

Septic System Operation and Maintenance Proposal For Henderson Inlet Watershed

Questions and Answers

January 2005

As you can see from the length of this document, dozens of questions were asked about the Septic System Operation and Maintenance Proposal For Henderson Inlet Watershed. Thank you for your patience in receiving answers, and thank you for asking good questions.

Your questions have been grouped together under 9 different topics, so you can read other questions regarding the same issue. Several people asked similar questions, and these also have been grouped and answered once.

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A. COMMITTEE PROCESS

1. Awareness of Issues

- < Is this operation and maintenance program a done deal, i.e., is it going to happen?
- < This analysis/report seemed to come out of the blue. Why didn't the county share with us that they were researching this issue earlier?
- < Although the proposal, according to The Olympian, has been planned for years, positive notification was never provided to those within the affected area until a short time before the November 18th public hearing. While those who devised the plan had years to prepare, those who will be required to pay for it are allowed only a few days to consider the soundness or unsoundness of the plan and /or any alternative measures of possibly greater merit.
- < As a concerned citizen, I am wondering why we haven't heard more about this proposal until now?
 - < *This is not a 'done deal'. This is the beginning of the public process about the specific proposal for a Septic System Operation & Maintenance Program for Henderson Inlet Watershed. The proposal was developed by an Advisory Committee (see section about the committee). What is happening now is making the public aware of the proposal and asking the public for comments, suggestions, and input.*

Since the first downgrade of shellfish beds in Henderson Inlet in 1984, much work has been done. Over the years public meetings (as well as public hearings), newspaper articles, local TV programs, outreach workshops, watershed tours, watershed-wide mailings, and door-to-door surveys in designated areas have taken place. From 1987 to 1989 a group of watershed citizens met twice a month to study the pollution problems affecting Henderson Inlet Watershed. Public workshops were held to inform residents and ask for input. An extensive Watershed Action Plan was written to address the various sources of nonpoint pollution, and public hearings were held to adopt the plan. A group of dedicated volunteer watershed residents has been overseeing implementation of that plan.

In November 2000 commercial shellfish harvesting areas in Henderson Inlet were downgraded again due to increasing fecal coliform levels within marine waters. To respond to the downgrade, and state law (Revised Code of Washington 90.72.045), Thurston County created a Shellfish Protection District in 2001 for Henderson Inlet. (RCW 90.72.045 requires the County to take action to correct the sources of pollution that led to the downgrade.)

Public meetings and hearings surrounded the 2001 adoption of the Shellfish Protection District for Henderson Inlet Watershed. Again, a group of dedicated volunteer watershed residents has been meeting monthly. The Henderson Shellfish Protection District Committee has reviewed and studied the water quality issues that led to the downgrade, and has developed a variety of recommendations to address the pollution problems that closed commercial shellfish beds in 2000. The recommendations are included in the Henderson Shellfish Protection District Committee Report, July 2003. (Available on the website: www.co.thurston.wa.us/shellfish)

The committee found that many studies implicated septic systems as a pollution source in Henderson Inlet. The Henderson Inlet Bacteriological Contamination Source Identification Study confirmed humans as a significant source of fecal coliform bacteria. Based on their review of this information, the committee made septic systems the top priority within the watershed. The committee's report contains a septic system operation and maintenance proposal. The

committee report was discussed at a workshop on May 19, 2003, and the Board of County Commissioners accepted the July 10, 2003 Report and Recommendations.

A Septic System Operation and Maintenance Advisory Committee, including stakeholders from the Shellfish Protection District Stakeholder committees, industry (real estate, builders, on-site sewage and shellfish), state agencies (Department of Health and Puget Sound Action Team), and watershed residents reviewed this recommendation and developed the proposed operation and maintenance program for Henderson Inlet.

The Thurston County Board of Health reviewed the operation and maintenance program proposal on June 16 and August 18, 2004. At the conclusion of the August briefing, the Board asked Environmental Health staff to develop a public information strategy for their review and approval. The open house and meeting with The Olympian are the first steps being taken to inform the public.

- < I received a notice in mail of this meeting about 1 week ago. Why don't you give us more advanced warning so we can plan our schedules better?
- < Suggest you mail your notices earlier. Mine arrived today Nov 20th. Hardly enough time to make plans to attend your Nov 18th meeting.
- < *Your comment is noted and we apologize for any late deliveries. Bulk mailing isn't always timely, but bulk mailing is used in order to be cost efficient. The other issue was that at that time of year being sandwiched in between elections and holidays, we were limited for meeting dates. We wanted the newsletter to arrive after the deluge of election pamphlets so that it wouldn't be confused with election issues. Our goal was for watershed residents who are septic system owners to read the material.*

What elected officials have backed this plan? (E)

The Thurston County Board of Health was briefed about the proposal in the summer of 2004. The Board requested development of a public information strategy to inform all watershed residents who would be affected by the proposal. The Board approved the strategy in October 2004. All Board members were present at the Open House held November 18th. The Board has requested a debriefing on February 2, 2005, in order to review all of the questions and comments in this document.

How will the program be phased in?

Before this program can begin, the Board of Health must formally adopt it. Therefore, a public hearing must be announced and held for the Board to adopt the program. Following adoption, the details, such as phasing in the program, will need to be worked out. The Board will be briefed periodically to comment and direct program development.

- < I would recommend that the final Program include some limiting terminology. For example, the program and the Health Department's scope should be reviewed by a citizen's advisory group every five years to ascertain that its original mandate (shellfish protection) is still its central focus.
- < At the meeting, it was noted that such programs are effective only if they are continuing and ongoing. Yet, in the circular it is indicated the program will expire after 10 years. Why 10

years? Why expire a program that will supposedly be effective? After all, the problem would only recur later in time.

- < *The Advisory Committee recognizes the value of this proposed program. However, they are aware that the public may be concerned about 'yet another government program'. As a committee, they felt that a 'sunset' clause would help dispel some concerns by requiring intentional review and action to continue the program.*

You are correct in stating that if the program is not ongoing, the problem will recur in the future. This is what we are seeing in Eld Inlet Watershed where water quality improved significantly after intensive dye-trace evaluations found septic system failures that homeowners repaired. But now that no ongoing work is being done, the water quality is beginning to again deteriorate.

2. Who's on the Committee?

- < How many residential property owners have contributed to the proposal?
- < Who makes up the committee and what is the Henderson Inlet Shellfish Protection District Stakeholders Group?
- < Does any of your Advisory Staff have experience in designing and installation of septic systems?
- < Who is on the Shellfish Protection Stakeholders group and what if any properties or interests do they have in this area? (E)
- < How many on this committee live in the affected area? How many of you have a septic system?
- < I would also like to know who the members of the Citizen's Advisory Board for this project are and what their interest is in the plan and what their occupations are.
- < *The list of committee members can be found in Attachment A. The committee member representation is listed after their name. 'SPD' means Shellfish Protection District and if no other identifier is listed for them, they are a watershed resident serving on the Stakeholder Committee for the District. Most, if not all, the watershed residents own homes with septic systems.*

The Shellfish Protection District Stakeholder group was appointed by the Board of Health. The committee is a group of watershed residents and stakeholders, i.e. cities, shellfish industry. This group has been meeting since April 2002.

3. How many properties are involved?

- < How many households are involved?
- < How many septic systems are involved in this proposal? (E)
- < *The newsletter was sent to all septic system owners within the Henderson Inlet Watershed. That was a mailing of about 10,600. There are almost 20,000 property owners within the entire watershed, but this includes those who are on sewer, as well as undeveloped parcels.*

How many non-regulated individual septic systems exist in the designated Henderson Inlet watershed?

Our best approximation is that there are about 10,000 septic systems in the Henderson Inlet Watershed. Of those, we estimate that 1,000 are currently required to have a septic system operational certificate.

As of Oct. 2004, how many more lots/parcels does the county have planned for this area? (E)

The parcels would be included in the 20,000 number.

4. Miscellaneous

Accountability. Will the report include HFB current levels and tolerable levels? Who will do the evaluation? What is an annual report?

Am unaware of HFB, so cannot answer that part of the question. Am unclear as to which evaluation, but assume that it is the 5-year evaluation of the program. The details of the evaluation have not yet been worked on. Very likely, any evaluation would include a citizen group review.

An annual report would include detailing number of certificates renewed, number of QA/QC checks made on low-risk systems, number of high-risk systems evaluated, statistics on what was found during evaluations, listing of system types, budget figures, septic system workshops held and attendance, findings from diagnostic assistance for homeowners with failing systems, etc.

How many shellfish growers are in the Henderson Inlet watershed?

There are 3 growers that are currently certified for commercial harvest. However, there are 456 shoreline parcels that border the inlet and therefore are potential for recreational shellfish harvest.

B. WHO'S INCLUDED AND WHY?

1. How was the boundary determined?

- < How was it determined where the lines would be drawn as to who would be included in the Henderson Inlet Watershed area of the county?
- < It seems that the impact area is larger than necessary. One family home that do not have surface runoff and a modern septic system do not impact the watershed.
 - < *The committee recommended including the whole watershed. Geographers determine the watershed boundary using contour lines. The definition of a watershed is the boundary of an area where a raindrop can fall and eventually flow overland into the inlet. [Please also read answer to Question 3 below.]*

2. Why Henderson?

- < Why are only the Henderson Inlet property owners being singled out for this program? Why not the property along Budd Inlet and Nisqually Inlet also? Better yet, why not the whole county?
- < Why just the Henderson Inlet watershed?
- < Why only those in Henderson Inlet watershed?
- < Also, I am wondering why the County has singled out Henderson Inlet for this project. You can't tell me that Budd Inlet or the other inlets in the area are cleaner than Henderson Inlet. If Henderson Inlet is mandated to do this procedure then it should be mandated countywide.
 - < *The primary reason is that Henderson Inlet is polluted—polluted to the extent that the County was required to form a state-mandated Shellfish Protection District (RCW 90.72). The commercial shellfish closures in Henderson Inlet are evidence of the pollution. This program is in response to that evidence. [Please also read answer to Question A.1.]*

3. Why all of Henderson Inlet Watershed?

- < If no contamination, or documented contamination south of I-5 why include them in the district?
- < I live in Thurston County near Yelm Highway. I would like to know what data supports our property being in the Henderson Inlet watershed. And I would like to know what magnitude or impact (by data) our septic has on the Henderson Inlet.
- < I understand the maintenance of my onsite system, how it functions, and how it can fail. There is no way where my system is located that bacteria are going to reach Henderson Inlet or any area surface or groundwaters. Eventually the system will fail, of course. At that point much less effluent will be percolating and reaching groundwater. If the system begins day-lighting profusely, septage will not reach surface water. Period. We would not be able to live in the house under those conditions, but the problem would not extend to surface waters. The county is painting a broad-brush stroke in an effort to generate funds for the program from people who do not contribute to the problem, and to lower the cost for those who do.
- < The watershed is a huge area and it is clearly evident that you are trying to impact everyone in the

watershed regarding pollutants entering Henderson Inlet. If the distant upstream septic systems were/are a problem with the Inlet pollution, then you need to prove this before requiring EVERYONE to be penalized for something which they are not responsible.

- < *The Advisory Committee believes that the boundary for the Henderson Inlet Watershed Septic System Operation and Maintenance program should be that of the current Henderson Shellfish Protection District. The Shellfish Protection District boundary is chosen because it encompasses the entire watershed. Inclusion of the entire area helps convey to watershed residents that all activity within the watershed impacts the water quality of the inlet. Raising residents' awareness that they live within the watershed is important to advisory committee members.*

4. Why not other marine watersheds?

- < Has the proposal been coordinated with the Nisqually Watershed or Mason County watersheds plans? If not, will it be coordinated?
- < How are other watersheds in Thurston County responding? Will these watersheds also appear at the Thurston County Board of Health meeting in 1st quarter 2005?
- < *This is a program for Henderson Inlet watershed only. It is a pilot program. There has not been any coordination with Mason County. The Nisqually Report does recommend an enhanced O&M program. However, Nisqually is not part of this proposal. The Shellfish Protection District Stakeholder committee and County will consider those recommendations at a later date.*

5. Am I in or out?

- < My residence is on the southern boundary of the outline of the watershed, south of Spurgeon Creek Rd. Will this boundary be moved to Yelm Highway in this area, which seems more logical?
- < My home is at XXXX 81st Ave. NE. I appear on the map to be the only house on 81st Ave. that is in the Henderson Inlet Watershed. Is it in or out, and if so, why?
- < If part of my 5 acres is in Henderson watershed and part is on the Budd Inlet watershed and the septic drainfield is on the Budd Inlet watershed will I be included in this project?
- < *Many people have asked this question. If you received a newsletter, our current database shows that you are within the watershed. However, before any program is started, a more precise (smaller contour increments) watershed map will be drawn.*

C. WHAT'S THE PROBLEM? BACTERIAL POLLUTION

1. Henderson details

- < The inlet has little water movement.
- < Henderson Inlet is not a closed system. Contaminated water flows into the system twice daily. Nonpoint pollution damages the system. Accountability should be improvement of water quality (verifiable) not to prevent further deterioration.
 - < *There are two daily tidal cycles. A circulation study of the lower (southern) third of the inlet has been conducted by Washington Department of Health and Thurston County Environmental Health. Documentation shows that on an ebb tide (out-going), water from the mouth of Woodland Creek, at the head (southern part) of the inlet, reaches the shellfish beds in less than two hours. Washington Department of Ecology completed a circulation study as part of their recent Total Maximum Daily Load Study for the inlet and watershed.*

The northern part of the inlet meets water quality standards. The lower, or southern, half does not.
- < The description of the plan mailed to residents within the area fails to mention whether there has been any testing of the water in Budd Inlet. It fails to mention the possibility that tidal flows can move pollution from Budd Inlet to Henderson Inlet.
- < There is no indication that any systematic testing of Woodward Creek, Woodland Creek, other tributaries, Chambers Lake, Hicks Lake, Long Lake, Patterson Lake, and other areas has been done in order to pinpoint the sources of pollution. Incidentally, why has Chambers Lake been left outside the drawn lines of the area when it definitely is within the watershed? Has Chambers Lake been tested for animal and human fecal bacteria? Have any of the lakes and tributaries been tested?
 - < *Thurston County has completed numerous studies and projects for Woodland Creek, Woodard Creek, and the other smaller tributaries to Henderson Inlet. In addition, for over a decade, the County has had an ambient monitoring program for the streams and lakes mentioned. Please visit it at www.geodata.org/swater . Chambers Lake is in the Deschutes watershed.*

Your arguments are 1 of 2. Either there is surface source pollution that leads to 'point' (a home or farmer's field) source(s), or the source is subterranean and pervasive through the groundwater. Either way, you should be able to trace the problem with diligent sampling to identify the source or source area(s). Why is this information not being conveyed? What are you doing to identify the sources? 3) Why not target the most likely sources of pollutants first - the homes within 1/2 mile of the inlet?

Nonpoint pollution is difficult to trace. Many people have been hard at work for lots of years to identify sources of pollution. Significant work has been done to correct problems. These remedial activities have slowed down the degradation of the inlet. However, water quality is still declining. This proposed program is addressing one of the known problems within the watershed. The Shellfish Protection District Stakeholder committee looked at pollution sources and made septic system operation and maintenance their first priority.

Why is a 1/2" of rain a septic system issue (as stated in mailout)?

The half-inch of rain is the 'condition' that closes the commercial shellfish beds for 5 days following the 24-hour ½ inch rainfall. This is the amount of rain that causes degradation of water quality to the point where shellfish cannot be harvested due to public health concern for consumption. Septic systems are more likely to fail when soils are saturated during the wet season.

What is the watershed acreage breakout for prohibited, conditionally approved, approved and total?

128 acres of Prohibited

360 acres of Conditionally Approved

1114 acres of Approved (most of these are not in commercial production due to water depth)

2. LOTT

What is the measured pollution contribution from LOTT sewage system discharge directly into Budd Bay in the past 2 years?

The national pollution discharge elimination system (NPDES) permit for the LOTT waste water treatment plant allows up to 200 fecal coliform colonies per 100ml sample as a monthly average, and up to 400 colonies per 100ml sample as a weekly average. The wastewater is disinfected using ultraviolet light prior to discharge into Budd Inlet, so bacteria concentrations are typically very low. In 2003 the maximum monthly fecal coliform bacteria average was 9 colonies per 100ml and the average for the year was 4 colonies per 100ml. In 2004 the maximum monthly average was 21 colonies per 100ml and the yearly average was 6 colonies per 100ml. There have been no permit violations since 1996.

An extensive study, entitled Budd Inlet Scientific Study Final Report, August 1998, found that the LOTT wastewater treatment plant contributed 1% of the fecal coliform bacteria loading to Budd Inlet. Moxlie/Indian Creek and the Deschutes River/Capitol Lake discharge contributed 93% of the fecal coliform load and were the two largest freshwater bacterial sources to Budd Inlet.

How do we know that the majority of the human fecal bacteria does not come from leakage and spills from the City of Lacey Sewage system, which has miles and miles of pipes carrying raw sewage all over the area? ... What compensation do the common community land owners get in the event that after we spend thousands and thousands of dollars over the decades complying with these regulations just to have the Lacey or Olympia System fail catastrophically or overflow and destroy all the efforts to clean up the water shed in one big event? In other words when the small property owner has a problem or is out of compliance we have to pay, If the big system fails and is out of compliance who compensates us for having our hard payed for benefit degenerated? (I ask because I recently found a major overflow of the Olympia Sewage line in Grass Lake Park, Last Spring, the city claimed it was a few weeks but I know it was going on for months because I could smell it at my house when the wind blew. So the city blew hundreds of thousands or millions of gallons of sewage effluent into the Green Cove Grass Lake system and I have not heard one word of anyone paying penny one to compensate anyone for that.)

LOTT does notify the County and Department of Ecology when there are spills/breaks in the sewer pipes. Lacey and Olympia monitor the lift stations within their jurisdiction. Some elements of the sewer system are part of a telemetric system; there are alarms at all lift stations to notify of overflow. For preventative maintenance, 80,000 – 100,000 feet of line per year are televised for inspection. Therefore, over a 5-year period the entire system is electronically inspected. Thurston County data show that 14% of the shoreline homes do have failing septic systems.

The limited dye-trace evaluations that were done along the Henderson Inlet shoreline (1996-1999) confirm this 14% failure rate. Therefore, it can be estimated that 14% of the shoreline homes not evaluated are failing.

Though a major break in a sewer line causing pollution to enter the inlet would be a disaster, bacteria do die off. The problem that failing septic systems present is that the pollution is continual and difficult to pinpoint.

If my septic system fails or leaks a few gallons down stream I am going to have to cough up at least ten thousand dollars or get fined???

A failing septic system is a violation of the County's sanitary code. It is unsanitary and a serious public health concern to be discharging improperly treated sewage to the ground, surface water, or ground water.

The County does have a responsibility to assure failing systems are repaired. All septic systems found failing do not require that an entire new system be installed. Thurston County data shows that failure in two thirds of the systems is caused by a component problem, i.e. cracked tank, broken building sewer line, improperly glued transport line, broken plumbing, etc.—all of which causes untreated or partially treated sewage to reach surface water. The County works with property owners and on-site professionals to determine if the failure is the result of leaking pipes and components, or if more substantial repairs are needed.

3. Other sources

Boater contamination in Henderson bay – Testing? Documentation?

There are no marinas in Henderson Inlet. Marinas can be a 'constant' source of contamination. Occasional boater contamination could be happening. There has been no testing or documentation. It would likely be a random source rather than a constant, continual source.

What other pollution sources are being controlled? Other than animal pollution.

In the mid-80's stormwater was identified as the primary source of nonpoint pollution to the inlet. The Cities and County have done important stormwater work including development of design standards for stormwater control, construction of stormwater facilities to provide protection of water quality, maintenance programs for stormwater facilities, ambient monitoring program of watershed streams, and educational programs regarding proper waste disposal, as well as waste reduction. For example, a successful used oil recycling program has been developed.

Much of the animal fecal pollution of the inlet comes from the 300 member colony of large seals living near Woodward Bay, not small pets.

Please read the fact sheet in Attachment B.

Bacterial pollution is an issue in Henderson, for sure. But nutrient loading is an issue also. What will the county do about this? Thanks for putting this forum together.

You are correct. However, this proposal addresses only the fecal contamination. Please visit the Shellfish Protection District website to read how the stakeholders are addressing other issues. www.co.thurston.wa.us/shellfish

Your Nov. 2004 maintenance proposal states that DOH closed Henderson Inlet for shellfish harvest because of fecal contamination in 2000. Since that time, has the county reduced the density/zoning of this area? How many building permits has the county issued knowing of this problem? (E)

The zoning has not been reduced. As stated above, please visit the website for the Shellfish Protection District to see how the stakeholders are addressing this. Please also read the section of 'How Septic Systems Work' – properly maintained and inspected septic systems do effectively treat wastewater.

Assuming all sources of human waste were eliminated, wouldn't there still be a problem in Henderson Inlet due to non-human sources?

Human waste is not the only nonpoint pollution problem in Henderson Inlet Watershed. Human activities cause a host of other nonpoint pollution problems, i.e. pet waste, stormwater, and inadequate animal waste management practices. Reducing the number of failing septic systems and subsequently reducing the number of disease-causing pathogens, however, would be a success.

What is being done to control horse stable waste from being spread in the areas where water flows into Henderson?

The County has a Nonpoint Ordinance as part of the Sanitary Code to address animal waste. The program is complaint driven. If a citizen knows of a problem, they can call 754-4111 and file the complaint.

Rapid increase in population over the last 10(?) years.

In 1989 the population in Henderson Inlet Watershed was 38,000. In 2000 it was around 52,000 and is projected to be 64,000 in 2010.

Why are the developers allowed to build subdivisions without requiring they put up the money to build roads, water systems, schools, etc.? The builders get the money and leave. I fear money is paid to government to get permits. These fees etc are just a tax.

Developers are required to pay for and install the roads, utilities and improvements necessary for their development. Most school districts require developers to pay fees to help cover the cost of additional classroom space and facilities needed to accommodate growth associated with the development. In addition, some jurisdictions charge impact fees to developers to help pay for services and facilities impacted by growth, such as parks and emergency services. Thurston County does not charge impact fees, however.

The proposed fees for the Henderson O&M proposal are designed to cover the costs for all the program elements. If this proposal is approved, the fees collected will go only towards the program approved by the Board of Health. The County does not have the means to pay for this program without a special fee.

< I am concerned we are attacking the problem in the wrong manner. It would, of course, be the easiest for the county to place a fee on anyone who has a septic, since we all have one. However, I believe we need to do more to educate pet owners about their responsibilities for cleaning up after their pets - perhaps through their pocketbooks! Thank you.

- < I live on the Woodard Bay watershed and I am very interested in the quality of our water. I will be unable to attend the workshop on Thursday night. I do have a few questions regarding how we have determined that the septic systems, specifically mine, are polluting the stream. I do not have a problem with doing whatever I need to do to clean up the contamination. I have read several articles that elude to the fact that pet waste, specifically dog waste, contributes more to the contamination than anything else. I tend to believe that this may be the case. I don't understand how 1/2" of rain runoff can carry contamination from my fully enclosed septic system into the Bay. I do understand how the first rains and any rain for that matter can and does carry pet fecal contamination into the Bay. As I said, I am willing to do my part, both physically and financially to clean up the Bay.
- < *A pet waste program has been developed. Outreach is happening through the Humane Society, Pacific Shellfish Institute and the City of Lacey to distribute materials to pet owners. Signs have been installed in parks and places where people walk their dogs, as well as several dog waste disposal stations with bags for proper pet waste disposal throughout the Henderson Watershed. Thurston County Public Health and Social Services, Environmental Health Division partnered with Thurston Conservation District to create a watershed stewardship pledge for Henderson Watershed residents to address the many sources of non-point pollution in the watershed. Please visit www.co.thurston.wa.us/shellfish for more information or contact Jennifer Johnson at (360) 754-4111 ext. 7631.*

Please see page 8 for information about ½ inch of rain.

Has the county exhausted all other risk issues – pets, wildlife, road crews not using portable toilets, awareness programs? The correlation to rain and shellfish indicates much of the issue is NOT in septic tanks. Why should OK systems/residents pay for the minority of systems?

Rain and runoff causes degradation of water quality. Septic systems are more likely to fail when soils are saturated during the wet season. The DNA study has shown that humans are a factor. Road crews could possibly be a part of the problem, but that would not be a constant source that would result in the degree of degradation that is occurring. Please visit www.co.thurston.wa.us/shellfish to read about other issues.

4. Septic system contribution

- < How much of the human fecal bacteria is attributable to septic systems? Sources/factors.
- < What is the evidence that septic systems are the cause of the presence of human fecal bacteria in Henderson Inlet Watershed? Has the committee investigated other possible factors/sources of human fecal bacteria?
- < Effectiveness of policy – how will the proposed requirements ensure a satisfactory reduction in human fecal bacteria?
- < Will this work? Is this a giant experiment with other people's money? Will other methods work better? Cheaper? No answers are provided.
- < Is septic tank failure a cause of the problems within the watershed? How many fail? Will the steps proposed do any good? Again no answers.
- < *We know that septic systems are a source. Exactly how much or what percent of the pollution load cannot be stated. There is proof that repairing failing septic systems has had dramatic*

success in improving water quality in Eld Inlet in Thurston County, as well as North Bay and Lower Hood Canal in Mason County. [Please read answers to all sections of C.]

5. DNA study

In response to worsening water quality of the marine shellfish growing water of Henderson Inlet, Thurston County Environmental Health conducted a study to identify the sources of pollution that impact Henderson Inlet waters. This study was designed to find the difference between human and animal contributors and evaluate the impact of these sources. Water (marine and freshwater), marine sediment, and shellfish tissue were sampled at different locations within the watershed.

The method used is called Microbial Source Tracking which is based on the use of genetic fingerprinting of E. coli bacteria. These bacteria were isolated from the water, sediment, and tissue samples. Therefore, the genetic, DNA, fingerprint identified is of the bacteria that is found in the gut of warm-blooded animal groups, including humans, and is not the DNA of the specific animal.

The study began in February 2000 and was completed in May 2001. Samples were collected on 14 different dates—each date being a ‘sampling event’. Sampling was done during saturated soil conditions when runoff of nonpoint pollution is most likely to occur. A total of 943 fingerprints were typed. Matches to sources were made for 86% of these. Twenty-seven different source types were identified including avian, beaver, bovine, canine, cat, deer, dog, duck, feline, goose, horse, human, marine mammal, opossum, otter, poultry, rabbit, raccoon, rodent, seagull, sea lion, and seal. (Please view the report at www.co.thurston.wa.us/shellfish/publicationsmedia.htm#dnatest)

What times of year were the samples taken?

Table 3 of the report shows the specific dates for the sampling events. The study began in February 2000 and was completed in May 2001. The study design was to sample during the wet season when soils were saturated and runoff was most likely to occur. It included sampling under various weather and tidal conditions as prescribed.

- < The flyer states that in 2002 that County staff took 600 samples from designated areas within Henderson Inlet. Who designated those areas and why? What time of year were the samples taken? How many non-regulated individual septic systems exist in the designated Henderson watershed? Were any follow up samples taken in the ensuing years?
- < The DNA results do not support septic tank failure as the source of pollution. The report suggests human sources but clearly states that it lacks data to identify where these sources are located. Are these sources septic systems? Are they sewage treatment plants (LOTT) or some other source(s)? How can this proposal use the DNA tests as a justification when the tests themselves do not support those conclusions? No answers are provided.
- < On a map, where were the 600 samples taken?
 - < *On page 13 of the report, Figure 2 shows the sample site locations - of which there were 3: a marine site where water, sediment, and shellfish were collected [This was the marine site where when the shellfish classification downgrade occurred in 2000, the downgrade action set into motion the state required formation of a Shellfish Protection District]; the mouth of Woodland Creek/head of Henderson Inlet where water samples were collected; and the rural creeks (2) that flow into the cove at the south end of Swayne Drive. ... Table 1 on*

page 15 shows that the study was designed to collect 300 samples - of which 200 were water, 50 were sediment, and 50 were shellfish. From each sample, at least 2 E. coli bacteria colonies were analyzed for DNA. ... Table 2 on page 17 shows that our goal of 2 DNA identifications per sample was reached for everything except the shellfish tissue. We ended the study with 943 separate colonies analyzed for a DNA fingerprint.... The data was proofed so that we counted a unique DNA pattern for the E. coli colony only once per sample site per sample – approximately 600 unique fingerprints. This was done because the same pattern could have appeared more than once in a sample from a site. This is where the 600 number comes from.

Were there follow up samples, as the report recommends, taken?

Unclear what is meant by 'follow-up' samples. Follow-up samples are not taken as part of a DNA study design.

Of 600 samples taken only 14 sampling events showed fecal contamination, of those 14 only 8 were human fecal contamination. I would say that the problem is not very substantial and should be approached in a different manor. It is not necessary to kill a flea with a sledgehammer.

There actually were 150 water samples and 50 sediment samples collected during 10 sampling events. Another 50 were marine water samples collected during 4 additional events. Oysters were collected during 4 sampling events. There were 3 sampling stations – rural streams, Woodland Creek, and marine water at Department of Health station #188 (formerly call station #5). Water was collected at all three stations; in addition, shellfish and sediment were collected at the marine site. So there were five sample types—3 water + 1 sediment + 1 oyster tissue. Ten to seventeen percent of the fingerprints for each sample type were from a human source.

What is being referred to in the 8 of 14 is the sampling events—the dates when samples were collected. For example, 8 of 10 sampling events at Woodland Creek had human sources; 6 of the 10 events at Swayne Creek had human sources; 8 of the 14 marine sampling events had human sources; 5 of the 11 sediment sampling events had human sources; and 5 of the 5 shellfish sampling events had human sources.

If those 8 human fecal samples were plotted and the septic systems within 500 feet were dye tested, I firmly believe that you would find the source of the human contamination. Once found, I'm positive that there are laws on the books that could be used to rectify the problem. ... I've always heard that drain field effluent was safe enough to drink after filtering through as little as 50 feet of good soils. If that's still true then most of the sources of human fecal contamination in Henderson Inlet are probably originating within 100 feet of the drainage courses within the boundaries of the watershed. Is it possible that another look at the scope of this regulation needs to be taken? ... My firm conviction is that, like so many other well intentioned government regulatory programs this one has taken on a life of it's own. And, again we are going to kill the flea with a sledgehammer.

The 8 refers to events not fecal samples. Fecal bacteria can travel significant distances in saturated soils and surface water, and survive for hours and days, depending on the circumstances. Bacteria from up in the watershed can reach the marine water and still be viable. Circulation studies calculate that water from the urban area of Lacey/Olympia can reach the mouth of Woodland Creek at South Bay Road in less than 2 hours. Water from the mouth of the creek / head of the inlet reaches the shellfish beds in another 2 hours.

While public health risk is greater if on-site sewage systems near the inlet fail, studies have shown that failing systems located greater distance from surface water can have a significant impact on water quality. The committee considered this when making their recommendations.

If 600 samples were taken? --Why did it take DNA typing and analyzing at a cost of? \$\$\$\$ to find out there's poop in Puget Sound. You could have just gone for a boat ride and seen that!

DNA typing is the only tool available that can scientifically confirm if fecal coliform bacteria come from humans or other sources. In the late 1990's the public and the Board of Health asked that studies be done to confirm the source of the fecal coliform bacteria that were polluting the inlet. The DNA study was completed to answer these questions.

It seems that all the emphasis is on human waste, whereas the DNA study shows this is a small portion of the overall fecal matter in Henderson Inlet. Will focusing on waterfront septic tanks really produce a clean Inlet? Having lived on this property for more than 20 years, I have noticed degradation of water quality increases as construction in Lacey increases.

The Shellfish Protection District Stakeholders evaluated the information about the sources of pollution to the inlet, and made septic system operation and maintenance the top priority. This program will produce a cleaner inlet.

I also find it very silly to be complaining about the wildlife as polluters. We want and like having deer, rabbits, raccoons, squirrels, and even the coyotes (you can have the possums). I can just see environmentalists with "wildlife" pooper scoopers combing the woods now.

No one is complaining about wildlife being polluters. The DNA study identified sources in the area.

5. Lakes

Has a fecal coliform contamination study been done in Pattison, Hicks and Long Lakes? If so, what were the findings? (E)

A major lake restoration study of the Hicks, Pattison, Long Lakes system was done in the late 1970's and 1980's. The reason for the study was excessive aquatic plant and algae growth in the lakes caused by excess nutrients, particularly phosphorus. One conclusion of the study was that the ground water, which flows into and out of the lakes, is vulnerable to nutrient loading from septic systems because of the presences of very porous sand and gravel soils with limited capacity to remove nutrients and other soluble contaminants. As a result, the first "Geological Sensitive Area" (GSA) in the county was created around the lakes in 1978. Since then on-site sewage regulations state-wide have surpassed those adopted in the GSA in 1985. Direct septic system discharges into the lakes and fecal coliform contamination from septic systems were not identified as major problems because of the porous soils around the lakes,.

Why aren't the lakes affected? Why isn't my well affected? My well water is checked every 6 months (no problems). Start your problem search at the source and work towards the houses.

Ground water in the vicinity of the lakes, especially to the south of Pattison Lake has been contaminated with pesticides and nitrates. The contamination was discovered in the 1980's, and is believed to have been caused primarily by the agricultural activities occurring at that time. That contamination illustrated the vulnerability of ground water in the area to contamination from human activities. High nitrate levels still exist along the Yelm Highway, south of Pattison Lake. As farms in that area are replaced by residential development, the types of potential ground

water contaminants in the area will shift from animal manure and commercial farm fertilizers and pesticides to septic system effluent and residential fertilizers and pesticides.

D. WHY CAN'T WE JUST SEWER?

- < Why aren't sewer systems being installed?
- < Is there a comprehensive study being made regarding sewage systems in this area?
- < Why you do not install a sewer system in Woodland Creek? I know it will be expensive but at the end it will be better for shellfish and other areas of the water sources.
- < We live within the area and have for 28 years. I'm not convinced that the problem is caused by septic tank failure. However, if it is, more frequent pumping will not resolve the problem. Consider a sewer system for the high-risk areas.
- < When I and my family lived in Massachusetts in the middle 70s the US govt mandated that the Merrimac River would be cleaned up. to do so the surrounding towns on the river had to install sewer systems and all of us had to hook up plus pay for the line that was laid Paid for by the linear foot over a 20-year period. As I understand there is a sewer line that runs along Pacific Ave Through lacey now. I live off of Homann drive and would like to know why the watershed area is not mandated to install sewer lines. Wouldn't this be the more responsible and less costly (in the long run) thing to do?
- < If septic is such a worry, then just put in a citywide sewer system with water reclamation and begin farsighted thinking. In 20 years Lacey area will be solid development and all city from the Olympia city boarder to DuPont.
- < I propose starting with the numerous subdivisions going in around Thurston County. How about this - - - anyone developing 10 or more residential units would be required to install a sewage treatment facility or hook up to an existing facility.
- < *Sewer may be one of the solutions to on-site sewage system problems in some areas. However, sewers can only be installed within the Urban Growth Management Area (UGMA) as per the Growth Management Act. About forty-five percent of the Henderson watershed is outside of the area planned for urban growth. So on-site sewage systems will remain a method of sewage treatment and disposal in the rural areas and likely in at least some of the urban growth area. Sewers are also expensive – millions and millions for construction and management of the sewer system network, lift stations, and the treatment plants. In this community new development pays for extending sewers into new areas. Neither the County nor the Cities have funds to pay for sewer extensions into previously developed areas. Special loans, grant funds, and/or local improvement districts (paid for by the property owners) would be needed to pay for extending sewers into existing neighborhoods.*

E. HOW SEPTIC SYSTEMS WORK

- < Properly built and maintained septic tanks create no pollution.
- < What percentage of septic systems are installed to code? If they are installed to code, why are they not functioning properly?
- < This is unfair and should be put in the Thurston County Commissioners wish list for when it's better thought out and paid for by the people who told us our septic systems were ok and approved by the county when installed.
- < I am also wondering why Thurston County feels that they need to monitor systems that they originally approved to have installed. Especially those systems that have been approved within the last five to ten years. I am sure the County was aware of the condition of the inlet during this time. So it makes me think that the County is just trying to find ways to increase their revenue by charging another fee. If a system fails before they are ten years old, I think the County should be looking at their system approval process.
- < The costs of the inspection program are modest but cumulative. It seems that someone (A septic tank pumping service) will charge each and every system owner a fee to do what is a very modest inspection program. If a system fails (tank fills, field clogs) the user/owner very quickly discovers that toilet facilities do not work or a large mess in their yard. Is this inspection really worthwhile? Can some other inspection program without cost work?
- < *When septic systems are installed with a County permit, they are to be installed to code. Septic systems have many components—building sewer, tank, tank baffles, distribution box, pump chamber, pump, distribution lines, trenches, treatment units, disinfection units. Proper siting, construction, installation, and maintenance are all critical pieces of a system that properly treats wastewater before it reaches ground or surface water. However, even with the best of all those elements, a septic system can fail or cause pollution that a homeowner is absolutely not aware of. Systems settle in the ground after installation causing components to shift and perhaps crack. Earthquakes happen in this area also causing shifting and movement that can cause breaks and dislocation of pipes. Drainage systems constructed to remove water from a house foundation or property can be built too close to a drainfield component and intercept untreated or partially treated sewage. Homeowners and residents have a large effect on system performance. There are elements of proper operation, i.e. no use of garbage disposals; spreading laundry out over the week; no use of septic system additives; no driving, parking, or impervious surface over drainfield area; water saving fixtures on faucets and showers; low flow toilets that determine whether a system will continue to operate properly.*

Has the County sold us a bill of goods insisting on design systems, etc. and now indicating that systems may not be sufficient to take care of now existing problems – or are they allowing too much building in the 1 house per 5 acres areas?

As stated in the previous answer, there are factors that can cause a septic system to fail.

Has a building construction moratorium been considered as an option? If so, why is it not part of the program being proposed?

On-site septic systems can work in many areas when they have been properly sited, designed, constructed, used, and maintained.

Why are we not requiring that homes on septic system be re-certified at time of sale? (Per presentation materials this was no longer required since 1999). And why not make a requirement to pump every home every 3-4 years as was the program?

There are potentially two issues in this question. First, if the question is about documentation of septic system inspection at time of sale, then the issue is about what is commonly referred to as 'Health Letters'. It has been the lending institutions that have required the 'Health Letters' as part of the loan process for purchase / sale of a home. These letters have provided documentation that the septic system has been inspected and any apparent repairs have been made. Many lending institutions are no longer requiring this documentation.

If the question is referring to the former County practice of requiring a septic system operational certificate for all homes at time of sale, regardless of system type, then the answer is found in the Sanitary Code provision changes made in 1999. In 1998, Thurston County Board of Health reviewed and evaluated the County's septic system operation and maintenance program. The decision was to make homeowner education the program focus. They believed that if septic system owners are given information on proper operation and maintenance, the homeowners will follow-through with regular maintenance. Educational information has been mailed to all septic system owners when systems are permitted, repaired, or evaluated as part of a loan certification process (health letter). A web site was developed to provide a variety of information about septic systems. www.co.thurston.wa.us/health/ehoss/index.html In addition, a Septic Help Line (357-2490) was initiated and seven to eight workshops are held annually.

It may not be necessary to pump a septic tank every three years. However, in order to be consistent with state law, the proposal is to inspect systems every three years to determine if pumping is needed. If the tank needs pumping, then it must be pumped and the pumper's report must be submitted to the County with the application for renewal of the operational certificate.

Those septic systems, that are currently required to have operational certificates, must have the tank inspected every 3 years. Some people may remember the previous renewal cycle of every 4 years. With the last revisions of the sanitary code, the cycle was changed to every 3 years to be consistent with the state law.

Tanglewilde / Woodland Creek neighborhoods have poor septic systems.

There are likely neighborhoods or area where poor soils, system age, and other factors are resulting in localized septic problems. The proposed program is intended to identify those areas and ensure that septic system problems are being addressed.

Most houses are sold within 5 years. Why not focus on systems that haven't been pumped or checked?

This recommendation will be considered by the committee.

I know of only one septic system failure in our community of approximately 100 homes over the past 25 years. It cost the homeowner about \$10,000 to install a new septic pump system. The planned remedy is much too expensive and unnecessary for the homeowners within the designated area. If enacted the requirements would at least double and in many cases, triple or more, the cost of maintaining a septic system. It would not resolve the problem.

The proposed new costs include an annual fee of \$17 - \$60 plus a \$25 certificate renewal fee for those who are not already required to have a certificate. These fees pay for the certificate, evaluation and education programs associated with this proposal. Maintaining a septic system

is already a cost that a homeowner plans for. A failing septic system is a public health issue and a violation of the County's sanitary code. It must be repaired to protect public health.

The Health Department has a poor record of stewardship of septic systems and has failed to enforce its own regulations concerning fecal contamination of waterways. A case in point is at xxxx 68th Ave NE where the last (and illegal) chlorinator system in the state continued operating for years while the Department did nothing about it. Finally, after some five years of complaining calls, letters to Environmental Health and appearances before the County Commissioners, the Health Department reluctantly forced the property owners to install a modern septic system. Part of that enforcement agreement was creation of an operations manual and plan with the requirement that quarterly and annual inspections of this system be conducted. Such inspections ended before the first year of operation was reached. And, as of today, have not resumed. Complaint calls to the Department about that fact have been ignored by health officials.

The Environmental Health Division works to assure septic system owners properly operate and maintain their septic systems. Thurston County's septic system regulations outline the actions the Department can take when septic system owners fail to follow the maintenance plan for their system. The Department is taking the steps allowed under the sanitary code for the described property.

The property in question was developed in the early 1960's using a "chlorinator" septic system. This type of system discharged chlorinated septic tank effluent in Henderson Inlet. In 1992, the Department of Ecology issued orders requiring the abandonment and replacement of chlorinators. In 1997 the septic system at the property in question was replaced with a aerobic treatment unit, a system that treats the septic tank effluent before it is discharged to a drainfield. Unfortunately, it took three years of monitoring and adjustments to get the system operating properly. An operational certificate was issued for the septic system in 2000. The certificate has expired and needs to be renewed.

The proposed O&M plan for Henderson Inlet would give the County greater enforcement authority when property owners fail to renew operational certificates or follow prescribed maintenance procedures. As proposed, if a property owner does not renew their operational certificate after a renewal notice is sent, a Notice of Violation would be issued, which would allow a range of enforcement options including civil infractions and formal legal action.

I support a septic system maintenance program for our watershed. I have been involved in water quality work for the 20 years I have lived in Henderson Inlet and believe such a program is long overdue. However, I am concerned about the County continuing to allow new systems to be installed in poor soils, in wetlands and too close to streams. Systems installed in these locations will eventually fail and undermine the progress we might achieve by better maintenance of existing systems. Simply designating poor located systems as "higher risk" is not appropriate for protecting surface and ground water quality. They should not be installed in the first place!

All permitted systems must show that soils are adequate to install a primary septic disposal system / drainfield and a reserve area, for a repair when and if needed.

I have a problem with all of this because the regulating authority is going to say I must repair or replace. This is bad enough. then you are not going to say, "here, this is the system you must put in," you are going to say, "go hire an engineer and hire a soils expert etc and then bring us a plan which we may or not approve." This is really aggravating. I believe the regulatory authority should have on staff people who can design the system for a small fee and approve it and then allow for capable owners to self manage the installation or rent a backhoe etc and install it themselves. ... I have a general problem with this because it is going to create a situation in which the owners of septic systems have no choice. The

Septic installation companies and designers will have a free hand in escalating prices and contract bids for these systems because there is no alternative unless you address my concern above.

In most cases, homeowners have several choices on what type of sewage system they will need and where it will be located on their property. A state licensed sewage system designer is required to evaluate the property and develop a proposal that meets state and local sanitary regulations. A designer should discuss the various options with the homeowner to ensure that the sewage system meets the needs of the homeowner, as well as the requirements of the appropriate regulations.

The County does not have the staffing resources to design sewage systems for property owners. There are dozens of licensed designers and over 70 certified installers in Thurston County providing services to property owners. It is advisable for property owners to speak with several industry professionals to discuss costs and any associated bids. A property owner can then make an informed decision.

A homeowner can install their own permitted and approved sewage system, but they must have approval from the County, as well as from the sewage system designer. Most homeowners, however, do not chose the self-installation option, as sewage systems are complex and a substantial financial investment.

F. COST / FEES

A draft budget has been developed and is based on 10,000 systems, the estimated number for the entire Henderson Inlet Watershed. Of these 10,000 systems, 9,000 are predicted to be low-risk systems, 980 would be high-risk systems, and 20 would be community systems. The majority of systems would be on a 3-year renewal cycle.

The budget has been developed around a program that includes program administration and database management, a quality control check on 10% of the low-risk systems, intensive dye-trace evaluations of the high-risk systems, educational workshops and brochures for homeowners, diagnostic assistance to homeowners with failing systems, and program compliance. As drafted this budget includes 1.9 FTE's (full time employees).

The annual fees (\$17-22 for low-risk; \$60 for high-risk; and \$160 for community systems) would generate \$212,800. [The proposal recommends collecting the fee on the property tax statement which would incur a 2% cost of \$4,256.] The \$25 septic system operational certificate renewal fee would generate \$83,333 annually. Therefore, the total annual revenue would be \$291,877 [\$212,800 - \$4,256 + \$83,333].

1. **What does the fee pay for? What is included in the program?**

↑ What am I getting for my fee? If the owner is inspecting his own system, what does the fee pay for besides paper pushing?

Please read paragraphs above.

↑ It is likely that creation of such a proposed inspection system and tax will result in expensive personnel growth at the Dept. of Health.

1.9 FTE's – full time employees

↑ You would require people to clean/check septic systems more often- much more often than most do. With it comes the full tab to pay for that service, which isn't cheap. Then pay an operational certificate every couple years- okay- some county employee has to take 5 minutes to file and enter info into some database. Surely this can be done for less than proposed rates. But then a yearly fee? For what? For building a large- very large- coffer of money? No service, just mandatory charge. Nope. I am not normally a vocal political "trouble maker", but this fee schedule is going to make me one.

↑ The brochure does not identify how the fee's charged for this program will be spent by the county, other than dye testing. It does not identify whether a monitoring program will be carried out to target problem areas and track down sources of human bacteria contamination. The certification approach based on mandatory septic system pumping, and a visual inspection of the drain field will not always detect failing systems. For example, septage from a failing system in our community was surfacing a considerable distance from the property on which system was located. I am curious what enforcement the County will commit to taking against system owners for continuing noncompliance (after a NOV is sent)?

The fees for the program cover a wide variety of activities, including dye testing of sewage systems. There are administrative costs associated with implementing the program, such as maintaining the computer database, billing, and mailing and staff time.

The program, as proposed, will evaluate many more sewage systems for problems than current programs. The Advisory Committee did not recommend any particular type of compliance action. The Committee agreed that the County should determine which method of gaining compliance would be most appropriate for a given circumstance. The Committee's recommendation was that all Operational Certificates be kept current.

The County has various options for ensuring compliance with state and local regulations. The first step in ensuring compliance is the issuance of a Notice of Violation (NOV). This is a certified letter that stipulates what the alleged violations are and the actions that must be taken to correct or address the situation. These notices generally specify deadlines for correcting the situation. Most property owners comply within the specified timeframes once they receive the Notice.

If there is no response to a Notice of Violation, the County may issue either a Notice of Civil Penalty, which is a monetary penalty as outlined in Thurston County's Sanitary Code, Article I, or a Civil Infraction. A Civil Infraction is similar to a parking ticket and is administered through Thurston County District Court.

The County also has the ability to bring the issue to Thurston County Superior Court. This is accomplished in conjunction with the Prosecuting Attorney's Office. It is the option used only when other methods have not been successful in gaining compliance.

↑ This is a tax. Fees are for a specific service. What service does this fee provide? Who will identify high-risk systems?

Please read the introduction paragraphs under F. High-risk systems are identified by using the point system that is located on the last page of the proposal.

↑ Every system owner will end up with an inspection bill at least every 3 years plus at least \$60.00 in renewal fees to what end?

Yes, there is an inspection every 3 years. The proposal includes an option whereby a homeowner would be able to conduct this inspection themselves. Under this proposal, the septic system owner will pay for proper system maintenance, the associated certificate, and annual fees. Of these, only the certificate renewal fee (for those homeowners who are currently not required to have one) and annual fees represent new charges, since the owner is already responsible for monitoring and maintaining their system. Routine homeowner maintenance of a septic system should include having the septic tank evaluated every 3 years, and pumped when needed.

The annual fee for high-risk is \$60 and \$17-\$22 for low-risk. The renewal fee is \$25.

↑ From the pamphlet and the editorial it appears that the 11,000 households could generate \$1,000,000 + or - in fees each year. This appears to be the creation of a huge bureaucracy.

Annual revenue is estimated at \$291,877. Increase in staff is estimated to be 1.9 full-time employees.

↑ What exactly will the tax accessed fees go to? They said the \$25 certificate fee is to administer the program. What is the additional fee for? Can/will the county set a limit/cap for fees charged by contractors to perform certified inspections so that contractors don't annually inflate fees once the program becomes required?

Cost of living increases have not been built into the draft budget. That is an important point and one that must be considered.

On my tax statement a charge of \$23.86 is assessed yearly for stormwater run-off. Does this apply towards sewer lines and stormwater drains? If so, since we live in the county and do not have stormwater drains, could not this money be applied towards the new fee you are proposing? The argument being that why should I pay for a service I am not receiving. If the answer is, Well, it benefits everyone...then could not the same argument be made for the people living in the Henderson Inlet Watershed that this benefits everyone, and so everyone should pay.

The Stormwater Utility charges go to improve stormwater drainage management, but Stormwater rates do not fund sewer line improvements. There is an annual Stormwater base rate of about \$20/residence. In addition, a Capital Facility rate was adopted to fund needed stormwater drainage system improvements on the regional and neighborhood level. Since urban-area needs for stormwater improvements are much greater, the charges in the urban area are correspondingly higher. The Stormwater Utility Capital Facilities charge averages \$18/year per residence within the unincorporated Urban Area and \$3/year in the Rural area. By law, the County cannot charge twice for the same services. The proposed program is different than the Stormwater Utility program.

What is the breakdown of expenses for the cost charged the homeowner or, where are the charges coming from? Where is our stormwater tax going? We were under the impression that tax was paying this.

The Storm and Surface Water Utility base rate pays for all utility services except construction projects. Examples include:

- *Maintaining existing county stormwater facilities.*
- *Working with homeowner associations to ensure maintenance of privately-owned stormwater ponds.*
- *Providing engineering advice and other kinds of technical help for ratepayers who have flooding problems, or who need help interpreting and complying with stormwater rules.*
- *Creating comprehensive watershed plans along with other municipalities (basin plans).*
- *Monitoring the quality and quantity of local streams.*
- *Organizing volunteers to cleanup streams through "Stream Team."*
- *Creating regulations requiring developers to manage the stormwater runoff they create.*
- *Educating adults and children about water-related issues.*
- *Staying current on federal and state stormwater mandates.*

The capital rate pays for construction projects that have been approved by Thurston County Commissioners. The projects seek to reduce local stormwater flooding, protect fish and wildlife habitat, and improve water quality throughout the utility. For more information about current capital projects and other details, see <http://www.co.thurston.wa.us/www/divisions/stormwater.htm>.

Stormwater Utility rates do not fund on-site septic system maintenance or city sewer system expenses.

2. Budget

- < What are the total revenues this program will generate (estimated) and what are the total estimated expenses?
- < How much additional revenue is expected to be generated by this new tax? How many additional civil servants are expected to be added?
- < How much total revenue in fees is projected per year to be collected by the county? How much is the cost estimated to be per year? How much surplus or deficit per year?
 - < *Revenue estimate is \$291,877; estimated expense is \$291,806. That would result in a \$69 shortfall.*

What is the estimated county revenue from the proposed fees? What, if anything, has been done to reduce the costs of administering the program?

The County has a relatively new permit tracking database system that centralizes the County's parcel information into one database. Environmental Health's current Operation & Maintenance program began using that program in April 2004. Use of this program has automated and streamlined the process, and has made it possible to have an equitable and consistent renewal program.

Why do we have to be billed for this? In fact, why are the inspections and permits necessary? We already pay to have them cleaned regularly. WE also pay to have the system design on our other land renewed regularly.

Inspections and certificates are needed in order for septic systems to be properly maintained. There are many homeowners who carefully maintain their systems and are keenly aware of what not to put down their drains and how to treat the area in their yard where their system is located. Unfortunately, that is not true for all. Also whether a high-risk system is performing, actually treating the sewage, cannot be determined from observing the system or even pumping the tank. Pumping the tank is an important 'insurance' policy to prevent a buildup of sludge and scum that could move out into a drainfield and cause clogging and failure. More complex septic systems have additional components that require continual oversight and care. Though residents may be well-intentioned, sometimes a reminder (every 3 years) to check things is what is needed.

3. Community fees

I am on a community system that serves 6 homes; 17 bedrooms. We are already in compliance with the proposed inspections and certification requirements, so none of this will be new to us being a community system. However, as a low risk (according to your point system) system, why will we be charged more - \$160 divided by 6 per home than individuals? It's not at all fair.

The \$160 represents the cost necessary to provide the services recommended under this proposal. The review and administration of community systems are more complicated and take more time than single family residences. Community systems require careful and thorough oversight. It is important to inspect a drainfield on an annual basis when so many different homes are using a single drainfield for disposal. Problems need to be caught early which means annual inspections are needed. Tanks, on the other hand, serve a single residence. Therefore, tanks are inspected every three years—just as are other single-family systems in the County.

How many homes can be part of a “community system”? Will they pay their fair share? The 1-family/5 acres zoning has already been violated. And why such a minor difference in fees between high and low risk properties? I don't want to subsidize waterfront living or those who have livestock.

Community systems share a common drainfield while each house has its own septic tank. Under Thurston County code a community system is one that serves more than one single family home or handles 1000 gallons or more of sewage per day. The proposed fees will cover the costs for the program and should result in an equitable distribution of costs so that each system owner pays their fair share for the services they receive.

Each tank is required to have an operational certificate, so the homeowner will be paying for their own tank. Each community drainfield will require an operational certificate as well. The community will need to determine how to pay for the annual fee for the drainfield.

4. Costs

In speaking with two septic pumping companies, they did not concur that more frequent pumping would prevent system failure. The cost to pump a 1200 gallon system is \$300 to pump, and average \$300 to uncover / cover and a sales tax of \$50.00. Total cost about \$650.00 plus any additional fees the County might impose.

Pumping a septic tank is based on need. If the pumper, or other qualified person, evaluates and finds that pumping is not needed, then the tank does not need to be pumped. Pumping should cost between \$185 and \$375; pumping a pump chamber would be between \$10 and \$250.. Digging up a tank should cost between \$75 and \$200 depending on the depth of the tank. Pumpers should pump both compartments of a tank; all contents should be thoroughly emptied and rinsed out – no ‘starter’ material is needed; pumping should occur through the main lids, not the baffles. If you have a system newer than 1995, there should be an effluent filter to protect the drainfield; this filter should be removed during pumping and cleaned. If you have a pressurized system, the pump and pump chamber should be inspected and the tank pumped if needed. Pumpers can do minor repairs, such as repairing or replacing a broken baffle. It is recommended that you get a second opinion for any repair estimated at more than \$200. [It takes several days to refill a tank, so you have time to get estimates.] Ask the pumper for a signed pumper report to keep with your records and to submit for certificate renewal.

5. Will there be any financial assistance?

- < For those people who would find this a financial hardship, would there be help for them?
- < If work on septic is needed, are there any grant funds available?
- < I have a big concern about lower income property owners and retired property owners and some small time real estate investors. If our system is found to be malfunctioning we are required to fix it. The question is what if I am retired or unemployed or a small rental owner who just barely makes the payments every month and do not have several thousand dollars lying around to fix the problem. Is the county going to arbitrarily fine and prosecute people who cannot afford to fix problems and thus increase even further the inability of people to pay for these repairs or replacements?

- < I am also concerned about the many senior citizens who live out in our area that live on very fixed incomes. This would be another charge that they would have to cover when many times they can barely make it from month to month.
- < We live in a neighborhood where more than 50% of the homeowners are retired. Two people in a home. Three homes consist of only one person. While you cannot tailor an individual plan, it's very unfair to force a "one size fits all" requirement. Many households just cannot afford the additional expense. We pump our septic tank, on average, every six years. The pumper said it could go another two or three years. Long ago we did the following: a. Stopped using the garbage disposal; b. installed low flow shower heads, c. installed low flush toilets, and d. kept 'wrong' items out of the septic tank.
- < *There is a County low-interest loan program available for repair of septic systems. A Senior Exemption Program is for low income seniors. Seniors who have enrolled in this program are identified by a code on the assessor's parcel information and their fees are reduced.*

We can't afford a special designed septic system – we are very concerned that this plan will force us with waterfront property to install one of these \$20,000 or more systems.

Repairs are needed only for documented failures. As stated previously, two-thirds of the failures are caused by component problems. Just because a system is old or built a certain way does not mean it has to be repaired.

6. Are there any incentives for being proactive?

The committee has recommended no incentives at this time. There is a strong sense that the program needs to be as transparent and uncomplicated as possible. However, this question grouping had one of the largest number of comment and question entries by homeowners. Clearly, incentives are something that the public would like reconsidered. There are many suggestions interspersed amongst the questions—credit for 'good behavior' being a primary one.

The fee structure is based on circumstance, not behavior. Has any consideration been given to incentives for well-maintained systems and penalties for bad actors?

I pump and check my system, without a county mandated fee program. Can I as a homeowner and honest citizen do my own inspection using guidelines set out by the county? No fees involved? Did I hear that the county through this program will be paying for inspections? After showing repeated compliance inspections, can you be exempted?

Will this affect those of us that already take care of our systems?

I am a private homeowner and have just received the newsletter on the Henderson Inlet Watershed Septic System Operation and Maintenance Proposal. Though I plan to attend the November 18 meeting, there is one particular point regarding the certificate requirements that I would raise at this time so that, if you have not considered it, you can address it prior to that meeting in order to avoid a multitude of vehement objections. Under your proposed certificate requirements, certificates would last for three years for "lower -risk" systems. The first item listed to be accomplished is for the tank to either be pumped or measured to determine if pumping is necessary. The third item requires a check of the pump chamber. These are the items of the proposed certificate requirements that incur the major cost to the homeowner. ... If this program is established as proposed, it would be most unfair at the inception of the program to initially require a homeowner to have his tanks inspected and/or

pumped if he or she has just recently had it done, particularly when it involves tanks whose lids are under the surface of the lawn where even more effort and cost is involved. If the program is, in fact, adopted as proposed, with a three-year certificate for "lower-risk" systems, I strongly propose that the initial inspection for a certificate be required three years from the last time the system was pumped, provided, of course, that the homeowner has appropriate documentation. ... A similar method of determining the initial certification time for "higher-risk" systems should be implemented. For instance, if a particular system is assigned a two-year certificate period, the initial certification would be required two years from the last time the system was serviced.

The County's current Operation and Maintenance Program works on the principle where the renewal cycle is dated from time of service. The Henderson Inlet program would likely work in a similar fashion - that the next renewal cycle would be 3 years from the last renewal cycle which is when the system would have been pumped or checked for pumping.

I just read the flyer on the Henderson Inlet septic System Operation and Maintenance Proposal. I am concerned about water quality in the area. Rather than make repairs to my septic system in the Tanglewilde subdivision, I just totally replaced it with new tanks and a new pressurized drain field in August. This was a very tedious and expensive process. Since this just went through rigorous inspection from the county and other jurisdictions, I would request that new systems like mine would not be subject to inspection and inspection fees for at least three years. Actually, I think a five-year time period might be more reasonable.

See answer to previous question.

G. HOW OFTEN SHOULD THE INSPECTIONS OCCUR?

1. Tank size / number of people

Folks had questions and suggestions for additional factors to determine frequency. We have requested the Washington Department of Health (on-site sewage section) to provide us with scientific research around the issues of tank size, number of household occupants, use of garbage disposals, and other factors that might provide rationale for a more flexible inspection frequency, as well as provide incentives to intentionally maintain a septic system.

Frequency is too great. Consideration needs to be given to volume/usage of the system, i.e., number of occupants, etc.

Is there consideration of the size of the septic tank and the number of people using it?

Not at this time. See above.

Where does a 2-person household compare to a 4+ person?

See above answer.

On November 13 I sent you a proposed consideration on the Septic System Operation and Maintenance Proposal. That note concerned the determination of the initial certification time for an installation that has had a recent inspection/pumping. I herewith submit another item that I think should be considered regarding the inspections, and it, too, involves the timing of certification inspections for individual homes. ... Your proposal as published indicates a three-year certification period for all "lower-risk" systems. That is a nice simple criterion that minimizes the administrative requirements, but, considering the cost to homeowners that these inspections entail, I propose that there is another factor that should be considered in determining the length of time between certifications for each system. ... It is my understanding that the size of each septic system for each home is basically determined by the number of bedrooms in the home, giving an estimate of the number of occupants and the relative amount of waste that the septic system will be required to handle. However, there are many homes, such as mine, that were purchased to house children who have now grown and left home. The septic system of such a home has now achieved a greater relative capacity in that there are fewer people using it, and it does not have to be pumped as often. ... Under your proposed certification system, two similar homes with a like amount of bedrooms (thus similar sized septic systems), but with a different, even a significantly different, amount of occupants, will both be required to have a certification every three years, in the case of a "lower-risk" system. Considering the effort and expense on the part of the homeowner that this program entails, in fairness to all, the number of occupants in relation to the number of bedrooms should be factored in in determining the certification period. The homeowner of a 4-bedroom home occupied by two people (my case) should not be required to be "certified" as often as the 4-bedroom neighbor whose home has five occupants. ... I strongly recommend that such a factoring in of number of occupants to number of bedrooms be applied to determination of the certification period.

2. Other than 3 years recommended

Since septic tank pumpers advise repumping only every 3-7 years and the proposed certificate would only be valid for 3 years, is there a way to correlate this so that the certificate would be valid as long as is recommended by the pumper?

The Advisory Committee followed state law in setting the certificate length at three years. The actual pumping frequency can be set based on system use and monitoring results

Why not give the landowner who has had their system pumped and inspected by a licensed firm a pass for at least three years?

That is the recommendation. Inspecting, and pumping if required, would renew the certificate for 3 years.

Will homeowners who have had their septic systems inspected/pumped/repared within the last 12 months be required to repeat the process?

Assuming your proposal went into effect immediately. This summer I had some remodeling done to my house and the county requested that I have my septic certified before the permit would be issued. I hired a septic company to come out and perform the test. Would you accept this inspection work since it was performed within the "3 year proposal"...or would I have to hire a certified professional to come to the house again? The cost for having a pumper's report was \$215. Since I am retired obviously I am concerned about costs. While I do not oppose most of the plan in it's draft stage, nor the more aggressive approach to having septic systems cleaned/checked more periodically, I am very much opposed to the new proposed fee schedule.

As is the current policy, an inspection/pump/repair qualifies for a 3-year renewal. Therefore, they would not be required to repeat the process until an additional 3 years has passed.

Would it be sufficient to inspect the system biannually instead of annually?

Some systems, due to their use or system type, are required to be inspected every year. No systems are required to have twice a year inspections (biannual). Every other year inspections would be for only a few system types as well (biennial).

Since I had my tank drained 2.5 years ago, could I use this as my inspection requirement? Is there a way to evaluate this septic system other than exposing the tank?

A pump and inspection is valid for 3 years. Installing risers over the tank lids can make inspections much easier. Stick testing or using a 'sludge judge' are ways to measure the sludge and scum layers. (Environmental Health has brochures on how to do this.) There are some innovative electronic systems with readouts that can be installed, so the tank does not need to be exposed. The cost is around \$500 plus installation cost. (Takes half day+ to install.)

As for monitoring and inspection, every three years should be adequate to ensure proper maintenance and function of an individual septic system. Anything beyond that is over regulating. Inspecting any system every year is successful at only one thing...making money for the septic companies.

Every year is a requirement for only a small segment of the systems, i.e. restaurants, experimental systems, etc.

The pamphlet stated that homeowners would have four months to comply and the Olympian editorial stated that there are 11,000 affected properties. This means to me that there would be some 90 days to have the 11,000 systems inspected (122 per day) and rated. I would think that from the enactment, present property owners with septic systems should be given at least 10 years to comply (this means pumping, measuring, upgrading, if necessary and permitting). Plus, I would be surprised if there are enough septic pumping trucks available to do the job in four months

As with the current County's Operation & Maintenance Program for Septic Systems, the certificates will be proportioned over the three years. That way there will be a consistent

number of certificates being renewed at any given time. It would be unmanageable to do all at once.

3. Size of property

Why don't you consider the size or area of the property that the septic system serves and the distance from surface water?

Why don't you consider the size or area of the property that the septic system serves?

Distance from water is a consideration for type of inspection. A single failure can have a significant impact on localized surface water quality. Consequently, the program sets criteria for each system based on its location and individual characteristics.

3. Do it once

Why not a one-time inspection of all septic systems in Henderson Inlet watershed, then repair those that need repair?

Nonpoint pollution is ever present. Unfortunately, it does not go away with a one-time effort. A one-time effort can have dramatic results, as in the case of Eld Inlet in Thurston County. However, 10 years later after the last intensive septic system evaluations were completed and the repairs made, the water quality in Eld Inlet is once again declining.

H. SERVICE PROVIDERS for the INSPECTIONS

1. Who will do the evaluations?

Can the pumper issue the certificate, therefore not obligating another \$25 for the certificate?

Certificates are issued by the Thurston County Environmental Health Division as per the County's Sanitary Code.

Who will do the septic tests? If its private pumping companies, some are reliable, others are not.

The private companies will be trained by the Health Division, or other appropriate trainers, before they will be certified to conduct the tests.

Why can't the septic pumper be the one to certify the septic conditions, etc. instead of having another county official come out and re-inspect? This was part of a concern mentioned during the meeting.

Private pumpers or monitoring specialists do most of the inspections and reporting. For the low-risk systems 10% of those evaluations are reinspected by County staff as a quality control measure.

Will homeowners be provided a list of authorized inspectors?

Yes. The list can be picked up at the courthouse. There is currently a list of certified professionals on the website www.co.thurston.wa.us/health/ehoss/index.html The 4th bullet down will describe how to get the list.

Will you certify firms that will pump our systems? Will there be a cost for pumping?

County does certify pumpers. Costs for pumping vary.

Will the county (with this proposal) be (better) able to meter, monitor or even improve the method(s) of certifying pumpers and septic installers. I work in the septic design field and honestly would only recommend and or trust about 10 installers on your huge list and even a lesser number of the pumpers. (from much experience)

This will be part of the QA/QC (quality assurance / quality control) component.

Pumper reports can indicate who has pumped. Can the county contact owners who haven't pumped, or let pumpers contact them with a bargain rate?

Currently, only those who are renewing OPC's have pump dates entered.

I also, believe regulations need to be in place addressing septic companies, that will work in this area, and with the county to wave fees and speed processing for permits for individuals that find themselves in need of a repair.

Article IV of the Thurston County Sanitary Code requires septic system installers, pumpers, and monitoring specialist be certified by the County. To be certified these professionals must pass an exam and show competence in their respective specialty area. Sewage system designers must be licensed with the State of Washington. Thurston County and the State have the authority to suspend or revoke certifications and licenses for firms and individuals.

In order to wave fees for repairs, the funding to cover the costs of review and inspection would need to come from a designated revenue source. There is currently no available source.

Thurston County expedites the review of septic system repair permits. Repairs can be difficult due to site conditions and restrictions, i.e. setbacks from drinking water wells, etc. It does take time to review complex design submittals. Retaining a busy professional to do the design work and installation can be a challenge to get on their work schedule.

- < I object to the entering of my land or house by a County employee. Will this happen?
- < Another concern is privacy. I moved out to the county to have privacy and now you are telling me that you can come on my property at any time. I think that is invasion of my privacy. Seems to me that government is taking more liberties and mandating more than it should.

The committee was aware of this concern when drafting the proposal. The committee recommends that a list of approved, trained private providers be available for those homeowners who prefer to have private contractors conduct the evaluation. The cost for these intensive dye trace evaluations would be set and agreed upon by the County and the qualified private providers. It is proposed that the County collect the assessment and, in order to assure participation of and payment to the providers, pay the private providers for those evaluations. The County does have the responsibility to oversee activities. This proposal, however, does not grant the County any additional rights

2. Criteria for 'low risk' and 'high risk' determination

If you live on Long, Pattison or Hicks Lakes do you need a dye test under current proposal?

Only if you have 'restrictive' soils, i.e. silts and clays AND some type of drainage off the property.

What about proprietary systems? For example, if you already have a yearly maintenance check, is this sufficient enough to meet any/all certifications?

If you have a proprietary system, you are already required to have an operational certificate. The additional cost to you with this program would be the annual fee.

How are you currently able to determine that systems greater than ¾ mile are impacting groundwater that feeds the inlet? And, why would it not be evident in all our drinking water wells?

Nitrate contamination of shallow aquifers has been well documented within the county including several areas within the Henderson Watershed. These areas are shown on a map titled "Known Areas of Soil and Groundwater Concern", April 2004. Two high nitrate areas in the Henderson Watershed are located more than two miles from the Inlet but very close to Woodland Creek. The shallow aquifer is the most vulnerable to contamination from activities on the land including septic systems. Nitrate-enriched groundwater from the upper aquifer is flowing into streams and inlets, contributing to over-enrichment and dissolved oxygen problems. High nitrates have been documented in Woodland Creek, Beatty Springs (a major tributary to Woodland Creek), and in base flow in area storm water systems. This has been verified recently in a water quality study being conducted by the Washington Department of Ecology, called the Henderson Total Maximum Daily Load Study.

The predominant land use in two of the high nitrate areas is older residential developments of more than 2000 homes. The densities of homes in these two areas are far in excess of that allowed under current on-site sewage regulations. Nitrate levels exceeding drinking water standards have forced homeowners and businesses in these areas to abandon their wells and connect to the nearby city water system, whose sources are from deeper aquifers. While there are other sources of nitrate in residential areas, such as lawn fertilizers, septic effluent is a major source being discharged directly into the ground.

Not all wells show evidence of contamination because in some areas the soil type and geology protect ground water from contamination. In other instances, there may be multiple aquifers at varying depths, so that a well drilled only into the shallow aquifer may show contamination while another nearby well drilled into the deeper aquifer does not.

Fecal coliform bacteria, in all but our most vulnerable aquifers, can be filtered out by the soils before reaching the drinking water aquifer. Therefore the Henderson Operation and Maintenance proposal includes a ranking matrix to identify the septic systems most at risk of discharging sewage to the surface of the ground and then those where the surfaced sewage could be transported to the creeks and marine water through drainages causing surface water contamination.

Regarding ranking for inspection – how are soil types determined and who does this? What are marine waterfront GSA or ASC? What is and what is not a natural or constricted drainage system?

Soils in Thurston County have been mapped by the US Dept. of Agriculture, Soil Conservation Service and are reported in the [Soil Survey of Thurston County, Washington](#), June 1990. The soils map is available to view on line at www.geodata.org.

To convert that information to the Class I, II,... through Class VI referenced in the proposed matrix to determine the 'type of inspection' for septic systems, it is necessary to go to the Soil Textural Classification Table in Section 11.2.5 of Article IV of the Thurston County Sanitary Code. (This soil textural classification table can also be found in the statewide on-site sewage system rules and regulations, Chapter 246-272 WAC, that establish the minimum requirements for all local health jurisdictions.) Thurston County's Article IV and the Soil Textural Classification table can be viewed on-line at www.co.thurston.wa.us/permitting/EH_Articles/Env_Hlth_Articles.htm.

A GSA is a Geologically Sensitive Area. The County has designated four such areas within the County. They include The Lakes GSA, Henderson Inlet GSA, Eld Inlet GSA, and McAllister Springs GSA. All of these areas were designated due to water quality concerns and were based on documented findings. An ASA is an Area of Special Concern. At this time, the County does not have any designated Areas of Special Concern. This designation is provided for in Article IV of the Thurston County Sanitary Code. It is established to minimize public health risk by establishing more stringent requirements on new development and corrective measures upon existing developments.

How are lower-risk vs. higher-risk systems determined for the basis of annual fee? (Not inspection frequency or inspection type.)

Those that are lower-risk are in the \$17 - \$22 fee; higher-risk are the \$60 fee.

I attended the open house held at the fairgrounds on November 18. I have some questions regarding the handout that had on its back page the various criteria for determining Type of Inspection. ... I live in the Holly Woods Development off of Hawks Prairie Road. How do I, or we, determine the type of soil

in our development? Do all of the lots in the subdivision have the same type of soil and if so, which is it? I was told at the meeting that there was a map that would show this, but I cannot find such on any Web site I have been able to download. ... Also, as to the "Natural or Constructed Drainage System" that we have, is the whole subdivision under the same system, or do some lots have a "Yes" answer and some a "No" answer as to that? How do we find that answer? I need to know because, as a result of my attending that open house, I am going to give my homeowners' board a briefing on what I learned at that open house and those pertinent items I cannot determine.

Go to the following Thurston County website <http://www.geodata.org/> and choose the on line maps and then Environmental Health choice. Use the mouse to draw a box around your neighborhood on the big county map. It will automatically give you the zoomed in map. On the Layers to the left of the map, scroll down toward the bottom where you will find Soils. Check both the box and the circle and then Refresh Map. ... Click the Identify button in the green area on the bottom bar. Move the cursor to the soil area and click anywhere in the area. It will tell you what the soil type is. ... From looking at the map, you have several different soil types in your neighborhood. ... Yes, you do have drainage - in constructed ditches and a stormwater pond(s). Unless there is a lot that neither drains to the creek or to the ditch system, all other lots would be 'yes' for drainage.

\$50/year (\$25/year more than "low risk") for the "high risk" category seems excessive to do a dye test every 6 years.

Dye tests cost approximately \$500 per system. They are a time intensive performance evaluation. The proposal is to conduct these every 6 years.

In our neighborhood, there have been as many failed septic tanks on properties not immediately located on saltwater as on the saltwater properties. The non-saltwater-front failed septic tank/drainfield effluent makes it to Henderson Inlet fairly rapidly. However, these non-saltwater properties are considered "low risk". Is the property 100 feet across the street from me "low risk" while I am "high risk"?

The intent is to intensively evaluate those systems where surfacing sewage can easily flow to surface water. Low and high risk is based on soil type that can vary from lot to lot. The definition for marine waterfront needs to be clarified.

3. Homeowner 'certification' program

- < I am interested in all education regarding becoming a certified homeowner for inspecting my septic tank. I have a biomax system.
- < Can someone who is a homeowner on a community system become certified to check the system (he works for A1 Septic)?
 - < *There has been interest shown in this option. There is money budgeted within this proposal for septic workshops. That money could be earmarked for homeowner certification workshops. Those details have not yet been addressed. However, there are certain septic system types that require a Third Party Maintenance contract. Those systems would not fall under a homeowner certification program.*

From Hollywood's Homeowners Board. Question if we could participate as a community rather than 79 individual homeowners. Have individual drainfield located in community areas. System designed by Skilling/Connolly.

The current proposal would require that each individual sewage system property owner obtain an Operational Certificate. Hollywood's Subdivision has community areas within the subdivision where individual drainfields are located. The County would be more than willing to work with the property owners to coordinate the application/renewal process so all the operational certificates are reviewed at the same time.

I. MISCELLANEOUS

Why does the county not consider voluntary compliance and awareness? No New Taxes! Education. Search for easy to find issues.

Education has been the approach for the last decade, and the water quality continues to decline.

Attachment A

Risk-Based Operation & Maintenance Pilot Program

December '03 – March '04

Advisory Committee Members:

Mark Blosser, City of Olympia, Henderson SPD
Christine Buckley, Nisqually SPD
Tris Carlson, Nisqually SPD
Diane Cooper, Shellfish Industry
Lisa Dennis- Perez, City of Lacey, Henderson and Nisqually SPD
Bill Dewey, Shellfish Industry
Daimon Doyle, Olympia Master Builders
David Hall, Thurston Conservation District Supervisor
Selden Hall, Washington State Department of Health
Peter Heide, Henderson SPD
Terry Hull, Puget Sound Water Quality Action Team
Roy Iwai, City of Olympia, Henderson SPD
Randy Jackson, Certified Septic System Designer
Steve Langer, Henderson SPD
Linda Malatesta, Nisqually SPD
Mike Petit, WRIA 13 Planning Unit
Priscilla Terry, Henderson Watershed Resident
Bryan Wilson, Nisqually SPD
Jerry Yamashita, Shellfish Industry and Henderson Shellfish Protection District

Staff:

Linda Hofstad, Environmental Health
Steve Petersen, Environmental Health
Art Starry, Environmental Health
Mark Swartout, Development Services

Guests present:

Mark Fischer, Community Shellfish Farm Project
Jim Dawson, People for Puget Sound



Seals and Water Quality in Henderson Inlet

April 2001

Shellfish Protection District

In November and December of 2000, the state Department of Health closed commercial shellfish harvesting in areas of Henderson Inlet and Nisqually Reach because fecal coliform bacteria levels in the water are unacceptably high. Under state law, Thurston County must now form a shellfish protection district to improve water quality in the two areas.

As Thurston County and local communities work to craft such a district, a common question surfaces: "Is seal waste to blame for the high levels of fecal coliform bacteria in Henderson Inlet?" Testing indicates that contaminated drainage from upland areas – not seals – is the most likely source of pollution.



Testing shows little correlation between high-pollution areas and seal populations

Pollution in Henderson Inlet starts off strong in the southern part of the inlet and gets weaker as it moves north, closer to open water. The most polluted testing stations in Henderson Inlet are located in the extreme southern portion of Henderson Inlet, closest to the mouth of Woodland Creek. There are few seals in this portion of the bay. Some of the *least* polluted stations are located to the north, adjacent to the seal haul-out areas near Chapman Bay. (Haul-out areas are those areas where seals haul their food and bodies out of the water.)



Tides, rainfall help spotlight location of pollution

During and after periods of rainfall, the marine waters in the southern inlet predictably fail state water quality standards. This demonstrates that rainwater is washing bacterial pollutants from the land into the inlet. Upland pollution can come from failing septic systems, contaminated stormwater runoff, and/or waste from pets, farm animals and wildlife.

Testing stations in the south inlet also show that bacteria levels are higher during ebb, or out-going, tides than during flood tides. This indicates pollution in the southern part of the inlet is probably heading out from the land, rather than coming in from deeper water where seals live.



State data shows deep haul outs do not contribute to shellfish bed pollution

Washington State Department of Health data shows that when seals haul out over deep water (such as rafts and booms), the seal waste is not likely to pollute shellfish growing waters. The deeper waters tend to dilute and disperse fecal matter and kill off bacteria before it reaches the shellfish beds. The seal haul outs in Henderson Inlet and Quilcene Bay are over deep water. Testing stations near the haul-out areas meet the shellfish growing standards.

Conversely, Department of Health data from other areas of Puget Sound show that seals *can* contaminate shellfish-growing waters if they haul out on nearby intertidal beaches. At these beach areas, wave and tidal action tend to keep the waste concentrated nearby, rather than dispersing it into more open waters. On the Dosewallips River Delta in Hood Canal, fences were used to discourage seals from using the intertidal area to haul out. Water quality improved and the Dosewallips State Park recreational beach was reopened to the public for recreational shellfish harvesting.

Produced by Thurston County Environmental Health, 2000 Lakeridge Drive S.W., Olympia, WA 98502. (360) 754-4111. www.co.thurston.wa.us

