health officer.

i) Assure that the Plan was developed to coordinate with the [Clallam County] comprehensive land use plan.

Activities

Description of Clallam County Environment

Jurisdictional Boundaries
Situated on the northwestern tip of the Olympic Peninsula, Clallam County features the westernmost point in Washington State and the continental United States. With a total area of approximately 2,670 square miles, nearly 35% of the county is made up of water. The county is bordered by two major bodies of water: the Pacific Ocean and the Strait of Juan de Fuca. Major cities in the county include Sequim, Port Angeles, and Forks, and the Clallam Bay-Sekiu Urban Growth Area is another population center. The Dungeness Spit, a 5.5-mile sand spit and the longest natural sand spit in the United States, juts out from the county near the edge of the Olympic Peninsula into the Strait of Juan de Fuca. Four state-determined Water Resources Inventory Areas (WRIAs) come together in Clallam County, including the Quilcene-Snow (WRIA 17), Elwha-Dungeness (WRIA 18), Lyre-Hoko (WRIA 19), and Sol-Duc-Hoh (WRIA 20) watersheds. Appendix B contains a map depicting the boundaries of these watersheds and the general jurisdictional boundaries of Clallam County.

It is important to note that Clallam County also contains significant federal and tribal lands: Olympic National Park and lands belonging to the Jamestown S'Klallam, Lower Elwha Klallam, Makah, and Quileute Tribes are all within county borders. However, the Clallam County government has no jurisdiction over these lands.

Population Density, Demographics, and Socioeconomic Trends
According to 2005 Census data, Clallam County is home to 66,800 people, with 40,305 of those citizens living in unincorporated parts of the county and 26,495 of those citizens located in incorporated parts of the county. The county has an area of 1,739.5 square miles, with the population density equal to 38.4 people per square mile. Between 1990 and 2004, the county reported a 14.7% increase in population, as compared to a 21.1% increase in population within Washington State during this time. Clallam County population forecasts, as noted in the Comprehensive Plan, indicate that the County must plan for an additional 3,000 to 23,000 people in the next twenty years[2]. Maps depicting population density for each WRIA in Clallam County are in Appendix B, while a graph showing predicted Clallam County population increases under the Growth Management Act (GMA) until 2025 is in Appendix C.

Clallam County's largest sources of employment are the Wholesale/Retail Trade sector (which accounts for approximately 17% of countywide employment) and the Healthcare & Social Assistance sector (which accounts for approximately 16% of countywide employment).[3] Median family income is $44,381.00.[4]

Land Use
Clallam County land use can be broken down into three general categories: 1) Urban Growth Areas, 2) Rural Lands, and 3) Commercial Forest Lands. Designated urban growth areas include Port Angeles, Sequim, Forks, Clallam Bay-Sekiu, Joyce, and Carlsborg. The designation of these urban growth areas will allow the county to manage growth in the upcoming years. According to the Clallam County Comprehensive Plan, rural growth centers which maintain certain characteristics of urban growth, but are "…not spread over wide areas requiring urban governmental services," include Blyn, Diamond Point, Dungeness, Sappho, Sunland, Beaver/Lake Pleasant, and Three Rivers. Forest lands cover much of the county, particularly in the west end. A map depicting urban growth areas and generalized zoning is available in Appendix B.

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[2] http://www.ofm.wa.gov/pop/gma/gmlow.pdf , http://www.ofm.wa.gov/pop/gma/gmhigh.pdf,
[3] http://www.ofm.wa.gov/databook/county/clal.asp#08emp
[4] http://www.ofm.wa.gov/census2000/profiles/county/05053009.pdf

In recent years, land use in the east end of the county has shifted from rural to suburban. This shift in land use likely has resulted in an increase in the number of OSS in the eastern end of the county.

Drainage
Soils in Clallam County vary from well drained to poorly drained, as shown in the map located in Appendix B. Areas with fair to poor drainage occur on the east side of Sequim Bay, the City of Port Angeles, the City of Sequim, in a narrow band along much of the northern shoreline of Clallam County, and in the far southwestern portion of the County around Lake Ozette. Well-drained soils occur near the Dungeness River, along the middle and upper reaches of many creeks such as Whiskey Creek and Tumwater Creek, and in the northwestern section of the county near the middle and upper reaches of the Pysht and Hoko Rivers. Please note that the map does not depict drainage on tribal or federal lands in the county.

Water Quantity and Water Quality
Water supply in Clallam County comes from a combination of public utilities and private wells. For more information on Group A and B water-supply systems in Clallam County, please see the Washington Department of Health's Drinking Water System Data page at http://www.doh.wa.gov/ehp/dw/our_main_pages/data.htm. For information about private wells in Clallam County please see the Washington Department of Ecology's Water Well Log website at http://apps.ecy.wa.gov/welllog/.

Groundwater quality varies from degraded to pristine. Repeat sampling of area wells suggests that nitrate concentrations have increased in the region's ground water since 1980. Recent ground water samples from the Carlsborg and Agnew areas have exceeded the federal standard for nitrate, a drinking water contaminant of concern. Current land-use activities may lead to increased groundwater nitrate concentrations: land use changes in the east end of the county from rural farms and pasture to suburban residences with septic systems may yield higher nitrate contributions. Additionally, increased piping of irrigation ditches to conserve surface water may reduce the dilution of ground water nitrate, thereby yielding higher nitrate concentrations.

Surface water quality in Clallam County varies from critically impaired to healthy, and is described in the County's 2004 report: State of the Waters of Clallam County[5]. There are a number of surface water quality problems which are likely linked to septic systems, particularly in the Sequim Bay-Dungeness Watershed**.** Due to high fecal coliform counts in Dungeness Bay there have been shellfish closures in the Bay since 2000, and over the years these have expanded in duration and geographical extent. Violations of bacteria standards in several water bodies in the watershed, and placement of certain streams on the state 303(d) list of impaired water bodies for fecal coliform violations, have prompted the Department of Ecology to conduct two Total Maximum Daily Load (TMDL) studies in the area. Currently the County and the Jamestown S'Klallam Tribe, along with other partners in the Clean Water Workgroup, are involved in monitoring and outreach efforts to address bacterial contamination. A map depicting 303(d) listed water bodies in Clallam County is available in Appendix B.

Clallam County, area Tribes, and the Washington Department of Ecology hold central responsibility for water data collection and analysis, and achieving water quality goals. Essential data sources for the establishment of water quality ratings include the following:

- Clallam County, which conducts water quality projects for both ground and surface water and maintains the Water Resources Database, primarily with data from Streamkeepers of Clallam County
- The Jamestown S'Klallam Tribe, which consistently monitors water quality, and particularly bacteria levels, in the Dungeness and Sequim Bay watersheds
- Washington State Department of Ecology's Environmental Information Management (EIM) database

5 http://www.clallam.net/streamkeepers/html/state_of_the_waters.htm

- The Quileute Tribe, which monitors water quality mainly in the Quillayute watershed
- The Makah Tribe, which monitors water quality on trust lands of the Makah reservation
- The Lower Elwha Klallam Tribe, which provides data on the Elwha River system and other streams draining to the Strait of Juan de Fuca
- The Olympic National Forest, which prepares watershed analyses for areas with U.S. Forest Service timberlands and generates water quality assessments as part of this effort.[6]

Designating Sensitive Areas

Areas Where OSS May Pose an Increased Threat to Public Health

Clallam County EHS has identified several areas where OSS may pose an increased threat to public health. While one study of bacterial contaminant sources is in progress, there are currently no data that indicate the relative contribution of OSS to degraded water quality in these areas. These areas are as follows:

- **Critical aquifer recharge areas.** The County has delineated critical aquifer recharge areas in Clallam County Code Chapter 27.12.[7] New subdivisions in this area must have septic systems with the technology to ensure 30% denitrification. Existing OSS are not currently regulated in the critical aquifer recharge area, and the County's current OSS code does not address how being in an aquifer recharge area should affect an OSS permit.
- **Sequim Bay-Dungeness Watershed Clean Water District.** As discussed above, water-quality sampling in the Sequim Bay -Dungeness Watershed area shows higher bacterial loading in tributaries and irrigation ditches draining into the Bay. Numerous upland sites in small streams also carry high bacterial loads. A study is underway to determine the sources of bacteria loads in the lower 3.2 miles of the Dungeness River, and several tributaries and irrigation ditches that drain into those river miles. However, it is currently unknown whether these bacteria loads come from OSS or other sources, such as livestock or wildlife. For more information about the Clean Water District, please see Part 4 of this plan.
- **Carlsborg.** Clallam County's Comprehensive Plan and the Carlsborg Urban Growth Area plan identify elevated levels of nitrates in the aquifer underlying Carlsborg. Many private and shared wells use the aquifer for drinking water. Therefore, new septic systems in the Carlsborg Urban Growth Area must have the technology to ensure 50% denitrification.

The OSS Work Group recommends that Clallam County EHS also consider the following areas as places where OSS may pose an increased threat to public health:

- Lake Sutherland (and its drainages)

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[6] http://www.clallam.net/streamkeepers/assets/applets/Chapter_2megs.pdf

[7] CCC 27.12.615 (3) Land Divisions. Divisions of land regulated by CCC Title 29, Clallam County Land Division Code, shall be evaluated for their impact on ground water quality for those areas designated as critical aquifer recharge area. The following measures may be required by the Administrator as a part of the review of the proposed land division based on site conditions after consideration of available data:

(a) An analysis of the potential nitrate loading to the ground water shall be required to assess the impact on ground water quality.

(b) Alternative site designs, alternative sewage disposal system design (e.g., denitrification), phased development and/or ground water quality monitoring shall be required to reduce contaminant loading where site conditions indicate that the proposed action will measurably degrade ground water quality.

(c) Open spaces shall be required on development proposals overlying areas highly susceptible for contaminating ground water resources.

(d) Community/public water systems and community drainfields shall be required where site conditions indicate a high degree of potential contamination to individual wells from on-site or off-site sources.

- Lake Pleasant
- Lake Crescent
- Lake Ozette
- Frequently flooded areas
- Commercial and recreational shellfish growing areas

Clallam County EHS recommends that Lake Dawn be added to this list of sensitive areas. Please note that Lake Ozette and Lake Crescent are in Olympic National Park; therefore, Clallam County does not have jurisdiction over these lakes, or over other sensitive areas on federal or tribal lands. Maps showing critical aquifer recharge areas, frequently flooded areas, and shellfish growing areas are located in Appendix B.

The OSS Work Group also recommends that Clallam County EHS designate one Marine Recovery Area (MRA) with the same boundaries as the Sequim Bay - Dungeness Watershed Clean Water District. For more information about this MRA, please see Part 4.

Clallam County EHS is committed to adding to this list if new data show that OSS are posing increased public-health risks in any area of the county. The OSS Work Group also recommends that Clallam County EHS track all water-quality monitoring data collected in the County, including Streamkeepers' and Surfriders' water-quality monitoring data.

Method for Identifying Critical Areas in Clallam County

Clallam County Code Section 27.12.050 governs the designation of critical areas as required under the Growth Management Act. According to this section, the County will designate the location and extent of critical areas "based upon best available information from qualified professional sources." This section of the Code also directs the County to "develop and make available to the public, maps or other data bases, as appropriate, which show the location, extent, and classification of regulated critical areas as accurately as feasible." These maps are for advisory purposes only, but critical areas that are not mapped but that meet classification and designation criteria are still regulated.[8]

Designation of critical areas is part of the land use code, and is not connected to the current version of the OSS code.

Coordination with Other Jurisdictions, Agencies, and Stakeholders in Setting Critical Areas

Changes to the designation criteria for critical areas, or new designations, require public hearings and a SEPA review. As part of these processes, Clallam County DCD ensures that known agencies of jurisdiction or expertise receive notice of the public hearings.

Coordination with Planning Entities within Clallam County

Clallam County DCD coordinates with the Washington State Department of Health, the Washington State Department of Ecology, the Washington State Department of Fish and Wildlife, the Washington State Department of Natural Resources, the US Fish and Wildlife Service, the Clallam Conservation District, the Jamestown S'Klallam Tribe, the Makah Tribe, the Quileute Tribe, the Lower Elwha Klallam Tribe, the cities and towns of Clallam County, Streamkeepers of Clallam County, the North Olympic Land Trust, and staff from the Olympic National Forest and Park.

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[8] Gray, Steve, 2007. Personal communication to Clallam County EHS.

To ensure that the OSS Management Plan and the Comprehensive Plan use the same goals and standards, Clallam County EHS submitted a draft of this OSS Management Plan to the Clallam County DCD for review for consistency with the Comprehensive Plan. In the future, EHS will coordinate with Clallam County DCD to ensure that Comprehensive Plan updates support implementation of this OSS Management Plan.

State Environmental Policy Act Review

Clallam County EHS completed a SEPA Checklist for this OSS Management Plan and submitted it to the Department of Community Development for a threshold determination (attached as Appendix D). Based upon the activities proposed in this plan, it is unlikely that a significant adverse environmental impact would result from its implementation.

Summary and Prioritization of Activities

- The following areas should be listed as sensitive areas:
  - ✓ Lake Sutherland (and its drainages)
  - ✓ Lake Pleasant
  - ✓ Lake Crescent
  - ✓ Lake Ozette
  - ✓ Lake Dawn
  - ✓ The Carlsborg area
  - ✓ The Sequim Bay-Dungeness Watershed Clean Water District
  - ✓ Critical aquifer recharge areas
  - ✓ Frequently flooded areas
  - ✓ Commercial and recreational shellfish growing areas
- Sensitive areas should be high priorities for water-quality monitoring to assist the County in early identification of failing OSS.
- The plan should be flexible enough to allow the County to identify new sensitive areas if data show that OSS are posing increased public health risks. The County should track all water quality monitoring data collected in the County, including Streamkeepers and Surfriders water quality monitoring data.

Please see Part 6 for a summary of resources needed and timelines to implement these activities.

Part 3: Operation, Monitoring, and Maintenance in Sensitive Areas

Introduction

This section describes the Operations, Monitoring, and Maintenance (O&M) requirements that Clallam County EHS had in place county-wide prior to the development of this Plan. It also lists the OSS Work Group's recommendations for inspection requirements and enforcement activities both county-wide and in sensitive areas to fulfill the requirements of the new state law. Information about O&M requirements for Marine Recovery Areas can be found in Part 4.

This part of the Plan fulfills the following elements of WAC 246-272A-0015 (note: the citation below excerpts the applicable portions of the code):

1) By July 1, 2007, the written plan must specify how [Clallam County] will:

c) Identify operation, maintenance, and monitoring requirements commensurate with risks posed by OSS within the geographic areas identified in element (b) [areas where OSS may pose an increased public health risk].
g) Enforce OSS owner permit application, operation, monitoring, and maintenance and failure repair requirements defined in WAC 246-272A-0200(1), 246-272A-0270, 246-272A-0275, and 246-272A-0280 (1) and (2).

7) In order to implement the Plan, the local health officer may require the owner of the OSS to:
   a) Ensure additional maintenance and monitoring of the OSS;
   b) Provide dedicated easements for inspections, maintenance, and potential future expansion of the OSS;
   c) Place a notice to title identifying any additional requirements for OSS operation, maintenance, and monitoring; and
   d) Have an inspection of the OSS at the time of property transfer including the preparation of a "record drawing" if necessary.

Operations, Monitoring, and Maintenance (O&M) Requirements Common to All Areas in Clallam County

O&M Requirements in Place Prior to the Adoption of WAC 246-272A
In July 2005, the State Board of Health adopted Chapter 246-272A WAC, which establishes new O&M requirements for all OSS. Prior to adoption of Chapter 246-272A WAC, Clallam County EHS had a number of O&M program requirements in place that applied to all OSS. These requirements came from the State Department of Health's guidance documents, or from proprietary device manufacturers. This section describes those requirements, which remain unchanged.

First, Clallam County EHS requires owners of Glendon Biofilters, Aerobic Treatment Units, or commercial or community systems to have a service contract with a designer or other qualified O&M provider. The manufacturer must approve O&M service providers for the two proprietary devices. In general, Clallam County EHS requirements defer to the OSS manufacturer's inspector requirements to ensure that owners are not at risk of being out of compliance with their system warranties.

Second, Clallam County EHS now requires owners and managers of community and commercial septic systems that were permitted prior to the requirement of a contract with an O&M provider to use OSS professionals or the Public Utility District (PUD) for O&M oversight. Clallam County EHS does not require owners or managers of some of these older permitted community and commercial septic systems to submit service contracts, as long as the systems remain in good working order. However, if Clallam County EHS issues a repair permit due to failure of the septic system or a permit to add capacity to the existing septic system, it requires owners of these systems to contract with an O&M provider and submit O&M reports. Clallam County EHS does not yet have a formal policy regarding requirements for the companies providing O&M services to older systems. Instead, Clallam County EHS suggests that owners select O&M service providers based on criteria such as knowledge of applicable regulations, experience in installation and pumping, or prior work on septic systems.

Third, Clallam County EHS has required the completion of O&M maintenance contracts as a mitigation measure in approving waivers to required septic system setbacks from water sources or wells. Lastly, state law and Clallam County EHS require permitted OSS at food-service establishments to be inspected annually as part of the food-service permit renewal process.

Clallam County EHS has based a significant portion of its O&M program on the efforts of a number of stakeholder work groups. An onsite work group convened in 1998 provided a number of recommendations,

one of which resulted in the creation of the Septics 101 classes. An O&M industry workgroup, formed in 2004, and a second workgroup (formed in 2005) addressed issues surrounding the certification of O&M providers. The work groups established standards and requirements for inspection and reporting, a standard contract for O&M providers, O&M provider certification requirements, and a draft of fee options to consider for the O&M program. Clallam County EHS incorporated these standards for inspection and reporting into its O&M program in 2005.

New Requirements for O&M Pursuant to WAC 246-272A

The new Chapter 246-272A-0270, adopted by the Washington State Board of Health in July 2005, specifies that in all cases, OSS owners are responsible for maintaining their OSS and obtaining proper inspections. Furthermore, the WAC requires OSS owners to obtain a complete evaluation of their OSS components and/or property to determine functionality, maintenance needs, and compliance with regulations and any permits according to the following schedule:

- At least once every three years for all systems consisting solely of a septic tank and gravity SSAS; and
- Annually for all other systems unless more frequent inspections are specified by the local health officer.

The Clallam County OSS Work Group believes that the state's new inspection frequency requirements are adequate, and does not recommend more frequent inspections (unless the system's manufacturer requires more frequent inspections). However, the Work Group does recommend the following enhancements:

- For systems composed solely of a septic tank and gravity SSAS, OSS owners who have received County-approved training may inspect their own systems.
- For all other systems, OSS owners who have received County-approved training may inspect their own systems unless the manufacturer requires a certified inspector and/or requires more frequent inspections.
- For any property that does not have an as-built diagram, OSS owners must have a professional inspection before conducting their own inspections.

The Work Group recommends that Clallam County EHS coordinate with the Washington On-Site Sewage Association (WOSSA) to develop the training that would enable OSS owners to inspect their own systems. Furthermore, the Work Group recommends that Clallam County EHS pursue grants to offset some of the owners' costs for the training. The Work Group believes that these trainings should be available locally, and should include the following elements:

- Hands-on training rather than classroom or video instruction only; and
- A certification process to identify those OSS owners who have completed the course successfully and that stipulates when owners must take a refresher course to renew their certification.

For community and commercial OSS, the Work Group recommended that the County require annual professional inspections, with the following caveats:

- If owners of community or commercial systems can demonstrate that their waste production is comparable to typical single-family residential volumes and strength, and if the owners have received County-approved training, they may inspect their own systems.
- Any fee or assessment for these systems would need to be based on volume and/or strength of waste so that it is comparable to the assessments or fees paid by homeowners.

These recommendations are consistent with Chapter 246-272A WAC for alternative commercial and community systems. However, these recommendations require more frequent inspections of gravity commercial and community systems than does the new law, with the exception of the requirement for annual food service inspections.

Clallam County EHS plans to develop a comprehensive inspection program during Phase I of implementation (please see Part 6 for more detail). Clallam County EHS will hold training workshops with professional inspectors working in Clallam County to ensure that they are knowledgeable about the inspection and reporting requirements. Professional inspectors who fail to meet inspection and reporting standards will be subject to compliance/enforcement actions.

For homeowners who choose to perform their own inspections, Clallam County EHS will provide written information on how to complete and submit inspection reports. The information will be posted on the County's website, and be available through direct mailings. The information will also be part of the ongoing Septics 101 homeowner workshops.

Sensitive Area O&M Requirements

Sensitive Area O&M Requirements in Place Prior to WAC 246-272A

Prior to the adoption of WAC 246-272A, Clallam County EHS O&M requirements for areas where OSS may pose an increased health risk were the same as its requirements for the rest of the county. The exception to this rule was Carlsborg: the Comprehensive Plan and the Carlsborg Urban Growth Area Plan both require that new septic systems installed in Carlsborg be able to achieve 50% denitrification. Such systems require careful O&M for effective removal of nitrogen. Due to this factor and to the high nitrate concentrations in the area's groundwater, the County and the PUD are studying the feasibility of sewering this area.[9]

New Requirements for O&M in Areas Where OSS May Pose an Increased Health Risk

WAC 246-272A does not require Clallam County EHS to institute more stringent requirements for OSS operations and maintenance in areas where OSS may impose an increased health risk, and the OSS Work Group does not recommend additional requirements (except for OSS in the Marine Recovery Area – please see Part 4). However, the OSS Work Group recommends that Clallam County EHS undertake the following actions:

- Clallam County EHS should review its siting and design requirements for OSS in these areas and revise them if necessary to address the specific environmental concerns in each area.
- Clallam County EHS should make these areas a high priority for water quality monitoring to assist in early identification of failing OSS.
- The OSS Management Plan should be flexible enough to allow Clallam County EHS to identify new areas if data show that OSS are posing increased public health risks. The Work Group recommends that Clallam County EHS should track all water quality monitoring data collected in the county, including Streamkeepers and Surfriders water quality monitoring data.

Sufficiency of Clallam County's O&M Program

Currently, a lack of data makes it difficult to determine whether Clallam County's pre-WAC 246-272A O&M Program is sufficient in protecting public health county-wide or in areas where OSS may pose an increased health risk. However, Clallam County EHS staff believe that O&M requirements could be strengthened county-wide, and have identified the following areas where improvements in the O&M program could help protect public health and the environment:

- Greater specificity in O&M requirements;
- Additional capacity to follow up with OSS owners after the permitting process is complete;
- Better evaluation of OSS functioning;
- Better assessment of the effectiveness of existing programs; and

[9] BHC Consultants LLC, 2007. *Draft Sewer Feasibility Study for Carlsborg UGA, April 2007*. Prepared for PUD #1 of Clallam County and Clallam County.

- Expanded education programs to ensure that homeowners understand their OSS and O&M standards.

Enforcement Activities

Clallam County EHS lacks capacity to conduct extensive enforcement. Currently, enforcement occurs when a septic system fails and Clallam County EHS must use enforcement measures to ensure that the property owner repairs or replaces it. Currently, Clallam County EHS discovers failing systems through one of several mechanisms:

- Homeowners may notify the County that their system is failing;
- OSS professionals may notify the County; or
- A neighbor or other third party may complain to the County that a system is failing.

Clallam County holds protection of public health as its highest priority, and works to ensure that all known failing systems are repaired or replaced. Generally, due to funding constraints, Clallam County EHS cannot follow up to make certain that OSS owners conduct O&M activities.

Enforcement also can occur when a homeowner applies for a development permit, such as a building permit for an addition to a home. At that time, Clallam County EHS checks the OSS and can withhold the permit until repairs or O&M occur.

The OSS Work Group recommends that the new compliance program include five basic elements, as follows:

1. **A strong education program** that informs OSS owners of the new requirements and the benefits or maintaining and inspecting their OSS.
2. **Incentives** to encourage OSS owners to inspect their systems and supply the required reports to the County. The County should consider fee-based incentives (such as lower fees or assessments for those who submit required reports and higher fees or assessments for those who do not). The County also should provide financial assistance to low-income OSS owners.
3. **Simple reporting requirements.** Required forms should be easy to complete and return to the County.
4. **Risk-based prioritization for compliance actions.** The County should prioritize its efforts based on risk to public health and the environment. Thus, the County's highest priorities should be systems that are on shorelines and/or near wells.
5. **Penalties as a last resort** to achieve compliance. The County should issue penalties only after giving warnings and after education, incentives, and other compliance efforts have failed.

Furthermore, the OSS Work Group recommends that Clallam County EHS should require proof of compliance with OSS inspection and maintenance requirements as follows:

1. The County should require a seller to submit proof of a successful professional OSS inspection prior to the transfer or sale of property.
2. The County should require proof of compliance when County permits are issued, including:
    - Building permits;
    - Land division permits (e.g. short plats, long plats, conditional use permits, or site plans);
    - Variances to Critical Areas Ordinance or Certificates of Compliance to Critical Areas Ordinance;
    - Shoreline permits;
    - Food establishment permits (new or renewal); and
    - Certificates of Occupancy for commercial building permits.

Summary of Activities

The OSS Work Group recommends the following activities:

- Clallam County EHS should follow the state's schedule of required inspections, but allow landowners who have received County-approved training to inspect their own systems.
- Owners of commercial and community OSS should obtain annual professional inspections. However, owners that have received County-approved training and can demonstrate that their waste production is comparable to typical single-family residential volumes and strength may inspect their own systems.
- Clallam County EHS should review siting and design requirements for OSS in areas where systems may pose an increased health risk, and monitor water quality in these areas.
- Clallam County EHS should develop a compliance program that focuses on education, incentives, simple reporting requirements, risk-based prioritization for compliance actions, and penalties as a last resort.
- Clallam County EHS should require sellers to provide proof of professional inspection at the time of property transfer and sale, and require proof of inspection before issuing a variety of permits.

Please see Part 6 for a summary of resources needed and timelines to implement these recommendations.

Part 4: Marine Recovery Areas (MRA)

Introduction

In March 2006, the Washington State Legislature enacted Third Substitute House Bill 1458, which became RCW 70.118A. This new law created a new type of management area called a Marine Recovery Area (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 – in this case, Clallam County EHS – to establish MRAs in places where OSS are "a significant factor contributing to concerns associated with" the following areas:

- Shellfish growing areas that have been threatened or downgraded under chapter 69.30 RCW;
- Marine waters that are listed on the 303(d) list for exceeding federal Clean Water Act standards for low-dissolved oxygen or fecal coliform bacteria; or
- Marine waters where Clallam County EHS has identified nitrogen as a contaminant of concern.

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

- Find existing failing OSS and ensure that their owners make necessary repairs;
- Find unknown[10] systems and ensure that they are inspected as required and repaired if necessary;
- Require O&M professionals to submit reports or inspection results to Clallam County EHS; and
- Develop and maintain an electronic database of all OSS within the MRA.

[10] The Washington State Legislature defines "unknown system" as an OSS that was installed without the knowledge or approval of the local health jurisdiction, including those that were installed before such approval was required.

This section describes how Clallam County EHS worked with the OSS Work Group to identify one MRA in Clallam County, the Work Group's recommendations for inspection requirements in the MRA, current activities occurring in the MRA, and data system requirements for the MRA. Part 6 describes Clallam County EHS' OSS Management Strategy in the MRA and outlines Clallam County EHS' needs for a contract with the Washington Department of Health.

Work Group Recommendations for the MRA

IDENTIFICATION OF THE MRA

To determine which areas might be considered an MRA in Clallam County, Clallam County DCD created a map showing the locations of threatened and downgraded shellfish areas, and marine waters on the 303(d) list for fecal coliform or low dissolved oxygen. (A version of this map can be found in Appendix B.) This map showed several areas in the county where commercial shellfish growing is prohibited, or where marine waters are impaired because of high bacteria or low dissolved oxygen, including locations in Sequim Bay, Dungeness Bay, Port Angeles Harbor, the mouth of the Pysht River, Clallam Bay, and Neah Bay.

The OSS Work Group recommends that Clallam County EHS designate the Sequim-Dungeness area as an MRA, using the existing boundaries of the Sequim Bay - Dungeness Watershed Clean Water District as the upland boundaries of the MRA. The reasons for the Work Group's selection of the Clean Water District included the following:

- Marine waters in the Clean Water District have downgraded shellfish growing areas and are listed on the state 303(d) list for fecal coliform bacteria. Therefore, creating an MRA here satisfies the requirements of state law.
- The Sequim Bay - Dungeness Watershed Clean Water District boundaries were set through a public process.
- The Clean Water District has been well-studied, and groups are already implementing a Clean Water Strategy in the Clean Water District that includes a focus on septic systems.

The mouth of the Pysht River also is on the state 303(d) list for elevated levels of fecal coliform bacteria. However, the OSS Work Group recommends against designating the mouth of the Pysht River as an MRA at this time because it is unknown whether the fecal coliform bacteria problems there are from OSS or from other sources, such as wildlife or livestock. If new data show that the fecal coliform bacteria at the mouth of the Pysht come from OSS, Clallam County EHS has the option of designating the Pysht as an additional MRA at any time.

The map identifies three additional areas where shellfish harvest is prohibited: just west of Port Angeles Harbor, Clallam Bay, and Neah Bay. The Work Group did not recommend creating MRAs in these areas for the following reasons:

- There are combined sewer overflow outfalls into Port Angeles harbor, as well as the outfall for the wastewater treatment plant for Nippon Paper Industries. According to the *2005 Annual Inventory: Commercial and Recreational Shellfish Areas of Washington State*,[11] the Washington Department of Health must classify marine waters adjacent to sewage treatment plant outfalls, marinas, and other persistent or unpredictable pollution sources as Prohibited. Therefore, since the classification of Port Angeles harbor as Prohibited is not related to OSS, developing an MRA in Port Angeles harbor did not seem warranted at this time.

[11] Washington State Department of Health, Office of Food Safety and Shellfish, 2006. 2005 Annual Inventory: Commercial and Recreational Shellfish Areas of Washington State. Available at http://static.doh.wa.gov/ehp/sf/Pubs/2005annual-inventory.pdf.

- The Prohibited shellfish growing area in Clallam Bay coincides with the Clallam Bay and Sekiu Sewage Treatment Plants and is not related to OSS. Therefore, it would not be appropriate to designate Clallam Bay as an MRA.
- Neah Bay is tribal land; therefore, Clallam County does not have jurisdiction over Neah Bay and its adjacent upland areas.

Inspection Requirements in the MRA

As described above, RCW 70.118A requires Clallam County EHS to ensure that all OSS within an MRA are functioning properly. The OSS Work Group recommends that Clallam County implement additional inspection requirements for the MRA, as follows:

- OSS owners within the MRA should be required to get a professional inspection as the first inspection required under this plan.
- After this initial inspection, OSS owners who receive County-sponsored or other approved training that is applicable to the system may inspect their own systems. Owners of gravity systems must inspect their systems every three years; owners of all other systems must inspect their OSS annually unless the manufacturer requires more frequent inspections. Manufacturers also may require the use of a certified inspector.

Additional Requirements within MRAs

The OSS Work Group also recommends that Clallam County EHS take the following actions in the MRA:

- Review its siting and design requirements for OSS and revise them if necessary to address the specific environmental concerns in the MRA.
- Make the MRA a high priority for water quality monitoring to assist the County in early identification of failing OSS.

Current Activities in the MRA

Identification of all Known, Assumed, and Unknown OSS in the MRA

RCW 70.118A requires Clallam County EHS to identify all OSS in the MRA by July 1, 2012. To begin to understand the scope of this task, Clallam County DCD used the permitting database to identify all parcels in the MRA, all parcels within the MRA that have OSS permits on record, and all parcels in the MRA that have at least one residential unit but have no OSS permit on record. The results of this analysis are as follows:

- **Known OSS:** the County's permit database shows records of approximately 9,700 residential OSS and 260 commercial OSS within the MRA
- **Assumed OSS:** the database shows that there are approximately 12,000 parcels in the MRA with at least one residential unit, and thus likely an OSS. Subtracting the 9,700 known systems yields an estimate of roughly 2,300 assumed OSS in the MRA. A similar analysis of commercial systems suggests that there are 60 assumed commercial OSS in the MRA.

Part 6 of this Plan describes in more detail how Clallam County EHS plans to find unknown and assumed systems. Known, assumed and unknown OSS are defined further in the Glossary, page 19.

Determination and Repair of Failing Systems

Currently, Clallam County EHS uses three methods to determine whether OSS are functioning appropriately:

- O&M reports submitted by professional inspectors;

- Site visits to "Septics of Concern" properties within the Sequim Bay - Dungeness Watershed Clean Water District; and
- Complaints from citizens about failing systems.

Clallam County EHS has been participating in a Targeted Watershed Initiative Grant (TWIG) for the Clean Water District. Under this program, Clallam County identified "Septics of Concern" properties within the Clean Water District that meet one or more of the following criteria:

- The property has no OSS on file;
- The OSS is more than 10 years old; and/or
- The OSS has a history of past problems or repairs with no documented follow-up.

Clallam County EHS staff conducted site visits to these "Septic of Concern" properties. These site visits consist of locating and assessing the septic system area in question and providing technical assistance to the owners of that septic system. Evaluators also conduct dye-testing to determine whether there are any suspected failures within the septic system, offer cost-share incentives for inspections and repairs, and provide information on Septic 101 classes.

As of January 2007, 149 site visits had been conducted, and eight properties were identified as discharging sewage into a road ditch or creek that drains into Dungeness Bay. In total, 24 identified "Septic of Concern" septic systems have been repaired through this grant and 14 septic systems have been repaired in areas abutting "Septic of Concern" sites. Through TWIG, the County held four classes on septic system management given for septic professionals, with approximately 78 professionals in attendance.

This program, which occurs entirely within the MRA, will continue in 2007. Clallam County EHS plans to seek additional funding to continue the program after 2007.

Electronic Data System of OSS in an MRA

Reporting Failing Systems to Clallam County

O&M providers performing inspections or pumping OSS in Clallam County currently submit reports in hard copy to Clallam County EHS. The Clallam County DCD is working on developing an interface that will allow O&M providers to submit reports online, but its target completion date is unknown. All data from inspection reports from OSS in the MRA will be entered into the permitting database described in Part 1.

Local codes require O&M providers to report OSS failures to Clallam County EHS immediately. In turn, Clallam County EHS responds immediately to an OSS failure. Clallam County EHS would like more funding and technical assistance from the Washington State Department of Health to assist it in finding and repairing failing systems.

Ensuring Electronic OSS Data Systems for Each MRA are Compatible within Clallam County

Clallam County EHS maintains the most comprehensive database of OSS data in the county. However, where feasible, Clallam County EHS should work with other agencies that maintain OSS data to ensure that the data systems are as compatible as possible.

DOH Contracts with Clallam County for Marine Recovery Area

Under RCW 70.118A, the Washington State Department of Health must enter into a contract with each local health jurisdiction, including Clallam County EHS, to implement its OSS Plan and to develop or enhance electronic data systems. The contract will include state funding. To be eligible for the contract and funding, Clallam County EHS must show how it will meet the goals listed in the table below.

Therefore, the table below describes how Clallam County EHS will meet certain goals and estimates its current capacity (personnel, financial assistance, hardware, software, etc.) to meet them. Clallam County EHS has minimal capacity through 2007 as a result of grant funding, but after 2007 will have no capacity to implement these programs without new funding. Please note that more detail about many of these activities is in Part 6 of this plan.

Table 2: Activities for Contract with the Washington State Department of Health

Goal	Prioritized Activity to Meet Goal	Current Capacity
Show progressive improvement in finding failing systems	1. Continue TWIG program of site visits to Septics of Concern properties. Expand the TWIG program to cover the entire MRA. 2. Require all OSS owners in the MRA to have a professional inspection as the first inspection required under this plan. 3. Develop and conduct trainings for those homeowners who wish to inspect their own systems 4. Develop O&M Provider training program. 5. Develop and distribute general education materials about new inspection requirements.	Currently, no capacity
Show progressive improvement in working with OSS owners to make needed system repairs	1. Continue TWIG program of providing technical assistance to Septics of Concern properties. Expand TWIG program to cover the entire MRA. 2. Develop grant and loan programs.	Currently, no capacity
Take steps to find previously unknown systems and ensure that they are inspected as required and repaired as necessary	1. Send a survey to owners of septics of concern within the MRA, asking for information about their OSS. 2. Continue TWIG program of site visits to Septics of Concern properties. Expand the TWIG program to cover the entire MRA. 3. Require all OSS owners in the MRA to have a professional inspection as the first inspection required under this plan. 4. Develop and conduct trainings for those homeowners who wish to inspect their own systems. 5. Develop O&M Provider training program. 6. Develop and distribute general education materials about new inspection requirements.	Currently, no capacity
Show progressive improvement in the percentage of OSS that is included in an electronic	1. Send a survey to owners of septics of concern within the MRA, asking for information about their OSS. Enter this information into the database.	Currently, no capacity

Goal	Prioritized Activity to Meet Goal	Current Capacity
database	2. Continue TWIG program of site visits to Septics of Concern properties. Expand the TWIG program to cover the entire MRA. 3. Require O&M professionals to submit inspection reports to the County 4. Require inspection at the time of property transfer. 5. Finish updating database with older records. 6. Track all O&M reports and results of TWIG site visits in Permit Plan. 7. Make the database available online	
Show progressive improvement in the percentage of OSS that has had required inspections	1. Continue TWIG program of site visits to Septics of Concern properties. Expand the TWIG program to cover the entire MRA. 2. Require all OSS owners in the MRA to have a professional inspection as the first inspection required under this plan. 3. Develop and conduct trainings for those homeowners who wish to inspect their own systems. 4. Develop O&M provider training program. 5. Develop and distribute general education materials about new inspection requirements.	Currently, no capacity

Summary

The Clallam County OSS Work Group made the following recommendations concerning the MRA:

- Designate one MRA, with the same boundaries as the existing Clean Water District.
- Require OSS owners within the MRA to get a professional inspection as the first inspection required under this plan. After this initial inspection, OSS owners who have received County-improved training may inspect their own systems unless manufacturers require certified inspectors.
- Clallam County EHS should review its siting and design requirements for OSS in the MRA and revise them if necessary to address the specific environmental concerns in the MRA.
- Clallam County EHS should consider the MRA a high priority for water-quality monitoring to assist the County in early identification of failing OSS.

Clallam County currently is implementing a progressive program to identify and repair failing OSS in the MRA. Its database is well equipped to maintain OSS records for the MRA.

Please see Part 6 for information about the MRA implementation strategy, resources needed, and timelines.

Part 5: Education

Introduction

This part of the Plan describes the OSS education activities that Clallam County EHS conducted prior to the promulgation of the new state law, and the activities that EHS plans to conduct to support the provisions of this Plan. This section relates to the following elements of WAC 246-272A-0015(1):

d) Facilitate education of homeowners regarding their responsibilities under this chapter and provide operation and maintenance information for all types of systems in use within the jurisdiction.
e) Remind and encourage homeowners to complete their operation and maintenance inspections.

Activities

CURRENT EDUCATION

Description of the current methods of educating the general public about the risks of OSS to public health

At the time of writing this plan, OSS education takes place through informative clinics, classes, presentations, and educational materials. Clallam County EHS developed "Septics 101" clinics in 1999-2000, and has offered them across the county since the spring of 2000. Since 2000, over 1500 homeowners have been educated about proper OSS management. Clinics have been held everywhere from Gardiner, in the far eastern section of the county, to Forks, in the West End. Clinic locations also included Sequim-Dungeness and Agnew/Carlsborg because of their high-risk nature as sensitive areas, as well as towns like Sequim and Port Angeles. Septic 101 classes have also been tailored to a variety of groups. For example, a Nitrates and Septics 101 class was held for Carlsborg property owners, watershed field trips were developed for 7th graders in the county, and classes were held for homeowner associations and community septic systems including the Alta Vista, Sun Meadows, and Monterra communities.

In addition to classes, Clallam County EHS has developed educational displays and gives presentations at numerous local events, including the annual Clallam County Fair, the Dungeness River Festival, and StreamFest.

Clallam County EHS also has produced a number of educational materials for Sequim Bay - Dungeness Watershed Clean Water District residents and also for county-wide distribution. These materials include the following:

- Full color, eight-page, newspaper-sized handouts entitled, "Take Care of Your Septic System," which are regularly distributed to designers, pumpers and O&M providers. This publication also was included as a section of the *Peninsula Daily News* and was a PUD insert in 2001.
- Six issues of the *Clean Waste Herald* were mailed to all residents in the Sequim Bay -Dungeness Watershed Clean Water District to inform them about issues relating to groundwater protection and water quality concerns. These newsletters were published in February 2001, December 2002, February 2003, Spring 2004, and Summer 2004.
- Warning stickers for those systems with a pump. These stickers were distributed to several designers initially and a large supply is still available.
- Postcards to notify homeowners of the need for pumping or minor repairs, as reported to the county on sanitary survey or O&M inspection forms.
- Placards for restaurants and other commercial establishments that are on a septic system. These placards have been mailed out on request and supplied to restaurants during inspections, and a large supply is still available.
- A flyer/handout for homeowners on a community septic system.
- A septic repair brochure, based on a Kitsap County brochure (copied with permission). This brochure has not been printed or used yet.

As part of an education plan for the Targeted Watershed Initiative Grant (TWIG) for the Clean Water District, Clallam County EHS has conducted a number of site visits for "Septic of Concern" properties within the Clean Water District. These site visits consist of locating and inspecting the septic system area in question and providing technical assistance to the owners of that septic system. Evaluators also conduct dye-

testing to determine whether there are any suspected failures within the septic system, offer cost-share incentives for inspections and repairs, and provide information on Septics 101 classes.

As of January 2007, 149 site visits had been conducted, and eight properties were identified as discharging sewage into a road ditch or creek that drains into Dungeness Bay. In total, 24 identified "Septic of Concern" septic systems have been repaired through this grant and 14 septic systems have been repaired in areas abutting "Septic of Concern" sites. Through TWIG, the County held four classes on septic system management given for septic professionals, with approximately 78 professionals in attendance.

Finally, a thorough overview of OSS maintenance is also available online, through the Clallam County website, at http://www.clallam.net/envhealth/html/os_maintenance.htm.

PLANNED EDUCATION

Description of additional or planned efforts to inform and educate the public on the need to care properly for OSS

As previously mentioned, Clallam County EHS has created a homeowners' guide to septic systems, entitled "Take Care of Your Septic". This guide is available from Clallam County EHS and will be available online soon. The guide explains how septic systems work and gives useful tips on properly caring for OSS.

Clallam County EHS plans the following new education and outreach efforts:

- Development of general outreach materials to explain new inspection requirements to landowners
- Development of a training course for Maintenance Professionals and the general public to ensure that they inspect OSS properly

Please see Part 6 for additional information about these plans.

CURRENT REMINDERS

Description of the current program to remind and encourage homeowners to complete O&M on their OSS as required

Clallam County EHS holds free "Septics 101" classes for homeowners and county residents who have onsite septic systems, think they might have an onsite septic system one day, or are interested in learning about onsite septic systems. Taught by Clallam County EHS staff and local onsite professionals, each Septics 101 class provides a two-hour overview of how septic systems work and how to responsibly monitor and maintain them. Other issues covered during class include how to locate a septic system, the different types of septic systems, how to determine what type of system is needed for one's home, and the cost of septic systems. Expert panelists are also available for homeowners' individual questions before and after the class. A portion of participants are evaluated on their OSS knowledge before and after the class in order to evaluate the program's effectiveness. Presently, all classes are held at the Dungeness River Audubon Center, Railroad Bridge Park (although as described above, clinics have been held throughout the county) and are offered roughly once per month.

The permitting process also offers Clallam County EHS an opportunity to encourage homeowners to complete O&M. Septic designers must submit an as-built drawing of a newly installed OSS, and the drawing becomes part of the County's records. When the property owner or interested buyer requests a copy of the drawing, Clallam County EHS uses this opportunity to remind homeowners and/or contractors of the O&M and inspection requirements associated with their systems.

Certain permits require an O&M contract. For example, the manufacturer requires that OSS owners sign an O&M contract if they have a Glendon Biofilter. If an OSS owner wishes to have their O&M contract requirements waived, they may be required to obtain approval from Clallam County EHS.

PLANNED REMINDERS

Description of planned or additional ways of notifying homeowners to complete required O&M on their OSS

As described in Part 6, Clallam County EHS plans to implement the following methods of notifying landowners that inspections are due:

- Develop an automated inspection notification function in Permit Plan.
- Develop a process to individually notify property owners/users of inspection requirements (for example, a post card or automated phone call).

Clallam County EHS also plans to hold more Septics 101 clinics in the West End. While citizen interest has been low, a community need still exists for the information. Before this plan can move further, Clallam County EHS will need to obtain more funding for advertising in the West End.

MEASURED EFFECTIVENESS

To estimate the effectiveness of outreach activities for OSS O&M, in 2006 Clallam County EHS surveyed Septics 101 class participants on their knowledge of OSS before and after attending Septics 101 classes between October 2004 and December 2005. Over 50% of the follow-up surveys were completed and returned. Clallam County EHS also provides evaluation forms at the end of Septics 101 classes. Clallam County EHS plans to analyze this data in 2007 to measure the effectiveness of the Septics 101 classes.

Furthermore, Clallam County EHS is conducting effectiveness monitoring for its TWIG grant. With the aid of the TWIG grant, many OSS have been repaired and Clallam County EHS has been monitoring the effectiveness of these repairs by studying fecal coliform levels after the repairs have taken place. OSS care is also reinforced in the Sequim-Dungeness area via door-to-door education on proper care of septic systems.

Summary and Prioritization of Activities

Clallam County EHS plans the following educational activities:

- Development of general outreach materials to explain new inspection requirements to landowners
- Development of a training course for Maintenance Professionals and the general public to ensure that they inspect OSS properly
- Develop an automated inspection notification function in Permit Plan.
- Develop a process to individually notify property owners/users of inspection requirements (for example, a post card or automated phone call).

Please see Part 6 for a discussion of resources needed and timelines for implementation.

Part 6: Implementation Plan and Summary Timeline

This part contains three major sections. It reiterates the OSS Work Group recommendations, describes the activities that Clallam County EHS currently undertakes, and sets forth a plan for implementing the OSS

Work Group recommendations based upon available resources and a risk-based approach to implementation. It describes the necessary implementation actions in two phases, and concludes with an estimate of the resources needed to implement this plan fully.

Clallam County OSS Work Group Recommendations

The Clallam County OSS Work Group recommended that the County take the following actions to fulfill the requirements of Chapter 246-272A WAC and RCW 70.118A.

OSS Inspections

- The Work Group believed the frequency of the state's OSS inspection requirements is adequate: conventional gravity systems must be inspected at least once every three years, and all other systems must be inspected at least once every year. The Work Group did not recommend more frequent inspection requirements.
- For conventional gravity systems (which are required by state law to be inspected every 3 years), OSS owners who have received County-approved training may inspect their own systems.
- For pump systems (which are required by state law to be inspected annually), OSS owners who have received County-approved training may inspect their own systems (unless the manufacturer requires more frequent inspections and/or requires a certified inspector).
- The County should coordinate with the Washington On-Site Sewage Association (WOSSA) to develop the training for OSS owners. The County should pursue grants to offset some of the owners' costs for the trainings. Separate training should be offered for owners of conventional gravity systems and pump systems. All trainings should include:
    - ✓ Hands-on training (as opposed to classroom or video instruction only);
    - ✓ A certification process to denote who has successfully completed the course and when the certification must be updated through a refresher course.
- For any properties that do not have an as-built diagram for their property, a professional inspection will be required before the owner can begin conducting their own inspections.
- For community and commercial OSS, annual professional inspections should be required.
    - ✓ If owners of community or commercial systems can demonstrate that their waste production is comparable to typical single-family residential volumes and strength, and if the owners have received County-approved training, they may inspect their own systems.
    - ✓ Any fee or assessment for these systems would need to be based on volume and/or strength of waste so that it is comparable to the assessments or fees paid by homeowners (see financing recommendations below).

Marine Recovery Areas

- One MRA should be designated, with the same boundaries as the existing Clean Water District.
- OSS owners within the Marine Recovery Area should be required to get a professional inspection as the first inspection required under the new OSS plan. After this initial professional inspection, OSS owners who have received County-approved training may inspect their own systems.
- Clallam County should review its siting and design requirements for OSS in the MRA and revise them if necessary to address the specific environmental concerns in the MRA.
- The MRA should be a high priority for water quality monitoring to assist the County in early identification of failing OSS.

AREAS WHERE OSS MAY POSE AN INCREASED THREAT TO PUBLIC HEALTH

- The following areas should be listed as sensitive areas in the OSS Management Plan:
  - ✓ Lake Sutherland (and its drainages)
  - ✓ Lake Pleasant
  - ✓ Lake Crescent
  - ✓ Lake Ozette
  - ✓ The Carlsborg area
  - ✓ Frequently Flooded Areas
  - ✓ Commercial and Recreational Shellfish Growing Areas
- Clallam County should review its siting and design requirements for OSS in sensitive areas and revise them if necessary to address the specific environmental concerns in each sensitive area.
- Sensitive areas should be high priorities for water quality monitoring to assist the County in early identification of failing OSS.
- The plan should be flexible enough to allow the County to identify new sensitive areas if data show that OSS are posing increased public health risks. The County should track all water quality monitoring data collected in the County, including Streamkeepers and Surfriders water quality monitoring data.

COMPLIANCE

- The County's compliance program should include five basic elements:
  1. A strong education program that informs OSS owners of the new requirements and the benefits of maintaining and inspecting their OSS.
  2. Incentives to encourage OSS owners to inspect their systems and supply the required reports to the County. The County should consider fee-based incentives (e.g. lower fees or assessments for those who submit required reports and higher fees or assessments for those who do not). Financial assistance should also be provided to low-income OSS owners.
  3. Simple reporting requirements. Required forms should be easy to complete and return to the County.
  4. Risk-based prioritization for compliance actions. Clallam County EHS should prioritize its efforts based on risk to public health and the environment. Thus, the County's highest priorities should be systems that are on shorelines, OSS near wells that could contaminate drinking water, etc.
  5. Penalties as a last resort to achieve compliance. Penalties should only be issued after warnings have been given and after education, incentives and other compliance actions have failed.
- The County should require proof of compliance when County permits are issued, including:
  - ✓ Building Permits;
  - ✓ Land Division (e.g. short plats, long plats, conditional use permits, site plans);
  - ✓ Variances to Critical Areas Ordinance or Certificate of Compliance to Critical Areas Ordinance;
  - ✓ Shoreline Permits;
  - ✓ Food Establishment Permits (new or renewal);
  - ✓ Certificate of Occupancy for commercial building permits;
- The County should require a seller to submit proof of a successful professional OSS inspection prior to the transfer or sale of property.

FINANCING

- The County should be funded to do the following tasks, in accordance with the new state law:
  - ✓ Developing and maintaining a database of records for all known OSS in the County;
  - ✓ Ensuring compliance with state inspection and repair requirements;
  - ✓ Providing ongoing education for OSS owners regarding proper OSS operation and maintenance;
  - ✓ Identifying areas where OSS could pose an increased public health risk, and developing risk-based operations and maintenance (O&M) requirements;
  - ✓ Designating a Marine Recovery Area (MRA) in land areas where OSS contribute to marine water quality problems, and developing a strategy for OSS management in the MRA;
  - ✓ Identifying existing failing systems in the MRA, and ensuring that the owner completes the necessary repairs; and
  - ✓ Identifying all unknown OSS within the MRA by 2012.
- Funding should also be provided for:
  - ✓ Financial assistance to low-income OSS owners to offset increased inspection costs;
  - ✓ Low-interest loans for OSS owners to pay for OSS repair and replacement;
  - ✓ Financial incentives to increase compliance with new inspection requirements. However, funding devoted to incentives needs to balance the need to keep the fee or assessment as low as possible.
- A fee or assessment should be collected via the property tax billing and collection process. All fees collected should be designated exclusively for implementation of the OSS plan; no funds should be diverted to the County's general fund.
- The fee should be assessed to all OSS in the County, but not to those on sewer systems.
- The fee should be in the range of $10-20 per year ($1.00 to $1.50 per month)

Current Programs

The implementation plan described below should be considered in light of the County's on-going efforts to ensure proper management of septic systems. The County employs both permitting/compliance strategies and outreach/education strategies, as described below.

PERMITTING/COMPLIANCE PROGRAMS

The County's permitting process ensures that septic systems are designed, installed and operated in a manner which will protect the health of the public and the environment. Washington State Licensed Septic System Designers or Engineers submit plans for each proposed system to the Environmental Health Division. The designer and a County Environmental Health Specialist evaluate the soil and site conditions and determine what type(s) of septic systems the site can support. The Specialist reviews the OSS plan and works with the Designer to ensure all requirements are met. Both the Designer and the Specialist are informed of the initiation of installation, and the Designer and/or the Specialist inspect the system at certain stages of installation. In cases where proprietary devices or commercial/community systems are proposed, the owner and an approved Operation and Maintenance professional will make a formal agreement of their roles in ensuring that the system will be regularly inspected and maintained.

The Clallam County Department of Community Development cooperates with EHS to ensure that sewage disposal in proposed subdivisions will comply with EHS site feasibility standards. Applications for subdivisions which propose on-site sewage disposal must be accompanied by on-site soil evaluation application forms; land may not be divided unless it can be shown that each lot will have sufficient setback

area for a well and each well's source will be safe from septic tank drain fields; and the County Health Officer must approve that each subdivision plan meets County requirements for sewage disposal.

Clallam County EHS ensures compliance with septic system installation and operation codes through a number of methods. Citizens may submit complaints to EHS about improper disposal of sewage or improperly functioning septic systems, or OSS professionals may notify the County that a system is failing. The County then conducts an investigation, which usually involves visiting the site, assessing the problem, and working with the owner to correct the problem and prevent future problems. In some cases, Clallam County EHS uses enforcement measures to ensure that the property owner repairs or replaces a failing system.

Additionally, if a Sanitary Survey reveals that the system needs repair or pumping, EHS can withhold development permits until repairs or O&M occur. Applications for development permits, such as building permits for home additions, may require a Sanitary Survey under the following conditions:

- There is no record of a septic permit, installation or inspection of an existing system
- At least five years have passed since system installation without a sanitary survey
- Three to five years have passed since the last sanitary survey

Currently, Clallam County EHS lacks capacity to conduct extensive enforcement. However, Clallam County EHS holds protection of public health as its highest priority, and works to ensure that all known failing systems are repaired or replaced. Generally, due to funding constraints, Clallam County EHS cannot follow up to make certain that OSS owners conduct O&M activities.

EDUCATION/OUTREACH PROGRAMS

Clallam County EHS conducts outreach and education activities targeted mainly to septic system owners and septic system professionals through door-to-door visits, clinics, classes, presentations, and educational materials. Many of these activities are funded through a Targeted Watershed Initiative Grant (TWIG) for the Sequim-Dungeness Watershed. This grant was obtained jointly by the County and the Jamestown S'Klallam Tribe.

Clallam County EHS has been offering "Septics 101" classes since 2000, with specialized versions tailored to the specific audience. These two-hour classes, offered seven to twelve times per year, review how septic systems work and how to monitor and maintain them. The County has given presentations to the local realtors association, the building association and various homeowners associations regarding the need for maintenance and inspections, and has developed a class for realtors.

Under the TWIG program, Clallam County has been identifying "Septics of Concern" properties following metrics described on page 18 of this plan. County staff make site visits to identified properties, offering technical assistance and conducting dye-tests. Residents who attend septic education courses receive cost-shares for inspections and repairs. This program has led to 149 site visits and 38 repairs..

In addition to the in-person outreach and education described above, Clallam County EHS offers information and educational materials through their website, http://www.clallam.net/EnvHealth/html/eh_onsite.htm. These resources include a number of downloadable brochures, information on basic OSS operation and maintenance, details on the permitting process, drain field landscaping, septic tank additives, an on-line complaint form, and lists of licensed or permitted septic system designers, installers and pumpers.

Clallam County EHS also offers classes on alternative sewage system management for septic professionals, which have been attended by 78 professionals as of January 2007. The County O& M specialist has worked with professionals to develop a program for processing O&M agreements with homeowners who own septic systems with pumps. The EHS website has a number of resources for professionals, including relevant publications, fee schedules, and links to professional associations.

Assuming that Clallam County EHS maintains its current level of funding, these activities will continue beyond 2007. However, it is important to note that the TWIG program is grant-funded, and that funding will expire in 2007.

Implementation Plan

This section describes the County's plan for implementing the OSS Work Group's recommendations, based on available funding.

PHASE 1: START-UP PROGRAMS (JULY 2007 THROUGH DECEMBER 2009)

Before Clallam County EHS can implement the Work Group's recommendations and the requirements of Chapter 246-272A WAC and RCW 70.188A, it must ensure that regulatory, programmatic, administrative, financial, and public-outreach systems are in place for effective implementation. In particular, Clallam County EHS believes that successful implementation of the OSS Management Plan will depend on three key factors:

1. **Establishing an adequate, stable funding source** to build Clallam County EHS capacity to address the increased need for administrative, database management, regulatory, educational, and field activities.
2. **Creating detailed work plans** for new programs. The OSS Work Group recommended new programs to fulfill the new state requirements, but many details of these new programs remain unresolved. Therefore, an important activity in Phase I will be detailed scoping of each of these programs. Clallam County EHS will consider the list of comments on this plan (found in Appendix D) during this scoping, and will reconvene the OSS Work Group periodically to review drafts of program designs. The details of individual programs will hinge on the funding available for implementation.
3. **Using a phased implementation approach** that begins with sufficient notice, information, and education to homeowners about their O&M responsibilities. The success of the inspection program will depend upon OSS owners' willing acceptance of their responsibility for maintaining their systems.

Clallam County EHS will make establishing a stable funding source, developing the details of new programs, and educating the public its priorities in the initial stages of plan implementation.

The remainder of this section details the implementation activities that Clallam County EHS plans to conduct between July 2007 and December 2009. Please note that *activities that will need to continue on an ongoing basis are in italics*.

Make Regulatory Amendments

Implementing the Work Group's recommendations and the provisions of Chapter 246-272A WAC and RCW 70.188A will require a number of updates to Clallam County Code Chapter 41.20, the On-site Septic System Ordinance. Chapter 41.20 must be amended to include the Marine Recovery Area designation, OSS maintenance provider and homeowner inspector approval processes, and enforcement language.

Implementing the recommendations may also require updates to the Comprehensive Plan and Critical Areas Ordinance. Other regulatory issues need to be addressed and codified.

In particular, Chapter 41.20 would need to be amended to include at least the following elements:

- Establishing the boundaries of the MRA, which will be the same as those of the Sequim Bay - Dungeness Watershed Clean Water District, as the OSS Work Group recommended.
- Inspection requirements in the MRA and county-wide
- Professional Maintenance Provider certification/license requirements
- OSS owner "self service" approval requirements
- Enforcement procedures for O&M non-compliance
- Requirement for OSS inspection at time of property transfer
- *Code amendment if new sensitive areas are identified*

In addition, Clallam County EHS will coordinate with Clallam County DCD to incorporate MRA activities in the County's next Comprehensive Land Use Plan update.

As part of its regulatory amendment process, Clallam County EHS also will review its siting and design requirements for OSS in sensitive areas and the MRA, as recommended by the OSS Work Group, and update them as necessary to address environmental and public health concerns specific to each area.

Develop Inspection Programs

The Clallam County OSS Work Group recommended that OSS owners that receive County-approved training be allowed to inspect their own systems, following the schedule of inspections in state law. OSS owners in the MRA must have an initial professional inspection, as must owners of systems without an as-built diagram on file with the County. Owners of community and commercial systems also must have professional inspections, unless they can prove their systems are similar in volume and strength to residential systems and receive County-approved training. Clallam County EHS plans to honor these recommendations.

To implement these recommendations, Clallam County EHS will work with the Washington On-Site Septic Association (WOSSA) and/or other qualified entities to develop a training program for homeowners, and with WOSSA, the Washington Department of Health, and/or other qualified entities to develop a training and certification program for professional inspectors. All training programs will include the following, as recommended by the OSS Work Group:

- Hands-on training (as opposed to classroom or video instruction only); and
- A certification process to denote who has successfully completed the course and when the certification must be updated through a refresher course.

In addition, Clallam County EHS recognizes that many details of the inspection programs remain to be finalized. During Phase I, EHS will work with the OSS Work Group, WOSSA, the Department of Health, and other partners as necessary to establish the parameters of the inspection programs. The comments received on drafts of this plan highlighted many of the questions that remain to be resolved, such as the following:

- Whether trained citizens will be allowed to inspect neighbors' OSS;
- How much the trainings will cost, where they will be held, and how long they will last;
- Whether Clallam County EHS will audit a certain percentage of homeowner and professionally inspected OSS;
- Timeframes for inspections; and
- How Clallam County EHS will define success.

Specific activities that Clallam County EHS will undertake in Phase I will include the following:

- Work with partners to establish the parameters of inspection programs, and to develop the citizen training program.
- Work with Department of Health and other partners to establish the professional inspection training program.
- Determine a means to evaluate the success of this effort, such as the number of OSS owners submitting septic inspection notices.
- *If funding allows, begin to offer on-going citizen and professional inspection training programs.*

Develop Compliance Program

The OSS Work Group recommended that Clallam County EHS implement a multi-faceted program to encourage compliance with the new regulations, and Clallam County EHS plans to honor this recommendation to the extent possible given available funding. However, the details of this compliance program remain to be developed, and will depend upon available funding. During Phase I, Clallam County EHS will work with the OSS Work Group, the Washington Department of Health, the Clallam County Board of Health, and other partners as necessary to finalize the scope of the compliance program.

Depending upon available funding, the compliance program will include the following elements, as recommended by the OSS Work Group:

1. A strong education program that informs OSS owners of the new requirements and the benefits of maintaining and inspecting their OSS.
2. Incentives to encourage OSS owners to inspect their systems and supply the required reports to the County. The County should consider fee-based incentives (e.g. lower fees or assessments for those who submit required reports and higher fees or assessments for those who do not). Financial assistance should also be provided to low-income OSS owners.
3. Simple reporting requirements. Required forms should be easy to complete and return to the County.
4. Risk-based prioritization for compliance actions. Clallam County EHS should prioritize its efforts based on risk to public health and the environment. Thus, the County's highest priorities should be systems that are on shorelines, OSS near wells that could contaminate drinking water, etc.
5. Penalties as a last resort to achieve compliance. Penalties should only be issued after warnings have been given and after education, incentives and other compliance actions have failed.

The County also will require proof of inspection when issuing County permits, and prior to the transfer or sale of property, as the OSS Work Group recommended.

Comments received on drafts of this plan suggest areas that need further scoping, such as the following:

- Whether the compliance program will include penalties for fraudulent inspection reports;
- How the County will verify that repairs are made; and
- What process Clallam County EHS will use to monitor program effectiveness.

Specific activities that Clallam County EHS will undertake in Phase I will include the following:

- Work with partners to finalize the details of the compliance program.
- As appropriate, make changes to permitting requirements to require proof of OSS inspection when issuing County permits.
- Determine measures to evaluate the success of the program, such as the number of OSS owners submitting inspection reports.
- *If funding allows, begin to implement the compliance program, particularly elements such as outreach programs.*

Establish Financial Systems

As noted above, implementation of this plan depends upon the development of an adequate, stable funding source that will help Clallam County EHS build the necessary capacity. During Phase 1, Clallam County EHS will conduct the following activities to establish a funding source and develop and administer grant and loan programs:

- Establish permanent, adequate, stable funding for O&M program. The OSS Work Group recommended that this funding come from a property fee or assessment of $10-$20 per year assessed on all OSS in the county, and be dedicated to implementation of the OSS Management Plan.
- Enter into a contract with the Washington Department of Health to implement aspects of this implementation plan related to the Marine Recovery Area (see Part 4 for additional detail).
- Develop grants and loans program for OSS repair/replacement (hardship cases).
- Develop low-cost/no cost inspection program for hardship cases.
- *Administer revenue tracking in annual County budget.*
- *Administer grant/loan program.*
- *Administer (office) and conduct (field) inspection program for hardship cases.*

Enhance Notification and Records Tracking and Retention

The existing Permit Plan database is a robust one that meets many needs. However, to best implement the new OSS requirements, Clallam County EHS envisions enhancing its database in the following ways if funding is available:

- Allow OSS owners and users, the OSS industry, and internal users to input inspection reports over the internet.
- Make OSS permit, inspection, and as-built records accessible over the internet to homeowners, realtors, and the OSS industry.
- Ground-truth questionable OSS permits to verify that the systems have been installed and update the database accordingly. The goal is to have a database that is as accurate as possible.
- Automate generation of lists of the following:
    - Which parcels in the county have OSS;
    - How many systems are being inspected on the necessary frequency; and
    - Which systems are not being inspected.
- Automate notification and reminder letters based on inspection status.
- Track reported and repaired OSS failures.
- Maintain lists of homeowners and OSS professionals who have been certified to conduct OSS inspections.
- Automate notification and reminder letters for certification renewal based on certification status.
- Begin recording GPS coordinates for all new and repaired OSS and add the locations to the database.
- Create reports and maps of OSS in Clallam County, their type, and their status.
- Track the inspection incentive program, if one is created.
- Track compliance actions.

On-going activities associated with these database enhancements will include the following:

- *Notify OSS owners of the need to inspect systems.*
- *File and maintain OSS inspection, repair, and compliance records.*
- *Notify certified OSS owners and professionals of the need to update inspection training.*

- *Create reports and maps as needed.*
- *Notify field staff when compliance actions are needed.*

As part of its efforts to enhance the database, Clallam County EHS also plans to develop ways to use the database to measure the effectiveness of new programs.

In addition, Clallam County DCD will be working on three changes to the database which will assist EHS with its efforts to track OSS records and make the database accessible over the internet. These efforts include the following:

- Develop capacity to maintain the digital relationship between permitted activities and the actual parcel upon which activities are occurring, as parcels are split and reconfigured.
- Integrate GIS parcel layer with the parcel tables already in the permit database.
- Develop a way to make the database accessible over the internet for select purposes.

Conduct General Outreach and Education

As noted above, Clallam County EHS believes that the success of this program depends on landowners' willingness to accept responsibility for their OSS. An effective outreach and education program will increase the likelihood that landowners know about and understand the new inspection requirements and why they are beneficial to the community. To that end, Clallam County EHS plans to pursue the following activities during Phase 1:

- Develop general public information/outreach on OSS management requirements.
- *Continue general education on OSS management requirements.*

Begin to Identify all OSS in the MRA

RCW 70.118A requires Clallam County EHS to identify all OSS in the MRA by July 1, 2012. Currently, Clallam County EHS conducts a "Septics of Concern" program in the MRA that targets properties that have no OSS records on file, have OSS that are ten years old or older, or have OSS with a history of past problems or repair with no documented follow-up. (Please see Part 4 or the current activities section above for more detail on this program.)

To begin to comply with the new state requirement, Clallam County EHS will adopt the following risk-based approach to its Septics of Concern program.

- Using its GIS capabilities, Clallam County DCD will create a map that shows the following zones within the MRA:
    1. Properties along marine shoreline;
    2. Properties along rivers/creeks/tributaries; and
    3. Properties in areas of high nitrates in groundwater.
- Identify septics of concern in these priority areas via a paper file search to prioritize households to contact.
- Send a survey to the owner of each septic of concern asking for information about the OSS.
- Develop specific public information/outreach on OSS management requirements within the MRA.
- Develop a work plan for continued site visits, based on information received from the survey and available funding.
- Using its GIS capabilities and building on information gleaned from the survey, site visits and inspection reports, Clallam County will create a map that identifies known and unknown systems in the MRA. This map also will indicate whether OSS owners are in compliance with inspection

requirements and identify systems that may be failing. Clallam County DCD will produce the first version of this map by October 31, 2008, and will update the map regularly as a tool to track progress toward identifying all OSS in the MRA.

- *Implement outreach and education within the MRA.*
- *Conduct work plan if funding is available.*

Clallam County EHS will consider this program successful if noticeable progress is made toward identifying unknown OSS in the MRA, and outreach to OSS owners in the MRA goes smoothly.

Please note that funding for the "Septics of Concern" program runs out in 2007; to pursue these goals, additional funding will be required.

PHASE 2: PROGRAM IMPLEMENTATION (JANUARY 2009 AND BEYOND)

Once all regulatory changes are made, funding is secure, Maintenance Providers are licensed, a citizen inspector program is in place and the public is informed about their responsibilities for periodic septic system inspections and reporting, on-the-ground implementation can commence. This section describes activities that Clallam County EHS will conduct to work toward full implementation of the Work Group's recommendations and the state-required OSS inventory within the Marine Recovery Area. One key feature of the County's plan for Phase 2 is to expand the OSS inventory program to all areas where OSS may pose an increased risk to public health, as funding allows. Phase 2 will overlap with Phase 1 for one year.

Please note that although Clallam County EHS intends to implement all of the activities described below, actual implementation will depend upon program funding.

Notify the Public

Using all media tools such as direct mailings, newspaper articles, paid advertising, and public service announcements through newspaper, radio, and cable TV, Clallam County EHS will announce the OSS inspection and reporting requirements and provide information on timelines for inspections to begin.

If programs are in place to train homeowners in performing their own inspections, Clallam County EHS will provide written information on how to complete and submit inspection reports. The information will be posted on the County's website, and be available through direct mailings. The information will also be part of the ongoing Septics 101 homeowner workshops.

Ensure Adequate Inspection Capacity

Clallam County EHS will work with Washington State On-site Sewage Association (WOSSA) to provide approved training programs to Maintenance Providers and landowners. The goals of this training are to ensure that adequate service capacity exists within the local OSS industry to perform the required inspections, and that those landowners who choose to inspect their own systems are sufficiently trained.

Track Inspection Activity

If adequately funded, Clallam County EHS will hire additional staff to perform administrative duties such as entering OSS inspection records and septic pumping records into the Permit Plan database, tracking inspection activities, and generating reports. These activities are necessary to administer the inspection program properly.

Identify All OSS in the MRA and Ensure Proper Function

If adequately funded, Clallam County EHS will hire additional staff to expand the OSS inventory work begun in Phase 1, modeled on the existing Septics of Concern program. These door-to-door visits will help to identify all OSS in the MRA and ensure that they are functioning properly. Staff will engage landowners regarding OSS maintenance and inspection requirements and collect information regarding unknown systems. Staff will work with landowners to fix systems that are found to be failing. This program, coupled with information gathered from other sources – such as inspections at the time of property sale or transfer, inspections required before building permits are issued, and citizen compliance with the new regulations – should result in identification of all OSS in the MRA by July 1, 2012.

Address Areas Where Nitrates are an Issue

As noted above, Clallam County EHS places high priority on areas within the MRA where nitrates in groundwater are a known problem. Clallam County EHS will undertake a study of various septic system designs (i.e., pressurized sand lined trench, aerobic treatment devices, sand filters, etc.) to determine their nitrogen reduction efficiencies. Based upon this information, Clallam County EHS will identify the best design and optimum operational conditions for nitrogen reduction efficiencies of at least 50%.

Identify All OSS in Areas Where OSS May Pose an Increased Health Risk

Once all OSS in the MRA have been identified and evaluated, Clallam County EHS will expand the Septics of Concern program to other OSS "sensitive" areas. The OSS Work Group recommended that these areas include the following:

- Lake Sutherland (and its drainages)
- Lake Pleasant
- Lake Crescent
- Lake Ozette
- The Carlsborg area
- Frequently Flooded Areas
- Commercial and Recreational Shellfish Growing Areas

Clallam County EHS also will consider Critical Aquifer Recharge Areas, the Sequim Bay – Dungeness Watershed Clean Water District, Carlsborg and Lake Dawn sensitive areas for the purposes of this plan. Note that Lakes Crescent and Ozette are under Olympic National Park jurisdiction; Clallam County does not have jurisdiction over these lakes, or other sensitive areas on federal or tribal lands.

As part of this program, Clallam County EHS also will continue to review water-quality monitoring data collected by various entities in the county. Clallam County EHS will add to this list of sensitive areas if new data show that OSS are contributing to water-quality declines in other areas.

Conduct Public Outreach

Public education activities will increase. Clallam County EHS will hold the current "Septics 101" classes county-wide and offer it to targeted audiences.

Regular newsletters (such as the *Clean Water Herald*) will be directly mailed to all residents on OSS. Articles will report the success of the OSS maintenance and inspection program, remind homeowners about inspection schedules, and advertise upcoming Septics 101 classes, among other topics.

Measure Effectiveness

The County will determine metrics to evaluate the effectiveness of its efforts. These may include measures of public acceptance, such as the number of people submitting septic inspection notices, or measures of database completeness, such as the number of unknown systems identified.

Resources Needed to Implement this Plan

As mentioned above, Clallam County EHS currently does not have sufficient staff and monies to implement all of the activities outlined in this chapter. Clallam County EHS estimates that annual costs to implement this plan will total approximately $300,000, including funding for two environmental health specialists, two permit technicians and program support; but not including database enhancement activities, the costs of which are detailed below.

Necessary database, web and application development is estimated to cost $25,000 to $50,000. Determining the current parcel location as needed for about 1000 cases is estimated to cost $35,00 to $70,000 based on an estimate of 1 hour per case and a cost of $35 to $70 per hour. Finding and describing the necessary data for the OSS not in the current permit system is estimated to cost $1,533,000 for the whole county and $991,200 in the Marine Recovery Area. This cost is based on an estimate of an average of 6 hours of field and office work per site visit at $70 per hour. Ongoing tasks which would largely be part of the new permit technicians' duties have not been priced. These would include filling out the necessary system information for the assumed OSS or programming PermitPlan to filter data submitted over the web.

Clallam County EHS expects to refine this estimate as it develops a funding mechanism during Phase I of this implementation plan.

Plan Checklist

C	R	P	**C**=Complete, **R**=Lack of Resources, **P**=Completed prior to Plan
☐	☐	☐	**Part 1 – Database Enhancement**
✓	☐	☐	OSS Inventory • Describe current software and hardware • Age of database, schedule of maintenance • What percentage of OSS in jurisdiction is recorded? • What fields are recorded: Age, location, technology, etc? • Ensure MRA records' compatibility with other OSS records
✓	☐	☐	Operation, Monitoring and Maintenance – Record Maintenance • Ensure timely reports of failures within MRAs • Describe current O&M reporting requirements • Current data management • How are data used now? Maps, permit tracking, etc • What changes will be made to the hardware and software? • How will data be managed?
✓	☐	☐	Summarize and prioritize activities with timeline
✓	☐	☐	**Part 2 – Coordination with planning on sensitive areas**

C	R	P	**C**=Complete, **R**=Lack of Resources, **P**=Completed prior to Plan
✓	☐	☐	Describe • Jurisdictional environment • Each sensitive area with maps • Methodology for determining MRAs • Coordination with all Planning Entities within the Jurisdiction • Resources necessary for these activities
✓	☐	☐	Conduct a SEPA review (see Appendix D)
✓	☐	☐	Summarize and prioritize activities with a timeline
✓	☐	☐	**Part 3 Operation, monitoring and maintenance in sensitive areas**
✓	☐	☐	Describe • Current O&M requirements common to all areas throughout the LHJ • Current O&M requirements in sensitive areas • O&M Enforcement Activities • Resources necessary for these activities
✓	☐	☐	Summarize and prioritize activities with a timeline
✓	☐	☐	**Part 4 – Marine Recovery Area Strategy**
✓	☐	☐	Describe • How failing OSS within MRAs will be found and repairs ensured • How all OSS within MRAs will be located • How OSS data in MRAs will be managed • Resources needed implement the MRA strategy
☐	☐	☐	Contract with DOH
✓	☐	☐	Summarize and prioritize activities with a timeline
✓	☐	☐	**Part 5 Education**
✓	☐	☐	Describe • Current and planned education efforts • Current and planned OSS reminders system • Resources needed to implement these activities
✓	☐	☐	Summarize and prioritize activities with a timeline
✓	☐	☐	**Part 6 – Plan Summary - For each Part 1-5:**
✓	☐	☐	Summarize • Current practices • Agency goals and objectives • Strategies for meeting agency goals and objectives • Resources necessary, including those needed to write the management plan • Resources available
✓	☐	☐	Include with the Plan Summary • Completed checklist with detailed answers to questions • Measurable program objectives • Timeline - Gantt chart or equivalent

Timeline

The graphic below shows the timeline for implementation of this OSS Management Plan, assuming that adequate funding is available. It also prioritizes activities during Phase I, and illustrates the fact that the Clallam County EHS current programs will continue throughout implementation of the plan.

Clallam County OSS Management Plan Proposed Implementation Schedule	Priority	Current Capacity	2007 1-Jul	2008	2009	2010	2011	2012 1-Jul	2013 and Beyond		
CURRENT PROGRAMS											
Permitting		Funded									
Compliance		Needs Funding									
Education and Outreach		Needs Funding									
Submit OSS Management Plan to WA Dept. of Health		Funded	X								
PHASE I: START UP PROGRAMS											
Make Regulatory Amendments	1	Funded									
Establish Financial Systems	2	Funded									
Enhance Notification and Records Tracking and Retention	3	Needs Funding									
Develop Inspection Training Programs	4	Needs Funding									
Develop Compliance Program	5	Needs Funding									
Conduct Outreach and Education	6	Needs Funding									
Begin to Identify all OSS in the MRA	7	Needs Funding									
PHASE II: PROGRAM IMPLEMENTATION											
Notify Public	TBD	Needs Funding									
Ensure Adequate Inspection Capacity	TBD	Needs Funding									
Track Inspection Activity	TBD	Needs Funding									
Identify all OSS in MRA and Ensure Proper Function	TBD	Needs Funding						X			
Address Areas Where Nitrates Are an Issue	TBD	Needs Funding									
Identify all OSS in Areas Where They May Pose Additional Risk	TBD	Needs Funding									
Conduct Public Outreach	TBD	Needs Funding									

X = Date required by law

Glossary of OSS-Related Terms

Clallam County EHS developed this glossary from several sources, including Chapters 246-272 and 246-272A WAC and a variety of Washington State Department of Health OSS recommended standards and guidance documents.

"Aerobic Treatment Unit (ATU)" is a container of various configurations that provide for aerobic degradation or decomposition of wastewater constituents by bringing the wastewater into direct contact with air by some mechanical means.

"Additive" means a commercial product added to an on-site sewage system intended to affect performance or aesthetics of an on-site sewage system.

"Alternative system" means an on-site sewage system other than a conventional gravity system or conventional pressure distribution system. Properly operated and maintained alternative systems provide equivalent or enhanced treatment performance as compared to conventional gravity systems.

"Approved" means a written statement of acceptability, in terms of the requirements in this chapter, issued by the local health officer or the department.

"Area of Special Concern" means an area of definite boundaries delineated through public process, where a local health officer, or the department in consultation with the health officer, determines additional requirements for on-site sewage systems may be necessary to reduce potential failures, or minimize negative impact of on-site systems upon public health.

"As-built" (changed to Record Drawing in July 1, 2007 regulations) means a complete and detailed drawing of the septic system as installed and including, but not limited to, location of drainfield and reserve area, accurate measurements and initial setting of electrical or mechanical devices. The Record Drawing is submitted to County Health Jurisdictions upon completion of the new construction, alteration or repair of an OSS.

"Assumed OSS" has no records but through GIS analysis an OSS can be assumed to exist on a parcel.

"Blackwater" is the portion of wastewater stream that originates from toilets. It includes human excreta, urine and associated flush waters.

"Cesspool" means a pit receiving untreated sewage and allowing the liquid to seep into the surrounding soil or rock.

"Coliform (Bacteria)" a group of bacteria which produces gas and ferment lactose, some of which are found in the intestinal tract of warm blooded animals and is used as an indicator of ground water and surface water pollution and sewage treatment efficiency (see also fecal coliform).

"Conforming system" means any on-site sewage system, except an experimental system, meeting any of the following criteria:

(a) Systems in full compliance with new construction requirements under this chapter; or

(b) Systems approved, installed and operating in accordance with requirements of previous editions of this chapter; or

(c) Systems or repairs permitted through departmental concurrence by the waiver process which assure public health protection by higher treatment performance or other methods.

"Conventional gravity system" means an on-site sewage system consisting of a septic tank and a subsurface soil absorption system with gravity distribution of the effluent.

"Conventional pressure distribution system" means an on-site sewage system consisting of a septic tank and a subsurface soil absorption system with pressure distribution of the effluent. Design, operation and maintenance, and performance monitoring are described by "Guidelines for Pressure Distribution Systems" by the Washington state department of health.

"Community On-Site Sewage System." Any residential on-site sewage system designed to serve two (2) or more dwelling units or designed to serve two or more residences on separate lots, with design flows less than 3,500 gallons per day.

"Commercial On-Site Sewage System." Any non-residential or combined residential/non-residential on-site sewage system with a design flow less than three thousand five hundred (3,500) gallons per day.

"Designer" means a person who matches site and soil characteristics with appropriate on-site sewage technology. Designers are licensed and regulated by the Washington State Licensing program.

"DOH" means the Washington state department of health.

"Disposal component" means a subsurface absorption system (SSAS) or other soil absorption system receiving septic tank or other pretreatment device effluent and transmitting it into original, undisturbed soil.

"Drainfield" an area in which perforated piping is laid in drain rock-packed or with infiltrator trenches for the purpose of distributing the effluent from a wastewater treatment unit into original, undisturbed soil.

"Effluent" means liquid discharged from a septic tank or other on-site sewage system component.

"Engineer" means a person who is licensed and in good standing under chapter 18.43 RCW.

"Failure" means a condition of an on-site sewage system that threatens the public health by inadequately treating sewage or by creating a potential for direct or indirect contact between sewage and the public. Examples of failure include:

(a) Sewage on the surface of the ground;

(b) Sewage backing up into a structure caused by slow soil absorption of septic tank effluent;

(c) Sewage leaking from a septic tank, pump chamber, holding tank, or collection system;

(d) Cesspools or seepage pits where evidence of ground water or surface water quality degradation exists; or

(e) Inadequately treated effluent contaminating ground water or surface water.

(f) Noncompliance with standards stipulated on the permit.

"Fecal Coliform" (Bacteria) coliform bacteria specifically originating from the intestines of warm-blooded animals and is used as an indicator of ground water and surface water pollution and sewage treatment efficiency.

"Frequently Flooded Areas" means the floodway and special flood hazard area, combined. Also known as "floodplain".

"Ground water" means a subsurface water occupying the zone of saturated soil, permanently, seasonally, or as the result of the tides. Indications of ground water may include:

(a) Water seeping into or standing in an open excavation from the soil surrounding the excavation.

(b) Spots or blotches of different color or shades of color interspersed with a dominant color in soil, commonly referred to as mottling. Mottling is a historic indication for the presence of groundwater caused by intermittent periods of saturation and drying, and may be indicative of poor aeration and impeded drainage. Also see "Water table".

"Greywater" the portion of the wastewater stream that originates in sinks, tubs, showers, and laundry.

"Glendon Biofilter" is a proprietary device. The system works by treating septic tank effluent using capillary action or upflow through layers of a media filter which are contained within an in-ground containment vessel.

"Installer" means a qualified person approved by a local health officer to install or repair on- site sewage systems or components.

"Inspection" means an evaluation of all components of a septic system. Inspections are done at time of installation to ensure compliance with regulations. An 'in use' inspection of an existing septic system is normally called a sanitary survey or O&M inspection.

"Known OSS" means an OSS that was installed with the knowledge or approval of the local health jurisdiction. Known OSS include conforming and nonconforming systems.

"Large On-site Sewage System (LOSS)" means any on-site sewage system with design flows, at any common point, greater than 3,500 gallons per day.

"Local health officer" means the health officer of the city, county, or city-county health department or district within the state of Washington, or a representative authorized by and under the direct supervision of the local health officer, as defined in chapter 70.05 RCW.

"Maintenance" means the actions necessary to keep the onsite system components functioning as designed.

"Mound" means the treatment and disposal component that is built with a specific sand media and is placed upon the ground surface.

"Monitoring" means periodic or continuous checking of an onsite sewage system, which is performed by observations and measurements, to determine if the system is functioning as intended and if system maintenance is needed. Monitoring also includes maintaining accurate records that document monitoring activities.

"On-site sewage system (OSS)" means an integrated arrangement of components for a residence, building, industrial establishment, or other places not connected to a public sewer system which:

(a) Convey, store, treat, and/or provide subsurface soil treatment and disposal on the property where it originates, upon adjacent or nearby property; and

(b) Includes piping, treatment devices, other accessories, and soil underlying the disposal component of the initial and reserve areas.

"Percolation" means the flow or trickling of a liquid downward through a contact or filtering medium. The liquid may or may not fill the pores of the medium.

"Perc test" process previously used to determine soil's suitability for a septic system. This was accomplished by measuring the rate of percolation of water which is poured into posthole dug holes 2-3 feet deep. This process has been replaced by soil analysis with a designer (see below).

"Pressure distribution" means a system of small diameter pipes equally distributing effluent throughout a trench or bed, as described in the "Guidelines for Pressure Distribution Systems" by the department. Also see "conventional pressure distribution."

"Proprietary device or method" means a device or method classified as an alternative system, or a component thereof, held under a patent, trademark or copyright.

"Public sewer system" means a sewerage system:

(a) Owned or operated by a city, town, municipal corporation, county, or other approved ownership consisting of a collection system and necessary trunks, pumping facilities and a means of final treatment and disposal; and

(b) Approved by or under permit from the department of ecology, the department of health and/or a local health officer.

"Pump Chamber" means a tank or compartment following the septic tank or other pretreatment process, which contains a pump, floats and volume for storage of effluent. In timer-controlled pressure distribution systems, this is frequently called a "surge tank" or "equalization tank." If a siphon is used, in lieu of a pump, this is called a "siphon chamber."

"Pumper" Means a person approved by the local health officer to remove and transport wastewater or septage from on-site sewage systems.

"Repair" means restoration, by reconstruction or relocation, or replacement of a failed on-site sewage system.

"Reserve area" means an area of land approved for the installation of a conforming system and dedicated for replacement of the OSS upon its failure.

"Residential sewage" means sewage having the constituency and strength typical of wastewater from domestic households.

"Restrictive layer" means a stratum impeding the vertical movement of water, air, and growth of plant roots, such as hardpan, claypan, fragipan, caliche, some compacted soils, bedrock and unstructured clay soils.

"Sand filter" means a biological and physical wastewater treatment component consisting (generally) of an under drained bed of sand to which pre-treated effluent is periodically applied. Filtrate collected by the under drains is then disposed of by an approved soil absorption system. Pretreatment can be provided by a septic tank or another approved treatment component.

"Sanitary Survey." The inspection and evaluation of an existing on-site sewage system usually done for the sale of a property or for a building permit. Sanitary surveys are done by licensed Designers.

"Seepage pit" means an excavation more than three feet deep where the sidewall of the excavation is designed to dispose of septic tank effluent. Seepage pits may also be called "dry wells".

"Septage" means the mixture of solid wastes, scum, sludge, and liquids pumped from within septic tanks, pump chambers, holding tanks, and other OSS components.

"Septic tank" means a watertight pretreatment receptacle receiving the discharge of sewage from a building sewer or sewers, designed and constructed to permit separation of settleable and floating solids from the liquid, detention, and anaerobic digestion of the organic matter, prior to discharge of the liquid.

"Sewage" means any urine, feces, and the water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments or other places. For the purposes of these regulations, "sewage" is generally synonymous with domestic wastewater. Also see "residential sewage."

"Soil analysis" on-site soil observations conducted by septic designers and county staff to determine soil suitability for a septic system. Based on soil science, the texture and properties of the soil and its horizons (layers) are examined in soil pits dug 5-6 feet deep with a backhoe. This process is done during the site registration process and requires at least two test pits with matching soils for a septic design. Clallam County soils are quite variable so often many test pits are dug to find two that match up.

"Soil log" means a detailed description of soil characteristics providing information on the soil's capacity to act as an acceptable treatment and disposal medium for sewage.

"Soil type" means a numerical classification of fine earth particles and coarse fragments as described in 246-272-11001(2)(e).

"Site Registration" The process of verifying soils (see soil analysis) available for a septic system and registering those with Clallam County for the purpose of securing a sewage disposal system permit.

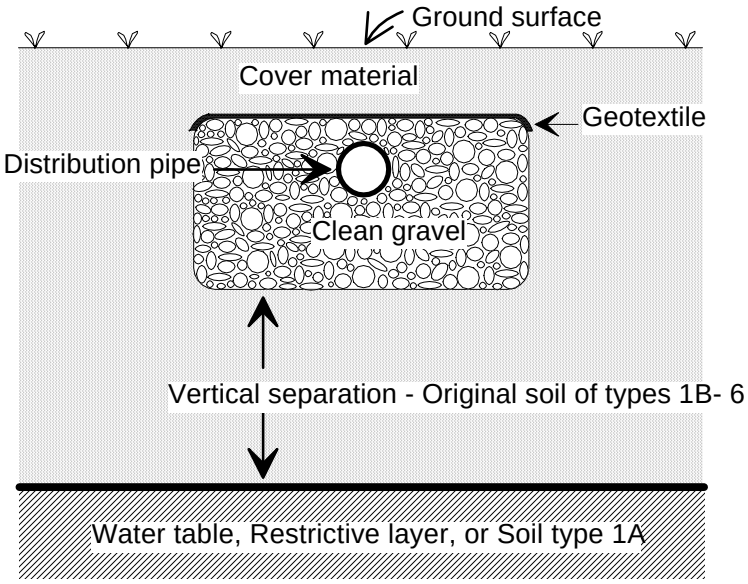
"SSAS" or "subsurface soil absorption system" means a system of trenches three feet or less in width, or beds between three and ten feet in width, containing distribution pipe within a layer of clean gravel designed and installed in original, undisturbed soil for the purpose of receiving effluent and transmitting it into the soil.

"Surface water" means any body of water, whether fresh or marine, flowing or contained in natural or artificial unlined depressions for significant periods of the year, including natural and artificial lakes, ponds, springs, rivers, streams, swamps, marshes, and tidal waters.

"Table VI Repair" means a repair or replacement of an existing on-site sewage system which, because of site limitations, must utilize treatment standards shown in Table VI in lieu of compliance with new construction requirements for vertical separation and/or horizontal set back from surface waters or drinking water wells or springs.

"Unknown OSS" means an on-site sewage disposal system (or OSS per WAC 246-272A) that was installed without the knowledge or approval of the local health jurisdiction, including those that were installed before such approval was required.

"Vertical separation" means the depth of unsaturated, original, undisturbed soil of Soil Types 1B-6 between the bottom of a disposal component and the highest seasonal water table, a restrictive layer, or Soil Type 1A, as illustrated below by the profile drawing of a subsurface soil absorption system.



"Water table" means the upper surface of the ground water, whether permanent or seasonal. Also see "ground water."

"WAC (Washington Administrative Code)" administrative regulations that are enacted to further define what is in state enabling legislation. The State Board of Health has enacted WAC 246-272A to define minimum standards for onsite sewage systems in Washington State.

Appendices

Appendix A: Inspection Reporting Form

O&M Standards of Inspection for Septic Systems:

From December 8, 2004 workgroup

Essential information per property: (what is necessary for data entry)

Parcel # (should be placed at top in larger type for data entry)
Property Owner Phone #
Mailing Address
Site Address
System type Date of inspection **+ next inspection due**
System Designer
Date of Installation
Problem identified: Yes/No
Action needed: Yes/No **+ details**
O&M Specialist Name, Address, Phone#
Comments:_____
_____
_____

Septic tanks:
size (gallons)
scum level (in inches) inlet/outlet
sludge level (in inches) inlet/outlet
needs pumping? y/n
condition of baffles-(concrete or pvc) inlet/outlet,
baffle screen present? y/n needs cleaning? y/n
biological function: normal/abnormal
Risers absent? y/n
Comments_____
_____
_____

Pump tanks
size (gallons)
scum and sludge levels
screen present (if required)
needs pumping?

Panel and Controls:_____
pump operating? y/n
timer setting on_____ off_____
dose counter?_____
Elapsed time meter?
Drawdown (in gpm) _____
Alarms functioning? y/n
Floats functioning? y/n
Comments_____
_____

From original O&M manual/sep-permit
Type of panel/timer
Float arrangement
panel location

ATU-Fast:
scum and sludge levels ____(in.)
offensive odor present? y/n
chocolate or mocha color y/n
sound normal? y/n
Alarm functioning y/n

ATU-Whitewater:
scum and sludge levels ____(in.)
offensive odor present? y/n
chocolate or mocha color y/n
sound normal? y/n
Alarm functioning y/n

Comments_____

ATU-Multiflo
socks maintenance required y/n
unsettled solids measured y/n ____ (in.)
sound heard normal y/n
odor normal y/n
color normal y/n
alarm functioning y/n

UVdisinfection (manufacturer on permit)
alarm functioning y/n
UV light present y/n light on y/n
functioning y/n
replaced bulb y/n
sheath cleaned y/n
trap cleaned y/n

Comments_____

For all ATU's
Problem noted/ tests done:
dissolved oxygen_____ PH_____ Temp._____

Glendon Biofilter:
Effluent level at port: _____(in.) normal/abnormal
Erosion/settling present? y/n
Vegetation cover: type_____ overgrown? y/n
Verify dosing distribution y/n
Signs of surfacing effluent toe___ basin_____
Comments_____

Drainfields:
surface sogginess or saturation y/n
monitoring ports ponded y/n, _____(in.)
residual head/squirt test _____(in.)
lateral flushed y/n laterals jetted y/n
signs of parking or driving on drainfield? y/n
vegetation: type_____ overgrown? y/n
reserve area available y/n

Distribution Box (if present)
D-box accessible y/n
if yes, equal flow at outlets y/n
maintenance performed? y/n

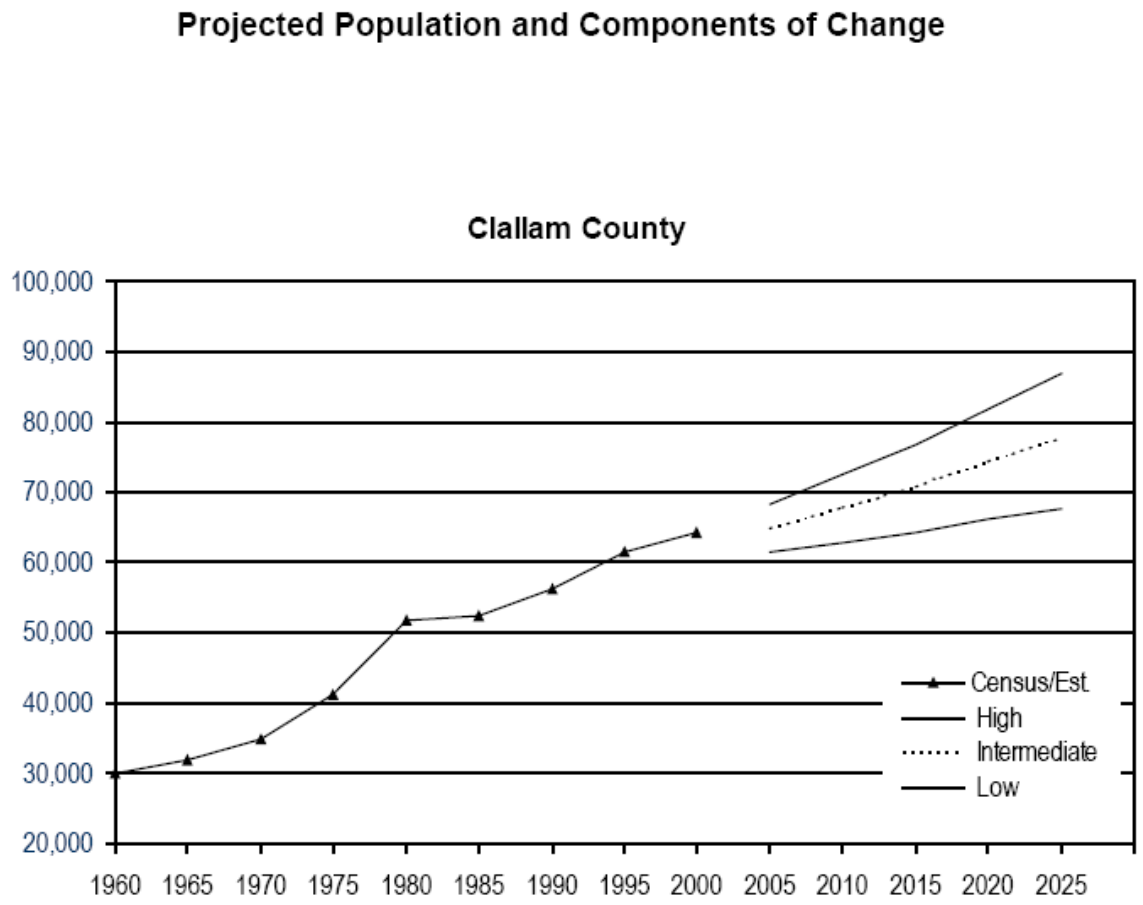
Comments _____

Appendix B: Maps

This section contains the following maps:

- Watershed Map
- Population Density Map
- Urban Growth Areas and Generalized Zoning Map
- Drainage Map
- 303(d) Listed Water Bodies Map
- Critical Aquifer-Recharge Areas Map
- Frequently Flooded Areas Map
- Shellfish Growing Areas Map
- Marine Recovery Area Map

Appendix C: Population Growth Chart



Source: Washington State Office of Financial Management. "Washington State County Population Projections for Growth Management." January 2002. Accessible at http://www.ofm.wa.gov/pop/gma/projections.asp. 7 May 2007.

Appendix D: Response to Public Comments

As part of the development of this OSS Management Plan, Clallam County EHS hosted two public workshops and invited the public to one Board of Health meeting to obtain comments on the draft plan. Clallam County EHS is grateful to the more than 150 citizens who attended these meetings to provide input on the draft plan.

Many citizens who provided comments were supportive of the process that Clallam County EHS used to develop recommendations to implement the new state requirements, even if they did not support the new requirements. Several citizens commended the OSS Work Group and thanked them for their efforts to ensure that the burden on OSS owners would remain as low as possible.

This appendix responds to questions about the draft plan and suggestions for specific changes. Because of the large number of questions and comments, Clallam County EHS has summarized the individual comments into key themes from the public meetings. This appendix does not address supportive notes or factual statements which did not ask for a specific change. This appendix also reproduces two letters sent to the Clallam County Commissioners, and the County's responses to those letters.

STATE LAW

Summary of comments

- What are the requirements?
- Why was it adopted?
- When do we have to comply?
- Can the County request the State to change aspects of the new law?

Responses

Chapter 246-272A WAC requires that OSS owners properly maintain and inspect their systems on the following schedule:

- Gravity systems must be inspected every three years.
- All other systems must be inspected annually.

This Chapter also creates many new requirements for local health jurisdictions, such as Clallam County Environmental Health Services. Under these new requirements, Clallam County EHS must do the following:

- Identify areas where OSS may pose risks to human health and the environment.
- Establish operations and maintenance programs.
- Track all inspection reports in a database.
- Inventory all septic systems.
- Educate OSS owners about operations, maintenance, and their responsibilities under the law.
- Ensure that OSS owners comply with the new regulations.

RCW 70.118A requires Clallam County to establish a Marine Recovery Area in places where OSS may contribute to the following problems:

- Downgrades or closures of shellfish areas, and/or

- Declines in water quality from nitrogen, or from fecal coliform bacteria or low dissolved-oxygen that result in placement of a water body on the state 303(d) list.

The State adopted these new regulations to help protect human health and the environment from the adverse effects of failing OSS. The laws take effect on July 1, 2007, and Clallam County EHS will phase in its compliance program over time. Clallam County EHS will inform OSS owners when it is ready to begin program implementation. While citizen groups may petition the Washington State Department of Health to change provisions of the law, the County must work within the existing laws.

HOMEOWNER INSPECTIONS:

Summary of comments

- What is involved in inspections?
- Who will teach the classes?
- What will be involved in the classes?
- Will there be different trainings for different types of alternative systems?
- Will people be able to submit their inspection reports online?
- Once I'm trained, can I inspect my neighbors and/or grandmother's OSS?
- Can there be a "volunteer" inspection crew; trained people who can inspect their neighbors' or extended family's OSS?
- Can the trainings be offered on-line or in-house for no cost?
- What is the difference between Septics 101 and the training?
- If I just had my OSS inspected, is it good for 3 years?
- How does it work for homeowners associations?

Responses

The OSS Work Group recommended that homeowners should be able to inspect their own systems if they receive County-approved training. Because the County had only a short time to develop the OSS Management Plan, it has not yet developed the training program. Clallam County EHS plans to develop the training program during Phase I of implementation, which will begin in July 2007, and will use the input gained at these public meetings in developing the trainings.

While many of the details remain to be worked out, it is clear that the inspection training will be more extensive and rigorous than Septics 101. Septics 101 provides excellent information about operations and maintenance of a septic system, but does not teach participants how to inspect their own systems. The new training also will end with a certification test.

If you own a gravity system and have proof of an adequate inspection, you may wait three years until the next inspection.

PROFESSIONAL INSPECTIONS:

Summary of comments

- What are the costs? Why are they so high?
- Are there enough inspectors to manage all the required inspections?
- How does one become an inspector?

- Are there published standards for inspections?
- Will there be any price controls?
- Why isn't the County going to do the inspections themselves?
- Can you ensure that inspectors are not allowed to do any of the follow-up work (pumping, repairs, etc.) so that they do not have a cost-incentive to recommend unnecessary repairs or pumping?
- Will the County check up on professional inspectors to ensure they don't rip people off?
- Clallam County EHS should consider using a statistician to assist it with developing a statistically valid audit program.
- You should keep these inspections simple and inexpensive.
- Inspection reports must be complete enough to track the status of OSS.
- Does a heavy rainfall affect the results of an inspection?
- What is the difference between pumping and inspections?
- The County should require systems to be pumped every 3-5 years, depending on the date of installation.
- The proposed inspection frequencies do not make sense and should be changed.

Responses
Industry professionals who participated on the OSS Work Group indicated that inspections cost anywhere from $150-$250, depending on the type of system and its location. Repairs, installation of risers, and pumping costs would be extra.

Currently, there are not enough inspectors to manage all of the required inspections, and there is no official "inspection certification program." Clallam County EHS plans to work with the Washington Department of Health, the Washington On-Site Sewage Association, and other qualified entities to try to develop one. Clallam County EHS expects that this certification program would determine whether inspectors can also repair OSS.

The inspector-licensing program also should establish standards for what information should be gathered during an inspection. The OSS Work Group recommended that inspection requirements should be kept simple. Clallam County EHS will attempt to balance the need for simplicity with the need for inspections to generate all the necessary information required by law. A previous OSS work group convened by Clallam County did create a standard inspection form. That form is published in Appendix A of this plan.

While the details of the inspector-licensing program remain to be established, Clallam County EHS currently expects the following:
- The County will not impose price controls on inspections.
- The County does not plan to conduct inspections itself. Instead, the County hopes that private OSS services will expand to fill the demand for inspections.
- The County does plan to audit a certain number of inspected systems for quality assurance. EHS will audit both professionally and owner-inspected systems. Details of this audit program are yet to be established, but EHS expects this program to be an important way to measure the effectiveness of its new programs.

Heavy rainfalls should not affect the results of an inspection. The purpose of an inspection is to assess the status of the system and determine whether it is functioning properly. Certain observations made during an inspection, such as the sludge or scum depths, may indicate the need to pump the system. Specific pumping requirements such as every 3-5 years are not desirable because properly operating systems may not need to be pumped. It is generally less expensive to the homeowner to have an inspection to determine whether or not pumping is necessary.

The County is obligated to follow the rules of the State Board of Health, which set the inspection schedule. The State Board of Health made such a rule based upon recommendations of health and industry professionals. At this time, Clallam County EHS cannot make any recommendations for changing the inspection frequency, since EHS has no broad experience to determine whether the time frames for inspections are overly-ambitious or on the mark. EHS does know that timely inspections of septic systems benefit both the home owner and the environment by increasing the operating life and functionality of the OSS.

FEES AND COSTS:

Summary of comments

- Why isn't there a better breakdown of costs to the County?
- What is the fee described in the plan based on?
- What will the money be used for? Will this now be used to fund other County activities?
- What is the public process for adopting the new fee?
- How much will the fee increase each year?
- Has the County asked the State for more money so that local homeowners don't have to pay for it all?
- If State money were available would that reduce the fee?
- Who has the authority to tax people with OSS?
- Will the Cities charge fees also?
- What will people do if they don't have the money to repair their systems?
- Don't establish a new fee.

Responses

The fees in the plan are based on the OSS Work Group's sense of a reasonable fee to charge OSS owners to support the new County programs. Because most of these programs have yet to be defined in detail, the Plan does not contain a specific breakdown of costs to the County. This information will be developed during Phase I of implementation.

Any revenues resulting from an assessment on OSS owners will be used to support the new County programs. These programs include creating and offering inspection-training courses, conducting public outreach and education about OSS operations and maintenance, maintaining inspection records, identifying all OSS in the MRA, developing and implementing a new compliance program, and offering low-interest loans to low-income OSS owners for repairs. Although the details of the assessment need to be worked out, Clallam County EHS expects that these revenues will not be used for other purposes.

Any new fee or assessment would need to follow a public process for adoption. A public process generally requires public hearings.

The Washington Department of Health has stated that it will enter into contracts with local health jurisdictions to help implement their programs, and that these contracts will include some funding. However, at the time of this writing, the State has not yet determined how much funding will be available. If Clallam County receives state funding, the Clallam County Board of Health will have to decide whether to use that money to expand the County's programs or to reduce assessments.

Clallam County will not be able to implement and enforce the law without new funding. Clallam County has the authority to assess OSS owners a fee for these new programs. Because the County serves as the local

health jurisdiction and the Cities do not, City governments do not face these new requirements and therefore are unlikely to charge additional fees.

The OSS Work Group recommended that part of the assessment be used to fund a low-interest loan program to assist OSS owners who cannot afford to repair or replace failing systems.

MARINE RECOVERY AREA:

Summary of comments

- Why does the Marine Recovery Area have the same boundaries as the Clean Water District, all the way back into the mountains?
- Why did the Work Group recommend establishing a Marine Recovery Area in the Sequim-Dungeness watershed?
- How do you plan to identify the unknown OSS in the Marine Recovery Area?

Responses

The OSS Work Group recommended using the same boundaries for the MRA as for the Clean Water District for two reasons: the Clean Water District boundaries were set using a public process, and the Clean Water District was established in the first place to protect shellfish and groundwater partly by addressing OSS. The Clean Water District has been well studied, and groups are already implementing a Clean Water Strategy in the District that includes a focus on septic systems.

The OSS Work Group recommended establishing an MRA in the Sequim-Dungeness Bay area because the new law requires Clallam County Environmental Health to create MRA in areas where shellfish beds are threatened or downgraded, where marine water bodies are on the 303(d) list for fecal coliform or low dissolved oxygen, and/or where nitrogen has been identified as a contaminant of concern. Marine waters in the Sequim-Dungeness area have downgraded shellfish growing areas and are listed on the state 303(d) list for fecal coliform bacteria. Therefore, creating an MRA here satisfies the requirements of state law.

Clallam County EHS plans to use at least two methods to identify unknown OSS in the MRA:

- Inspection reports from citizens and professional inspectors; and
- Door-to-door outreach that continues the successful program already underway in the watershed.

SENSITIVE AREAS:

Summary of comments

- Did the Work Group discuss specific actions that need to occur in sensitive areas?
- Did the statute define the boundaries of the sensitive areas?
- Were there any data driving the delineation of the sensitive areas?
- The County should define sensitive areas using consistent criteria such as Critical Areas or Shoreline Master Plan Designations.
- The County should add saltwater swimming and wading beaches, particularly those that will be sampled under the Department of Ecology's Beach Environmental Assessment, Communication, and Health Program (BEACH), to the list of sensitive areas.
- The County should track the water-quality monitoring data collected through the BEACH program to evaluate potential public-health risks.
- What is the mechanism or process for responding to problems in sensitive areas?

Responses
The OSS Work Group recommended that Clallam County EHS make sensitive areas a high priority for monitoring, and also examine its requirements for siting and design to ensure they are protective of sensitive areas. Because the OSS Work Group did not agree upon boundaries for sensitive areas, it recommended this as an area for future work.

The new state requirements do not define the boundaries of sensitive areas. There are data that suggest that on-site systems are at least partly contributing to the degradation of shallow aquifers in the Carlsborg – Dungeness area, and failing on-site systems are found near or adjacent to lakes, rivers, and other water bodies. In defining sensitive areas, Clallam County EHS will strive to be consistent with sensitive area definitions in other regulations. Clallam County EHS also will consider public input, such as the suggestion to include saltwater swimming and wading beaches, as it develops the final list of sensitive areas.

The OSS Work Group recommended that Clallam County EHS track all water-quality monitoring data collected in the county to assist in monitoring and defining sensitive areas. Therefore, EHS expects to include the BEACH data in this effort.

Clallam County holds protection of public health as its highest priority, and works to ensure that all known failing systems are repaired or replaced. EHS responds immediately to failing systems throughout the county, including in sensitive areas.

ENFORCEMENT:

Summary of comments

- How will the County enforce the new law?
- We recommend requiring submittal of proof of inspection at the transfer of property.
- The County should create an audit system to detect fraudulent inspection reports and a verification system to determine whether repairs were actually completed.

Responses
The OSS Work Group recommended that Clallam County EHS employ a compliance program with the following basic elements:

1. A strong education program that informs OSS owners of the new requirements and the benefits of maintaining and inspecting their OSS.
2. Incentives to encourage OSS owners to inspect their systems and supply the required reports to the County. The County should consider fee-based incentives (e.g. lower fees or assessments for those who submit required reports and higher fees or assessments for those who do not). Financial assistance should also be provided to low-income OSS owners.
3. Simple reporting requirements. Required forms should be easy to complete and return to the County.
4. Risk-based prioritization for compliance actions. Clallam County EHS should prioritize its efforts based on risk to public health and the environment. Thus, the County's highest priorities should be systems that are on shorelines, OSS near wells that could contaminate drinking water, etc.
5. Penalties as a last resort to achieve compliance. Penalties should only be issued after warnings have been given and after education, incentives and other compliance actions have failed.

The Work Group also recommended that the County require sellers to submit proof of successful professional inspection prior to the transfer or sale of property, and require proof of compliance when the County issues permits, including the following:

- Building Permits;
- Land Division (e.g. short plats, long plats, conditional use permits, site plans);
- Variances to Critical Areas Ordinance or Certificate of Compliance to Critical Areas Ordinance;
- Shoreline Permits;
- Food Establishment Permits (new or renewal); and
- Certificate of Occupancy for commercial building permits;

Clallam County EHS plans to develop a complete compliance program based on these recommendations and on community input during Phase I of implementation.

PLAN IMPLEMENTATION:

Summary of comments

- When will more detail about these programs be available?
- If funding isn't available, are there ways to scale down Phase I?
- The inspection schedules required should be consistent with the manufacturers' guidelines.
- What will be done with all the data? Will the County keep paper copies of everything or just electronic ones? Will there be more funding for data entry?

Clallam County EHS will use the OSS Work Group's recommendations to develop complete scopes of work for these programs during Phase I of implementation, which will begin in July 2007 and end in December 2009.

With its existing funding, Clallam County EHS will be able to make amendments to current regulations, and work on developing a financing mechanism. Without additional funding, however, other programs will not be implemented.

Clallam County EHS plans to track all of the inspection data in its existing database, known as Permit Plan or Tidemark Advantage. During Phase I, the County will determine whether to keep paper copies of everything and will seek funding for data entry.

OTHER:

These comments cannot be clearly grouped together so each is addressed individually.

Comment 1: Isn't it clear that an OSS has failed because it backs up into the house?
Response 1: Failing systems don't always cause sewage to back up into the house. In some cases, the failure may result in sewage on the ground, or if the sewage can drain elsewhere – such as into a ditch or water body – the failure isn't apparent at all.

Comment 2: Why is Forks included when it's not on Puget Sound?
Response 2: Chapter 246-272A WAC covers the entire state of Washington.

Comment 3: What about Victoria's sewage?

Response 3: Clallam County EHS has little influence on the City of Victoria's decisions. Clallam County agrees that City's actions affect water quality in the Strait of Juan de Fuca and would prefer that the City implement improved sewage treatment. In the meantime it is still beneficial for Clallam County and the State of Washington to manage their wastes responsibly.

Comment 4: What is the definition of Frequently Flooded Areas?
Response 4: The Clallam County Critical Areas Ordinance defines "Frequently Flooded Areas" as the floodway and special flood hazard area, combined. It is also known as "floodplain".

Comment 5: What is the big problem we are trying to solve? OSS work fine and don't need to be inspected so often.
Response 5: OSS that are working properly do a good job of treating human waste. However, if OSS fail, they can contribute to many problems, such as the following:

- Contamination of drinking water
- Contamination of shellfish beds
- Spread of diseases ranging from conjunctivitis (pink eye) to typhoid
- Contamination of surface waters

Regular inspections can help detect problems before they lead to complete system failure.

Comment 6: What about OSS that don't meet current design standards (e.g. outhouses, cesspools, and dry wells)? Are they still okay so long as they are inspected?
Response 6: Although Clallam County EHS has not yet developed a policy to address this issue, EHS expects that systems that are not causing a public health threat by contaminating surface or ground water can remain in use until they fail. When systems are replaced, they will need to meet current codes.

Comment 7: Will the County be doing more well testing?
Response 7: The OSS Work Group recommended that the County consider the MRA and sensitive areas high priorities for monitoring. However, the plan does not call for anything more specific than that, and the County currently does not have funding to do more well testing.

Comment 8: Why can't we divert gray water from OSS and use it beneficially?
Response 8: The Washington Department of Health currently classifies gray water with black water. Until the classification changes, Clallam County EHS cannot differ from it. However, Clallam County EHS would support citizen efforts to convince the Department of Health to change this classification.

Comment 9: How will owners of commercial and community systems demonstrate that their waste is comparable to a typical single-family OSS in volume and strength? How often will owners of these systems need to demonstrate this information as use of these systems changes over time?
Response 9: Clallam County EHS will need to determine the best way to manage this program during Phase I of implementation, which begins in July 2007 and ends in December 2009.

LETTERS AND RESPONSES

Reproduced below are two letters sent from citizens to the Clallam County Commissioners, and the County's responses to those letters.

Dear Mike, May 15, 2007

Ask Andy if he investigated why second tank (pump & float switches) fail and now call or will require inspection every year.

Ask Andy how many times he was aware that or questioned a designer/installer putting a two tank/mound systems in an area that had supported simple systems for long extended time. An example that he was informed of is at the corner of SE 3rd Avenue and Baker Street. What action did he take?

What action to correct leaking septic systems into the Sound has been taken? Looking at it is not action.

Thanks,
Bob Hoyle

Clallam County Department of Health and Human Services

Environmental Health Services ♦ 223 East 4th Street, Suite #14 ♦ Port Angeles, WA 98362-3015
Tele: 360-417-2258 ♦ FAX: 360-417-2313

Bob Hoyle
4202 S Bean Road
Port Angeles, WA 98363

June 1, 2007

Dear Mr. Hoyle:

Commissioner Doherty requested that I respond to your May 15, 2007 letter. In the letter you listed three issues, which we are addressing here:

1. Has there been an investigation as to the reason why septic system pump and float switches fail? Why is an inspection on these kinds of systems now required annually?

Response:
Beginning in the early 1980's, the State Board of Health adopted rules that recognized the use of "alternative" septic systems, which can be designed by registered sanitarians, certified septic designers, and engineers. These systems use pumps and special treatment technologies to increase the quality of sewage effluent that would enter soil pores and eventfully enter shallow ground water. The technology allowed the development of previously un-developable property (due to soils and site conditions) and also provides for the protection of ground water and water supply aquifers. The trade-off was, and still remains, that these types of systems require frequent attention to the system components. The State Department of Health, since alternative systems approval for use, has provided technical guidance (now called Recommended Standards and Guidance (RS&Gs) for all alternate systems. Since the 1980's these guidance documents have recommended that home owners of alternative systems have the system components inspected on a frequent basis. Since the documents are recommendations and not requirements, there was little follow-through to determine if the maintenance work was being done. Most public health and industry professionals agree that the septic pump chamber environment is harsh on electrical and plumbing, and mechanical components. That is why they recommend frequent inspection and cleaning to prevent pump, electrical, mechanical, and other components failure in the system.

2. Why are two-tank mound systems being installed in areas where simple (assume conventional) systems once existed?

Response:
As stated above, The State On-site Regulations provide the technical requirements for sewage system design. For the past 20 years, The State regulations have become stricter in both the soil type and soil depth that would allow conventional septic systems. In many areas of The County, there are septic systems that were installed prior to the requirement for a permit, were installed without the benefit of a permit, or were installed under old, existing regulations at the time. When these systems need to be replaced, the repair systems must meet current state requirements and code. In some cases, the site or the soil conditions do not now meet the requirements to allow conventional systems.

3. What action to correct leaking septic systems into the Sound (assume Strait of Jun de Fuca) has been taken.

Response:
Clallam County has a multi-tiered approach to preventing bacterial contamination of all water bodies in The County (including marine waters).

The program consists of:

Permitting new septic systems
Proper review and permitting of septic systems ensures that systems are designed and installed to State Department of Health and local standards.

Education
We believe that an informed and educated public is our best resource in preventing premature on-site system failures and recognizing when a failure has occurred. The Environmental Health Division sponsors free clinics to home owners regarding basic septic-system information. Almost 2000 members of the public have attended the Septics 101 classes since we began holding them a number of years ago.

Water Quality/ Pollution detection program
Environmental Health and other partners conduct routine surface and ground water monitoring to detect problem areas where septic systems appear to be failing. This work is currently focused in the Dungeness Bay area. Failing septic systems have been identified and corrected through the monitoring efforts.

Compliance/Enforcement
The EHD is informed of failing septic systems in several ways:
Home owners contact us seeking help and information on fixing failing systems.
Designers, installers, and pumpers notify us if they suspect that a septic system is failing.
The general public notifies us by lodging a complaint of a failing septic system. The Environmental Health Division follows through on all citizen complaints regarding failing septic systems.

We have enclosed a Department of Health brochure entitled *Understanding and Caring for Your Mound System*, which explains problems that can occur when the pump chamber and mound are not inspected frequently.

Thank you for your comments.

Sincerely,

Andy Brastad R.S., Director, Clallam County Environmental Health Division

Cc: Board of Clallam County Commissioners
Dr. Tom Locke, Health Officer
Iva Burks, Director, Health and Human Services Department
Correspondence file

May 16, 2007

Commissioners: Michael Chapman
Mike Doherty
Steve Tharinger

I attended the Clallam County Board of Health regular meeting May 15, 2007, and came away with an uncomfortable concern.

Over ten years ago before any of you were elected commissioner, the City of Sequim manipulated a UGA and the ensuing SERP and Interlocal documents based on a misrepresentation of the State GMA mandates. I and others met with Ms. Ireland during the rough draft stages and were told that the city's draft was not going to receive major revisions. It wasn't until a general public meeting in the Sequim High School cafeteria headed by the three commissioners with city of Sequim officials present and a packed room of irate citizens that the commissioners finally heard county residents. The commissioners told the city to go back to the drawing board. Unfortunately, the approved final still turned a deaf ear to public concerns.

I say this because I had a flashback listening to the OSS presentation. While I admire and respect the committee's desire and efforts to satisfy state requirements and improve the health of this county's septic systems and aquifers, I feel the present draft is going to fuel a growing resentment of citizens towards elected and appointed government leaders who will be seen as dictating rather than representing.

I believe Clallam County citizens on septic systems are overwhelmingly good people, more than willing to support effective and efficient policies that replace "unhealthy" problems today with "healthy" solutions tomorrow. I believe these same citizens, many of whom are on fixed incomes and challenged everytime a new expense hits their checkbook – and there have been many just in recent years -- will make willingly an additional sacrifice if at all possible because they know it is the right thing to do. Even the irate gentleman who spoke at the above meeting before I did, I believe, would be supportive if he felt part of the solution, not victimized by a system he neither understood nor supported.

And even though Mr. Beitzel tried to keep the discussion relevant to the draft, I believe even the "ignoring the questions" and "non sequiturs" were important because, in reality, they probably reflected the feelings of an untold number not in attendance. And this is input decision makers need to hear to implement a program that is enthusiastically supported which is the best way to govern. It is also important to note that not one speaker in the audience seemed pleased with the draft content.

I know the above sounds critical, but I would be remiss in not communicating the following: I really had the impression you three commissioners were listening to the questions and responses from the public. Feeling you genuinely wanted to get as much information as possible before making an important decision is comforting. I commend you for that. I also think that what you didn't hear was important, too. When you asked questions of the health director, there were many admitted gaps. This honesty is refreshing to hear.

Based on the above, I would like to offer the following guidelines. First, a broad brush should not paint all septic systems in the county. The only important criteria is does it work as intended. While the size land an OSS is on should not factor into the final document from my perspective (a failed system should be fixed period), the topography, soil conditions, proximity to sensitive areas (ie. wells, waterways), age of system, and type of system justify different looks. Second, a management plan for OSS should be easy and cost effective to implement, not pose a lot of unknowns and a projection of four new hires just to drown in the paperwork. Third, a plan should make sense to the typical resident on an OSS and respect his/her wallet. Fourth, it should comply with state requirements, but if Clallam County feels a part of the state requirement does not

effectively contribute to the solution (ie. 1 and 3 year inspections), the County should make a strong argument to the state on behalf of its residents.

That said, I make the following recommendations (these recommendations are restricted to OSS not a threat to wells and sensitive areas). These recommendations assume the Clallam County Environmental Health Department approved a county approved septic designer's plan as well as the installation of the system (for the several I had installed, Mel oversaw the log holes, approved the designer's plan, and on-site approved the final installation). I believe my recommendations will (1) treat each system logically, (2) be significantly easier and cheaper for the county to administer, (3) be supported by the typical OSS resident, and (4) satisfy the State's goals.

First, eliminate the inspections: 3 years for gravity flow and 1 year for a pressurized version. To begin, most of the systems prior to 1990 probably were gravity, and I would think they would be at the greatest risk for disrepair. Also, some of these may have been installed prior to health department regulations. Having a greater period before inspection does not make sense to me.

Most of the systems designed and approved since 1990, especially in valleys where clay may be a concern, probably are of a pressurized nature. Not only are these newer, but they generally are more effective and more friendly to aquifers. To require more frequent inspections of pressurized over gravity flow does not make sense to me. If a pump fails and the system doesn't work, the owners will not wait for the next inspection. They will get it fixed yesterday. And pump failures are rare in the newly designed systems.

Second, place a terrific emphasis on education. Unfortunately, the typical owner knows very little about his OSS. I believe the typical owner would welcome information on maintaining septic system health and practice measures consistent with a healthy system to minimize personal costs and contribute to a healthier environment.

Third, require tanks be pumped up to three years for systems installed prior to 1990* and up to five years for systems installed after 1990 (* A certified pumper could acknowledge to the county that the system could go five years before the next pumping). The certified pumper would send a simple, one page form to the Department of Environmental Health stating the tanks have been pumped and the system appears to be working as designed. Upon receipt, the department of Environmental Health could include a note in the database a letter be sent to the homeowner six months before the next deadline.

For systems previously pumped within the past five years, homeowners could send a copy of the pump bill to the Department of Environmental Health to determine the next deadline.

Any system not working as designed, be it gravity or pressurized, would be required to be fixed immediately. This should not be an issue since an owner should be the first to know something is wrong as well as the first to want it fixed.

Thanks for taking the time to read this. I know it is simple and doesn't cover all the conditions described in the draft. It does relate to a huge percentage of the rural systems installed in recent years in the Sequim/Dungeness Valley and rural areas around PA. If you should want to discuss further any part of this, I would be happy to meet with you. My telephone is 681 7022.

Sincerely,

Jack Iacolucci

Clallam County Department of Health and Human Services

Environmental Health Services ♦ 223 East 4th Street, Suite #14 ♦ Port Angeles, WA 98362-3015
Tele: 360-417-2258 ♦ FAX: 360-417-2313

May 30, 2007

Jack Iacolucci
90 Cherrywood Place
Sequim, WA 98382

Dear Mr. Iacolucci:

Commissioner Tharinger requested that I respond to your May 16, 2007 letter to the Clallam County Board of Commissioners. Thank you for your comments regarding the draft Clallam County On-site Septic System Management Plan (OSSM). As you are aware, recently adopted State Board of Health Rules WAC 246-272A requires, on a state-wide basis, all on-site septic systems (OSS) be inspected on a regularly scheduled frequency (annually or every three years depending on the type of OSS) and that each county maintain a database of the inspection records. Also, the 2006 Legislative Session enacted RCW 70.118A, requiring that all Puget Sound counties identify Marine Recovery Areas (MRA) where OSS contribute to marine water quality problems and develop management strategies to find and repair all failing OSS within the MRA.

The Clallam County Environmental Health Division, in October 2006, convened a broadly represented stake-holders' workgroup to help make recommendations to the Board of Health to implement the new requirements. The draft OSSM plan incorporates the recommendations of the work group.

As your letter states, The County has a large population of families on fixed incomes and that the recommendations in the plan should consider how to keep expenses to the home owner and costs to The County as low as possible. The work group was very mindful of keeping homer owner costs low and the plan recommendations reflect this.

Regarding the three recommendations you have listed in your letter, our responses are:

First recommendation – Eliminate inspections
We do not consider this an option. The County is obligated to follow the rules of the State Board of Health. The State Board of Health made such a rule based upon recommendations of health and industry professionals. At this time, we can not make any recommendations for changing the inspection frequency, since we have no broad experience to determine whether the time frames for inspections are overly-ambitious or on the mark. We do know that timely inspections of septic systems benefit both the home owner and the environment by increasing the operating life and functionality of the OSS.

Second recommendation – Place emphasis on education
The work group's recommendations do just that. They recommend that The County continue and expand the Environmental Health Division's highly successful Septic 101 classes. The work group recommends that training should also be made available to all OSS owners who wish to inspect their own septic system. Lastly, the work group recommends that education be the primary tool used to gain compliance with the inspection and maintenance requirements.

Third Recommendation – Have tanks pumped on a regular basis based on age of OSS
While we fully endorse keeping the inspection reporting and tracking requirements as simple as possible, requiring tanks to be pumped at a specified time may not provide the results we hope to achieve. Determining how often septic tanks need to be pumped is based on system usage. For instance, a retired family of two may only need their septic tank pumped every six to ten years, while an OSS serving a young family with two adults and three children may require pumping every two years. Un-needed pumping is not beneficial to the OSS and is an unnecessary cost. The important issue to note is that the septic tank should be evaluated (inspected) on a routine basis to determine if it requires pumping. A check on the inlet and outlet baffles should be made to ensure protection of the drainfield, and the condition and effluent levels in the tank might also forecast potential problems in the drainfield.

In conclusion, we thank you for your thoughtful input. We are acutely aware of the issue of increasing costs to home owners to comply with The State OSS inspection requirements. We believe that the work group made the best recommendations they could to meet the requirements of the law in a manner that would be reasonable for both the home owners and The County.

Sincerely,

Andy Brastad R.S., Director, Clallam County Environmental Health Division

Cc: Board of Clallam County Commissioners
Dr. Tom Locke, Health Officer
Iva Burks, Director, Health and Human Services Department
Correspondence file

Appendix E: SEPA Checklist

WAC 197-11-960 Environmental checklist.

Purpose of checklist:
The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:
This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:
Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." In addition, complete the supplemental sheet for nonproject actions (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. Background

1. Name of proposed project, if applicable:
Clallam County On-Site Septic System Management Plan

2. Name of applicant:
Clallam County Environmental Health Services

3. Address and phone number of applicant and contact person:
Andy Brastad
Clallam County Environmental Health Services

223 East 4th Street Port Angeles, WA 98362
web_envhlth@co.clallam.wa.us
(360) 417-2415

4. Date checklist prepared:
May 23, 2007

5. Agency requesting checklist:
Clallam County Department of Community Development

6. Proposed timing or schedule (including phasing, if applicable):
Implementation of the Plan will occur in two major phases. Phase 1 will last from July 2007 through December 2009, and is designed to ensure that necessary regulatory, programmatic, administrative, financial and public-outreach systems are in place for effective implementation. In Phase 2, specific implementation activities will occur such as conducting outreach, tracking inspections and identifying all septic systems (OSS) within the Marine Recovery Area by July 1, 2012 (required by RCW 70.118A).

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
Yes, additional programs may be implemented as funding allows. For example, the OSS inventory project described above in Question 6 may be extended to additional areas where septic systems may pose an increased risk to public health.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.
None.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.
Does not apply.

10. List any government approvals or permits that will be needed for your proposal, if known.
The Clallam County Board of Health will need to approve the Plan following a public hearing. The Washington State Department of Health will then review the Plan for completeness.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)
The Clallam County On-Site Septic System Management Plan is designed to provide greater assurance that existing OSS are not causing public health problems, either through inadequate operation and maintenance or outright failure. The Plan was developed by a work group composed of people who live and work in Clallam County, and ex-officio members from outside the County. The recommendations in the Plan are intended to help Clallam County Environmental Health Services and the citizens of Clallam County implement the provisions of WAC 246-272A and RCW 70.118A. Specific activities are recommended to minimize OSS contributions to marine water quality problems, including:

- Designation of a Marine Recovery Area (MRA)
- OSS database enhancement
- Operations and maintenance education

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.
Situated on the northwestern tip of the Olympic Peninsula, Clallam County is the westernmost point in Washington State and the continental United States. The County's total area is approximately 2,670 square miles, nearly 35% of which is water, including the Pacific Ocean and the Strait of Juan de Fuca. Major cities in the County include Sequim, Port Angeles, and Forks. The map appended to this checklist shows the location of Clallam County within Washington State.

B. Environmental Elements

1. Earth

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other
Varies throughout the County.

b. What is the steepest slope on the site (approximate percent slope)?
Does not apply.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.
Varies throughout the County.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.
Does not apply.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Does not apply.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
Does not apply.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?
No change.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:
Does not apply.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.
None.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
None.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:
Does not apply.

3. Water

a. Surface:

1. **Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

Within County boundaries are multiple rivers, creeks, lakes, wetlands, and estuaries. Major water bodies within the County include parts of the Pacific Ocean and the Strait of Juan de Fuca; the Pacific Coast, Western Strait, Central Strait, Elwha River and Greater Dungeness River watersheds; Port Angeles area streams and Sequim Bay drainages;, as well as Lakes Sutherland, Pleasant, Crescent, Ozette and Dawn.

2. **Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

The Plan is intended to improve the quality of the described waters. A Marine Recovery Area will be designated following the boundaries of the current Sequim Bay – Dungeness Watershed Clean Water District. Within this area, Clallam County EHS will locate all existing septic systems and ensure that they are properly repaired, operated and maintained. Under the recommendations of the Work Group and Clallam County EHS, Lake Sutherland, Lake Pleasant, Lake Crescent, Lake Ozette, Lake Dawn, Frequently Flooded Areas, and commercial and recreational shellfish growing areas will be noted as sensitive areas for further consideration of protection. The County will continue on-going work to locate and ensure repair and maintenance of 'Septics of Concern', many of which are adjacent to the described waters.

3. **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

Does not apply.

4. **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

No change in discharges to or withdrawals from surface water.

5. **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

Does not apply.

6. **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

One of the goals of the Plan is to minimize discharges of waste from septic systems to surface waters.

b. Ground:

1. **Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.**

   No change in discharges to or withdrawals from ground water.

2. Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals…; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

The Plan is designed to improve management of septic systems, ensure proper discharge of waste into septic systems, and ensure that existing septic systems adequately meet residents' needs.

c. Water runoff (including stormwater):

1. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Does not apply.

2. Could waste materials enter ground or surface waters? If so, generally describe.

Does not apply.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

Does not apply.

4. Plants

a. Check or circle types of vegetation found on the site:

✓ deciduous tree: alder, maple, aspen, other

✓ evergreen tree: fir, cedar, pine, other

✓ shrubs

✓ grass

✓ pasture

✓ crop or grain

✓ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

✓ water plants: water lily, eelgrass, milfoil, other

✓ other types of vegetation, varying throughout County. The Olympic Peninsula is home to eight kinds of plants that are not found anywhere else on Earth.

b. What kind and amount of vegetation will be removed or altered?

None.

c. List threatened or endangered species known to be on or near the site.

Cotton's Milk-vetch	*Astragalus australis var. Olympicus*
Ozette Coral-Root	*Corallorhiza maculata var. Ozettensis*
Long-stalked Draba	*Draba longipes*
Water Lobelia	*Lobelia dortmanna*
Western Yellow Oxalis	*Oxalis suksdorfii*
Loose-Flowered Bluegrass	*Poa laxiflora*
Great Polemonium	*Polemonium carneum*
Water Bur-reed	*Sparganium fluctuans*
Cut-leaf Synthyris	*Synthyris pinnatifida var. Lanuginose*

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
Does not apply.

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

✓ birds: hawk, heron, eagle, songbirds, other:
✓ mammals: deer, bear, elk, beaver, other:
✓ fish: bass, salmon, trout, herring, shellfish, other:

b. List any threatened or endangered species known to be on or near the site.

Coastal-Puget Sound bull trout	*Salvelinus confluentus*
Puget Sound chinook salmon	*Oncorhynchus tshawtscha*
Hood Canal summer-run chum salmon	*Oncorhynchus keta*
Puget Sound steelhead	*Oncorhynchus mykiss*
Sockeye (Lake Ozette)	*Oncorhynchus nerka*
Brown Pelican	*Pelecanus occidentalis*
Spotted Owl	*Strix occidentalis*
Streaked Horned Lark	*Eremophila alpestris strigata*
Gray Wolf	*Canis lupis*
Fisher	*Martes pennanti*
Bald Eagle	*Haliaeetus leucocephalus*
Marbled Murrelet	*Brachyramphus marmoratus*
Mazama (Western) Pocket Gopher	*Thomomys mazama melanops*
Sea Otter	*Enhydra lutris*
Sei Whale	*Balaenoptera borealis*
Fin Whale	*Balaenoptera physalus*
Blue Whale	*Balaenoptera musculus*
Humpback Whale	*Megaptrera novaeangliae*
Black Right Whale	*Balaena glacialis*
Killer Whale	*Orcinus orca*
Sperm Whale	*Physeter macrocephalus*
Leatherback Sea Turtle	*Dermochelys coriacea*
Steller Sea Lion	*Eumetopias jubatus*
Green Sea Turtle	*Chelonia mydas*
Loggerhead Sea Turtle	*Caretta caretta*

c. Is the site part of a migration route? If so, explain.
Clallam County is a part of the Pacific Flyway.

d. Proposed measures to preserve or enhance wildlife, if any:
One element of the Plan is heightened protection of marine life through the designation of a Marine Recovery Area, following the boundaries of the current Sequim Bay – Dungeness Watershed Clean Water District. The marine waters in this area have downgraded shellfish growing areas and are listed on the state 303(d) list for fecal coliform bacteria. By focusing on septic system management in this area, the County plans to reduce septic system inputs and protect marine life.

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
Does not apply.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:
Does not apply.

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.
No. The purpose of the Plan is to minimize environmental health hazards associated with poorly maintaned or failing OSS.

1. Describe special emergency services that might be required.
Does not apply.

2. Proposed measures to reduce or control environmental health hazards, if any:
Does not apply.

b. Noise

1. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?
Does not apply.

2. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.
None.

3. Proposed measures to reduce or control noise impacts, if any:
Does not apply.

8. Land and shoreline use

a. What is the current use of the site and adjacent properties?
Land uses in Clallam County include agriculture, livestock production and grazing, timber harvest, residential housing, commerce, industry and recreation.

b. Has the site been used for agriculture? If so, describe.
Portions of the County are used for agriculture.

c. Describe any structures on the site.
Structures include homes, businesses, schools and churches.

d. Will any structures be demolished? If so, what?
No, unless incidental to septic system repair.

e. What is the current zoning classification of the site?
The majority of Clallam County land use falls into one of three general categories: 1) Urban Growth Areas, 2) Rural Lands, and 3) Commercial Forest Lands. Designated urban growth areas include Port Angeles, Sequim, Forks, Clallam Bay-Sekiu, Joyce, and Carlsborg. According to the Clallam County Comprehensive Plan, rural growth centers which maintain certain characteristics of urban growth, but are "…not spread over wide areas requiring urban governmental services," include Blyn, Diamond Point, Dungeness, Sappho, Sunland, Beaver/Lake Pleasant, and Three Rivers. Forest lands cover much of the county, particularly in the west end.

f. What is the current comprehensive plan designation of the site?
See above.

g. If applicable, what is the current shoreline master program designation of the site?
Varies throughout County.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.
Varies throughout County.

i. Approximately how many people would reside or work in the completed project?
Does not apply.

j. Approximately how many people would the completed project displace?
None.

k. Proposed measures to avoid or reduce displacement impacts, if any:
Does not apply.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
To ensure that the OSS Management Plan and the Comprehensive Plan use the same goals and standards, Clallam County EHS submitted a draft of this Plan to the Clallam County DCD for review for consistency with the Comprehensive Plan. In the future, EHS will coordinate with Clallam County DCD to ensure that Comprehensive Plan updates support implementation of this Plan. Clallam County DCD coordinates with the Washington State Department of Health, Washington State Department of Ecology, and Washington Department of Fish and Wildlife, as well as the Clallam Conservation District, the Jamestown S'Klallam Tribe, Streamkeepers of Clallam County, the Quileute Tribe, the Lower Elwha Klallam Tribe, Makah Tribe, the cities and towns of Clallam County, and staff from the Olympic National Forest.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
Does not apply.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
Does not apply.

c. Proposed measures to reduce or control housing impacts, if any:
Does not apply.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?
Does not apply.

b. What views in the immediate vicinity would be altered or obstructed?
Does not apply.

c. Proposed measures to reduce or control aesthetic impacts, if any:
Does not apply.

11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
Does not apply.

b. Could light or glare from the finished project be a safety hazard or interfere with views?
Does not apply.

c. What existing off-site sources of light or glare may affect your proposal?
Does not apply.

d. Proposed measures to reduce or control light and glare impacts, if any:
Does not apply.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?
Clallam County is a haven for recreationalists, with opportunities including boating, fishing, swimming, camping, and hiking along the rivers, shores and lakes and within Olympic National Park.

b. Would the proposed project displace any existing recreational uses? If so, describe.
No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
The Plan will help to protect water quality for recreational uses.

13. Historic and cultural preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.
The County encompasses tribal lands and a national park. However, this Plan does not apply to tribal or federal lands.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.
Within Clallam County borders are lands belonging to the Jamestown S'Klallam, Lower Elwha Klallam, Makah, and Quileute Tribes, as well as Olympic National Park.

c. Proposed measures to reduce or control impacts, if any:
Does not apply.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.
Does not apply.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?
Does not apply.

c. How many parking spaces would the completed project have? How many would the project eliminate?
Does not apply.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).
Does not apply.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
Does not apply.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.
Does not apply.

g. Proposed measures to reduce or control transportation impacts, if any:
Does not apply.

15. Public services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.
Does not apply.

b. Proposed measures to reduce or control direct impacts on public services, if any.
Does not apply.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.
Does not apply.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.
Does not apply.

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature:

Date Submitted:

D. Supplemental Sheet for Nonproject Actions

(do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?
Does not apply.

Proposed measures to avoid or reduce such increases are:
Does not apply.

2. How would the proposal be likely to affect plants, animals, fish, or marine life?
The Plan includes provisions for the protection of marine life through the designation of a Marine Recovery Area.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:
The Sequim Bay – Dungeness Watershed Clean Water District would be designated as a Marine Recovery Area, as the marine waters in this area have downgraded shellfish growing areas and are listed on the state 303(d) list for fecal coliform bacteria. By focusing on septic system management in this area, the County plans to reduce septic system inputs and thereby protect marine life.

3. How would the proposal be likely to deplete energy or natural resources?
Does not apply.

Proposed measures to protect or conserve energy and natural resources are:
Conservation and efficient use of water are essential components of septic system management which will be presented through education and outreach programs under the Plan.

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?
The Plan is designed to protect environmentally sensitive areas, including the newly-designated Marine Recovery Area, Critical Aquifer Recovery Areas, Frequently Flooded Areas, commercial and recreational shellfish growing areas, and specific lakes where septic systems may pose an increased threat to public health.

Proposed measures to protect such resources or to avoid or reduce impacts are:

Clallam County Environmental Health Services may consider further protection for these areas which would result in focusing efforts such as outreach and education to local septic system owners, identification of unknown or failing septic systems, and more stringent requirements for septic system inspections.

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?
Does not apply.

Proposed measures to avoid or reduce shoreline and land use impacts are:
Does not apply.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?
Does not apply.

Proposed measures to reduce or respond to such demand(s) are:
Does not apply.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.
Does not apply.

Placeholder for vicinity map