

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

Project Goals

1st CLEAN WATER

- **Understanding boating community's behavior and attitudes as it pertains to sewage disposal**
- **Determining obstacles to proper disposal**
- **Understanding the frequency of vessel sewage discharge and WHY?**
- **Identifying local solutions**

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.

Agenda – CLEAN WATERS FOR BOATING

- **Results of Anonymous Boaters Survey**
- **Three 10 minute presentations**
 - Vinny Malkoski (CVA) - Clean Vessel Act Program
 - Ann Rodney (EPA) - No Discharge Area Designation
 - Steve McKenna (CZM)- Funding Resources & NDA Applications
- **Recommendations for Action**
 - Peter Burilson (Epson International) - Trend in Marine Industry
- **Break-out - Discussion Groups**
- **Ideas and Questions from Discussion Groups**
- **Next Steps - Panel**

Forum agenda

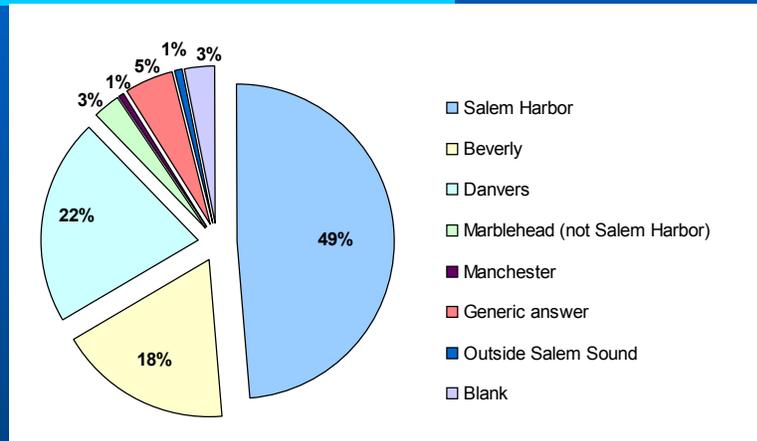
Study Design

- 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.

Amazing 21% return rate...good representation



Percentage of survey responses based on boat locations. N = 867
return rate ~ same for each community

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%.

Boater Awareness

- *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.

General Characteristics

- 25% boating for 1 to ten years
- 97% recreational boaters
- 61% have motor boats/ 39% sailboats
- 79% fuel at a dock
- 37% swim or fish from their boats at the dock or on the mooring
- Only 5% spend summer on boat
 - 3 said they live aboard all year
- 25% spend more than 50% of the time at mooring or slip

N = 871

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.

MSD Refresher - Marine Sanitation Device

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

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

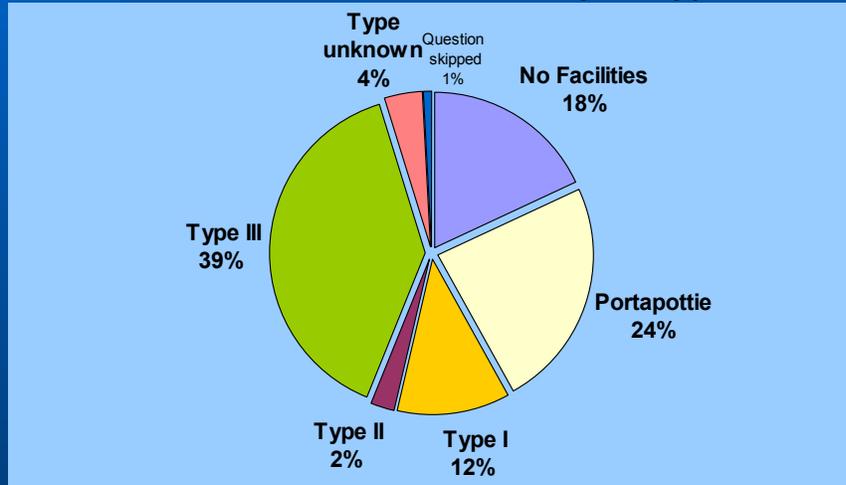
From EPA

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]

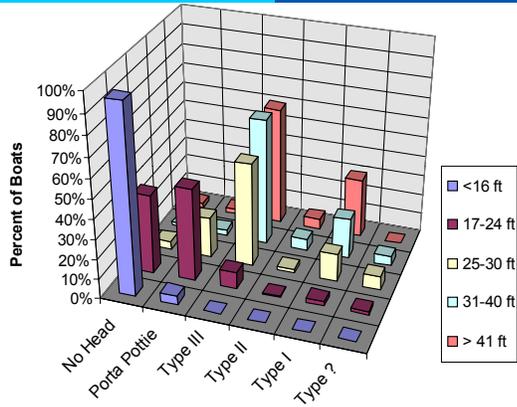
^[1] EPA. Using your head to help protect our aquatic resources. Vessel Sewage Discharge Program. Last updated on Tuesday, February 17th, 2004. URL:
http://www.epa.gov/owow/oceans/regulatory/vessel_sewage/vsdflyer.html

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



Percentage of MSDs types onboard boats. N = 871.

Comparison- head to boat length



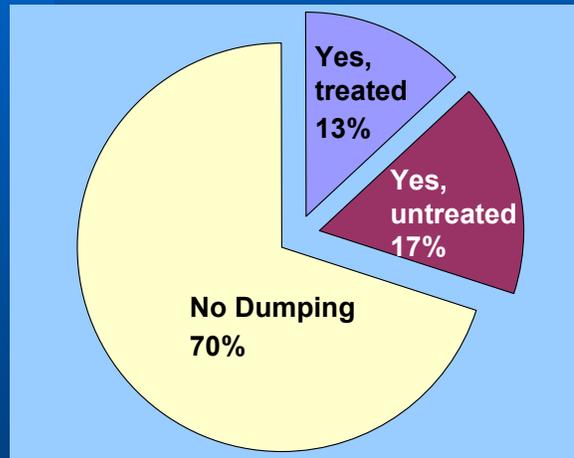
Boat Length	No Head	Porta Pottie	Type III	Type II	Type I	Type ?
<16 ft (n = 21)	95%	5%	0%	0%	0%	0%
17-24 ft (n = 304)	40%	47%	9%	0%	2%	2%
25-30 ft (n = 275)	4%	21%	52%	2%	14%	7%
31-40 ft (n = 226)	2%	3%	64%	6%	21%	5%
> 41 ft (n = 41)	3%	3%	60%	5%	30%	0%

Percent of MSD types onboard boats by boat length. N = 855.

535 boats in the study are 25 feet or longer. 85% have a MSD. 58% have holding tanks. 3% no head. 12% portapottie.

Results Summary...dumping?

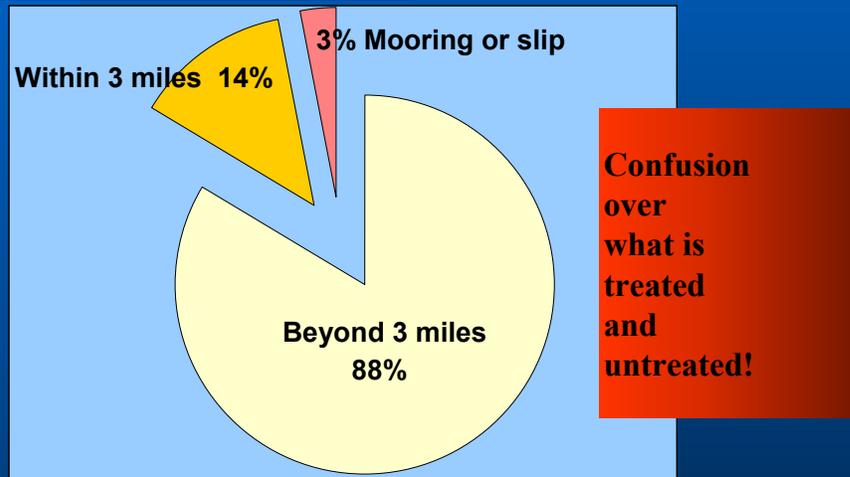
Do current practices include dumping sewage overboard ?



Percentage that dump sewage overboard. N = 860.

Boaters do dump overboard but where?

Where do you dump ? Taking a closer look...



Where dumping overboard occurs by percent. N = 277.

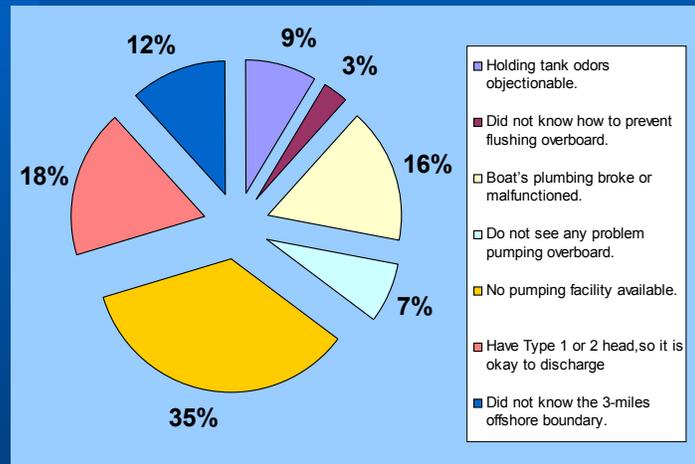
Some boats with Type I or II discharge within 3-miles and at the mooring, but there are also boats with holding tanks, portapotties and no head that discharging within 3-miles and at the mooring.

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.

Results Summary... Dumping overboard is happening in Salem Sound.

Reasons for dumping overboard within 3-miles of shore?



Reasons for dumping overboard by percent. N = 128.

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.

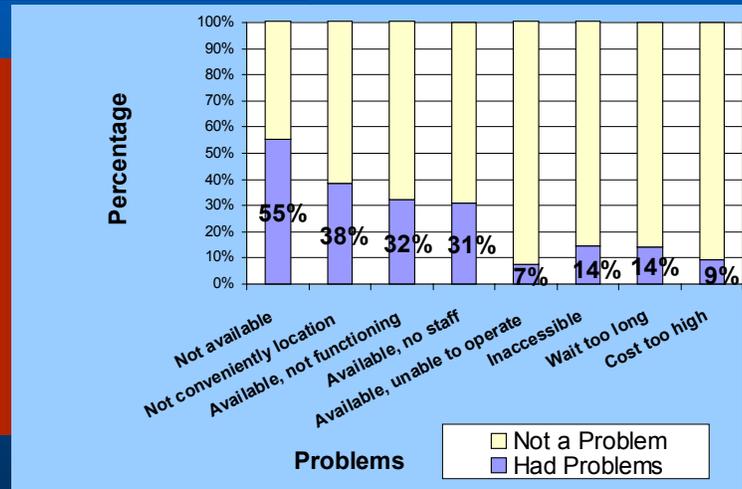
3% say they did not know how to prevent flushing overboard.

12% admit to not knowing when they are at least 3-miles offshore.

Pumpout Problems? In last two years....

28% said they had pumpout problems.

62% none apply.



Percent experiencing problem by type. N = 242.

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.

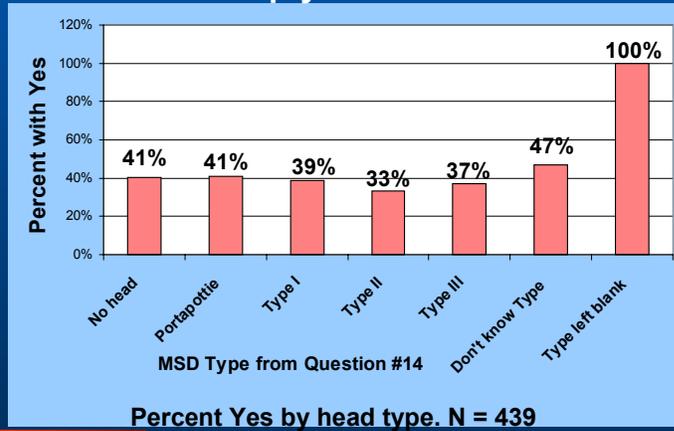
When asked to describe their experience with pumpout facilities over the past two years, the biggest complaint was availability with by 55%. Thirty-eight percent said that there was no pumpout conveniently located near their boats, while 32% checked available but not functioning; 31% available but no 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.

Portapottie Onboard... is common.

24% of the respondents have portapotties

- Most places will not let them empty.
- 57% empty at home.
- Asked if they would use a dock Portapottie pumpout 40% say "YES"

(n = 871)



Convenience...

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.

Reporting illegal dumping

- **79% of 799 respondents said they would report it.**
- **Harbormaster, Coast Guard and then, environmental police.**
- **Several would speak first to the boat owner or operator.**

Many say they have no idea who to call.

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.

Last Question: Support NDA

- **No Discharge Area for Salem Sound**
 - *In a NDA, any discharge of boat sewage, even treated is prohibited.*

86% answered "YES"

Plus 767 comments.....

Results, summary of comments will be posted in January on Salem Sound Coastwatch's website: salemsound.org

Acknowledge - MA Coastal Zone Management provided funded this study through Coastal NPS grant

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 salemsound.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