

Clallam County On-site Septic System Owner (OSS) Survey (July-August 2013)

Prepared by:

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Executive Summary

In the summer of 2013, the Clallam County Environmental Health Section (CCEH) of the Health and Human Services Department conducted a direct mail and on-line survey of On-site Septic System (OSS) owners in Clallam County, WA. The survey had a response rate of 13.5%, which far exceeded expectations. The goal was to receive 400 surveys back and CCEH received 2,138 filled-in surveys. The purpose of the Clallam County survey was four-fold:

- Assess the OSS homeowner's knowledge, beliefs, and behaviors associated with OSS operations and maintenance;
- Identify barriers associated with adopting OSS best management practices;
- Evaluate the effectiveness of the County's OSS management program; and
- Consider how to fund the OSS program activities.

The following bulleted points represent the most notable findings from the survey:

- Further outreach is needed for OSS owners to distinguish whether their OSS is located inside the Marine Recovery Area (MRA) or outside the MRA.
- OSS owners may not understand the requirements for a certified inspection of their OSS.
- The greatest benefit to septic maintenance for OSS owners in order of priority was peace of mind, avoid cost and hassle of repairs, prevent pollution, and preserve your investment.
- OSS owners tend not to have their system inspected because they do not think it is necessary; a secondary reason is that they do not know that they should have it inspected.
- The septic newsletter, *Clean Water Herald-Septic Issue*, and the septic classes are well-received and considered valuable to OSS owners.
- Outreach has changed some beliefs and behaviors. OSS homeowners are more careful about what goes into their septic systems such as chemicals and types of detergents and toilet tissue. They watch their water usage by limiting and spreading out laundry and other water usages.
- Barriers to having septic systems inspected are cost and to a lesser degree not knowing that an inspection needs to be done.

- OSS owners are highly interested in participating in the online DIY/Septics 201 classes and want it available as soon as possible.
- The majority of survey respondents did not support property tax assessments or a yearly septic system license fee, but are willing to pay at least \$10/year for an OSS management program, support fines for those not following inspection requirements, and advocate enforcing existing laws and regulations.
- OSS respondents overwhelmingly preferred to receive information about septic system care and maintenance through magazine or newsletter mailed to their home.

CCEH will use the findings of the survey to tailor their current outreach strategies and activities and develop new activities in order to increase OSS inspection compliance rates. These survey findings will be presented to the Board of Health and the Clallam County Commissioners so that when they shape policies to how best provide stable funding for the OSS program, applicable public opinions will be considered.

Introduction

In order to assess the success of any outreach program, it is necessary to understand the knowledge base, beliefs, and behaviors of the audience that the program is targeting. An effective means of obtaining this information is to use a survey. To that end, in the summer of 2013, Clallam County's Environmental Health Section (CCEH) of the Health and Human Services Department developed and conducted a survey of residents in Clallam County who own a residential on-site septic disposal system (OSS). The purpose of the Clallam County survey was four-fold:

- Assess the OSS homeowner's knowledge, beliefs, and behaviors associated with OSS operations and maintenance;
- Identify barriers to OSS homeowners adopting OSS best management practices;
- Evaluate the effectiveness of the County's OSS management program; and
- Consider how to fund the OSS program.

CCEH intends to use the survey information collected to adapt and adopt outreach strategies and activities to increase OSS inspection compliance rates as well as gauge the level of support for funding clean water programs such as OSS management and Pollution Identification and Correction (PIC).

Background

Project Location and Description—The project area includes all of Clallam County, which is located in northwest Washington adjacent to the Strait of Juan de Fuca. An additional focus area for this project is the Clallam County Marine Recovery Area (MRA), shown in Figure 1. In 2006 the Washington state legislature adopted RCW 70.118A that required all Puget Sound counties to create Marine Recovery Areas (MRAs) for commercial shellfish areas that were impacted by bacterial pollution. In response to RCW 70.118A, the Clallam County Board of Health created an MRA in 2008 to address the contribution of OSS to shellfish closures and marine water quality impairments in Dungeness Bay. The Clallam County MRA contains the Sequim-Dungeness Clean Water District, which was formed in 2001 in response to shellfish downgrades in Dungeness Bay and bacterial pollution in tributaries to the Dungeness River, Dungeness Bay, Sequim Bay, and the Strait of Juan de Fuca. Washington State Department of Ecology (Ecology) developed fecal coliform total maximum daily loads (TMDL) for the Dungeness River and Matriotti Creek (2002) and Dungeness Bay (2004). CCEH and our partners are implementing the *Clean Water Strategy for Addressing Bacterial Pollution in Dungeness Bay and Watershed and Water Cleanup Detailed Implementation Plan* (Streeter and Hempleman 2004), a joint shellfish protection and TMDL implementation plan. Reducing human pathogen pollution from OSS is a major component of the plan. Microbial source tracking research performed by Battelle in the Dungeness watershed identified the presence of human derived fecal coliform at multiple freshwater sites as well as in Dungeness Bay (Woodruff et al. 2009). Other streams in the MRA including Meadowbrook, Cassalery, Bell, and Johnson Creeks are on the 303(d) list for high fecal coliform and have contributed to shellfish closures at their mouths.

Additionally, residents and visitors use the saltwater beaches in the MRA. Public beach access is available at the Dungeness National Wildlife Refuge, Sequim Bay State Park, and county parks such as Cline Spit, Dungeness Landing, and Port Williams. Impaired marine water quality could impact humans during recreational water activities.

Project Need--The Puget Sound Partnership Action Agenda lists actions to implement in order to reduce sources of water pollution. Among those actions is to “Establish, in each Puget Sound County, a coordinated, systematic way to identify, inspect, and repair or replace failing or poorly functioning on-site septic treatment systems.” Although it sounds simple, such a coordinated and systematic program requires adequate staffing, capital outlay, and stable funding to be effective. Moreover, the success of the program depends on OSS owners’ willingness to accept responsibility to monitor and maintain their systems.

The Washington State On-Site Sewage System Regulations require local health jurisdictions (LHJs) to inform and educate homeowners about septic systems (WAC 246-272A-0015) and require OSS owners to ensure that their systems are inspected regularly and functioning properly (WAC 246-272A-0270). The LHJs must also track OSS inspections and enforce the inspection requirements.

Since 2009 Clallam County Environmental Health staff has focused on educating OSS owners about OSS maintenance activities by providing Septics 101 workshops, a newsletter (*Clean*

Water Herald), Septics 201 workshops, and incentive programs. As of June 2013, CCEH estimates that county-wide there is a compliance rate of about 17% (19% within the MRA and 14% outside the MRA) with the OSS inspection requirements. In other words, about 83% of the OSS owners county-wide that we are reaching or trying to reach have not had their OSS inspected or have not reported the inspection activities. The reasons for this low compliance rate is unknown. Are homeowners opposed to having their system inspected, opposed to reporting the activities to the County, or do they not understand the importance of OSS maintenance, inspection, and state OSS regulations? The OSS owner survey was CCEH's attempt to answer some of these questions and gauge the OSS owner's knowledge, beliefs, and behaviors associated with OSS monitoring and maintenance activities.

In parallel, CCEH developed the survey to identify what are the barriers associated with OSS owners adopting OSS best management practices. (OSS best management practices include having inspections, pumping your septic tank, installing risers, not using additives, not watering over the drainfield, minimizing bleach and garbage disposal usage, etc.) Why are 83% of the OSS owners not in compliance with inspection requirements? If barriers were identified, then CCEH staff would work to remove or minimize the barriers to OSS owners.

CCEH proposed, additionally, that the survey assess which of CCEH's outreach and education activities are providing the most favorable impact to educate OSS owners. We wanted to know what is working effectively and what needs to be changed. Is there a better way to reach the OSS owners to increase compliance? The OSS owner survey was CCEH's attempt to answer some of these questions.

Lastly, Clallam County does not have a stable funding source to carry out the state's mandated OSS management requirements. CCEH has explored the available funding mechanisms with our stakeholder advisors in the Clallam County On-site Septic System Work Group and summarized the findings and challenges in the memorandum *Funding the Clallam County On-Site Septic System Management Plan* (Cascadia Consulting Group and Sound Resolutions 2011). No matter which funding tool is pursued, however, there must be the political will to do it, and that heavily depends on the public's perception of the need to do it (acceptance). By conducting the survey, we hoped to learn if OSS owners support developing a local funding source. If so, what level or amount of fee or assessment might the OSS owners be willing to pay?

Objectives

The County received a grant from the Washington State Department of Health (DOH), which was funded wholly or in part by the US EPA under assistance agreement PC-00J32601, to conduct a county-wide survey of homeowners with on-site septic systems. The objective of the survey was to gain an understanding of the state of knowledge of OSS users as well as their motivation and core values, and to gauge the public support for developing a stable funding source for an OSS management structure.

The objective was to obtain at least 400 completed surveys from homeowners whose primary residence utilizes a septic system in order to access information regarding:

- their knowledge of their own septic system;
- their knowledge of their responsibilities under the law to maintain and inspect their system;
- views toward septic system ownership and required responsibilities;
- the motivations and barriers/impediments to complying with the inspection requirements and septic maintenance;
- the effectiveness of CCEH’s education and outreach efforts, including workshops and the *Clean Water Herald—Septics Edition* newsletter;
- interest in CCEH’s new Do-It-Yourself (DIY/Septics 201) OSS inspection program for homeowners; and
- support for creating a stable funding source to support an OSS management program.

The data would be used to assist the County to:

- prepare a report that will include recommendations for improvements to existing OSS programs;
- develop new tools to address values, motivations, and barriers to compliance with OSS regulations and address barriers to long-term septic care;
- improve OSS management strategies and better direct public education and outreach; and
- develop a plan for a stable funding source.

Survey Development

Due to limited funding, the survey development and recording were performed in-house instead of contracting with a private social marketing company. CCEH staff determined that the best method for obtaining a response to the survey questions was to provide a postal mailer as well as have an online version of the survey using Survey Monkey. Staff reviewed surveys conducted by other local health jurisdictions (LHJs) and other agencies to gain ideas for questions and format. After internal review, drafts of the survey were sent to LHJs and the WA Department of Health for review and comment. The final survey consisted of 18 main questions, including checking applicable answers, ranking provided answers, and addressing open or free response questions. The survey is provided in Appendix A.

Method

The target audience was Clallam County homeowners with septic systems. These included homeowners inside and outside the Marine Recovery Area (MRA). The address list was compiled from the septic system database (Tidemark Advantage “Permit Plan”) and the corresponding assessor address database. Surveys were mailed to 15,819 homeowners on July 12, 2013; response was requested by August 16, 2013, allowing more than one month for reply.

Responders had several options to return the survey: mail, a drop box located outside the County Courthouse, personal delivery to the Environmental Health counter, fax, email, and on-line using Survey Monkey. Additionally, a direct link to the online survey was posted and accessible on the county website.

The mailed survey was printed such that the homeowner’s address was on one side, and when refolded the county return address would be on the other. Return postage was not included. Respondents were instructed to “blackout” their name and address if they chose to remain anonymous.

Data Management

Results from the surveys were compiled using Excel worksheets. Excel was chosen as it allows for ease of counting and sorting by response, and was an existing database with which CCEH staff was familiar. Key words were used for many of the comment fields in order to determine number of similar responses and to categorize the responses.

Results

Response Rate--The response rate exceeded our expectations. “Although there are no set guidelines for return rates from mailers, industry standards for direct mail response rates suggest that a “good” response rate is approximately 2% per mailer” (Final Report: Snohomish County Septic System Program, November 10, 2011). Our original objective was to obtain at least 400 completed surveys from homeowners whose primary residence utilizes a septic system (approximately a 2.5% response rate). CCEH mailed out 15,910 surveys; 1,816 filled out surveys were returned to CCEH and an additional 322 surveys were completed on-line for a total of 2,138 respondents-- a 13.5% response rate (2,138/15,910). This was a 435% higher response than expected.

Generally, in an analysis of survey response, the questionnaires that do not reach the correct address are subtracted from the number of mailers sent. However, in this case, it was not possible to determine the number of mailed questionnaires that did not arrive at the correct addresses since CCEH did not receive any undeliverable mailers from the bulk mail distribution.

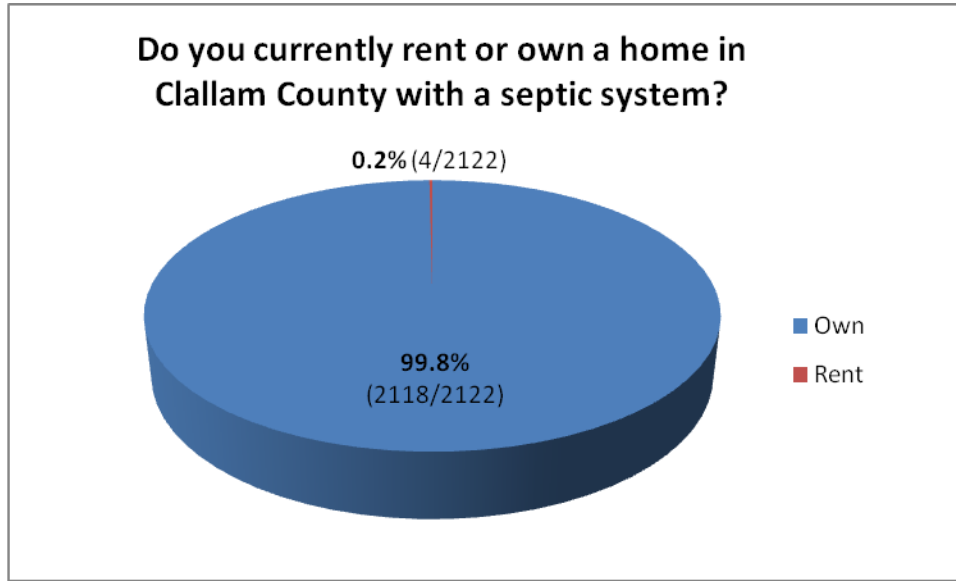
With the high likelihood that some of the mailers were not received, this would lead to a response rate that would be even higher than 13.5%.

Results by Question

1. Do you currently rent or own a home in Clallam County with a septic system?

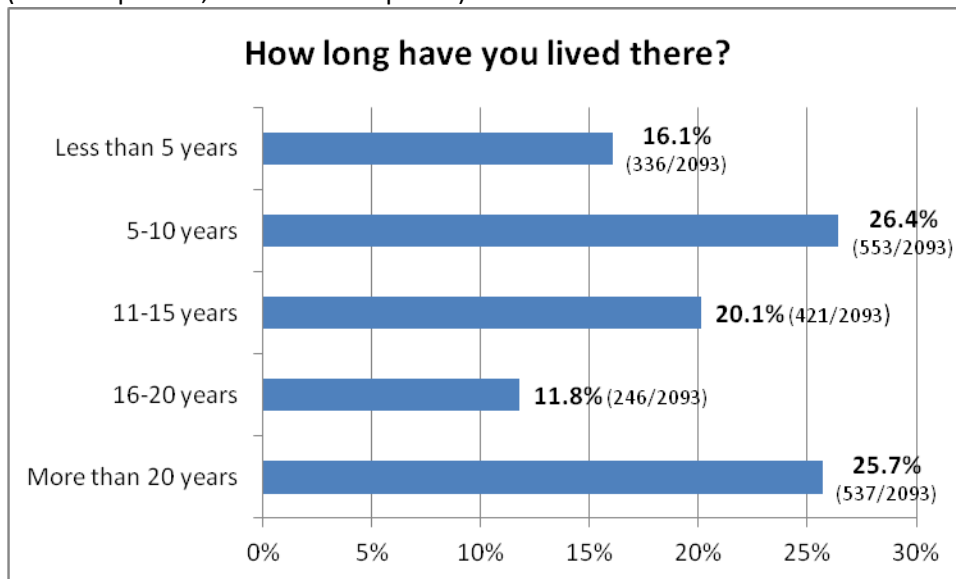
(2122 responses; 16 with no response)

Almost 100% of the respondents owned a home with a septic system in Clallam County.



2. How long have you lived there?

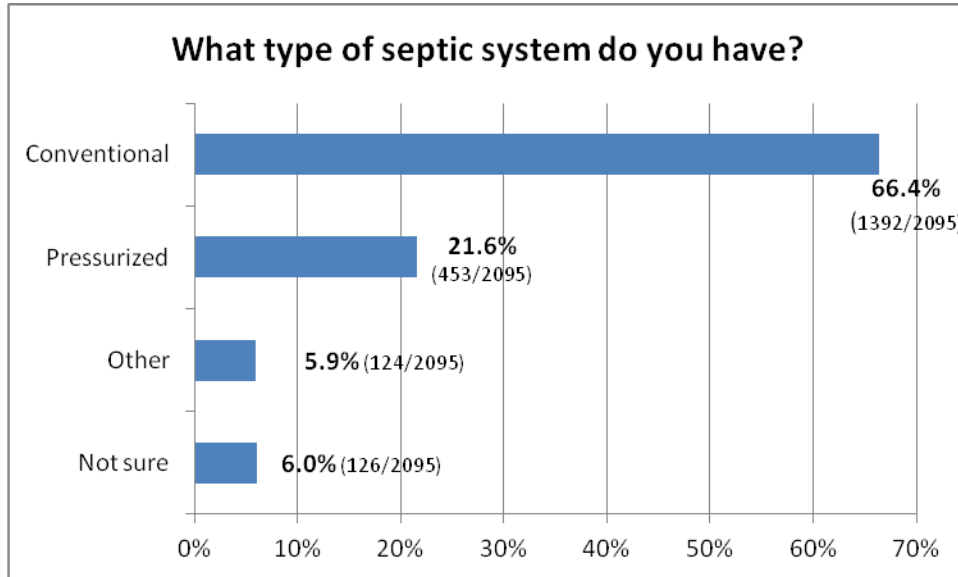
(2093 responses; 45 with no response)



3. What type of a septic system do you have?

(2095 responses; 43 with no response)

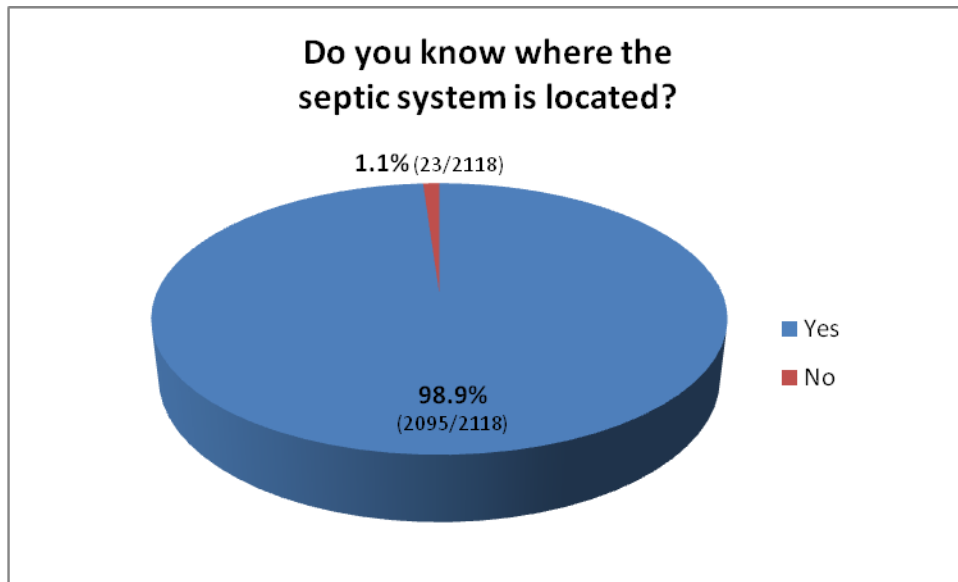
The majority of septic systems according to the respondents were conventional (gravity) systems (over 66%). Six percent (6%) of the respondents were not sure of their system type.



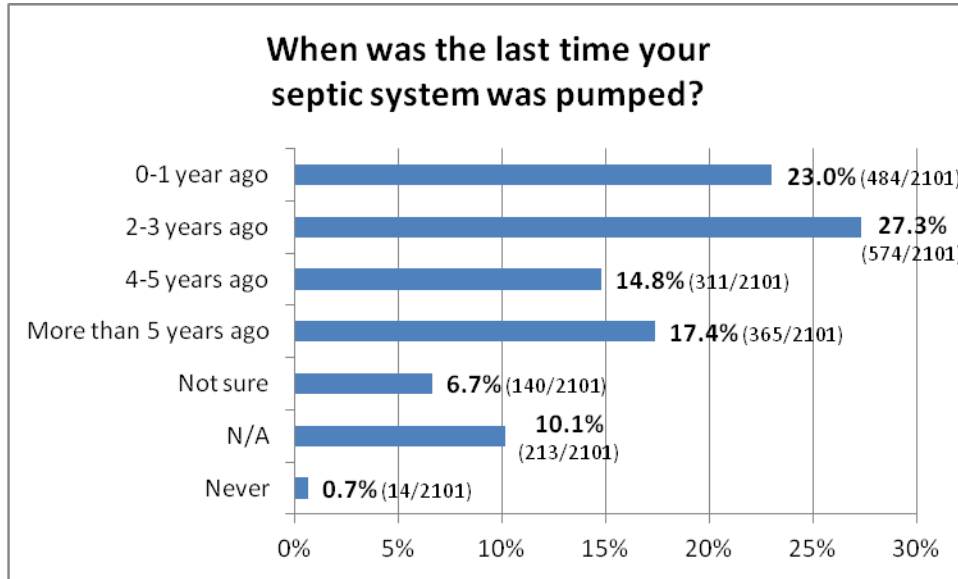
4. Do you know where the septic system is located?

(2118 responses; 20 with no response)

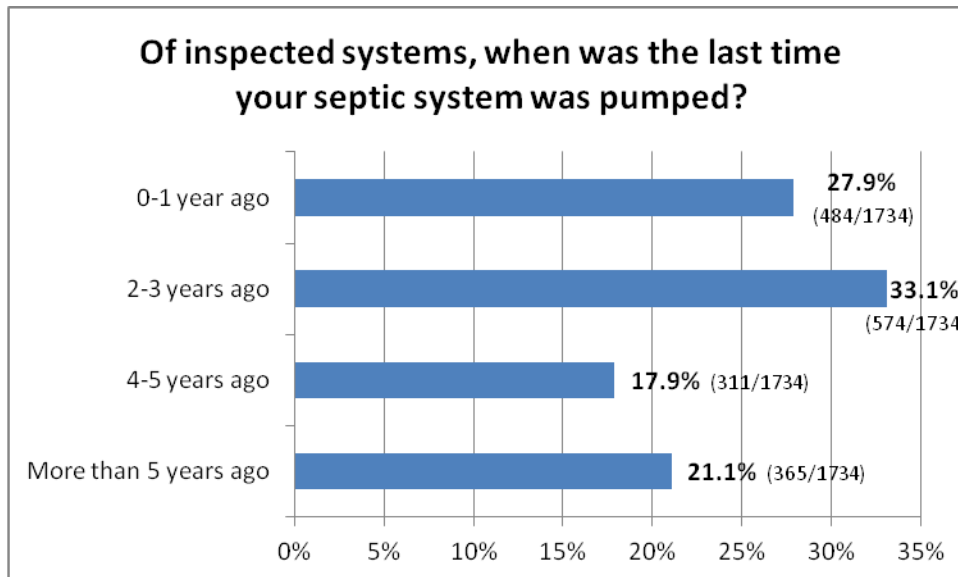
Almost 99% of the respondents contended that they know where there septic system is located.



5. When was the last time your septic tank was pumped?
 (2101 responses; 37 with no response)

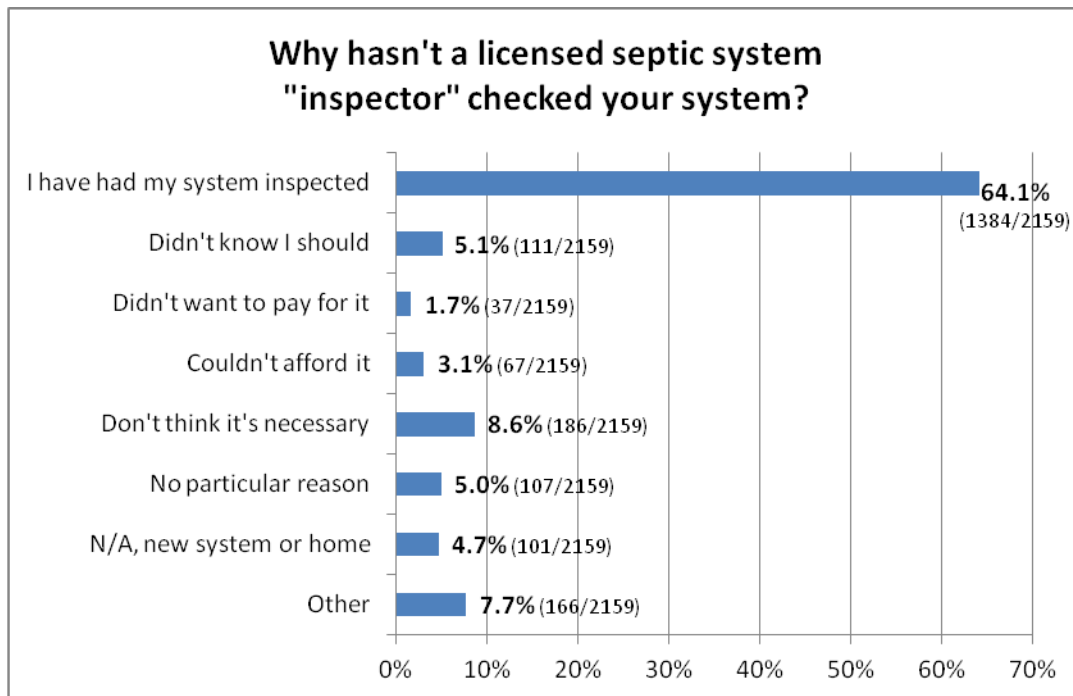


Of the 1734 surveys that answered that they had had their system pumped, 27.9% have been pumped in the last year, 61.0% have been pumped in 3 or less years, and 79.0% have been pumped in 5 or less years.



6. A septic system inspection involves looking at the septic tank and drainfield and all components to ensure that the system is functioning properly. Has a licensed septic system “inspector” checked your system? If no, why not? Please check all that apply.

There were 2159 responses on 2101 separate surveys. Since respondents were asked to check all the answers that apply, there were multiple responses per survey. There was no response on 37 surveys.



Approximately 64% of the respondents said that they had had their septic system inspected by a licensed septic system inspector. This was an unexpected response since according to county records for June 2013 only approximately 17% are current with their OSS inspection—19% in the MRA and 14% outside the MRA. This discrepancy may indicate that OSS owners do not understand what a septic system inspection entails or who is considered to be a licensed septic system inspector. Based on comments written on the survey, it appears that OSS owners may think that having their tank pumped is the same as a septic system inspection. The survey question could possibly have been clarified by asking whether the OSS had been inspected in the last 3 years. For example, having an OSS inspected when the septic system was installed 30 years ago could be considered as having the septic system inspected; however, this does not address the issue of being in compliance with state OSS requirements. Additionally, it may be that an OSS owner who has had a septic inspection is more likely to return a filled out survey so that self-selection occurs, which would increase the rate of inspections for this survey.

Of the almost 36% of the responses that said that they have not had their systems inspected, the responses from most checked to least checked were

- Don't think it's necessary: 24.0% (186/775)
- Other: 21.4% (166/775)

- Didn't know I should: 14.3% (111/775)
- No particular reason: 13.8% (107/775)
- N/A (new system, new home, or haven't lived there very long): 13.0% (101/775)
- Couldn't afford it: 8.6% (67/775)
- Didn't want to pay for it: 4.8% (37/775)

The highest ranked response for not having an inspection was "Don't think it's necessary" at 24%. Affordability and not wanting to pay were the least ranked.

Some respondents included comments that could be separated into 6 main categories:

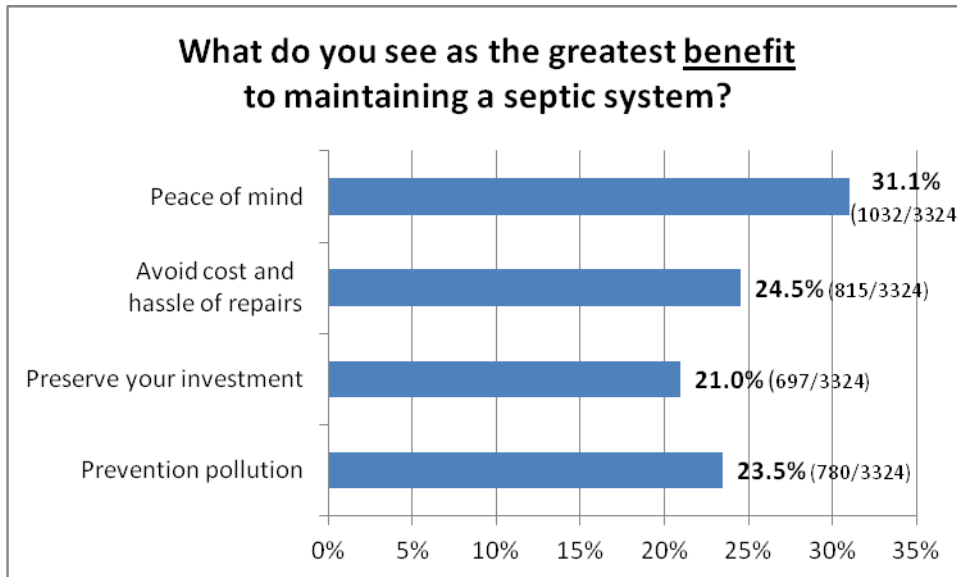
- Vacant or part-time residence. System with very little use
- Inspect it themselves
- Pumper inspected
- New system
- Septic system working fine so no need to inspect
- Don't think it is necessary

7. What do you see as the greatest benefit to maintaining a septic system?

On a scale of 1-4, please rate the following with 1 being a very important benefit and 4 being not an important benefit.

(The surveys provided 3324 responses for the number one benefit for maintaining a septic system. Only the responses on the postal mailer are discussed for this question. A computer problem on the on-line survey precluded ranking.)

The percentages of the very most important benefit were peace of mind (31.1%), avoid cost and hassle of repairs (24.5%), prevent pollution (23.5%), and preserve your investment (21.0%).

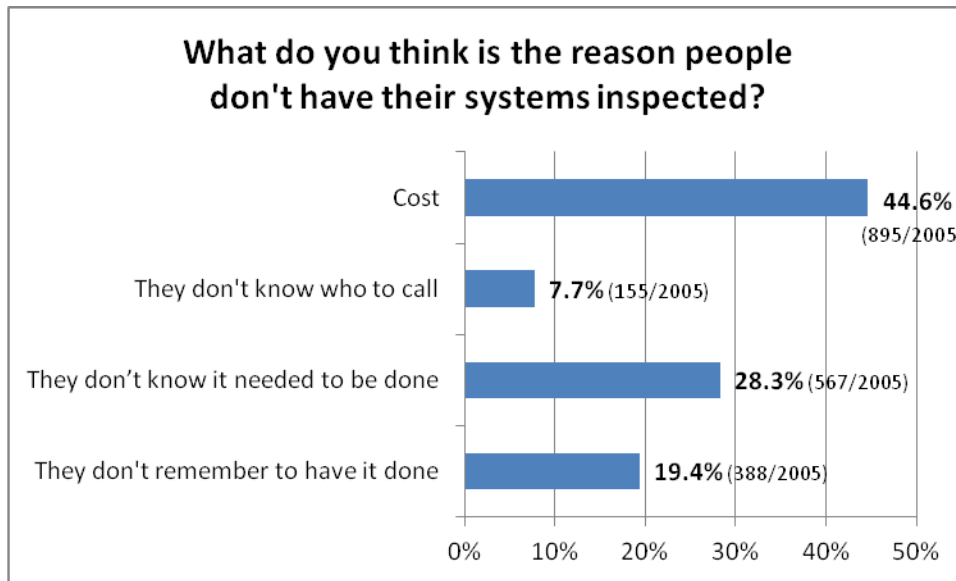


8. What do you think is the reason people don't have their systems inspected?

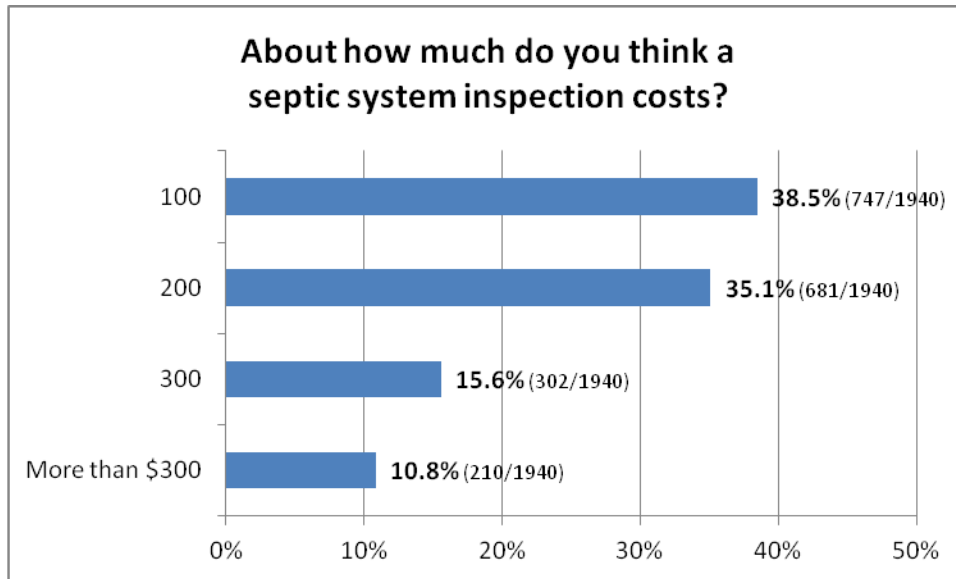
On a scale of 1-4, please rank the following with 1 being the most likely reason and 4 being the least likely reason.

(The surveys provided 2005 responses for the number one reason that people don't have their septic systems inspected. Only the responses on the postal mailer are discussed for this question. A computer problem on the on-line survey precluded ranking.)

Ranking from most likely to least likely was cost (44.6%), didn't know it needed to be done (28.3%), don't remember to have it done (19.4%), and don't know who to call (7.7%).

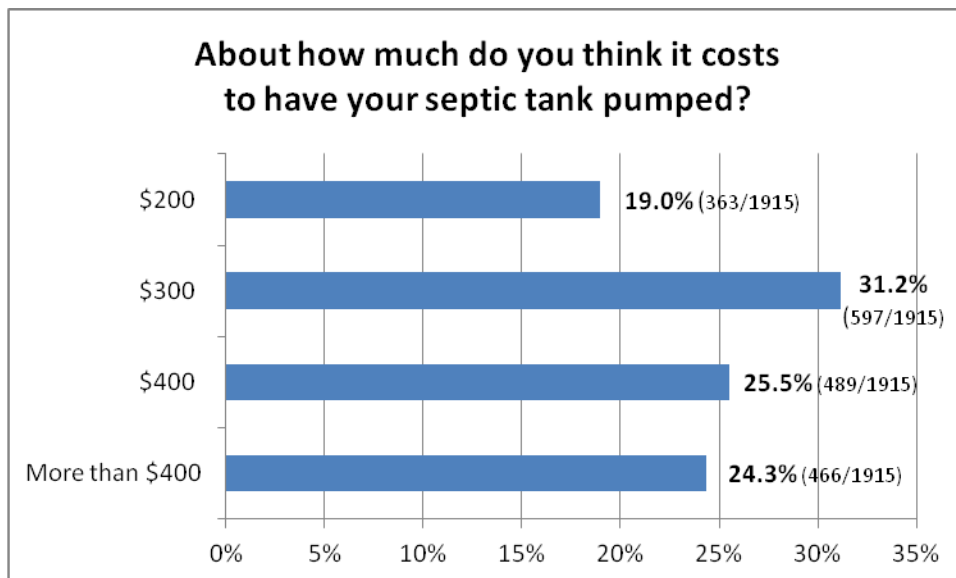


9. About how much do you think a septic system inspection costs?
 (1940 responses; 198 with no response)



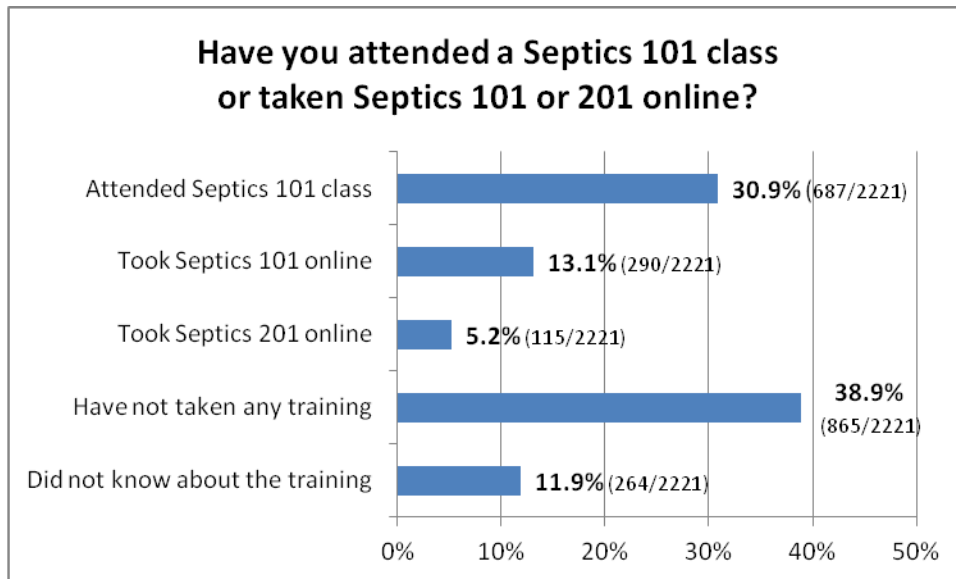
Of those surveys with responses, almost 74% thought that the septic system cost would be \$200 or less. In Clallam County the cost of a septic inspection ranges from \$125 to \$300, depending upon available access to risers and correct as-built drawings. When an OSS does not have an as-built or does not have a correct as-built, then locating costs may raise the inspection cost.

10. About how much do you think it costs to have your septic tank pumped?
 (1915 responses; 223 with no response)



Of the 1915 responses, about half believed that the cost of septic tank pumping would be \$300 or less and about half thought it would be \$400 or greater. In Clallam County the cost of tank pumping ranges from \$400 to \$450 per 1,000 gallons.

11. Clallam County Environmental Health has developed in-person and on-line training on septic system maintenance (Septics 101) and homeowner do-it-yourself inspections (Septics 201). Have you attended a Septics 101 class or taken Septics 101 or 201 online? (Please check all that apply)
(2221 responses; 74 with no response)



Approximately 49% of all the responses indicated that they have attended Septic 101 (44.0%) and Septic 201 (5.2%) while about 51% have not taken a septic class (38.9%) or did not know about the training (11.9%). Of those who had taken a class, 71% had indicated that their septic system had been inspected; whereas, of those who did not attend a class, significantly less, 62%, had their septic system inspected.

Do you have any comments or recommendations about either class?

The majority of the comments on classes was positive and fell into 6 categories:

- Wonderful to excellent to good class
- Informative
- Valuable/helpful
- Learned to do own maintenance
- More aware of my system and how it works
- Everyone should take the class

The comments concerning the classes were mainly concerned with the Septics 201 classes. The majority of comments wanted to know “When 201 was going to be available?” Other recommendations were to follow through with promised classes and improve the on-line classes to run faster, be Mac friendly, and be more accessible.

Comments were also provided for why the class(es) had not been taken.

- Classes always full
- Hope to /plan to take the class
- Offer classes more often and at more locations
- Didn’t know that the classes were available on-line
- Need a class for advanced systems
- Prefer classes in person
- Need to know the website to find the class and to register for classes

Did you make any changes in your home water use habits as a result of the class?

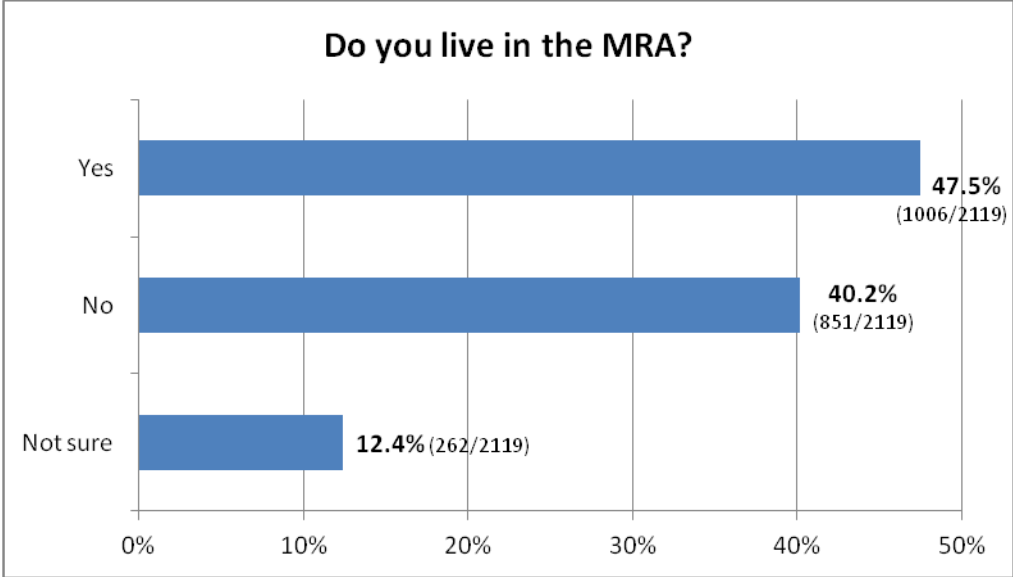
Of the survey respondents who had attended classes or participated in on-line Septics 101 and 201, 20% wrote that they had received valuable information resulting in behavior changes. The main changes in home water use habits mentioned by those who attended a class had to do with being more careful about what goes into their septic system:

- Watch water usage. Spread out laundry and other water usages
- Use less detergent or a different detergent
- Use less chemicals, bleach, and softener

12. The eastern end of Clallam County, from Bagley Creek Road (near Precision Truss and The Greenhouse Nursery on Hwy 101) to the east county line, has been designated a Marine Recovery Area (MRA) due to real and potential impacts to water quality resulting from population growth in both urban and rural areas. Do you live in the MRA?

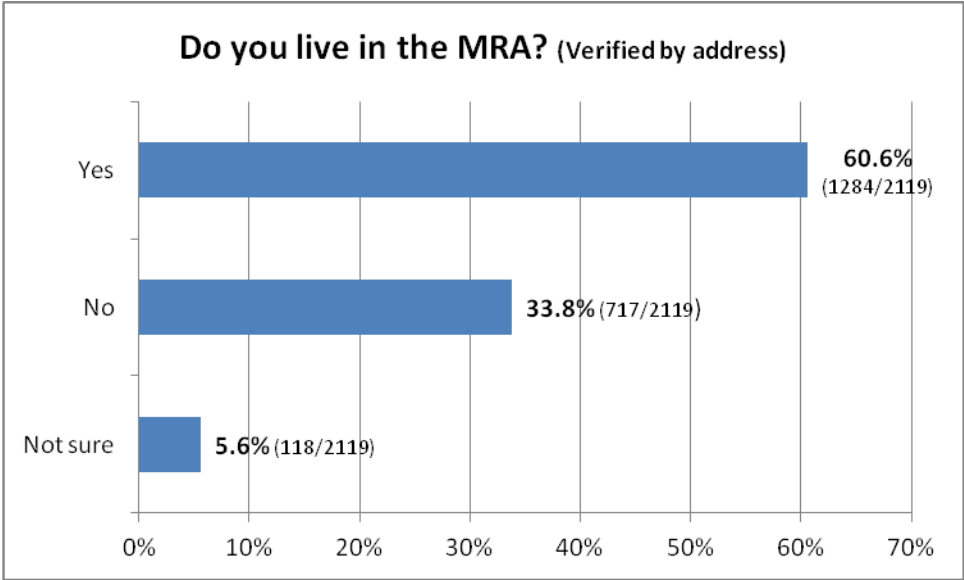
(2119 responses; 19 with no response)

According to the surveys, responders believed that they were inside or outside the MRA in similar amounts, 47.5% to 40.2%, respectively.



However, when we were able to verify the answer of those responding by comparing the addresses that were not blacked out on the survey, we found that over 60% of the respondents lived in the MRA, almost twice as many as outside the MRA. This change indicates that even though the survey included a description of and a graphic showing the MRA and the MRA had previously been addressed in newsletters, respondents had some confusion as to the MRA boundaries and whether or not they reside in the MRA.

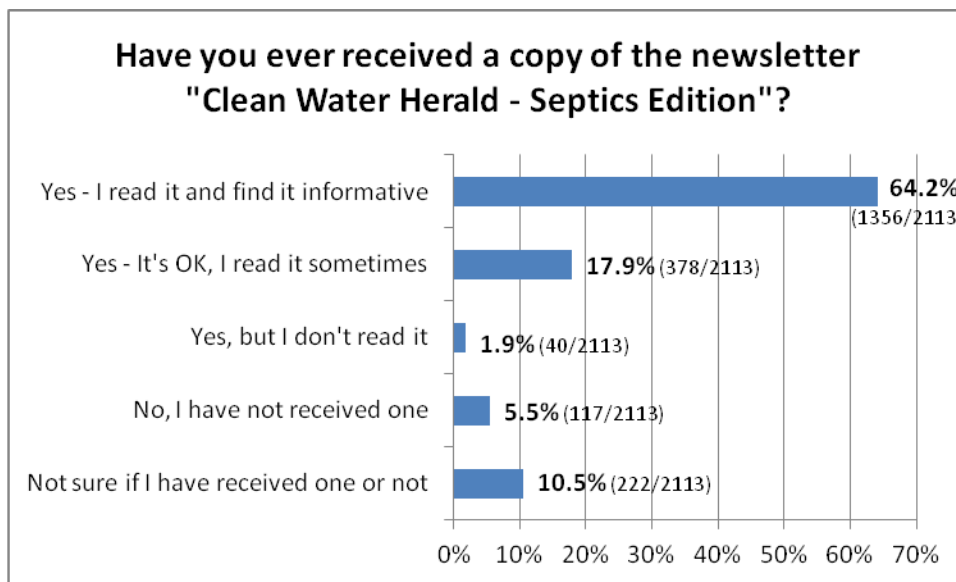
- ___ Yes: 1006 (47.5%) Answered yes but do not live in MRA: 4/1006 (0.5%)
- ___ No: 851 (40.2%) Answered no but do live in MRA: 156/851 (21.2%)
- ___ Not Sure: 262 (12.4%) Answered not sure but do live in the MRA: 126/262 (53.4%)
- Answered not sure but do not live in the MRA: 18/262 (7.6%)



Having a majority of respondents in the MRA may explain the higher compliance rate for inspections (Question 6) since the majority of outreach efforts by CCEH have occurred in the MRA.

13. Clallam County Environmental Health produces a newsletter titled the “Clean Water Herald – Septics Edition”. Since 2009 it has been mailed 4 times a year to septic system owners in the MRA and once a year County-wide. Have you ever received a copy of this newsletter in the mail?
(2113 responses; 25 with no response)

Over 64% of the respondents who believe they have seen a copy of the *Clean Water Herald* read it and find it informative. An additional 18% read it sometimes and less than 2% who received it did not read it. Eleven percent (11%) are not sure or do not remember having received the newsletter.



Has reading the newsletter changed any of your attitudes or behaviors toward septic system maintenance? (You scheduled an inspection, you're limiting water use, you visited a website for information, etc.)

Of those who provided comments, 273 wrote that the newsletter did not cause a change or that they were already performing the operations and maintenance described in the newsletters. Of the responders that read the newsletter, approximately 28% (495 responses) wrote that newsletter was very informative and had changed their views or behaviors toward septic system maintenance. The major changes noted were

- Limit and or spread out water usage
- Scheduled an inspection

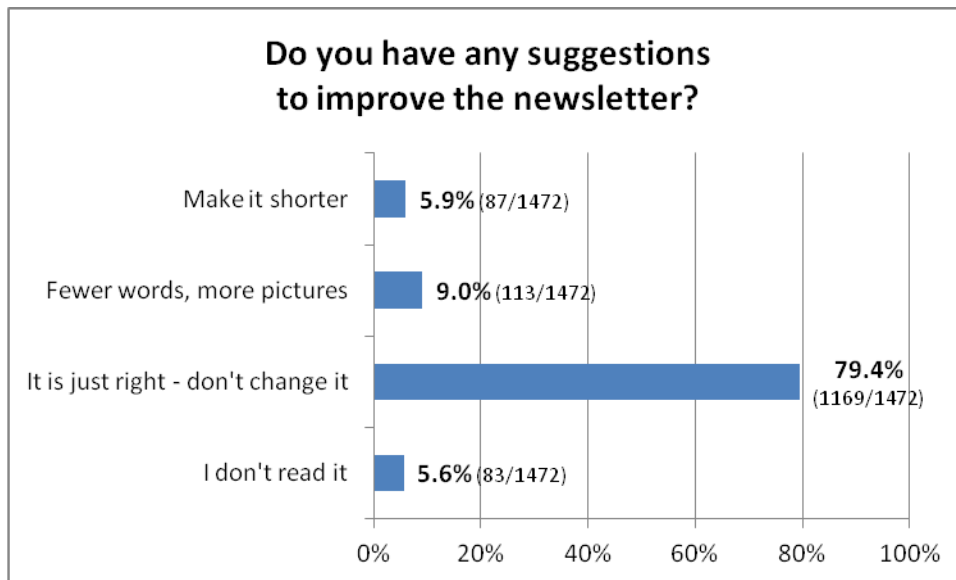
- Visited the OSS website
- Made them more aware of their septic system
- Watch what enters the system such as chemicals/bleach, type of soap, type of toilet tissue
- Check system regularly
- Took a class

The comments concerning water usage and watching what is being sent to the septic system (chemicals, soap, etc.) are consistent with the responses from Question 11.

14. Do you have any suggestions to improve the newsletter?

(1472 responses; 666 with no response)

This question had the least responses overall. However, of those who did respond, an overwhelming 79% checked the reply that the newsletter is just right-don't change it.



Please add any comments or suggestions:

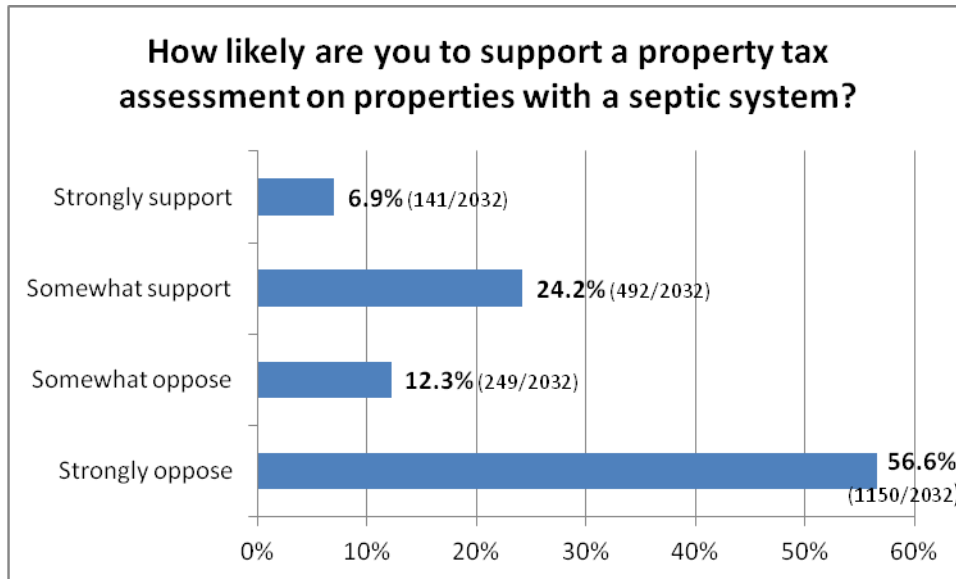
The top five comments concerning the newsletter were

- Good reminder
- Interesting, relevant, and informative
- A waste of money, not necessary
- Reinforces what I already know
- Provide contact lists for professional and county staff, not just the website URL

15. In order to protect water quality and public health, the State requires Clallam County Environmental Health to assist septic system owners in ensuring that their septic system is working safely. Environmental Health provides training programs, technical assistance, newsletters and reminders about septic system operation and maintenance to help homeowners get the most out of their septic system investment. The County is considering various ideas to pay for these services. How likely are you to support each of the following options?

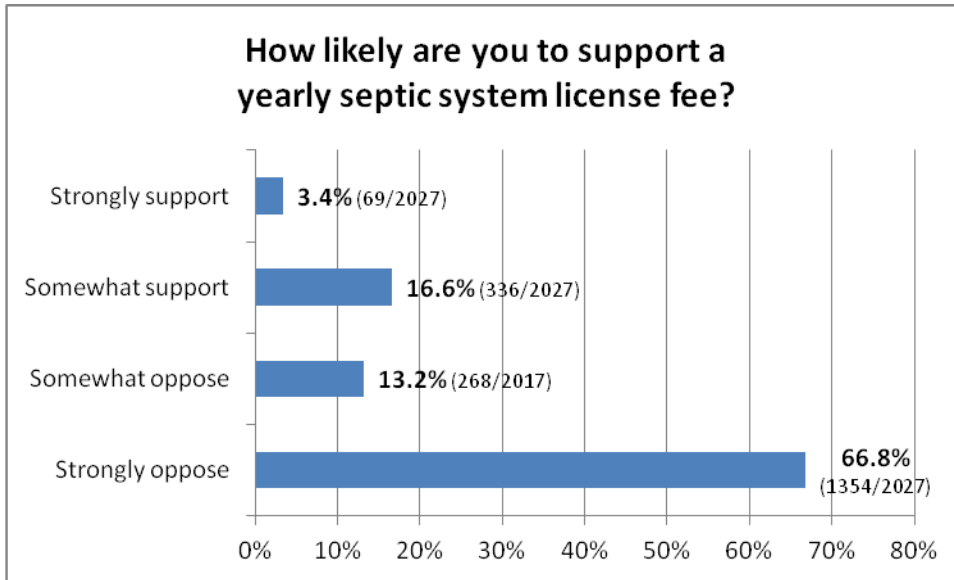
a) Property tax assessment on properties with a septic system
(2032 responses; 106 with no response)

Almost 69% oppose a property tax assessment—57% strongly oppose and 12% somewhat oppose.



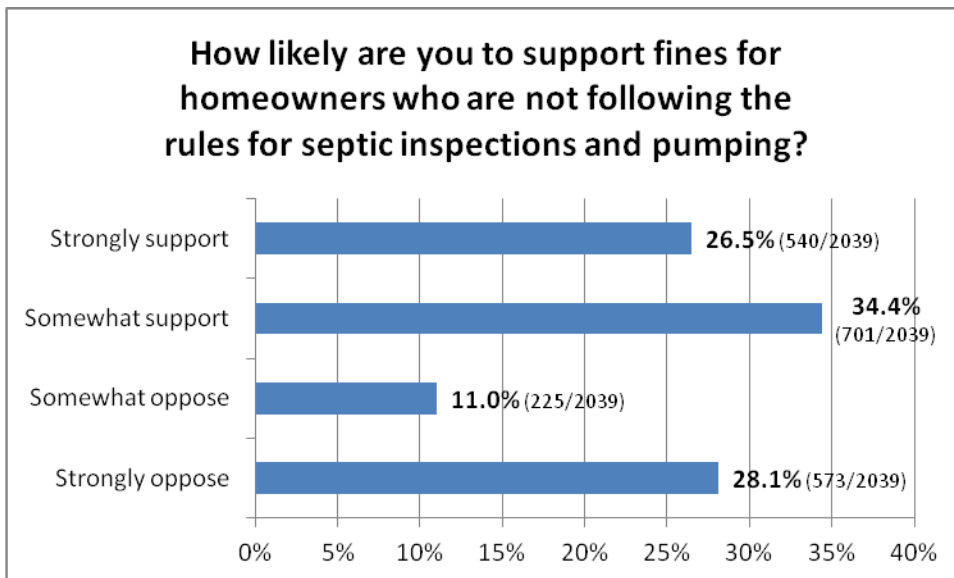
b) Yearly septic system license fee
(2027 responses; 111 with no response)

Eighty percent (80%) oppose a yearly septic system license fee—67% strongly oppose and 13% somewhat oppose.



c) Fines for homeowners who are not following the rules for septic system inspections and pumping
(2039 responses; 99 with no response)

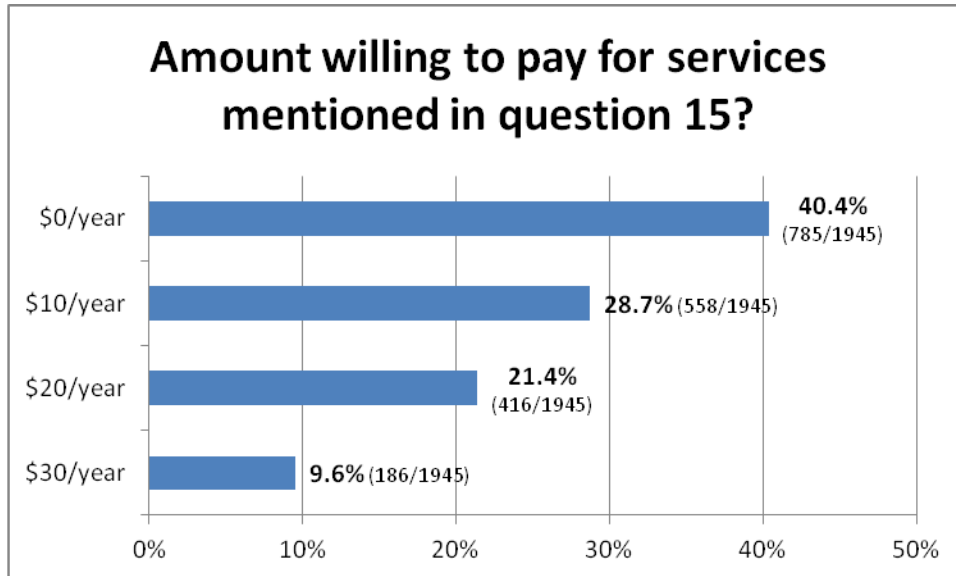
Approximately equal amount of respondents strongly support and strongly oppose fines for homeowners who are not following the rules for septic system inspections and pumping. Overall, about 61% strongly support or somewhat support compared to about 39% who strongly oppose or somewhat oppose having fines.



16. Please select an amount you would be willing to pay for the services mentioned in question 15 above:

(1945 responses; 193 with no response)

Almost 60% of the respondents surveyed are willing to pay \$10 or more per year for services mentioned in question 15. Forty percent (40%) do not want to pay any dollar amount per year for those services.



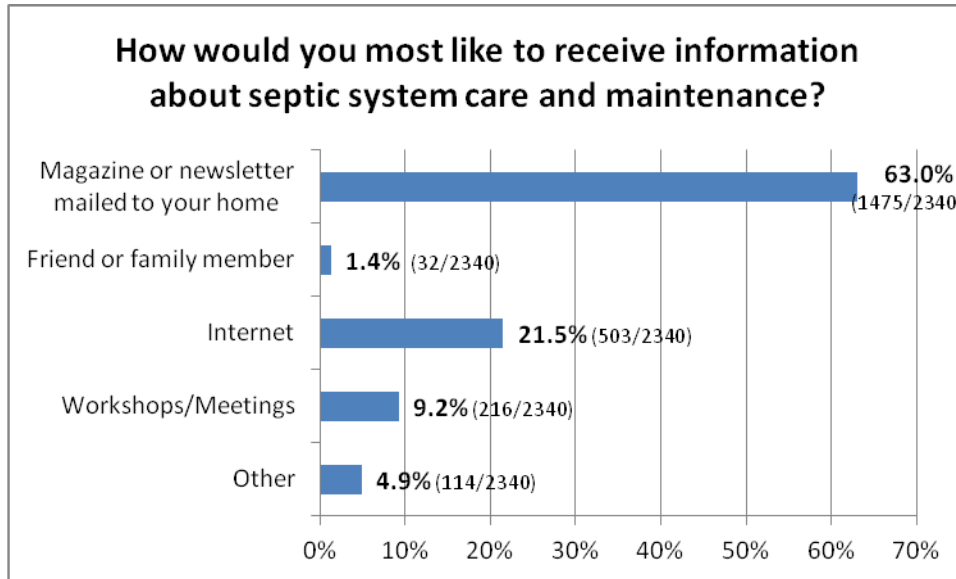
Do you have other ideas to support these services?

After removing the comments that there is too much government and Clallam County residents already pay too much in taxes, the main ideas provided by respondents to support these services were:

- Don't make those of us who comply pay for others
- Owner has the responsibility
- The state or federal governments should pay for state and federal mandates
- Fees should be tied to system type, use, and location
- Use existing taxes or general funds
- Fine those who have OSS failures
- Reward those in compliance (ex. lower taxes, rebates, etc.)
- User fees for classes and materials
- Increase fees for new construction

17. How would you most like to receive information about septic system care and maintenance?
(2003 responses; 135 with no response)

Responders overwhelmingly preferred to receive information about septic system care and maintenance through magazine or newsletter mailed to their home.



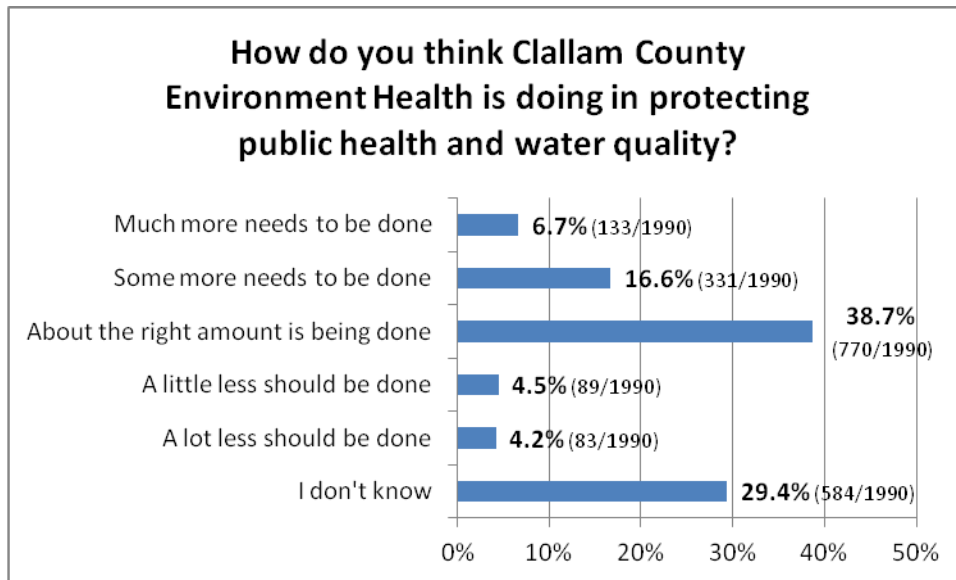
The main comments supplied by respondents for other means of obtaining information about septic system care and maintenance included

- E-mail
- Don't want or need information
- Inspector, installer, or pumper
- Newspaper
- Mail annual reminders
- Internet
- At time of installation or property sale

18. How do you think Clallam County Environmental Health is doing in protecting public health and water quality?

(1990 responses; 148 with no response)

Almost 39% of respondents indicated that Clallam County Environmental Health was doing about the right amount to protect public health and water quality while about 29% do not know how Environmental Health is doing.



Comments for Question 18:

- How does Clallam County compare to other counties?
- Enforce the laws
- Too much government interference
- I know what EH is doing, but not the results
- Unneeded mandate for most of Clallam County outside the MRA, especially for the west end
- CCEH is doing excellent/good job
- No new fees

ADDITIONAL COMMENTS

Summarized below are some of the main comments provided by respondents:

- When will Septics 201 be available?
- I take care of my system, don't need you.
- What about sewage pollution from Victoria, BC; animals; and agriculture?
- There needs to be help for fixed income, low income, and seniors.
- Clallam County Environmental Health is doing a good job.
- Need low to no interest septic loans.
- Less government is best.
- Make those who have failing systems pay.
- Not all systems are identical. Focus on the worst cases.
- Have more classes at more locations.

Summary of Results, Discussion, and Recommendations

As stated earlier the objective was to obtain at least 400 completed surveys from homeowners whose primary residence utilizes a septic system. The survey response far exceeded our objective; 2,138 surveys from postal mailers or online surveys were received. This section of the survey report summarizes the responses, discusses the results, and provides recommendations based on several categories of questioning:

- their knowledge of their own septic system;

Most of the respondents believe they know where their septic system is located, what is the septic system type, and when it was last pumped. There is some confusion as to whether their OSS is located in the MRA or outside the MRA. According to the answers to Question 12, 47% thought they were in the MRA; however, when comparing the addresses that were not crossed out on the survey, we found that over 60% of the respondents lived in the MRA, almost twice as many as outside the MRA.

Recommendations: Continue outreach activities on OSS maintenance and operations.

Develop other outreach activities to further educate OSS owners as to whether their OSS is located inside or outside the MRA.

- their knowledge of their responsibilities under the law to maintain and inspect their system;

Approximately 64% of the respondents said that they had had their septic system inspected by a licensed septic system inspector. This was an unexpected response since according to county records for June 2013 only approximately 17% are current with their OSS inspection. This discrepancy may indicate that OSS owners do not understand what a septic system inspection entails or who is considered to be a licensed septic system inspector. Only about 5% of the responses indicated that they didn't know they should have an inspection. It could also indicate that those OSS owners that have had their septic system inspected may have been more willing to have returned a completed survey.

As mentioned above, there is some confusion among respondents as to whether their OSS is inside or outside the MRA. Considering that there are slightly more

inspection requirements for inside than outside the MRA, it is likely that OSS owners are unclear as to which inspection requirements they should be following. Based on survey comments and class comments, many OSS owners are under the impression that the septic requirements only apply to the MRA and not to the rest of Clallam County, to all Puget Sound counties, and to all OSS systems in Washington State. Inspection requirements are state wide (WAC 272-0270(1)(d)). As required by Clallam County's OSS Plan and local ordinance, in the MRA there is the additional requirement of having the first inspection performed by a certified septic inspection professional.

Recommendations: Besides providing outreach to reinforce the need to comply with the state OSS requirements, more outreach needs to be performed on distinguishing septic system requirements for the MRA versus outside the MRA and identifying the location of the MRA.

Even though 64% of respondents claimed to have had their septic systems inspected by a certified inspector, this is in conflict with the actual inspection compliance rate of about 17%. Additional outreach needs to occur so that OSS owners are informed or reminded of the septic requirements mandated by WAC 246-272A-0270 and informed on what constitutes a certified inspection.

- their views toward septic system ownership and required responsibilities;

At least 36% of the respondents have not had their OSS inspected. The main reason checked by respondents was that they don't think it is necessary. A secondary reason is that they didn't know that they should. Affordability and not wanting to pay were the least ranked. Based on the comments supplied, many OSS owners think their septic system is working fine and, therefore, should not have to be inspected. Septic problems are generally perceived by OSS owners as having septic backup, odors, or surfacing on the ground. Without these problems, they do not see a need for septic inspections. A connection has not been made between a poorly operating septic system and water contamination or the need for septic inspection in order to be in compliance with state law.

Respondents of the survey tended to underestimate the cost of a septic system

inspection and the cost to pump a septic system. Even though the results show they know inspecting is cheaper, they still prefer to pump rather than inspect.

As mentioned earlier, many OSS owners do not know if they live inside or outside of the MRA. Therefore, they may not be familiar with the additional local septic requirement that applies to the MRA.

As a result of the outreach through the newsletter and classes, there have been knowledge, belief, and behavior changes. Twenty-seven percent (27%) of the newsletter readers and 19% of septic class participants indicate that they have changed their behaviors. These OSS homeowners are more careful about what goes into their septic systems. They watch their home water usage by limiting and spreading out laundry and other water usages. They use less detergent and chemicals. Other changed behaviors as a result of the newsletter and classes include performing activities such as scheduling an inspection, visiting the CCEH OSS website for more information, being more aware of their system and how to maintain it, and taking a septic class

Recommendations: Develop outreach that emphasizes the benefits of maintaining your septic system such as preventing pollution, preventing septic failures, and saving money long-term.

- the motivations and barriers/impediments to complying with the inspection requirements and maintaining a septic system;

The motivations to comply with inspection requirements and maintain a septic system, rating from most benefit to least important benefit, are peace of mind (31.1%), avoid cost and hassle of repairs (24.5%), prevent pollution (23.5%), and preserve your investment (21.0%).

According to the results in Question 8, the barriers that cause people not to have their septic system inspected, ranking from most likely to least likely, are cost (44.6%), didn't know it needed doing (28.3%), don't remember to have it done (19.4%), and don't know who to call (7.7%). While in Question 6, the reasons respondents cited as to why they did not have a septic inspection were don't think it was necessary (24.0%), other (21.4%), didn't know I should (14.3%), no particular reason (13.8%), new home (13.0%), couldn't afford (8.6%), and didn't want to pay for it (4.8%). In contrast to the response in Question 8 where cost was ranked as the highest barrier, in Question 6, affordability

and not wanting to pay were the least ranked. This variation may have arisen as a result of a subtle difference in perspective. Question 6 dealt with why the respondent has not had their septic system inspected while Question 8 dealt with why they think people (others) may not have their septic system inspected.

Recommendations: Based on the responses provided, some of the barriers can be overcome to increase compliance. Since cost is an issue, it is recommended that incentives to reduce inspection costs continue to be made available to OSS owners. Likewise, continuing to have classes and DIY on-line classes where OSS owners learn how to perform their own inspections is another way to bring down inspection costs. Outreach should include the message that septic inspections can save money in the long run. Lastly, more outreach needs to be done to make OSS owners aware that septic inspections are a state requirement and need to be performed in a timely manner.

- the effectiveness of our education and outreach efforts, including the OSS classes and the *Clean Water Herald—Septics Edition* newsletter;

Classes—Approximately 49% of the respondents have taken a Septics 101 class (31%), Septics 101 on-line (13%), and/or Septics 201 on-line (5%). Comments from respondents indicate the classes are well-received and considered valuable. The main recommendation for the classes was to finalize development of the DIY/Septic 201 class and make it available on-line. The main reasons for not having taken a class were that the classes were full, need to offer more classes and at more locations, and didn't know that the classes were available on-line.

The classes are having an impact on compliance rates for septic inspections. According to the survey results, 71% of those who attended a class whether it was Septic 101, Septic 201, or on-line versions of Septic 101 and 201 had indicated in Question 6 that their septic system had been inspected. Whereas of those who had not taken a class, the percentage of OSS owners that had an inspection was significantly less at 62%.

Even though the classes are well received, there is room for improvement. Of those who have taken the classes, 19% responded that it changed their views or behavior towards septic system maintenance. The main change made included being more careful about what goes into their septic system.

Newsletter— Respondents overwhelmingly agreed (63%) that the newsletter was the prime method for receiving information on OSS maintenance and operations. A distant second was the internet at approximately 22%. Sixty-four percent (64%) of the respondents read the newsletter and find it informative. When asked how to improve the newsletter, an overwhelming 79% responded that the newsletter was just right and not to change it. The top two categories of comments received indicate that it is a good reminder and provides interesting/relevant information. In contrast, the third highest category of comments was that the newsletter was a waste of money and was unnecessary. A main suggestion for the newsletter was to include contact lists for septic specialist and county staff as well as the septic website.

Even though the newsletter is well received, there is room for improvement. Of those who read the newsletter, 27% responded that it changed their beliefs or behavior towards septic system maintenance.

Overall—Almost 39% of the respondents indicated that CCEH was doing about the right amount to protect public health and water quality.

Recommendations: Due to the overwhelming positive response concerning the newsletter, it is recommended to continue development and distribution of the newsletter. Since the septic classes were also well-received, the recommendation is to continue them, possibly increasing the number of classes and locations as funding allows. Likewise, the on-line classes should be made more accessible and user friendly, especially Septic 201. Information on when the septic classes will be held and how to access the on-line classes should be marketed more aggressively through public service notices, updated County septic websites, and more pronounced visibility in the *Clean Water Herald*.

- interest in CCEH’s new Do-It-Yourself (DIY/Septics 201) OSS inspection program for homeowners; and

Many write-in comments concerned the availability of the new Do-It-Yourself (DIY/Septics 201) OSS inspection program for homeowners. There is major interest in taking DIY/Septics 201. Availability of this class would allow OSS

owners the opportunity to perform their own inspections and thus decrease the cost of inspections.

Recommendations: Unveil a fully functioning DIY/201 on-line class as soon as possible. Substantial progress has been made to attain this goal since the survey was mailed in July 2013. Staff is currently working on debugging the current DIY, which went on-line in August 2013 after the survey was completed. There should be press releases/advertisements announcing that the DIY is available.

- support for creating a stable funding source to develop an OSS management structure.

Based on responses to all parts of Question 15 of the survey, there appears to be only limited support for creating a stable funding source to develop an OSS management structure. Sixty-nine percent (69%) oppose property tax assessments on properties with OSS; 80% oppose a yearly septic system license fee. In contradiction to opposing a yearly septic system license fee or a tax assessment, 60% of the respondents are willing to pay at least \$10/year for an OSS training program, technical assistance, newsletters, and reminders about septic system operation and maintenance. Additionally 61% support fines for those not following inspections requirements. This support for fines agrees with the public comment that recently arose from the Dungeness Wastewater Feasibility Study (2013) for the Three Crabs area. There was broad support among community members in Three Crabs for the County to enforce existing laws and force people to get inspections.

Constructive write-in comments for other sources of funding include owner responsibility; state or federal government paying; tiering of fees based on system type, use, and location; use existing taxes; reward those in compliance; user fees for classes and class materials; and increase fees for new construction.

Recommendations: The recommendation for stable funding for an OSS management program that includes OSS outreach and technical assistance would be to charge OSS owners at least \$10/year. However, it should not be called a property assessment or a yearly septic license fee, which led to negative responses by survey responders. There is also support for fining those OSS owners that are not in compliance with septic inspection. The new OSS ordinance that has been recently adopted by the Clallam County Board of Health

includes enforcement options that may provide some teeth for fining those OSS owners that are not in compliance.

Conclusion

The Clallam County Environmental Health Section conducted this survey to help assess the OSS homeowner's knowledge, beliefs, and behaviors associated with OSS operations and maintenance; identify OSS homeowners' barriers associated with adopting OSS best management practices; evaluate the effectiveness of the County's OSS management program; and consider how to provide stable funding for the OSS program. The survey had an excellent response rate of 13.5%, which far exceeded our expectations. The goal was to receive 400 surveys back and CCEH received 2,138 completed surveys.

Survey findings indicate that additional work needs to be done to educate OSS owners on septic maintenance and care, septic inspection requirements, and whether their OSS is located inside or outside the MRA. Based on the responses provided, some of the barriers identified can be overcome to increase compliance. Since cost is an issue it is recommended that incentives to reduce inspection costs continue to be made available to OSS owners. Likewise, continuing to have classes and DIY on-line classes where OSS owners learn how to perform their own inspections is another way to bring down inspection costs.

CCEH will use the findings of the survey to tailor its current outreach strategies and activities and develop new activities in order to increase OSS inspection compliance rates. Although the *Clean Water Herald* newsletter and the septic in-person and on-line classes are well received, other methods of social media such as newspaper articles and advertisement, Facebook and other internet avenues, and radio advertisement will be considered as additional tools to reach and encourage OSS homeowners to be in compliance with septic requirements.

Survey findings will also be used for developing a plan to create a stable funding source to continue OSS management programs. The majority of survey respondents did not support property tax assessments or a yearly septic system license fee, but are willing to pay at least \$10/year for an OSS management program, support fines for those not following inspection requirements, and advocate enforcing existing laws. These survey findings will be presented to the Board of Health and the Clallam County Commissioners to aid them in shaping policies to best provide stable funding for the OSS program.

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Figure

Figure 1—Clallam County MRA

Appendix

Appendix A—On-site Septic System Owner Survey (July 2013)

Clallam County Environmental Health staff wish to thank all those OSS homeowners that completed the survey; your input is invaluable.

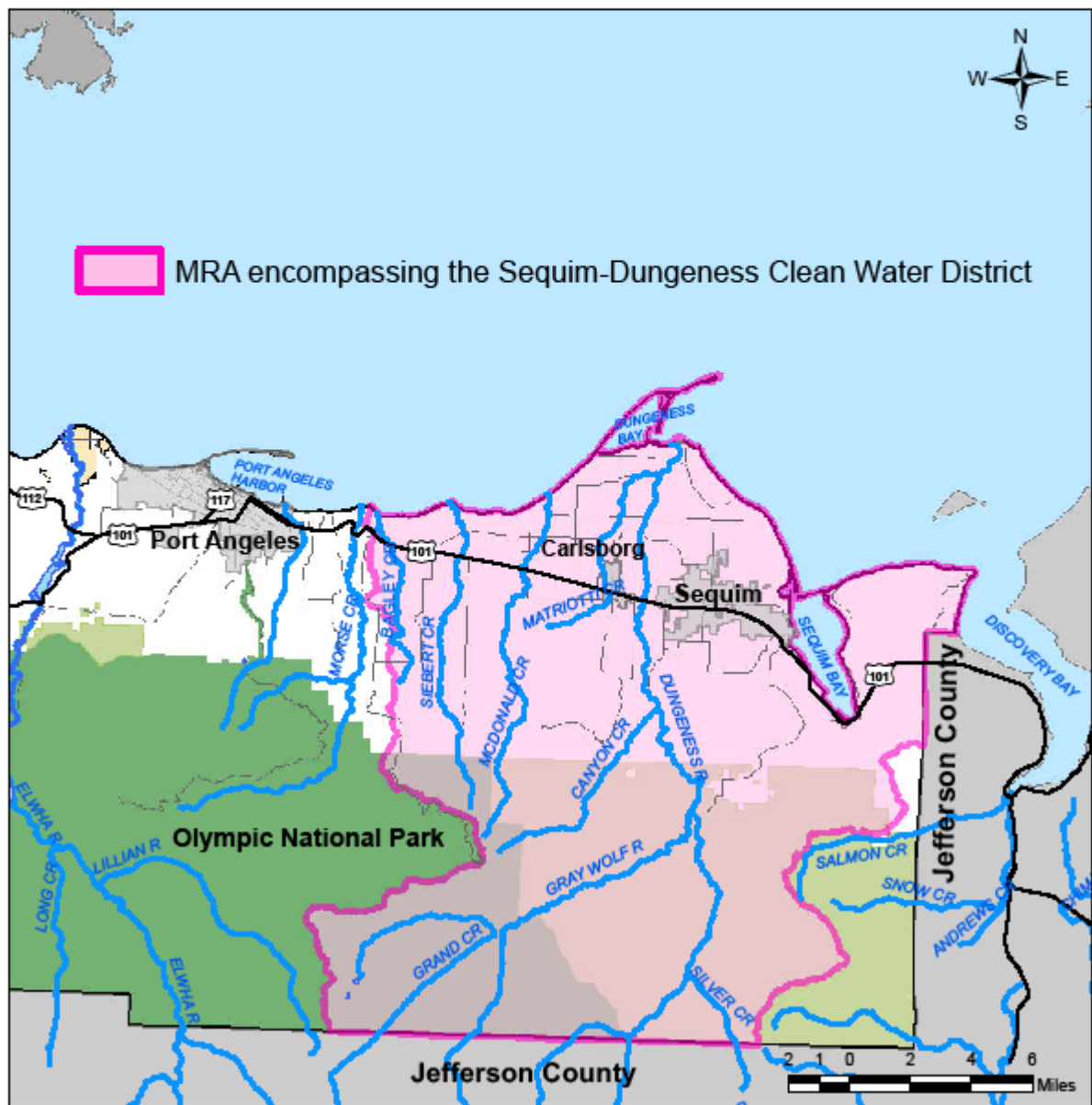
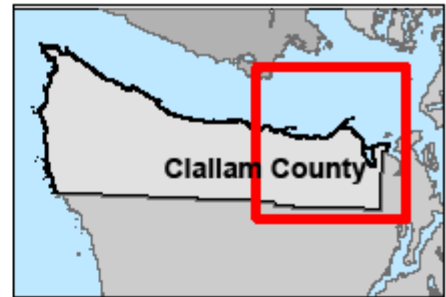


**SEPTIC SYSTEM CARE
BEGINS WITH YOU**

Special thanks go to Jonathon J. Waldrip, who volunteered assistance for database management and analysis.

Figure 1:

Clallam County Marine Recovery Area (MRA) including the Sequim-Dungeness Clean Water District



Appendix A- On-site Septic System Owner Survey (July 2013)

Onsite Septic System Owner Survey

Please return by _____ 2013. Thank you!

1. Do you currently rent or own a home in Clallam County with a septic system?
 own rent

2. How long have you lived there?
 Less than 5 years 5-10 years 11-15 years
 16-20 years More than 20 years

3. What type of a septic system do you have?
 Conventional (gravity) Pressurized (includles mounds)
 Other (ATU, biofilter, sandfilter) Not sure

4. Do you know where the septic system is located?
 Yes No

5. When was the last time your septic tank was pumped?
 0-1 year ago 2-3 years ago 4-5 years ago
 More than 5 years ago Not sure
 N/A (new system, new home, haven't lived there very long)

6. A septic system inspection involves looking at the septic tank and drainfield and all components to ensure that the system is functioning properly. Has a licensed septic system "inspector" checked your system? If no, why not?
Please check all that apply.
 I have had my system inspected
 Didn't know I should
 Didn't want to pay for it
 Couldn't afford it
 Don't think it's necessary
 No particular reason
 N/A (new system, new home, haven't lived there very long)

7. What do you see as the greatest benefit to maintaining a septic system?
On a scale of 1-4, please rate the following with 1 being a very important benefit and 4 being not an important benefit.
 peace of mind (knowing it won't back up/surface in your yard)
 avoid cost and hassle of repairs
 preserve your investment
 preventing pollution

8. What do you think is the reason people don't have their systems inspected?

On a scale of 1-4, please rank the following with 1 being the most likely reason and 4 being the least likely reason.
 they don't remember to have it done
 they don't know it needed to be done
 they don't know who to call
 cost

9. About how much do you think a septic system inspection costs?
 \$100 \$200 \$300 more than \$300

10. About how much do you think it costs to have your septic tank pumped?
 \$200 \$300 \$400 more than \$400

11. Clallam County Environmental Health has developed in-person and on-line training on septic system maintenance (Septics 101) and homeowner do-it-yourself inspections (Septics 201). Have you attended a Septics 101 class or taken Septics 101 or 201 online?

Please check all that apply.
 Attended Septics 101 class
 Took Septics 101 online
 Took Septics 201 online
 Have not taken any training
 Did not know about the training

Do you have any comments or recommendations about either class? Did you make any changes in your home water use habits as a result of the class?

12. The eastern end of Clallam County, from Bagley Creek Road (near Precision Truss and The Greenhouse Nursery on Hwy 101) to the east county line, has been designated a Marine Recovery Area (MRA) due to real and potential impacts to water quality resulting from population growth in both urban and rural areas. Do you live in the MRA?
 Yes No Not Sure

13. Clallam County Environmental Health produces a newsletter titled the "Clean Water Herald – Septics Edition." Since 2009 it has been mailed 4 times a year to septic system owners in the MRA and once a year County-wide. Have you ever received a copy of this newsletter in the mail?
 Yes – I read it and find it informative
 Yes – It's OK, I read it sometimes
 Yes, but I don't read it
 No, I have not received one
 Not sure if I have received one or not

Has reading the newsletter changed any of your attitudes or behaviors toward septic system maintenance? (you scheduled an inspection, you're limiting water use, you visited a website for information, etc.)

14. Do you have any suggestions to improve the newsletter?
 Make it shorter
 Fewer words more pictures
 It is just right – don't change it
 I don't read it

Please add any comments or suggestions:

15. In order to protect water quality and public health, the State requires Clallam County Environmental Health to assist septic system owners in ensuring that their septic system is working safely. Environmental Health provides training programs, technical assistance, newsletters and reminders about septic system operation and maintenance to help homeowners get the most out of their septic system investment. The County is considering various ideas to pay for these services. How likely are you to support each of the following options?

- a) Property tax assessment on properties with a septic system:
 Strongly support Somewhat support
 Somewhat oppose Strongly oppose
- b) Yearly septic system license fee:
 Strongly support Somewhat support
 Somewhat oppose Strongly oppose
- c) Fines for homeowners who are not following the rules for septic system inspections and pumping:
 Strongly support Somewhat support
 Somewhat oppose Strongly oppose

16. Please select an amount you would be willing to pay for the services mentioned in question 15 above:
 \$0 \$10/year \$20/year \$30/year

Do you have other ideas to support these services?

17. How would you most like to receive information about septic system care and maintenance?
 Magazine or newsletter mailed to your home
 Friend or family member
 Internet
 Workshops/Meetings
 Other (please specify)

18. How do you think Clallam County Environmental Health is doing in protecting public health and water quality?
 Much more needs to be done
 Some more needs to be done
 About the right amount is being done
 A little less should be done
 A lot less should be done
 I don't know

Comments:

ADDITIONAL COMMENTS:

Thank you for your time in completing this survey.

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