CLEAN WATERS FOR BOATING

Results of Boaters Survey
Salem Sound

Salem Sound Marine Sanitation Needs Assessment
Salem Sound Coastwatch
Barbara Warren

Public forum at the Danversport Yacht Club
December 13, 2005
Salem Sound Coastwatch’s primary goal is clean water. We have worked for the past 15 years on land-based pollution into the Sound, such as stormwater runoff. This is the first time that we have taken a close look at the boating community to evaluate their needs.
Forum agenda
Study Design

- Focus on Danvers River, Beverly and Salem Harbors
- Anonymity for surveys critical
- Also, interviewed harbormasters, pumpout operators and marina operators

4063 surveys mailed + available on internet

Conducted starting in July 2005.
It appears that Salem Harbor boaters responded to the survey in greater numbers than other area boaters.

However, the return rate was approximately the same for each community, just some locations received more surveys because they have more mooring holders. Approximately, half of the mailed surveys went to boaters in Salem Harbor. When the number of returned surveys per community is divided by the number of mailed surveys to each community, the return rate is a 20% for Salem.

Nine hundred surveys were mailed to Beverly mooring holders or 22% of the total surveys mailed. Their return rate was 17%.

One thousand forty-three surveys or 26% were mailed to people with Danvers moorings. Danvers' return rate was 18%. 
Federal law prohibiting discharge of untreated sewage from vessels within all navigable waters of the U.S., including coastal waters (within 3-miles of shore)

High Rate of Awareness

96% out of 825 responses

Boaters know the law.
Boater Awareness..... sewage disposal into water

High Awareness of environmental issues

- Over 80% - sewage may cause problems at beaches and increase health risks.
- 62% - increases toxins in the water from MSD disinfectants and deodorizers.
- 11% - no affect because it becomes diluted and biodegrades.
- 6% - provides food for fish.

Multiple answers possible
The majority of boaters (68%) spend less than 36 days a year onboard their boats. However, 22% say they spend 37 to 60 days a year onboard, which means they are on their boats between a third to two-thirds of the summer since the average boating season in Salem Sound runs from Memorial Weekend to Labor Day. Those who spend more than 61 days onboard make up only 11% of the survey respondents.

This seems to follow closely with what the marina operators and harbormasters reported.

Most respondents seem to go out to their boats to go motoring or sailing. Seventy-five percent (n = 643) say they spend less than 33% of the time at their mooring or slip. However, twenty-five percent spend greater than 50% of boating at the mooring or slip. One hundred twenty-five spend 50%; 64 said 75%; while 24 spend 90%, and 5 people say they spend 100% of the time on the mooring or slip. Therefore, 93 people, or almost 11% of the respondents, spend very little time off their moorings or slips.

More results are covered in the Salem Sound Marine Sanitation Needs Assessment Report.

Salem Sound Coastwatch is looking for opportunities to speak with boating groups, yacht clubs, marinas, etc.

Please email info@salemsound.org or call 978-741-7900.
The Clean Water Act prohibits the discharge of untreated sewage from a boat into waters within three nautical miles of shore and set into motion Environmental Protection Agency (EPA) regulations on federal performance standards for marine sanitation devices (MSDs).

As of January 30, 1980, if a vessel has an installed toilet, it must be equipped with one of three types of US Coast Guard certified MSDs. Since portable toilets can be moved on and off a vessel, they are not considered installed toilets.\(^1\)

\[1\] EPA. Using your head to help protect our aquatic resources. Vessel Sewage Discharge Program. Last updated on Tuesday, February 17th, 2004. URL: http://www.epa.gov/owow/oceans/regulatory/vessel_sewage/vsdflyer.html

### Table: Sewage Treatment Device Specifications

<table>
<thead>
<tr>
<th>Sewage Treatment Device</th>
<th>Vessel Length</th>
<th>Effluent Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I - Flow-through device (maceration and disinfection)</td>
<td>&lt; 65 feet</td>
<td>fecal coliform bacteria count &lt; 1000 per 100 milliliters and have no visible floating solids.</td>
</tr>
<tr>
<td>Type II - Flow-through device (maceration and disinfection)</td>
<td>&gt; 65 feet</td>
<td>fecal coliform bacteria count &lt; 200 per 100 milliliters and suspended solids &lt; than 150 milligrams per liter.</td>
</tr>
<tr>
<td>Type III - Holding tank</td>
<td>any length</td>
<td>prevents the overboard discharge of treated or untreated sewage</td>
</tr>
</tbody>
</table>

**Note:** shellfish harvesting water quality < 14 fecal coliform colonies/100 ml

From EPA
Do you have a head onboard
and if yes, type?

Percentage of MSDs types onboard boats. N = 871.

- Type III: 39%
- PortaPottie: 24%
- Type I: 12%
- Type II: 2%
- No Facilities: 18%
- Question skipped: 1%
- Type unknown: 4%
Comparison- head to boat length

535 boats in the study are 25 feet or longer. 85% have a MSD. 58% have holding tanks. 3% no head. 12% portapottie.
Do current practices include dumping sewage overboard?

Results Summary...dumping?

*Do current practices include dumping sewage overboard?*

- **No Dumping**: 70%
- **Yes, treated**: 13%
- **Yes, untreated**: 17%

Percentage that dump sewage overboard. N = 860.

Boaters do dump overboard but where?
Some boats with Type I or II discharge within 3-miles and at the mooring, but there are also boats with holding tanks, portapotties and no head that discharging within 3-miles and at the mooring.

Upon closer examination of this question, it became apparent that boaters are confused over the meaning of “treated” and “untreated”.

Some owners of portapotties and holding tanks think the contents are treated, probably because of the chemical deodorizer that is added to the container. Almost 20% of the Type I boat owners who dump believe it is untreated.
Of the 155 who responded as to why they pumped overboard within 3 miles, 53 chose “other” and wrote comments to explain. Thirty-five of these comments explained why the respondent does not dump. Besides “other”, 128 answers were checked. The **unavailability of pumpout facilities received the highest percentage of responses at 35%**, 18% are owners of Type I and II who say it is okay to dump from their MSDs, 16% say they had equipment malfunctions, 9% holding tank odors objectionable, 7% checked that they see no problem with dumping overboard within 3-miles of the shore, 3% say they did not know how to prevent flushing overboard, 12% admit to not knowing when they are at least 3-miles offshore.
Less than half of the respondents have used pumpout facilities

- BUT - 77% are aware of one or more pumpout facilities
- Asked if they use pumpout
- Asked if they would consider using a boat pumpout: 15% said “NO”.

Out of 820 surveys, 58% (n = 472) say they have not used local pumpout facilities, while 42% (n = 348) say they use local pumpouts. Fifty-one respondents left the question blank.

Based on the total number of surveys collected (n = 871), the pumpout facility awareness percentage drops to 77%; 38% knowing about one pumpout; 28% knowing two; and 11% knowing three or more. This is because 199 respondents skipped the question.

Of the group that did not check an answer, 23 people wrote in “none.” Further examination of these 23 surveys shows that eighteen are from Salem, four from Beverly and one from Danvers.
Seventy-five percent of the respondents answered this question (n= 653), but 411 marked that “None apply.”

Therefore, the population that answered this question is actually n = 242 or 28% of the total survey population. Multiple answers could be checked.

When asked to describe their experience with pumpout facilities over the past two years, the biggest complaint was availability with by 55%. Thirty-eight percent said that there was no pumpout conveniently located near their boats, while 32% checked available but not functioning; 31% available but no staff; and 14% that pumpout was inaccessible (i.e. hose too short or water too shallow). Fourteen percent said that wait time was too long, while fewer people thought that the cost was too high (n = 22 or 9%). Seven percent said they do not know how to operate the pumpout. They are probably referring to the Congress Street dockside pumpout since it is the only self-operated pumpout in Salem Sound.
Two questions were asked about portapottie use.

There are few places to empty portapotties. Most are dumped at home, next public restrooms. Some say they dump them three miles out at sea.

When asked if they would use a dock portapottie pumpout the response of Yes was 40%, but many of these responses were not portapottie users.

What this service is was not explained. I think this response shows that people want convenience and mobile dockside pumpout sounds just that.
Asked if they would report sewage being discharged from a boat, 79% of 799 respondents said they would report it. One hundred and seventy-one say they would not, and 72 skipped the question.

**Question 29. If yes, who would you contact?**

Respondents wrote in the answer to this question. There were various renditions of fourteen contacts to whom respondents would report illegal sewage dumping. Most gave the harbormaster as the answer, followed by the Coast Guard and then, environmental police. Many say they have no idea who to call. Also, listed are the patrolling Auxiliary Coast Guard, Board of Health, marina, yacht club, dock master, Salem Sound Coastwatch, National Response Center, launch drivers, marine patrol, EPA, and DEP. Several would speak first to the boat owner or operator.
86% answered “YES”

86% said they would accept Salem Sound as a No Discharge Area. The next step to see what this means and is it achievable. The comments are summarized in the final report to be posted at salemssound.org in January.
Salem Sound is a great place to be a boater. We all want clean water. Let’s work together to find better ways to keep the water clean and cleaner. Call Salem Sound Coastwatch 978-741-7900 or email info@salemsound.org