

PUGET SOUND RECREATIONAL BOATER SURVEY RESULTS

PUGET SOUND NO DISCHARGE ZONE FOR VESSEL SEWAGE



Prepared for
Washington State Department of Ecology



Prepared by
Herrera Environmental Consultants, Inc.



Note:

Some pages in this document have been purposely skipped or blank pages inserted so that this document will copy correctly when duplexed.

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INTRODUCTION

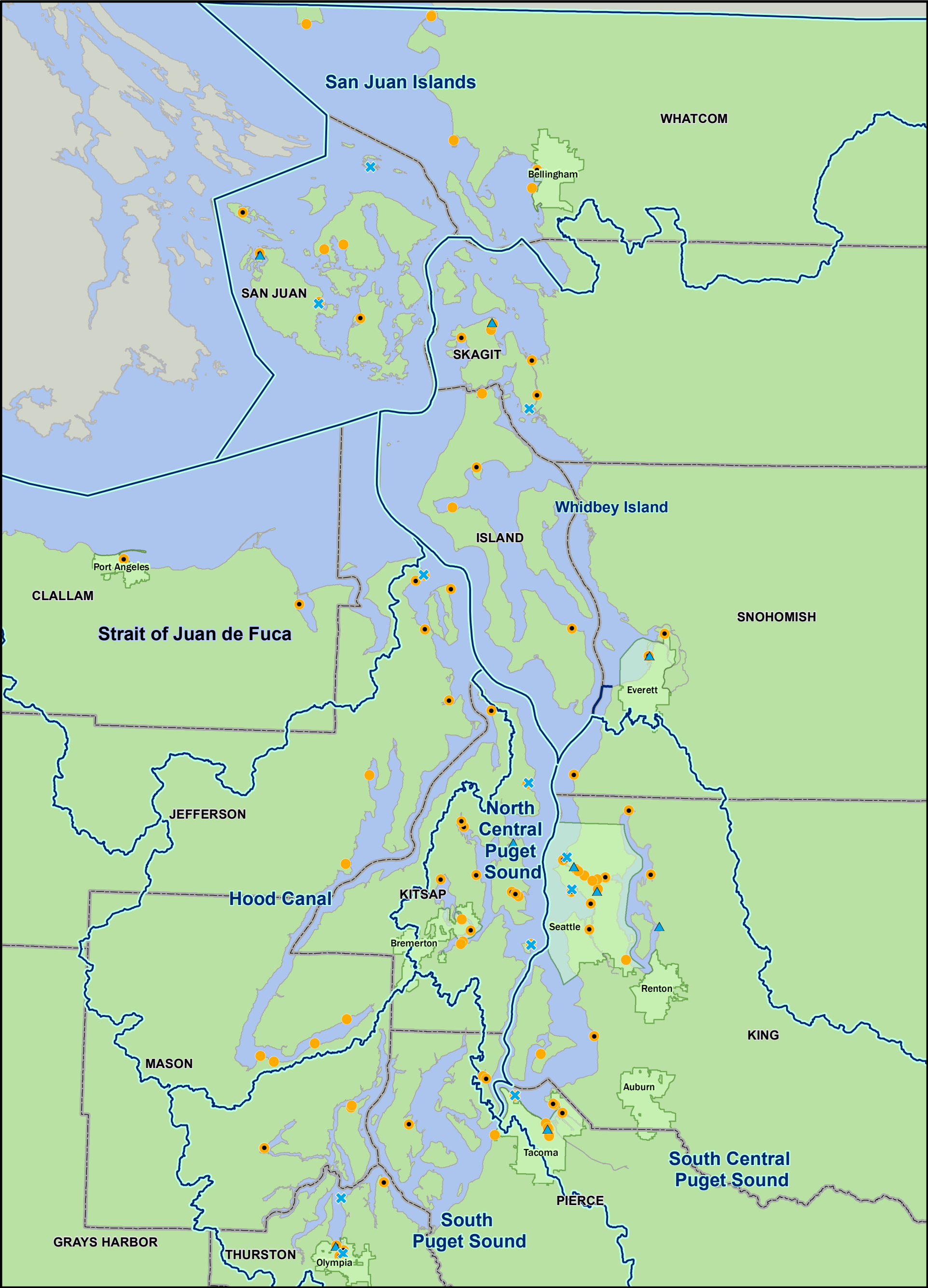
The Washington State Department of Ecology (Ecology) is evaluating the potential costs and benefits of establishing some or all of Puget Sound as a No Discharge Zone (NDZ) for vessel sewage for recreational and commercial vessels. To establish a NDZ for Puget Sound, Ecology must petition the United States Environmental Protection Agency (US EPA) to designate the NDZ, because the NDZ program is a federal program administered and overseen by the US EPA. The US EPA is authorized, under the Federal Clean Water Act (CWA), to institute a NDZ in waters that are threatened by the discharge of sewage waste from vessels. The authorization allows the US EPA to “completely prohibit the discharge from all vessels of any sewage, whether treated or not” (40 CFR 401.4[a]). There are three possible pathways to designating a NDZ under CWA Section 312, and each uses a different set of criteria to justify the designation. Ecology is in the process of evaluating whether some or all of Puget Sound should be designated as a NDZ under CWA 312(f)(3), which bases the designation on whether there are a sufficient number of pumpout facilities available to boaters.

While there are no specified criteria for making a determination of whether there are a sufficient number of pumpout facilities, other states which have successfully established NDZs based on CA 312(f)(3) relied on recommendations set forth in the Clean Vessel Act Technical Guidelines (CVA 1994). This guidance prescribes a ratio of between 300 to 600 vessels for each pumpout facility. Even in light of these guidelines, states have used different criteria for documenting sufficient pumpout station availability. For example, the State of Massachusetts cited a minimum ratio of 450 vessels per pumpout stations recommended by US EPA Region 1 for the Boston Harbor NDZ Petition. The state of Maine cited a minimum ratio of 350 vessels per pumpout, also recommended by US EPA Region 1 for the Casco Bay NDZ Petition. The State of New York cited a minimum ratio of 300 vessels per pumpout station for the Long Island Sound NDZ petition.

A preliminary assessment (Herrera 2012) indicated that there are more than 100 public pumpout facilities located in Puget Sound and that these would provide a ratio of about 90 vessels for each pumpout facility at times of highest vessel usage; a ratio that exceeds any of the cited ratios. The assessment was based on boat population estimates obtained from Washington State vessel registration records, and a set of assumptions related to boat use and predictions of existing marine sanitation devices described in the Clean Vessel Act (CVA) (CVA 1994). Since this preliminary assessment involved several potentially outdated assumptions regarding marine sanitation practices, and did not account for the geographical distribution of pumpout facilities, it was intended as a ‘best guess’ to inform decision making until better data that more accurately reflects the habits and needs of Puget Sound boaters could be gathered. A Puget Sound Boater Survey (PSBS) was conducted in the summer of 2012 to collect data about Puget Sound Boater’s sewage management practices and habits and to help refine previous estimates of the number of boaters requiring access to pumpout facilities. The Survey was conducted as a joint effort between Washington Sea Grant (WSG) and Ecology. WSG was planning to conduct a boater survey in the summer of 2012 as part of an ongoing survey effort

that began in 2009 to assess the effectiveness of CVA education and outreach to boaters and managers of boating access facilities. WSG, agreed to expand their survey to include a few questions that were pertinent to the ongoing NDZ effort. As part of the survey effort, staff from WSG, Ecology, and other contributing organizations surveyed 306 recreational boaters throughout Puget Sound.

The primary purpose of the survey was to learn about boater practices and attitudes, but a few questions addressed boater's opinions on the sufficiency of the existing Puget Sound pumpout station infrastructure, and where boaters would like to see additional pumpout facilities. The survey will help to refine previous estimates of the number of boaters who would require access to pumpout facilities, and, or modify their vessels to comply with NDZ regulations, should an NDZ be established for Puget Sound. This data will be cited as supplemental information in the NDZ petition that might be submitted to the US EPA. Though anecdotal, boater's opinions of where added pumpout facilities are needed will help inform upcoming research on the geographical distribution of existing pumpout facilities, and the need for new facilities.



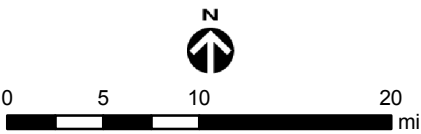
Identified Puget Sound Pumpout Facilities

- ▲ Mobile pumpout²
- Pumpout only
- Pumpout with dump station
- ✕ Boater survey location
- ▭ Puget Sound Action Area
- ▭ County boundary
- ▭ City boundary

Notes:

1. Pumpout facility information is continually changing. For up-to-date information, the Washington State Parks pumpout database should be accessed.
2. Mobile pumpout locations indicate the home marina for the pumpout vessels. The area serviced by each vessel, and maximum distance traveled, varies by company and the demand for their services.

Figure 1.
Location of 2012 Boater Surveys and
Known Public Pumpout Facilities in
Puget Sound.¹



Coordinates: NAD83 Washington State Plane North (feet)

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METHODS

WSG staff and volunteers surveyed the recreational boater population in Puget Sound by asking boaters to respond to a questionnaire aimed at learning about their boats, their boating habits, their attitudes toward sewage management, and pumpout facility information. The primary mode of soliciting survey respondents was through visits to marinas. Eleven marinas were visited over the summer; seven of them were visited on the same day (August 11, 2012). In total, 266 surveys were collected from boaters at marinas. Surveys were also solicited at the Anacortes Trawler Fest and Seattle Boats Afloat boat shows. Forty responses in total were received at the boat shows. Figure 1 and Table 1 identify the location of the surveys, and the number of surveys collected at each location. The intent of the WSG survey was educational, so the survey locations were likely selected to maximize the number of contacts while covering a broad expanse of Puget Sound. Therefore, although the survey locations and number of responses received at each location were not evenly distributed throughout Puget Sound, the survey locations (Figure 1) represent a wide range of popular boating locations.

Table 1. Survey Location Information.

Survey Location	Survey Date(s)	Number of Responses
Point Hudson Marina ^a	August 11	15
Blake Island State Park	July 26,27; August 3; August 11	47
Kingston Marina	August 11	11
Friday Harbor Marina	August 10,11	75
Sucia State Park	July 13,14	22
Shilshole Marina	August 11	51
Tacoma Yacht Club	June 23	6
Elliot Bay Marina	June 6	5
Boston Harbor Marina	August 11	6
Swantown Marina	August 11	15
Shelter Bay Yacht Club	July 18	13
Boat Shows		
Anacortes Trawler Fest	May 15	10
Lake Union Boats Afloat	September 12-16	30

The survey consisted of 13 questions that typically took boaters between 5 and 10 minutes to complete. Most of the questions were multiple choice, but a few allowed for open responses from the respondents. Complete survey results are provided in Appendix B. The 13 questions, address three basic topic areas:

- Vessel characteristics and usage habits

- Pumpout facility awareness and convenience
- Attitudes towards vessel sewage management

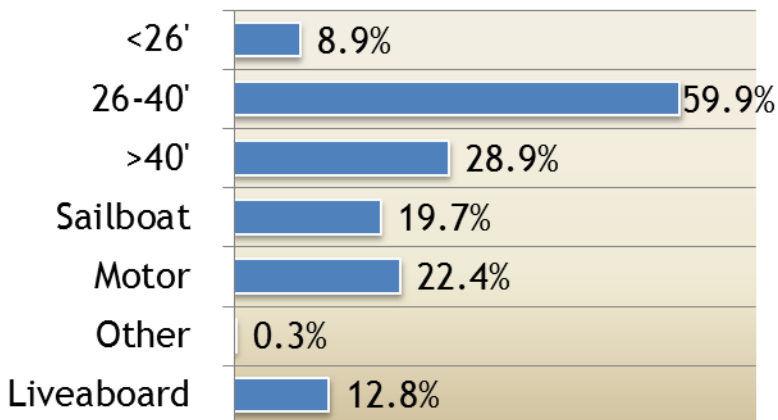
Survey results are presented in the following sections as organized by these three topic areas.

RESULTS AND DISCUSSION

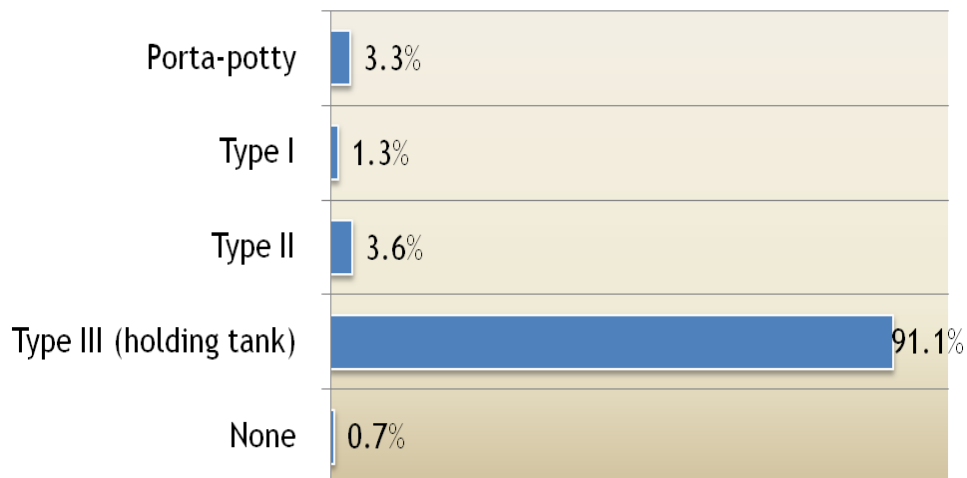
Vessel Characteristics and Usage Habits

Boaters were asked the length of their boats, how often they use their boats, and the type of Marine Sanitation Device (MSD), if any, that is installed on their boat. Responses to these questions help to refine previous estimates of the percentage of Puget Sound boaters who will require access to pumpout stations under NDZ regulations. They also help determine the percentage of boaters who may have to modify their boats (such as adding a holding tank) to be able to comply with NDZ regulations. Results for each question are provided below.

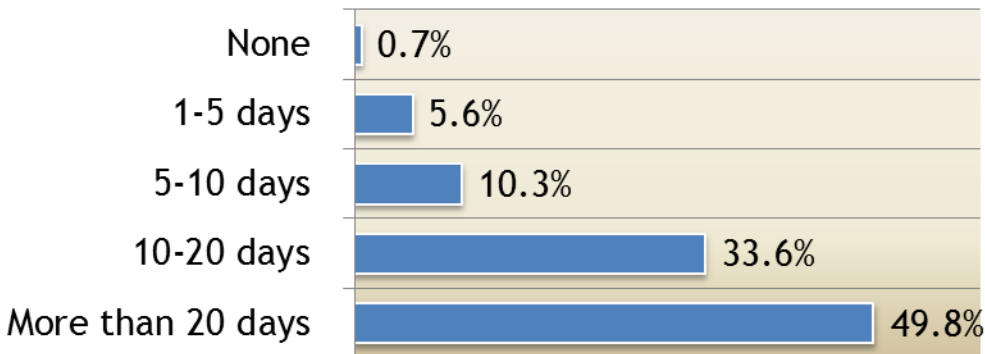
Please tell us about your boat.



Marine Sanitation Device (MSD)



On average, how many days each year do you spend on your boat away from your permanent moorage?



The vast majority (over 89 percent) of people who responded to the question about vessel length had vessels over 26 feet. This was the target demographic for this survey since this is the population most likely to be affected by NDZ regulations. It is less likely that smaller boats have MSDs, and would require access to pumpout facilities (CVA 1994). Only about 55 percent of respondents listed the type of boat they owned. The population was fairly evenly divided between sailboats and motor boats. Nearly 13 percent of total respondents have live-aboard vessels. Live-aboard vessels pose a challenge when estimating the demand for pumpout facilities. Proportionally more waste is generated on these vessels because they are effectively continually occupied as compared to recreational vessels that are only occasionally occupied. In addition, some live-aboard vessels may be permanently moored, and can only be pumped out via a mobile pumpout. While, it cannot be assumed that live aboard vessels can easily access the dockside facilities identified in Figure 1, many of them would likely have access to the mobile pumpout services identified. Further research aimed at estimating the number and location of live-aboard vessels in Puget Sound is planned for 2013.

Nearly all of the respondents (96 percent) have an MSD on their boat. Approximately 3 percent use porta-potties and less than 1 percent do not have a sewage management system in place. More than 91 percent of the respondent's vessels have a Type III MSD (holding tank). Less than 5 percent of the respondent's vessels have a Type I or Type II MSD.

In previous work (Herrera 2012), it was estimated that only 50 percent of vessels greater than 26 feet in length would have toilet facilities, and would require access to pumpout stations if Puget Sound were designated a NDZ. The remaining 50 percent of vessels would presumably have no toilet facilities, and in theory, would have little opportunity to discharge sewage overboard. The previous estimate was based on guidelines set forth in the CVA (1994). The basis for the CVA (1994) estimation method was a survey conducted by the US EPA in 1981, and appears to be outdated. Vessel data obtained from the 2012 PSBS more likely reflects the current Puget Sound boat population. Given that nearly twice as many vessels may require access to pumpout facilities than previously estimated, the number of pumpout stations

required will be about twice as high as well. As stated earlier, the previous estimate (Herrera 2012) was that there were approximately 90 vessels per pumpout, if the vessel number is doubled that would mean approximately 180 vessels per pumpout. This more than adequately meets the guidance set by the CVA of 300 to 600 vessels per pumpout. Further revisions to the estimated ratio of vessels to pumpouts in Puget Sound may be made in later stages of this project if more accurate vessel population data becomes available.

The discharge of untreated sewage into Puget Sound, such as from a Type III MSD via a Y-valve or pump, is currently prohibited within 3 miles of the coast under existing state regulations (Ecology 2012). Based on survey results, it can be assumed that more than 95 percent of Puget Sound's recreational boating population has Type III MSDs or porta-potties. Therefore, under existing State law, 95 percent of Puget Sound boaters are already prohibited from discharging sewage waste into Puget Sound, although the compliance rate is unknown. Type I and Type II MSDs nominally treat sewage, and can be discharged anywhere in Puget Sound under existing regulations. Discharge from Type I and Type II MSDs would be prohibited under NDZ regulations; so boats with Type I and Type II MSDs may need to be retrofitted with a holding tank to comply with the proposed regulation. Based on this survey, less than 5 percent of boats would need to be retrofitted.

Due to the disparity between the assumptions made in the CVA guidance and the above survey results, two industry professionals were contacted to verify whether it is reasonable to assume that most boats with toilets have a Type III MSD or a porta-potty. Both responded that, although they don't have specific statistics, most large vessels (vessels over 26 feet in length) have a holding tank, and most smaller vessels have porta-potties. They also said that although there are still Type I and II MSDs available to boaters, the industry has been moving toward using holding tanks rather than relying on on-board treatment given the nationwide movement towards NDZs (Dave Rigby, The Boat Guys, Pers. Comm., 12/7/2012; Walt Jackson, EMP Industries, Pers. Comm., 12/7/2012).

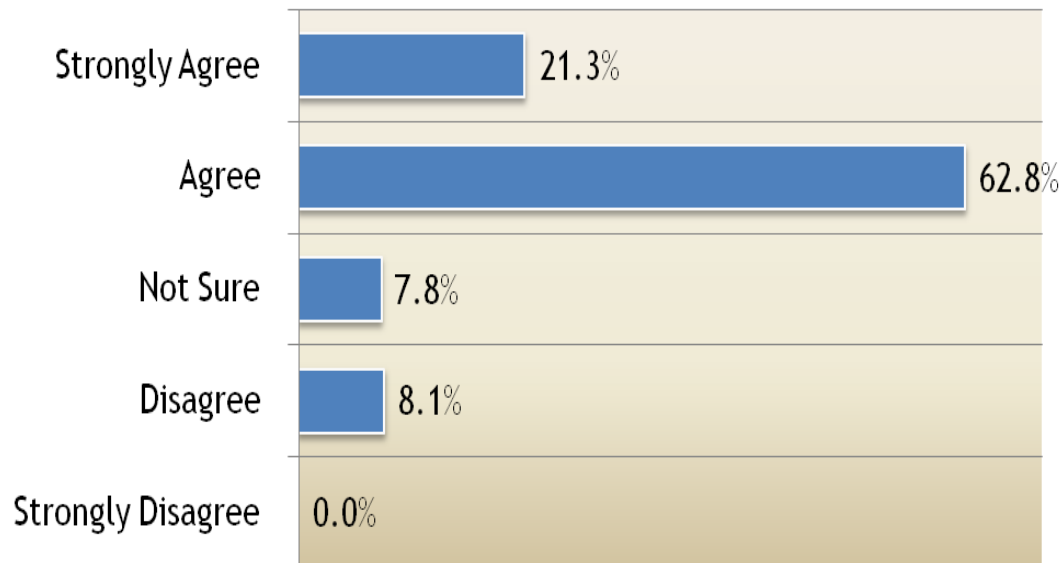
The Washington boaters who responded to the survey spend a fair amount of time away from permanent moorage. Almost 50 percent of respondents reported that they use their vessels more than 20 days out of the year. Only two respondents reported that they never leave permanent moorage. Knowing how often boaters leave permanent moorage does not address how many vessels might be used at peak times (e.g., Fourth of July Weekend). The CVA guidelines (CVA 1994) assert that the number of pumpout stations needed for an area is largely driven by demand during these peak times; presumably because wait times and traffic at pumpout stations becomes unmanageable if too many people want to pump out at the same station at the same time. Because Puget Sound is such a large water body, the need for pumpout stations may be driven less by peak demand, and more by geography (i.e., making sure pumpout stations are located where boaters need them). Although peak demand may play an important role in the number of pumpout stations needed in more populated areas. The question regarding wait times (Appendix A) may better reflect the demand at individual stations.

Pumpout Facility Awareness and Convenience

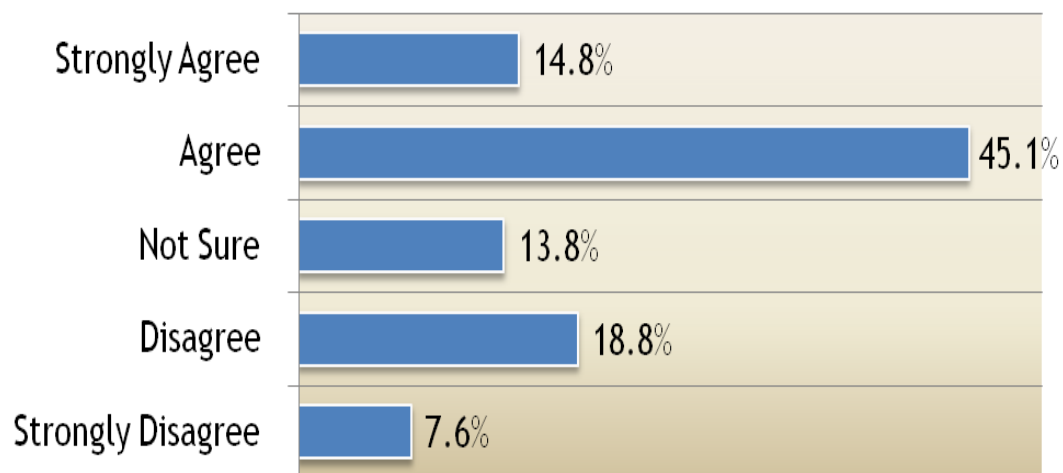
Six questions in the PSBS assessed boater's awareness of pumpout facilities and assessed people's satisfaction with the convenience of the existing pumpout facility network. Boaters

were also asked where they last pumped out their vessel, how long they had to wait to pump out, and where they would like to see additional pumpout facilities. A summary of these responses are described below, and complete responses are contained in Appendix B.

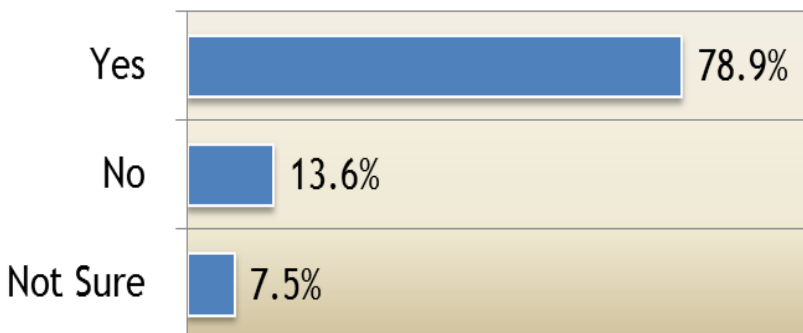
Pumpout facilities are easy to use.



There is an adequate number of pumpout facilities in the area where I operate my boat.



I have seen the symbol above and know that it refers to sewage pump-out facilities.



Washington boaters appeared to have a high awareness of pumpout facilities. Nearly 80 percent of survey respondents recognized the sign identifying pumpout facility locations. More than 80 percent of boaters also find pumpout facilities easy to use. These results indicate that current education and outreach conducted via the State Parks and CVA funding recipients is reaching most Puget Sound boaters.

Approximately 60 percent of the respondents felt that there are an adequate number of pumpout facilities where they operate their boats. However, more than 25 percent of respondents felt that the number of facilities was inadequate. This result indicates that there may be some areas of Puget Sound where pumpout facilities are not sufficiently available.

Survey respondents were asked where they would like to see additional pumpout facilities. Nearly 150 of the 306 respondents responded to this question. Some respondents recommended specific marinas; others offered more general suggestions such as “San Juan Islands.”

In a previous report (Herrera 2012), it was suggested that the Action Areas as defined by the Puget Sound Partnership, might be an appropriate scale for evaluating the feasibility of a NDZ for some or all of Puget Sound. Table 2 indicates the number of pumpout facility requests received for each Action Area as well as other suggestions. Several responders suggested that more pumpouts are needed outside of the proposed NDZ area (for example Canada), or indicated that they thought there were sufficient pumpout facilities available; these results are also included in Table 2. All responses to this question are included in Appendix B.

The Action Area identified most frequently as needing more pumpout facilities was San Juan/Whatcom, where 37 respondents noted the need for additional facilities. Since nearly one-third of the total survey responses came from the San Juan/Whatcom Action Area, there is some sampling bias in this number. However, there are only 12 identified, publicly accessible, pumpout stations in the San Juan/Whatcom Action Area (Figure 1), which spans a wide geographic area and is also a popular boating destination. Therefore the survey results

corroborate the graphical evidence that this Action Area may have a greater need for additional facilities.

Table 2. Areas Identified by Puget Sound Boaters as Needing More Pumpouts.		
	Area	Number of Pumpout Facility Requests
Action Area	Hood Canal	1
	North Central Puget Sound	5
	San Juan / Whatcom	37
	South Central Puget Sound	4
	South Puget Sound	7
	Strait of Juan De Fuca	2
	Whidbey Basin	8
Other Suggestions	Lake Union / Lake Washington	9
	More Mobile Units	2
	More in General	25
	Out of Area (e.g., Canada)	27
	Sufficient	18
No Response to Question		161

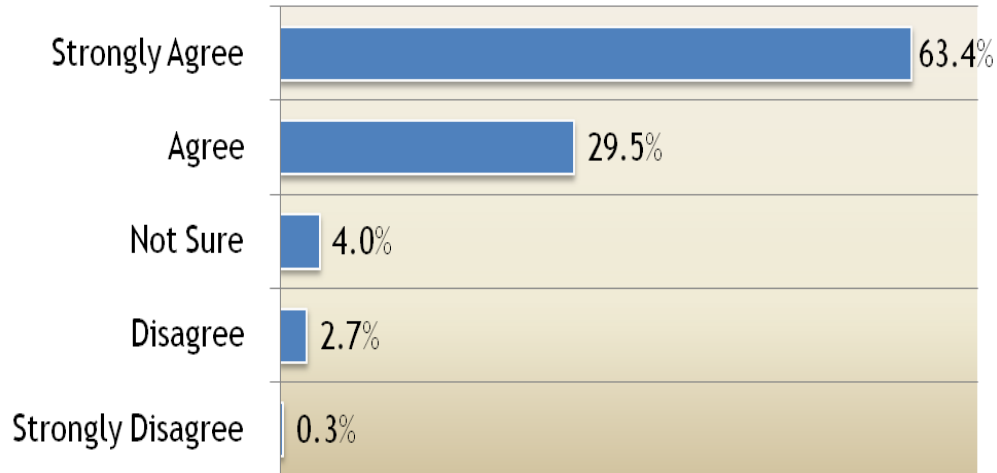
Lake Washington/Lake Union, Whidbey Basin, and South Puget Sound were similar in terms of the number of respondents who identified these areas as needing additional facilities (Table 3). Considering that few responses were collected in the Whidbey Basin Action Area, and there are not many pumpout facilities within the Whidbey Basin Action Area this area may have greater need for additional pumpout facilities.

The Action Area may not be an ideal scale to evaluate pumpout facility sufficiency. Each Action Area has at least 100 miles of shoreline. Therefore, it is likely that within an Action Area there could be some regions with a very dense coverage of pumpout facilities, and other regions where boaters do not have reasonable access to a pumpout facility. Conversely, a boater may have reasonable access to a pumpout by crossing over to a pumpout facility in an adjacent Action Area.

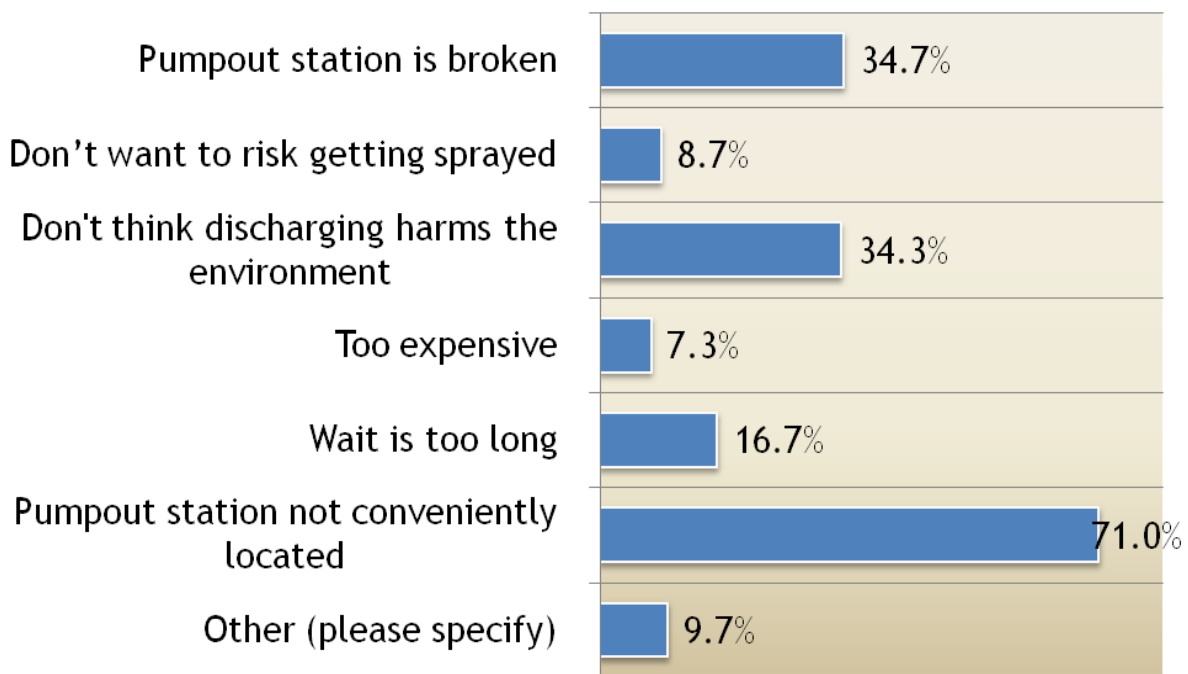
Attitudes toward Vessel Sewage Management

Four questions were asked to gauge boater attitude toward vessel sewage management. The questions and the results are listed below. Some respondents chose to provide additional information for these questions. Complete responses are included in Appendix B.

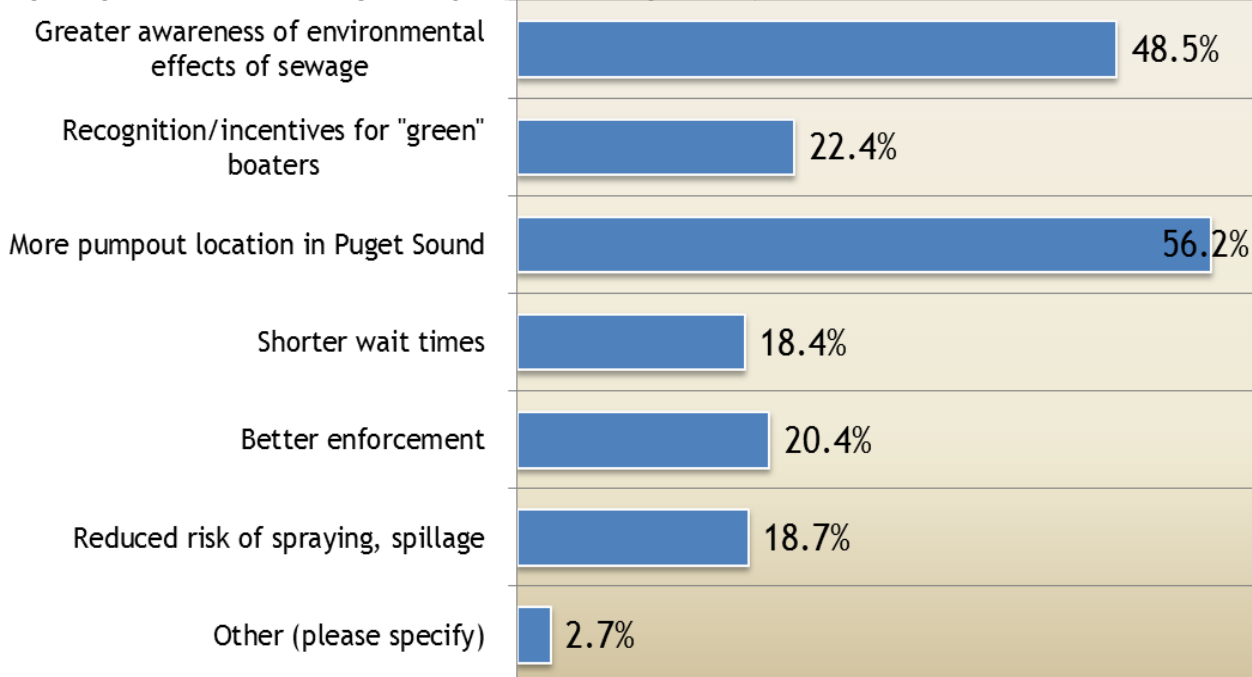
Untreated sewage from boats can harm the environment



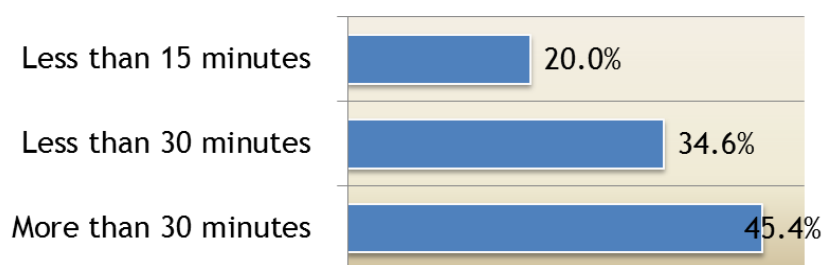
For what reasons do you think people are most likely to discharge illegally? (Check top two.)



What do you think would most effectively make boaters use pumpouts more frequently? (check top two.)



When you are out on a trip, how far are you willing to travel out of your way to use a pumpout facility?



Nearly 93 percent of Puget Sound boaters believe that discharging untreated sewage can harm the environment. When respondents were asked for what reason boaters might discharge illegally, they indicated that the most likely reason a boater might discharge their sewage to Puget Sound is because a pumpout station is not conveniently located. Similarly, the majority of respondents felt that increasing the number of pumpouts in Puget Sound would influence most boaters to use pumpouts. Many respondents also thought that increased awareness of the environmental effects of sewage discharge would be helpful to counteract the perception that sewage discharge doesn't harm the environment.

When respondents were asked how far they were willing to travel to use a pumpout facility. The majority answered that they were only willing to travel between 15 and 30 minutes out of

their way to use a pumpout facility, and 20 percent were only willing to travel less than 15 minutes. Therefore, limiting travel time by increasing the geographic density of pumpout stations could improve compliance with no discharge regulations.

COMPARISON TO OTHER STATES

Recreational boater surveys were recently conducted in California and Massachusetts. The Urban Harbors Institute (UHI) surveyed 413 boaters in Massachusetts' South Shore region in 2003 about vessel characteristics, sewage management practices, and attitudes towards pumpout facilities (UHI 2004). The survey was similar in scope and intent to the PSBS survey described in this report. California's survey (California Department of Boating and Waterways 2011), conducted between 2007 and 2009, was more rigorous and involved more than 5,000 participants. The scope was also much broader, because it encompassed many aspects of recreational boating, not just sewage management. Although the UHI and California surveys are not entirely comparable to each other or the PSBS survey, they serve as valuable points of comparison.

The California and Massachusetts surveys included smaller vessels so it is difficult to make direct comparisons. Disregarding vessel size though, Puget Sound and South Shore Massachusetts boaters were more likely to have a MSD installed than boaters in the coastal areas of California. Approximately 71 and 96 percent of South Shore Massachusetts boaters and Puget Sound boaters, respectively, had an MSD or porta-potty on their boat. In the coastal areas of California, 48 to 70 percent of boaters had an MSD or porta-potty installed on their boats. The type of MSDs installed on vessels was also consistent between South Shore Massachusetts and Puget Sound. In both areas, more than 94 percent of boats with toilet facilities had holding tanks (i.e., Type III MSDs) or porta-potties, and therefore are compatible with use of pumpout facilities. While the percentage of Type III MSDs was not as high in California, the vast majority of vessels with toilets have Type III MSDs. This result is consistent with the observation of industry professionals (Dave Rigby, The Boat Guys, Pers. Comm., 12/7/2012; Walt Jackson, EMP Industries, Pers. Comm., 12/7/2012). The trend toward using holding tanks as opposed to using on-board sewage treatment systems means that fewer boaters, at least in Washington State, will need to make changes to their boats or boating habits to comply with NDZ regulations.

CONCLUSIONS

The most significant finding of the PSBS survey is that approximately 91 percent of recreational vessels have a Type III MSD (holding tank), and approximately 3 percent have a porta-potty, for a total of 94 percent of surveyed boaters have the infrastructure to comply with a potential NDZ designation. This in turn means that approximately 6 percent of vessels have Type I and II MSDs; these are the vessels that would need to be modified to be able to comply with the NDZ restrictions. If an NDZ is established for Puget Sound, 96 percent of vessels would require access to pumpout facilities. This estimate includes the 91 percent of vessels which already have Type III holding tanks, and the approximately 5 percent of vessels which currently have Type I or II MSDs, but would need to use pumpouts if an NDZ is established.

The percentage of vessels requiring access to pumpout stations is much higher than the assumption calculated based on the CVA guidelines. CVA guidelines suggest that only 50 percent of vessels over 26 feet would have a non-porta potty MSD (Type I, II, or III) and would require access to pumpout facilities in a NDZ (CVA 1994; Herrera 2012). Accurately determining the ratio of vessels with toilets (those that would require access to pumpout facilities) to pumpout facilities is a critical important of developing a NDZ petition. Even though the number of vessels that will need access to pumpout stations appears to be nearly twice as high as previously estimated, there are still likely enough pumpout facilities to serve them based on CVA guidelines. A final estimate of the ratio of boats to pumpout facilities will be calculated for a NDZ using the statistics obtained by this survey, and better vessel population estimates should they become available in later phases of this project.

The survey indicated that boaters believe that discharging boat waste harms the environment. Thus, even though boaters with Type III MSDs have the ability to discharge waste overboard, the survey results indicate that they may be already disinclined to do so.

Survey results suggest that boaters believe that those illegal sewage discharges that do occur may result from some gaps in having quick and convenient access to pumpout facilities. Increasing compliance with regulations through improved education, enforcement, and targeted efforts to improve access to pumpout facilities where it is currently limited will be important factors in getting more boaters to use pumpout facilities. Based on the survey results and an assessment of pumpout facility density, the San Juan/Whatcom and Whidbey Island Action Areas may be lacking in available pumpout facilities more than the other Action Areas. A more detailed geographical analysis of pumpout facility network coverage, to be completed in future stages of the NDZ exploration effort, will provide clearer results of where more pumpout facilities are needed.

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APPENDIX A

Puget Sound Boater Survey Results








Washington State boaters and Sewage Pumpouts 2012DOE








1. I have seen the symbol above and know that it refers to sewage pump-out facilities.

		Response Percent	Response Count
Yes		78.9%	220
No		13.6%	38
Not Sure		7.5%	21
answered question			279
skipped question			27

2. Please tell us about your boat.

		Response Percent	Response Count
<26'		8.9%	27
26-40'		59.9%	182
>40'		28.9%	88
Sailboat		19.7%	60
Motor		22.4%	68
Other		0.3%	1
Liveaboard		12.8%	39
answered question			304
skipped question			2

3. Marine sanitation Device (MSD)

		Response Percent	Response Count
Porta-potty		3.3%	10
Type I		1.3%	4
Type II		3.6%	11
Type III (holding tank)		91.1%	276
None		0.7%	2
answered question			303
skipped question			3

4. Untreated sewage from boats can harm the environment.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Rating Average	Response Count
Pick One	63.4% (189)	29.5% (88)	4.0% (12)	2.7% (8)	0.3% (1)	0.00	298
answered question							298
skipped question							8

5. Can you tell us where you last pumped out and how long you had to wait?

	Response Count
	306
answered question	306
skipped question	0

6. There is an adequate number of pumpout facilities in the area where I operate my boat.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Rating Average	Response Count
Pick One	14.8% (45)	45.1% (137)	13.8% (42)	18.8% (57)	7.6% (23)	0.00	304
answered question							304
skipped question							2






7. Pumpout facilities are usually open when I want to use them.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Rating Average	Response Count
Pick One	19.4% (58)	60.5% (181)	12.7% (38)	7.4% (22)	0.0% (0)	0.00	299
answered question							299
skipped question							7




8. Pump-out facilities are easy to use.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Rating Average	Response Count
Pick One	21.3% (63)	62.8% (186)	7.8% (23)	8.1% (24)	0.0% (0)	0.00	296
answered question							296
skipped question							10

9. On average, how many days each year do you spend on your boat away from your permanent moorage?

		Response Percent	Response Count
None		0.7%	2
1-5 days		5.6%	17
5-10 days		10.3%	31
10-20 days		33.6%	101
More than 20 days		49.8%	150
answered question			301
skipped question			5

10. When you are out on a trip, how far are you willing to travel out of your way to use a pumpout facility

		Response Percent	Response Count
Less than 15 minutes		20.0%	56
Less than 30 minutes		34.6%	97
More than 30 minutes		45.4%	127
answered question			280
skipped question			26

11. Where would you like to see additional sewage pumpout facilities? (Please provide location names.)

**Response
Count**

306

answered question

306

skipped question

0

12. For what reasons do you think people are most likely to discharge illegally? (Check top two.)

**Response
Percent Response
Count**

Pumpout station is broken



34.7%

104

Don't want to risk getting sprayed



8.7%

26

Don't think discharging harms the environment



34.3%

103

Too expensive



7.3%

22

Wait is too long



16.7%

50

**Pumpout station not
conveniently located**



71.0%

213

Other (please specify)



9.7%

29








answered question

300

skipped question

6

13. What do you think would most effectively make boaters use pumpouts more frequently? (check top two.)

		Response Percent	Response Count
Greater awareness of environmental effects of sewage		48.5%	145
Recognition/incentives for "green" boaters		22.4%	67
More pumpout locations in Puget Sound		56.2%	168
Shorter wait times		18.4%	55
Better enforcement		20.4%	61
Reduced risk of spraying, spillage		18.7%	56
Other (please specify)		2.7%	8
answered question			299
skipped question			7

Can you tell us where you last pumped out and how long you had to wait?

Response
Count

306

answered question

306

skipped question

0

Page 2, Q5. Can you tell us where you last pumped out and how long you had to wait?

1	Friday Harbor - no wait	Oct 3, 2012 3:48 PM
2	Edmonds - no wait	Oct 3, 2012 3:46 PM
3	Pleasant harbor - no wait	Oct 3, 2012 3:45 PM
4	Pleasant Harbor - no wait	Oct 3, 2012 2:56 PM
5	Shilshole - no wait	Oct 3, 2012 2:54 PM
6	Service comes to seattle	Oct 3, 2012 2:51 PM
7	Kingston - No wait	Oct 3, 2012 2:49 PM
8	Everett, no wait	Oct 3, 2012 2:45 PM
9	Never	Oct 3, 2012 2:44 PM
10	Everett, no wait	Oct 3, 2012 2:42 PM
11	Kingston, no wait	Oct 3, 2012 2:40 PM
12	Shilshole - no wait	Oct 3, 2012 2:32 PM
13	Uses Service	Oct 3, 2012 2:28 PM
14	Couple months ago - shoreside with bucket	Oct 3, 2012 2:27 PM
15	Shilshole, No wait	Oct 3, 2012 2:25 PM
16	La Conner -- No wait	Oct 3, 2012 2:23 PM
17	Pumpout weekly service	Oct 3, 2012 1:56 PM
18	Shilshole - no wait	Oct 3, 2012 1:54 PM
19	Shilshole, no wait	Oct 3, 2012 1:52 PM
20	uses SS Head	Oct 3, 2012 1:46 PM
21	Shilshole - no wait	Oct 3, 2012 1:20 PM
22	Vessel Pumped out by service	Oct 3, 2012 1:18 PM
23	SS Head Service	Oct 3, 2012 1:15 PM
24	Elliott Bay - No Wait	Oct 3, 2012 1:14 PM
25	Port Angeles, No Wait	Oct 3, 2012 1:12 PM
26	la Conner No Wait	Oct 3, 2012 1:07 PM
27	Thea Foss marina	Oct 3, 2012 12:39 PM

Page 2, Q5. Can you tell us where you last pumped out and how long you had to wait?

28	P.T. No Wait	Oct 3, 2012 12:38 PM
29	Deer Harbor, 10 min	Oct 3, 2012 12:37 PM
30	Anacortes/no wait	Oct 3, 2012 12:35 PM
31	Edmonds, No wait	Oct 3, 2012 12:34 PM
32	port of Everett	Oct 3, 2012 12:23 PM
33	Fisherman's terminal 15 min	Oct 3, 2012 12:22 PM
34	Shilshole/Fall'11	Oct 3, 2012 12:12 PM
35	?	Oct 3, 2012 12:10 PM
36	2 weeks / no wait	Oct 3, 2012 12:08 PM
37	3 weeks / Shilshole no wait	Oct 3, 2012 12:06 PM
38	3 days/oak harbor	Oct 3, 2012 12:04 PM
39	Shilshole	Oct 3, 2012 12:03 PM
40	1 week mobile	Oct 3, 2012 12:01 PM
41	1 day Shilshole	Oct 3, 2012 12:00 PM
42	Weekly/ss head	Oct 3, 2012 11:57 AM
43	Zero - Shilshole	Oct 3, 2012 11:53 AM
44	Tyee, Tacome, No Wait	Oct 3, 2012 10:32 AM
45	late August - no wait	Oct 3, 2012 10:31 AM
46	Port Mcneil, BC. 1 hour	Oct 3, 2012 10:29 AM
47	No Comment	Oct 3, 2012 10:28 AM
48	Poulsbo, o min	Oct 3, 2012 10:27 AM
49	Elliott Bay Marina, No wait	Oct 3, 2012 10:25 AM
50	Anacortes	Oct 3, 2012 10:17 AM
51	Astoria	Oct 3, 2012 10:16 AM
52	No Comment	Oct 3, 2012 10:15 AM
53	Port of Friday Harbor	Oct 3, 2012 10:14 AM
54	la Conner	Oct 3, 2012 10:12 AM

Page 2, Q5. Can you tell us where you last pumped out and how long you had to wait?

55	Roche Harbor, 1 hour	Oct 3, 2012 10:11 AM
56	Shilshole, no wait	Oct 3, 2012 10:09 AM
57	Squalicum Marina (no wait)	Sep 28, 2012 4:13 PM
58	Shilshole, No wait	Sep 28, 2012 3:56 PM
59	Not yet installed	Sep 28, 2012 3:54 PM
60	Poulsbo, no wait	Sep 28, 2012 3:53 PM
61	last week, now wait	Sep 28, 2012 3:51 PM
62	No wait, Parkshore Marina	Sep 28, 2012 3:46 PM
63	No Comment	Sep 28, 2012 3:44 PM
64	5 days ago no wait	Sep 28, 2012 3:43 PM
65	Poulsbo 15 min	Sep 28, 2012 3:41 PM
66	No Comment	Sep 28, 2012 3:39 PM
67	Elliot bay Marina, no wait	Sep 28, 2012 3:37 PM
68	Blake Island no wait	Sep 28, 2012 3:36 PM
69	Des Moines no wait	Sep 28, 2012 3:33 PM
70	Sunday 8/12/12, no wait	Sep 28, 2012 3:10 PM
71	Elliott Bay Marina, no wait	Sep 28, 2012 3:08 PM
72	Elliott Bay Marina early august no wait	Sep 28, 2012 3:06 PM
73	No waiting at home port of Everett (12th st)	Sep 28, 2012 3:05 PM
74	2 weeks ago no wait	Sep 28, 2012 3:02 PM
75	No Comment	Sep 28, 2012 3:00 PM
76	30 min	Sep 28, 2012 2:46 PM
77	elliott bay marina no wait	Sep 28, 2012 2:36 PM
78	Semiahmoo 1 wk (auto)	Sep 28, 2012 2:35 PM
79	Twice monthly srevice	Sep 28, 2012 2:32 PM
80	Port Orchard no wait	Sep 28, 2012 2:28 PM
81	5-10 min	Sep 28, 2012 2:23 PM

Page 2, Q5. Can you tell us where you last pumped out and how long you had to wait?

82	last week	Sep 28, 2012 2:13 PM
83	Edmonds/none	Sep 26, 2012 2:42 PM
84	No Comment	Sep 26, 2012 2:34 PM
85	Every other day, 10 mins,	Sep 26, 2012 2:33 PM
86	1 week ago, no wait	Sep 26, 2012 2:20 PM
87	Friday Harbor - 0 wait time	Sep 26, 2012 2:19 PM
88	Shilshole, 0 min	Sep 26, 2012 2:10 PM
89	Nanaimo - no wait	Sep 26, 2012 2:07 PM
90	60 mins,	Sep 26, 2012 1:53 PM
91	Today - one day	Sep 26, 2012 1:51 PM
92	Semiahmoo - no wait	Sep 26, 2012 1:50 PM
93	Semiahmoo	Sep 26, 2012 1:33 PM
94	Anacortes - porta pump	Sep 26, 2012 12:55 PM
95	Roche	Sep 26, 2012 12:54 PM
96	Vancouver BC - on dock - no wait	Sep 26, 2012 12:52 PM
97	La Conner - No wait	Sep 26, 2012 12:50 PM
98	No Wait	Sep 26, 2012 12:49 PM
99	Friday Harbor 8/9/12	Sep 26, 2012 12:47 PM
100	Cap Sante - no wait	Sep 26, 2012 12:45 PM
101	West Sound 20 min	Sep 26, 2012 12:43 PM
102	Anacortes	Sep 26, 2012 12:42 PM
103	Everett - No wait	Sep 26, 2012 12:40 PM
104	8/7/12, no wait	Sep 26, 2012 12:37 PM
105	Roche Harbor	Sep 26, 2012 11:59 AM
106	Friday Harbor - No Wait	Sep 26, 2012 11:37 AM
107	Friday Harbor - Monthly Schedule	Sep 26, 2012 11:29 AM
108	Friday Harbor - no wait	Sep 26, 2012 11:27 AM

Page 2, Q5. Can you tell us where you last pumped out and how long you had to wait?

109	La Conner - O min	Sep 26, 2012 11:25 AM
110	No Comment	Sep 26, 2012 11:24 AM
111	?	Sep 26, 2012 11:23 AM
112	Anacortes - No Wait	Sep 26, 2012 11:21 AM
113	Ganges, 30 minutes	Sep 26, 2012 11:05 AM
114	8/4 - regular service	Sep 26, 2012 10:41 AM
115	La Conner	Sep 26, 2012 10:36 AM
116	Quick - pumpout boat	Sep 26, 2012 10:34 AM
117	Campbell River - 5 min	Sep 26, 2012 9:57 AM
118	Kingston - no wait	Sep 26, 2012 9:55 AM
119	Delin Docks	Sep 26, 2012 9:53 AM
120	Unreadable	Sep 26, 2012 9:51 AM
121	Bell Harbor - no wait	Sep 26, 2012 9:50 AM
122	Everett, no wait.	Sep 26, 2012 9:48 AM
123	Roche Harbor	Sep 26, 2012 9:47 AM
124	Bell harbor	Sep 26, 2012 9:44 AM
125	Edmonds - no wait	Sep 26, 2012 9:33 AM
126	Port Orchard - no wait	Sep 26, 2012 9:32 AM
127	Liberty Bay, Poulsbo - no wait	Sep 26, 2012 9:29 AM
128	No Comment	Sep 26, 2012 9:27 AM
129	Tacoma Fuel Dock, No wait	Sep 25, 2012 4:28 PM
130	Dock St Marina	Sep 25, 2012 4:27 PM
131	Dock st Tacoma, minutes	Sep 25, 2012 4:25 PM
132	2 months no wait	Sep 25, 2012 4:20 PM
133	Friday	Sep 25, 2012 4:18 PM
134	Percival Landing	Sep 25, 2012 4:16 PM
135	Swantown - no wait	Sep 25, 2012 4:14 PM

Page 2, Q5. Can you tell us where you last pumped out and how long you had to wait?

136	Blake Island - no wait	Sep 25, 2012 4:12 PM
137	Shilshole - no wait	Sep 25, 2012 4:10 PM
138	Gig harbor	Sep 25, 2012 4:01 PM
139	Bainbridge	Sep 25, 2012 3:59 PM
140	Bremerton Marina - no wait	Sep 25, 2012 2:47 PM
141	EBM no wait	Sep 25, 2012 11:44 AM
142	Des Moines - no wait	Sep 25, 2012 11:43 AM
143	EBM 10 min	Sep 25, 2012 11:41 AM
144	Shilshole - no wait	Sep 25, 2012 11:40 AM
145	EBM No Wait	Sep 25, 2012 11:38 AM
146	La Conner - no wait	Sep 25, 2012 11:35 AM
147	La Conner No wait	Sep 25, 2012 11:33 AM
148	Deer Harbor - no wait	Sep 25, 2012 11:30 AM
149	7/7/12 - 0 wait	Sep 25, 2012 11:28 AM
150	Skyline - 0	Sep 25, 2012 11:26 AM
151	Port of Bellingham - no wait	Sep 25, 2012 11:24 AM
152	Stuart Island - 0 wait	Sep 25, 2012 11:22 AM
153	Friday Harbor, WA	Sep 25, 2012 11:21 AM
154	No Comment	Sep 25, 2012 11:19 AM
155	Bellingham - 0 wait	Sep 25, 2012 11:18 AM
156	Had Slip-side pumpout last week, 6/26/12	Sep 25, 2012 11:14 AM
157	Bellingham - No wait	Sep 25, 2012 11:12 AM
158	La Conner - No wait	Sep 25, 2012 11:10 AM
159	Edmonds - no wait	Sep 25, 2012 11:03 AM
160	La Conner	Sep 25, 2012 10:50 AM
161	6/22/12	Sep 25, 2012 10:40 AM
162	NA	Sep 25, 2012 10:38 AM

Page 2, Q5. Can you tell us where you last pumped out and how long you had to wait?

163	No Wait	Sep 25, 2012 10:37 AM
164	Breakwater - 0 wait	Sep 25, 2012 10:34 AM
165	Foss Marine Fuel Dock	Sep 25, 2012 10:33 AM
166	Dock Street Marina	Sep 25, 2012 10:31 AM
167	Home (porta potty)	Sep 25, 2012 10:24 AM
168	Roche Harbor	Sep 25, 2012 10:23 AM
169	No Wait	Sep 25, 2012 10:18 AM
170	Roche Harbor - no wait	Sep 25, 2012 10:15 AM
171	Friday Harbor, 20 Min	Sep 25, 2012 10:10 AM
172	LaConner, No Wait	Sep 25, 2012 10:08 AM
173	LaConner, 30 min	Sep 25, 2012 10:06 AM
174	LaConner Marina	Sep 24, 2012 1:45 PM
175	No Comment	Sep 24, 2012 1:42 PM
176	Anacortes - short wait	Sep 24, 2012 1:40 PM
177	Elliott Bay - No wait	Sep 24, 2012 1:37 PM
178	bell harbor	Sep 24, 2012 1:36 PM
179	Duwamish 0 wait time	Sep 24, 2012 1:34 PM
180	Silverdale no wait 7/11	Sep 24, 2012 1:30 PM
181	Des Moines	Sep 24, 2012 1:28 PM
182	Morrison's Fuel Dock	Sep 24, 2012 1:26 PM
183	Kenmore - Harbor Village - none	Sep 24, 2012 1:23 PM
184	7/25/12	Sep 24, 2012 1:20 PM
185	No Comment	Sep 24, 2012 1:15 PM
186	Des Moines - no wait	Sep 24, 2012 11:46 AM
187	Poulsbo	Sep 24, 2012 11:44 AM
188	Harbor Island, Seattle - no wait time	Sep 24, 2012 11:40 AM
189	Poulsbo - used portable pump.	Sep 24, 2012 11:36 AM

Page 2, Q5. Can you tell us where you last pumped out and how long you had to wait?

190	Yarrow Bay, Kirkland, no wait	Sep 24, 2012 11:32 AM
191	Port Orchard Marina	Sep 24, 2012 11:01 AM
192	Shilshole, no wait	Sep 24, 2012 11:00 AM
193	Winslow Wharf	Sep 24, 2012 10:58 AM
194	1/2 hour	Sep 24, 2012 10:56 AM
195	Port Townsend	Sep 24, 2012 9:52 AM
196	Swantown	Sep 24, 2012 9:50 AM
197	Cap Sante	Sep 24, 2012 9:49 AM
198	No Comment	Sep 24, 2012 9:47 AM
199	Skyline, 20 minutes	Sep 24, 2012 9:34 AM
200	?	Sep 24, 2012 9:31 AM
201	No Comment	Sep 24, 2012 9:25 AM
202	Meydenbauer bay Yacht Club	Sep 24, 2012 9:20 AM
203	Oak Harbor - no wait	Sep 24, 2012 9:18 AM
204	Oak harbor - no wait	Sep 24, 2012 9:15 AM
205	Shilshole	Sep 24, 2012 9:12 AM
206	Port Ludlow. 0 min	Sep 24, 2012 9:11 AM
207	Bellingham. No Wait	Sep 24, 2012 9:09 AM
208	Shilshole 15 min	Sep 24, 2012 9:07 AM
209	Shilshole	Sep 24, 2012 9:06 AM
210	Shilshole	Sep 24, 2012 9:04 AM
211	?	Sep 24, 2012 9:01 AM
212	2 months ago	Sep 24, 2012 8:59 AM
213	0	Sep 24, 2012 8:58 AM
214	Shilshole. No Wait	Sep 24, 2012 8:55 AM
215	Des Moines Marina, 10 min	Sep 20, 2012 7:02 PM
216	Blake Island, no wait	Sep 20, 2012 7:01 PM

Page 2, Q5. Can you tell us where you last pumped out and how long you had to wait?

217	Swantown, Olympia, no wait	Sep 20, 2012 7:00 PM
218	Brounsville, no wait	Sep 20, 2012 6:59 PM
219	NA	Sep 20, 2012 6:58 PM
220	Morrison, Lake Union	Sep 20, 2012 6:57 PM
221	Shilshole, some wati	Sep 20, 2012 6:56 PM
222	Kenmore, 0 minutes	Sep 20, 2012 6:55 PM
223	Poulsbo - no wait	Sep 20, 2012 6:53 PM
224	Day Island Yacht Club, a few minutes	Sep 20, 2012 6:52 PM
225	Penrose, 0 min	Sep 20, 2012 6:51 PM
226	NA	Sep 20, 2012 6:50 PM
227	Shilshole, no wait	Sep 20, 2012 6:49 PM
228	Lake Washington (Harbor Village Marina)	Sep 20, 2012 6:48 PM
229	Yacht club/no wait	Sep 20, 2012 6:46 PM
230	Never	Sep 20, 2012 6:45 PM
231	July, Mobile - 30 min	Sep 20, 2012 6:29 PM
232	Des Moines, no wait - mid week	Sep 20, 2012 2:23 PM
233	Seattle Yacht Club	Sep 20, 2012 2:22 PM
234	Swantown in Olympia, no wait at all	Sep 20, 2012 2:16 PM
235	1 month, Kenmore Marina	Sep 20, 2012 2:11 PM
236	Morrison Fuel Dock Lake Union, no wait	Sep 20, 2012 2:09 PM
237	NA	Sep 20, 2012 2:08 PM
238	48 hours ago, no wait	Sep 19, 2012 4:53 PM
239	Shilshole, 10 minutes	Sep 19, 2012 4:51 PM
240	2-4 weeks	Sep 19, 2012 4:50 PM
241	Shilshole Marina, no wait	Sep 19, 2012 4:48 PM
242	Bremerton	Sep 19, 2012 4:46 PM
243	Morrisons, no wait	Sep 19, 2012 4:44 PM

Page 2, Q5. Can you tell us where you last pumped out and how long you had to wait?

244	Shillshole, no wait	Sep 19, 2012 4:42 PM
245	Shillshole, 10 min	Sep 19, 2012 4:40 PM
246	Tacoma, 10 minutes	Sep 19, 2012 4:37 PM
247	May '12, no wait	Sep 19, 2012 4:35 PM
248	Percival, yesterday	Sep 19, 2012 4:34 PM
249	week	Sep 19, 2012 4:32 PM
250	Swantown, no wait	Sep 19, 2012 4:30 PM
251	Sequim Bay, none	Sep 19, 2012 4:26 PM
252	Shelton	Sep 19, 2012 4:25 PM
253	Percival Landing/ 0 mins	Sep 19, 2012 4:22 PM
254	Boston Harbor, 10 minutes	Sep 19, 2012 4:20 PM
255	Swantown, 30 minutes	Sep 19, 2012 4:18 PM
256	Swantown, no wait	Sep 19, 2012 4:17 PM
257	2 months ago/1 hour	Sep 19, 2012 4:15 PM
258	Swantown, no wait	Sep 19, 2012 4:13 PM
259	Shilshoe, no wait	Sep 19, 2012 4:11 PM
260	2 weeks ago	Sep 19, 2012 4:09 PM
261	Swantown	Sep 19, 2012 4:07 PM
262	Jarell's Cove, no wait	Sep 19, 2012 4:05 PM
263	Swantown, 1 week	Sep 19, 2012 4:03 PM
264	NA on shore	Sep 19, 2012 4:02 PM
265	Took home to empty	Sep 19, 2012 4:00 PM
266	Swantown, no wait	Sep 19, 2012 3:58 PM
267	Friday Harbour	Sep 19, 2012 3:30 PM
268	Friday Harbor, no wait	Sep 19, 2012 3:29 PM
269	Anacortes, no wait	Sep 19, 2012 3:27 PM
270	Friday Harbor, 20 min	Sep 19, 2012 3:26 PM

Page 2, Q5. Can you tell us where you last pumped out and how long you had to wait?

271	Today, 4 days max	Sep 19, 2012 3:25 PM
272	Once a week, Friday Harbor	Sep 19, 2012 3:23 PM
273	Friday Harbor, 1 day	Sep 19, 2012 3:21 PM
274	Blake, none	Sep 19, 2012 3:20 PM
275	Use pumpout service	Sep 19, 2012 3:19 PM
276	Friday Harbor, harbor service	Sep 19, 2012 3:17 PM
277	Squalicum portable, no wait	Sep 19, 2012 3:15 PM
278	2 weeks, 0	Sep 19, 2012 3:13 PM
279	Naniamo, BC, 30 min	Sep 19, 2012 3:12 PM
280	Bellingham, didn't wait	Sep 19, 2012 3:10 PM
281	Squalicum Harbor, no wait	Sep 19, 2012 3:09 PM
282	Des Moines, WA, no wait	Sep 19, 2012 3:07 PM
283	Vancouver Island marinas	Sep 19, 2012 3:05 PM
284	Weekly at Friday Harbor Marina	Sep 19, 2012 2:17 PM
285	Bremerton Yacht Club	Sep 19, 2012 2:13 PM
286	3 days ago - 2 minutes	Sep 19, 2012 2:11 PM
287	Port Orchard, WA - no wait	Sep 19, 2012 2:09 PM
288	Anacortes, no wait	Sep 19, 2012 2:07 PM
289	Friday Harbor Marina	Sep 19, 2012 2:05 PM
290	Yesterday, never have to wait	Sep 19, 2012 2:04 PM
291	Yesterday, 1 hour	Sep 19, 2012 2:02 PM
292	NA	Sep 19, 2012 2:01 PM
293	Anacortes Marina, Cap Sante, no wait	Sep 19, 2012 1:59 PM
294	Friday Harbor port, no wait	Sep 19, 2012 1:58 PM
295	Friday Harbor, 0 minutes	Sep 19, 2012 1:56 PM
296	Roche Harbor, not long	Sep 19, 2012 1:54 PM
297	NA	Sep 19, 2012 1:52 PM

Page 2, Q5. Can you tell us where you last pumped out and how long you had to wait?

298	All the time, no waits	Sep 19, 2012 1:49 PM
299	Anacortes, 0 minutes	Sep 19, 2012 1:47 PM
300	Roche Harbor, 15 minutes	Sep 19, 2012 1:44 PM
301	Ried Harbor, open	Sep 19, 2012 1:42 PM
302	Reid Hbr - no wait	Sep 19, 2012 1:40 PM
303	Salt Spring - no wait	Sep 19, 2012 1:36 PM
304	This morning by Pumpty Dumpty	Sep 19, 2012 1:34 PM
305	NA	Sep 12, 2012 9:25 AM
306	Roche Harbor Marina, San Juan Island. No wait time.	Aug 1, 2012 7:38 AM

Where would you like to see additional sewage pumpout facilities? (Please provide location names.)

Response
Count

306

answered question

306

skipped question

0

Page 2, Q11. Where would you like to see additional sewage pumpout facilities? (Please provide location names.)

1	Mobile	Oct 3, 2012 3:48 PM
2	More Portables	Oct 3, 2012 3:46 PM
3	canada	Oct 3, 2012 3:45 PM
4	No Comment	Oct 3, 2012 2:56 PM
5	Jone Island State Park	Oct 3, 2012 2:54 PM
6	No Comment	Oct 3, 2012 2:51 PM
7	No Comment	Oct 3, 2012 2:49 PM
8	No Comment	Oct 3, 2012 2:45 PM
9	No Comment	Oct 3, 2012 2:44 PM
10	No Comment	Oct 3, 2012 2:42 PM
11	No Comment	Oct 3, 2012 2:40 PM
12	No problems	Oct 3, 2012 2:32 PM
13	Canada	Oct 3, 2012 2:28 PM
14	no comment	Oct 3, 2012 2:27 PM
15	No Problems	Oct 3, 2012 2:25 PM
16	Poulsbo - not sure if there is one	Oct 3, 2012 2:23 PM
17	Satisfied	Oct 3, 2012 1:56 PM
18	no problems	Oct 3, 2012 1:54 PM
19	ok	Oct 3, 2012 1:52 PM
20	None	Oct 3, 2012 1:46 PM
21	Good	Oct 3, 2012 1:20 PM
22	Good	Oct 3, 2012 1:18 PM
23	No Issues	Oct 3, 2012 1:15 PM
24	Can't think of any	Oct 3, 2012 1:14 PM
25	No	Oct 3, 2012 1:12 PM
26	State Parks	Oct 3, 2012 1:07 PM
27	No Comment	Oct 3, 2012 12:39 PM

Page 2, Q11. Where would you like to see additional sewage pumpout facilities? (Please provide location names.)

28	No Comment	Oct 3, 2012 12:38 PM
29	Easier Access for Larger Vessels	Oct 3, 2012 12:37 PM
30	No Comment	Oct 3, 2012 12:35 PM
31	San Juans, State Parks	Oct 3, 2012 12:34 PM
32	No Comment	Oct 3, 2012 12:23 PM
33	No Comment	Oct 3, 2012 12:22 PM
34	Gulf islands	Oct 3, 2012 12:12 PM
35	Parks/ more parks	Oct 3, 2012 12:10 PM
36	Oc	Oct 3, 2012 12:08 PM
37	San Juans/Gulf Islands	Oct 3, 2012 12:06 PM
38	No Comment	Oct 3, 2012 12:04 PM
39	San Juans	Oct 3, 2012 12:03 PM
40	Blake island	Oct 3, 2012 12:01 PM
41	gas works	Oct 3, 2012 12:00 PM
42	More dock carts	Oct 3, 2012 11:57 AM
43	No Comment	Oct 3, 2012 11:53 AM
44	San Juans	Oct 3, 2012 10:32 AM
45	No Comment	Oct 3, 2012 10:31 AM
46	No Comment	Oct 3, 2012 10:29 AM
47	No Comment	Oct 3, 2012 10:28 AM
48	No Comment	Oct 3, 2012 10:27 AM
49	N/A	Oct 3, 2012 10:25 AM
50	No Comment	Oct 3, 2012 10:17 AM
51	No Comment	Oct 3, 2012 10:16 AM
52	no comment	Oct 3, 2012 10:15 AM
53	No Comment	Oct 3, 2012 10:14 AM
54	San Juan Islands	Oct 3, 2012 10:12 AM

Page 2, Q11. Where would you like to see additional sewage pumpout facilities? (Please provide location names.)

55	No Comment	Oct 3, 2012 10:11 AM
56	No Comment	Oct 3, 2012 10:09 AM
57	N/A	Sep 28, 2012 4:13 PM
58	More Marinas. More on Lake Union	Sep 28, 2012 3:56 PM
59	No Comment	Sep 28, 2012 3:54 PM
60	No Comment	Sep 28, 2012 3:53 PM
61	No Comment	Sep 28, 2012 3:51 PM
62	Newport Marina	Sep 28, 2012 3:46 PM
63	No Comment	Sep 28, 2012 3:44 PM
64	No Comment	Sep 28, 2012 3:43 PM
65	Lake Union	Sep 28, 2012 3:41 PM
66	No Comment	Sep 28, 2012 3:39 PM
67	No Comment	Sep 28, 2012 3:37 PM
68	San Juan Islands (other than the ones that are already there).	Sep 28, 2012 3:36 PM
69	South Sound	Sep 28, 2012 3:33 PM
70	No Comment	Sep 28, 2012 3:10 PM
71	No Comment	Sep 28, 2012 3:08 PM
72	No Comment	Sep 28, 2012 3:06 PM
73	No Comment	Sep 28, 2012 3:05 PM
74	No Comment	Sep 28, 2012 3:02 PM
75	No comment	Sep 28, 2012 3:00 PM
76	No Comment	Sep 28, 2012 2:46 PM
77	No Comment	Sep 28, 2012 2:36 PM
78	No Comment	Sep 28, 2012 2:35 PM
79	No Comment	Sep 28, 2012 2:32 PM
80	No Comment	Sep 28, 2012 2:28 PM
81	Orcas San Juan, Blakely	Sep 28, 2012 2:23 PM

Page 2, Q11. Where would you like to see additional sewage pumpout facilities? (Please provide location names.)

82	No Comment	Sep 28, 2012 2:13 PM
83	None	Sep 26, 2012 2:42 PM
84	No Comment	Sep 26, 2012 2:34 PM
85	No Comment	Sep 26, 2012 2:33 PM
86	Unsure	Sep 26, 2012 2:20 PM
87	Vancouver Island	Sep 26, 2012 2:19 PM
88	Newport Shores	Sep 26, 2012 2:10 PM
89	No Comment	Sep 26, 2012 2:07 PM
90	Shelter Bay	Sep 26, 2012 1:53 PM
91	Most marinas	Sep 26, 2012 1:51 PM
92	No Comment	Sep 26, 2012 1:50 PM
93	No Comment	Sep 26, 2012 1:33 PM
94	Sucia, Patos Isl	Sep 26, 2012 12:55 PM
95	No Comment	Sep 26, 2012 12:54 PM
96	Yes, Lopez Island	Sep 26, 2012 12:52 PM
97	No Comment	Sep 26, 2012 12:50 PM
98	No Comment	Sep 26, 2012 12:49 PM
99	n/a	Sep 26, 2012 12:47 PM
100	Islander Marina	Sep 26, 2012 12:45 PM
101	San Juan Islands	Sep 26, 2012 12:43 PM
102	No Comment	Sep 26, 2012 12:42 PM
103	No Comment	Sep 26, 2012 12:40 PM
104	Not Sure, some remote and smaller islands.	Sep 26, 2012 12:37 PM
105	No Comment	Sep 26, 2012 11:59 AM
106	No Comment	Sep 26, 2012 11:37 AM
107	No Comment	Sep 26, 2012 11:29 AM
108	No comment	Sep 26, 2012 11:27 AM

Page 2, Q11. Where would you like to see additional sewage pumpout facilities? (Please provide location names.)

109	Sucia/Matia or Stuart	Sep 26, 2012 11:25 AM
110	No Comment	Sep 26, 2012 11:24 AM
111	Canada!	Sep 26, 2012 11:23 AM
112	No Comment	Sep 26, 2012 11:21 AM
113	North of Nanaimo in BC	Sep 26, 2012 11:05 AM
114	Canada - Just Kidding	Sep 26, 2012 10:41 AM
115	RYC (Royal Yacht Club)	Sep 26, 2012 10:36 AM
116	Often in places where my boat can't reach	Sep 26, 2012 10:34 AM
117	No Comment	Sep 26, 2012 9:57 AM
118	No Wait	Sep 26, 2012 9:55 AM
119	No Comment	Sep 26, 2012 9:53 AM
120	No Comment	Sep 26, 2012 9:51 AM
121	No Comment	Sep 26, 2012 9:50 AM
122	State/County Parks	Sep 26, 2012 9:48 AM
123	Gig Harbor. More mobile pumpouts.	Sep 26, 2012 9:47 AM
124	No Comment	Sep 26, 2012 9:44 AM
125	?	Sep 26, 2012 9:33 AM
126	No Comment	Sep 26, 2012 9:32 AM
127	No Comment	Sep 26, 2012 9:29 AM
128	B.C.	Sep 26, 2012 9:27 AM
129	No Comment	Sep 25, 2012 4:28 PM
130	No Comment	Sep 25, 2012 4:27 PM
131	Gig Harbor, Edmonds, laConner, All State Parks	Sep 25, 2012 4:25 PM
132	No Comment	Sep 25, 2012 4:20 PM
133	-	Sep 25, 2012 4:18 PM
134	No Comment	Sep 25, 2012 4:16 PM
135	No Comment	Sep 25, 2012 4:14 PM

Page 2, Q11. Where would you like to see additional sewage pumpout facilities? (Please provide location names.)

136	No comment	Sep 25, 2012 4:12 PM
137	Plan with pumpouts in mind	Sep 25, 2012 4:10 PM
138	N/A	Sep 25, 2012 4:01 PM
139	No Comment	Sep 25, 2012 3:59 PM
140	No Comment	Sep 25, 2012 2:47 PM
141	No Comment	Sep 25, 2012 11:44 AM
142	No Comment	Sep 25, 2012 11:43 AM
143	No Comment	Sep 25, 2012 11:41 AM
144	No Comments	Sep 25, 2012 11:40 AM
145	No Comment	Sep 25, 2012 11:38 AM
146	Shelter Bay	Sep 25, 2012 11:35 AM
147	Every Marina /fuel dock	Sep 25, 2012 11:33 AM
148	Lopez Islander	Sep 25, 2012 11:30 AM
149	No Comment	Sep 25, 2012 11:28 AM
150	No Comment	Sep 25, 2012 11:26 AM
151	Sucia	Sep 25, 2012 11:24 AM
152	Columbia River	Sep 25, 2012 11:22 AM
153	Bellingham	Sep 25, 2012 11:21 AM
154	No Comment	Sep 25, 2012 11:19 AM
155	No Comment	Sep 25, 2012 11:18 AM
156	No Comment	Sep 25, 2012 11:14 AM
157	No Comment	Sep 25, 2012 11:12 AM
158	Sucia Island	Sep 25, 2012 11:10 AM
159	Washington Marine Parks	Sep 25, 2012 11:03 AM
160	No Comment	Sep 25, 2012 10:50 AM
161	No Comment	Sep 25, 2012 10:40 AM
162	No Comment	Sep 25, 2012 10:38 AM

Page 2, Q11. Where would you like to see additional sewage pumpout facilities? (Please provide location names.)

163	All marinas public and private. Every State park etc... - make it easy! Accessible!	Sep 25, 2012 10:37 AM
164	No Comment	Sep 25, 2012 10:34 AM
165	Don't Know	Sep 25, 2012 10:33 AM
166	No Comment	Sep 25, 2012 10:31 AM
167	No Comment	Sep 25, 2012 10:24 AM
168	No Comment	Sep 25, 2012 10:23 AM
169	Desolation Sound	Sep 25, 2012 10:18 AM
170	Sucia Island	Sep 25, 2012 10:15 AM
171	No Comment	Sep 25, 2012 10:10 AM
172	Shelter Bay	Sep 25, 2012 10:08 AM
173	LaConner, Orcas	Sep 25, 2012 10:06 AM
174	Shelter Bay Marina	Sep 24, 2012 1:45 PM
175	No Comment	Sep 24, 2012 1:42 PM
176	Shelter Bay	Sep 24, 2012 1:40 PM
177	Canada	Sep 24, 2012 1:37 PM
178	No Comment	Sep 24, 2012 1:36 PM
179	No Comment	Sep 24, 2012 1:34 PM
180	No Comment	Sep 24, 2012 1:30 PM
181	Dockton	Sep 24, 2012 1:28 PM
182	Leschi Marina	Sep 24, 2012 1:26 PM
183	No Comment	Sep 24, 2012 1:23 PM
184	Zittles Marina	Sep 24, 2012 1:20 PM
185	No Comment	Sep 24, 2012 1:15 PM
186	No Comment	Sep 24, 2012 11:46 AM
187	No Comment	Sep 24, 2012 11:44 AM
188	Additional sewage pumpouts at private marinas would be nice.	Sep 24, 2012 11:40 AM
189	No Comment	Sep 24, 2012 11:36 AM

Page 2, Q11. Where would you like to see additional sewage pumpout facilities? (Please provide location names.)

190	The more the better but Puget Sound has good coverage.	Sep 24, 2012 11:32 AM
191	No Comment	Sep 24, 2012 11:01 AM
192	No Comment	Sep 24, 2012 11:00 AM
193	No Comment	Sep 24, 2012 10:58 AM
194	No Comment	Sep 24, 2012 10:56 AM
195	B.C.	Sep 24, 2012 9:52 AM
196	No Comment	Sep 24, 2012 9:50 AM
197	No Comment	Sep 24, 2012 9:49 AM
198	No Comment	Sep 24, 2012 9:47 AM
199	Gulf Islands	Sep 24, 2012 9:34 AM
200	No Comment	Sep 24, 2012 9:31 AM
201	Desolation Sound, Gulf Islands	Sep 24, 2012 9:25 AM
202	Nanaimo	Sep 24, 2012 9:20 AM
203	Gulf Islands, Vancouver Island, Broughton Peninsula	Sep 24, 2012 9:18 AM
204	San Juan and Gulf Islands	Sep 24, 2012 9:15 AM
205	No Comment	Sep 24, 2012 9:12 AM
206	No Comment	Sep 24, 2012 9:11 AM
207	British Columbia	Sep 24, 2012 9:09 AM
208	No Comment	Sep 24, 2012 9:07 AM
209	No comment	Sep 24, 2012 9:06 AM
210	No comment	Sep 24, 2012 9:04 AM
211	No Comment	Sep 24, 2012 9:01 AM
212	On the San Juan Island	Sep 24, 2012 8:59 AM
213	No Comment	Sep 24, 2012 8:58 AM
214	N	Sep 24, 2012 8:55 AM
215	NA	Sep 20, 2012 7:02 PM
216	Because we can just take our porta potty home	Sep 20, 2012 7:01 PM

Page 2, Q11. Where would you like to see additional sewage pumpout facilities? (Please provide location names.)

217	Throughout the Puget Sound Area, would be good if they had water to hose things down	Sep 20, 2012 7:00 PM
218	Towanoh State park, San Juan islands parks	Sep 20, 2012 6:59 PM
219	NA	Sep 20, 2012 6:58 PM
220	LongBranch	Sep 20, 2012 6:57 PM
221	Lake Union area	Sep 20, 2012 6:56 PM
222	South Sound - almost no convenient facilities (Gig Harbor broken)	Sep 20, 2012 6:55 PM
223	Gig Harbor	Sep 20, 2012 6:53 PM
224	At more state marine parks	Sep 20, 2012 6:52 PM
225	NA *Gig Harbor - wait 20 sec to open valve after turning on pump - works GREAT	Sep 20, 2012 6:51 PM
226	NA	Sep 20, 2012 6:50 PM
227	NA	Sep 20, 2012 6:49 PM
228	Kirkland	Sep 20, 2012 6:48 PM
229	No problem	Sep 20, 2012 6:46 PM
230	Never Use, don't need	Sep 20, 2012 6:45 PM
231	2 per popular destination	Sep 20, 2012 6:29 PM
232	I don't get out much/Dockton on Vashon Island	Sep 20, 2012 2:23 PM
233	NA	Sep 20, 2012 2:22 PM
234	South of Narrows, Gig Harbor. I try to make sure that a facility is on my way.	Sep 20, 2012 2:16 PM
235	NA	Sep 20, 2012 2:11 PM
236	NA	Sep 20, 2012 2:09 PM
237	NA	Sep 20, 2012 2:08 PM
238	Marine Parks	Sep 19, 2012 4:53 PM
239	NA	Sep 19, 2012 4:51 PM
240	NA	Sep 19, 2012 4:50 PM
241	NA	Sep 19, 2012 4:48 PM
242	NA	Sep 19, 2012 4:46 PM

Page 2, Q11. Where would you like to see additional sewage pumpout facilities? (Please provide location names.)

243	NA	Sep 19, 2012 4:44 PM
244	NA	Sep 19, 2012 4:42 PM
245	NA	Sep 19, 2012 4:40 PM
246	NA	Sep 19, 2012 4:37 PM
247	NA	Sep 19, 2012 4:35 PM
248	NA	Sep 19, 2012 4:34 PM
249	NA	Sep 19, 2012 4:32 PM
250	Carlyon Beach	Sep 19, 2012 4:30 PM
251	Sequim Bay, Port Angeles	Sep 19, 2012 4:26 PM
252	More in San Juans	Sep 19, 2012 4:25 PM
253	NA	Sep 19, 2012 4:22 PM
254	South Puget Sound and fix the existing one that don't work properly	Sep 19, 2012 4:20 PM
255	NA	Sep 19, 2012 4:18 PM
256	Central Puget Sound, broken or not working	Sep 19, 2012 4:17 PM
257	NA	Sep 19, 2012 4:15 PM
258	NA	Sep 19, 2012 4:13 PM
259	Coupeville	Sep 19, 2012 4:11 PM
260	San Juans	Sep 19, 2012 4:09 PM
261	Person said they were too busy to finish	Sep 19, 2012 4:07 PM
262	Boston Harbor	Sep 19, 2012 4:05 PM
263	NA	Sep 19, 2012 4:03 PM
264	Jarell's Cove State Park	Sep 19, 2012 4:02 PM
265	NA	Sep 19, 2012 4:00 PM
266	NA	Sep 19, 2012 3:58 PM
267	Parks	Sep 19, 2012 3:30 PM
268	NA	Sep 19, 2012 3:29 PM
269	NA	Sep 19, 2012 3:27 PM

Page 2, Q11. Where would you like to see additional sewage pumpout facilities? (Please provide location names.)

270	NA	Sep 19, 2012 3:26 PM
271	Some State Park Islands	Sep 19, 2012 3:25 PM
272	State Parks	Sep 19, 2012 3:23 PM
273	yes	Sep 19, 2012 3:21 PM
274	Lake Washington	Sep 19, 2012 3:20 PM
275	NA	Sep 19, 2012 3:19 PM
276	Sucia Island	Sep 19, 2012 3:17 PM
277	We pump before we go out on a trip.	Sep 19, 2012 3:15 PM
278	NA	Sep 19, 2012 3:13 PM
279	NA	Sep 19, 2012 3:12 PM
280	NA	Sep 19, 2012 3:10 PM
281	Orcas, West Sound, hand pumpout-Sucia	Sep 19, 2012 3:09 PM
282	NA	Sep 19, 2012 3:07 PM
283	Canada	Sep 19, 2012 3:05 PM
284	NA	Sep 19, 2012 2:17 PM
285	NA	Sep 19, 2012 2:13 PM
286	NA	Sep 19, 2012 2:11 PM
287	NA	Sep 19, 2012 2:09 PM
288	Sucia Island, Jones Island, Blind Bay/Orcas Landing	Sep 19, 2012 2:07 PM
289	NA	Sep 19, 2012 2:05 PM
290	NA	Sep 19, 2012 2:04 PM
291	NA	Sep 19, 2012 2:02 PM
292	NA	Sep 19, 2012 2:01 PM
293	NA	Sep 19, 2012 1:59 PM
294	NA	Sep 19, 2012 1:58 PM
295	NA	Sep 19, 2012 1:56 PM
296	Canada, Gulf Islands, et al.	Sep 19, 2012 1:54 PM

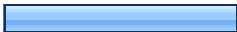






Page 2, Q11. Where would you like to see additional sewage pumpout facilities? (Please provide location names.)

297	NA	Sep 19, 2012 1:52 PM
298	Lake Union, Lopes, Stuart, all of Canada	Sep 19, 2012 1:49 PM
299	Wherever fuel is located	Sep 19, 2012 1:47 PM
300	NA	Sep 19, 2012 1:44 PM
301	All State Parks	Sep 19, 2012 1:42 PM
302	All State Parks - Sucia	Sep 19, 2012 1:40 PM
303	NA	Sep 19, 2012 1:36 PM
304	?	Sep 19, 2012 1:34 PM
305	Or porta potty dump	Sep 12, 2012 9:25 AM
306	Have not been boating long enough to find a location that does not save a pump out station where I have been.	Aug 1, 2012 7:38 AM

Washington State boaters and Sewage Pumpouts 2012DOE



For what reasons do you think people are most likely to discharge illegally? (Check top two.)

		Response Percent	Response Count
Pumpout station is broken		34.7%	104
Don't want to risk getting sprayed		8.7%	26
Don't think discharging harms the environment		34.3%	103
Too expensive		7.3%	22
Wait is too long		16.7%	50
Pumpout station not conveniently located		71.0%	213
Other (please specify)		9.7%	29
		answered question	300
		skipped question	6

Page 2, Q12. For what reasons do you think people are most likely to discharge illegally? (Check top two.)

1	lazy	Oct 3, 2012 3:45 PM
2	Lazy	Oct 3, 2012 2:54 PM
3	lazy	Oct 3, 2012 2:32 PM
4	Lazy	Oct 3, 2012 2:28 PM
5	Lazy	Oct 3, 2012 1:56 PM
6	Lazy	Oct 3, 2012 1:54 PM
7	Education	Oct 3, 2012 1:46 PM
8	Don't follow rules	Oct 3, 2012 1:20 PM
9	Lazy	Oct 3, 2012 1:18 PM
10	lazy	Oct 3, 2012 12:04 PM
11	tank is too small	Oct 3, 2012 11:57 AM
12	lazy	Oct 3, 2012 10:29 AM
13	Full Tank	Sep 28, 2012 3:44 PM
14	Too lazy	Sep 25, 2012 4:28 PM
15	Especially for larger boats	Sep 25, 2012 4:14 PM
16	Lazy boaters	Sep 25, 2012 4:01 PM
17	Lazy	Sep 25, 2012 11:30 AM
18	Laziness	Sep 25, 2012 11:14 AM
19	LaZY	Sep 25, 2012 11:10 AM
20	Lazy	Sep 25, 2012 11:03 AM
21	Lazy	Sep 25, 2012 10:23 AM
22	Lazy	Sep 25, 2012 10:18 AM
23	Too lazy	Sep 24, 2012 11:01 AM
24	Urine ok	Sep 24, 2012 9:01 AM
25	Don't care	Sep 20, 2012 7:01 PM
26	Laziness	Sep 20, 2012 6:49 PM
27	old boat, no holding tank	Sep 19, 2012 4:48 PM








Page 2, Q12. For what reasons do you think people are most likely to discharge illegally? (Check top two.)

28	People don't care!	Sep 19, 2012 4:30 PM
29	Too lazy	Sep 19, 2012 1:56 PM

Washington State boaters and Sewage Pumpouts SurveyMonkey

2012DOE

**What do you think would most effectively make boaters use pumpouts more frequently?
(check top two.)**

		Response Percent	Response Count
Greater awareness of environmental effects of sewage		48.5%	145
Recognition/incentives for "green" boaters		22.4%	67
More pumpout locations in Puget Sound		56.2%	168
Shorter wait times		18.4%	55
Better enforcement		20.4%	61
Reduced risk of spraying, spillage		18.7%	56
Other (please specify)		2.7%	8
answered question			299
skipped question			7

Page 2, Q13. What do you think would most effectively make boaters use pumpouts more frequently? (check top two.)

1	Mobile	Oct 3, 2012 3:45 PM
2	Education over Enforcement	Oct 3, 2012 1:46 PM
3	stop navy	Oct 3, 2012 12:12 PM
4	fees	Oct 3, 2012 12:04 PM
5	And make them accessible	Sep 25, 2012 10:37 AM
6	A rubber glove dispenser	Sep 24, 2012 11:46 AM
7	People are too lazy	Sep 20, 2012 2:16 PM
8	More pumpout stations in Canada	Sep 19, 2012 1:44 PM