

Septic System Operation and Maintenance Proposal For Henderson Watershed Protection Area

September 27, 2005

The Risk-Based O&M Program project advisory committee began its work on December 10, 2003. The committee members are stakeholders representing the Shellfish Protection District committees, WRIA 13 watershed committee, real estate industry, master builders, on-site sewage industry, Puget Sound Action Team, State Department of Health, shellfish industry, and watershed residents.

The committee met five times for discussion of six program elements. In early November 2004, their proposal was sent to all septic system owners within the Henderson Inlet Watershed. An Open House on November 18, 2004 had 300+ residents in attendance. In response to public comments and questions received (November 2004 open house, e-mail, and in person), the advisory committee asked the Thurston County Board of Health for the opportunity to review public comment and make appropriate modifications to the proposal. The advisory committee met again in February and March 2005 and made changes to the initial proposal. These changes were primarily the boundary of the program area (1.) and some suggested incentives (6.) for participation. Approximately 100 people attended a second Open House, July 7, 2005.

Understanding that the entire program, is adopted by the Board of Health and Board of County Commissioners by resolution, the following is the recommended Septic System Operation and Maintenance Proposal for the Henderson Watershed Protection Area.

1. Program Boundary

Recommendation: The Advisory Committee recommends that the program boundary be limited to the area within the Henderson Inlet Watershed Shellfish Protection District that most likely is affecting the water quality of Henderson Inlet. (Appendix A) This area would be called *Henderson Watershed Protection Area* and represents those properties that drain toward Henderson Inlet. The perimeter boundary of the program area was drawn using the latest geographic data and technology of the Thurston County Geodata Center: 2-foot contours and LIDAR (Light Distance and Ranging) technology. A Water and Waste Management Department engineer verified this boundary in the field.

The program area includes those properties on and within the physical boundary of the map. If any portion of the property is within the boundary, the property is considered to be within the program area. Rates and charges would apply to those properties where any portion of the wastewater system, including the building plumbing, is within the program area. There will be an annual review of the map to consider new information and make adjustments as warranted by the information. Environmental Health Division would maintain a copy of these detailed maps.

2. Program Requirements

Recommendation: The Advisory Committee recommends that the *Henderson Watershed Protection Area* be established as an 'Area of Special Concern' via Article IV of the Thurston County Sanitary code, which allows an enhanced operation and maintenance program. The requirements would be as follows:

- < Renewable Operational Certificates for all septic systems
- < Operational Certificates must be kept current and renewed on prescribed schedule (90% of systems within the program would be renewed every 3 years.)
- < Requirements for renewal would include system evaluations:
 - Low-risk** systems would require documentation of routine maintenance and visual inspection every renewal cycle.
 - High-risk** systems would require dye test evaluations every other renewal cycle (or every 6 years) plus low-risk requirements.
- < Maintenance activities required for those systems that already have certificates under the countywide O&M program must still be done. (Currently, complex or large systems are required to have renewable operational certificates.) Examples of other maintenance activities include such things as
 - o Checking pumps
 - o Servicing a disinfection unit
 - o Sampling a disinfection unit
 - o Specific conditions stated in the certificate

3. Determination of Risk Level

Recommendation: The committee recommends use of the ranking matrix included in Appendix B to determine risk level. The various pieces of the matrix define the risk factors to septic system failure. Points are tallied in each of the categories for both frequency and inspection type. The more points the greater the risk of failure and the more frequent and intensive the inspection.

- < Those systems having 15 or more points on the *Evaluation Type* column of the matrix would be designated as **high-risk**.
- < Those systems having less than 15 points on the *Evaluation Type* column of the matrix would be designated as **low-risk**.

Upland / inland / urban septic systems that are weighted as low risk can effectively be evaluated using a visual inspection. A dye-testing method can be effectively used on systems located on the shoreline or near water. The committee recommends that other methods (including new tools as they become available) should be used as needed to assess the functioning of septic systems in these areas.

4. Level and methods of compliance

Recommendation: Acknowledging that failing septic systems are a source of pollution to Henderson Inlet and do impact water quality, the advisory committee recommends that enforcement be an integral part of the risk-based program.

- < Homeowners are required to maintain a current O&M certificate at all times. Those owners who do not renew their required operational certificates would be in violation of the Sanitary Code. Renewal of certificates requires that all the conditions be met before a new certificate is issued.

- < Failing septic systems must be repaired in accordance with the County’s Sanitary Code. (A repair permit is valid for 1 year to accommodate possible problems with wet season installations.) If a septic system is in the process of repair, then the renewal cycle must be flexible in order to accommodate the repair. A certificate cannot be issued on a failing system nor on a repair until the repair is complete and an as-built drawing of the repair has been received and approved.

The following schedule for compliance of O&M certificate renewals is proposed: (*Due date refers to the certificate renewal due date.*)

60 days prior to due date:	renewal notice sent
30 days after due date:	warning letter sent
60 days after due date:	notice of violation sent
Thereafter:	all enforcement options available to bring system into compliance

- < The committee recommends a reinstatement fee to recoup the administrative costs. The fee amount would be based on cost expended to bring the septic system back into compliance. Environmental Health reinstatement procedures in Article IV are to be followed: Environmental Health must conduct a field inspection, and the homeowner must pump the tank.

5. Service providers

Recommendations: The advisory committee recommends that evaluations/inspections be conducted as follows:

Low-risk systems: these inspections would be done by certified professionals with the option to develop a ‘certified homeowner’ program. County staff would conduct a 10% quality control check of all professionals. The committee recommends beginning with 10% and adjusting based on findings.

High-risk systems: the dye-test evaluations would be conducted by County staff. The committee recommends that homeowners have the option to use a private contractor to conduct the evaluation. The private contractors would need to be trained and certified by the County. The cost for these dye-test evaluations by qualified private providers would be a set amount paid with the annual program fees collected by the County. It is proposed that the County pay the private providers for those evaluations in order to assure participation of and payment to the providers.

6. Rates and Charges

The authority for the recommended program is the Thurston County Sanitary Code. Henderson Watershed Protection Area would be designated as an Area of Special Concern. The authority for collection of rates and charges is under the Shellfish Protection District legislation.

Recommendations: The advisory committee recommends a three-tier annual fee system with projected annual fees as follows:

Low risk:	\$32
High risk:	\$87
Community*	\$160

*It has been documented that community systems have a higher failure rate than single-family systems.

Program costs, including field staff, equipment, laboratory costs, program administration, certificate renewal, clerical support, computer programming, technical diagnostic support of field staff, sanitarian support for system repairs, compliance, educational materials, and overhead, are determined and divided by the number of systems within the Protection Area. This would establish a baseline fee per system, which would be assessed to all systems. Those systems at high risk, and requiring the dye-test evaluation, would be assessed a higher annual fee.

Rates and charges would be collected on the property tax statement on the same line as the Stormwater Utility fee. The committee members agreed by consensus that the fee should be placed on the property tax statement because it is the most cost-effective means of billing.

This fee structure would replace the renewal fees currently paid for those systems already under the countywide O&M certificate program.

7. Incentives

The committee made no recommendations for incentives in the initial proposal. However, the public expressed concern over the costs of the program and suggested rewards or incentives for being conscientious about septic system care. In response to those comments, the committee proposes consideration of the following incentives to enable participation in the program:

- Senior and disabled exemption program
Already available in the County
For those who qualify (application is required), a %reduction in fees would be given.
- Homeowner inspection program
Train homeowners to conduct the evaluations for their own septic systems
- Riser rebate program
Give rebates to homeowners who install access risers over their septic tanks, making future evaluations easier and less costly.

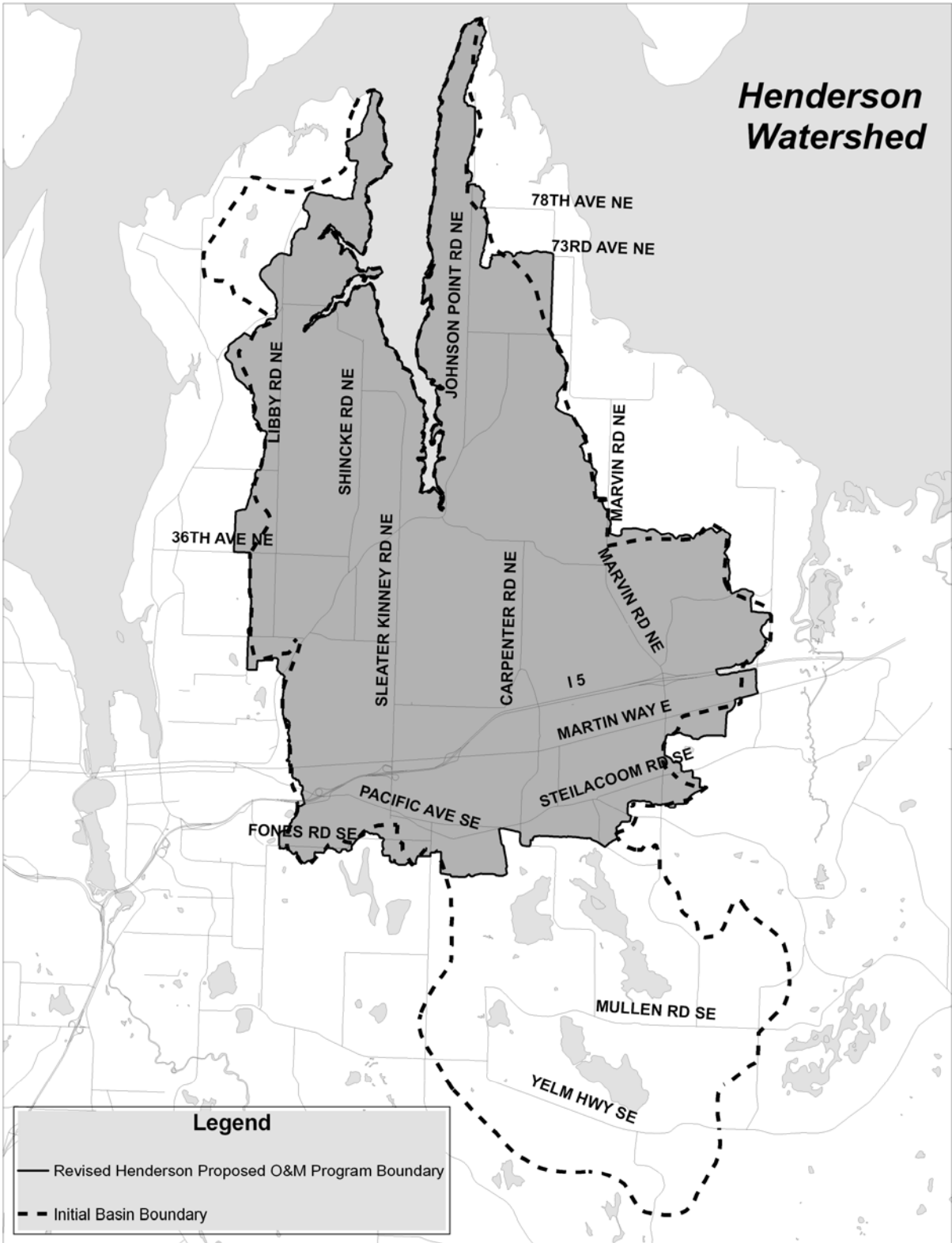
8. Additional Recommendations

The committee has the following additional recommendations:

- ◆ Include a sunset clause that states that the program will end in 10 years unless the Board of Health takes action to retain it
- ◆ Conduct a 5-year evaluation of the program
- ◆ Publish an annual report available to the Protection Area residents
- ◆ Use adaptive management as an integral part of the program in order to adjust program needs and fees

Appendix A

Map of Henderson Watershed Protection Area



Ranking for Evaluation Frequency

Frequency	
Dwelling Types	Points
Single Family Residences	1
Multi-Family Unit [<1000 gpd]	2
Community System [1000 - 3500 gpd]	6
Larger On-Site Systems [LOSS: >3500 gpd]	8
Commercial (sales and service) < 500 gpd	2
Commercial > 500 gpd	6
Industrial	10
System Types	Points
Gravity and pressure distribution	1
Alternate Systems: Mounds, sandfilters, proprietary (required yearly walkover)	3
Table 6 Repairs	8
Experimental	10
Age of System	Points
Less than 20 years old	0
Older than 20 years	4
Frequency Tally Sheet	Points
Dwelling Type	
System Type	
Age of system	
Total	
Range of points for frequency of inspection	
Every year	> 20
Every other year	9 - 20
Every 3 years	2 - 8

Ranking for Evaluation Type

Type of Inspection	
Soil Types	Points
Class 1, 2, 3, non-restrictive layer 4's	0
Class 4 (with restrictive layer*), 5 and 6	10

* Restrictive soils: Alderwood, Cathcart, Delphi, Dystric Xerochrepts, Kapowsin, Katula, Pheeny, Schneider, Tenino

Area	Points
Inland	1
Freshwater frontage	6
Marine waterfront	10

Constructed Drainage where water flows	Points
No	0
Yes	4

Intensity Tally Sheet	
	Points
Soil Type	
Area	
Drainage System	
Total	

Range of points for intensity of inspection	
Pump/stick report and walkover	< 15
Dye Trace alternate cycles	≥ 15

NOTE: There are special requirements for frequency and intensity for certain non-residential systems. Some requirements are based upon law; other requirements are determined by estimated flow, number of employees, materials used on-site, and system type. For example, restaurants are required by law to be inspected every year.

