



NEEDLESS CRUISE POLLUTION:

PASSENGERS WANT SEWAGE DUMPING STOPPED





Oceana is a non-profit international advocacy organization dedicated to protecting and restoring the world's oceans through policy advocacy, science, law and public education. Founded in 2001, Oceana's constituency includes members and activists from more than 190 countries and territories who are committed to saving the world's marine environment. In 2002, the American Oceans Campaign became part of Oceana's international effort to protect ocean eco-systems and sustain the circle of life. Oceana, headquartered in Washington, D.C., has additional offices in key U.S. coastal areas and will open offices in Latin America and Europe in 2003. For more information, please visit www.oceana.org or www.stopcruise pollution.org.



EXECUTIVE SUMMARY

While thousands of gallons of crude oil from the sunken tanker, *Prestige*, are still washing up on European beaches killing countless fish, mammals and birds, a more insidious threat placidly sails the ocean in plain sight – cruise ships. When you see the gleaming white boats on television commercials, you would never think that those same ships are a major and growing source of ocean pollution. These floating vacation resorts, like cities, are literally producing thousands of gallons of pollutants and tons of solid waste on each ship every day. Unlike cities, however, cruise ships are exempt from the discharge permitting program of the nation's preeminent water pollution control law, the Clean Water Act.

❖ **Cruise ships are needlessly dumping vast amounts of raw sewage and other harmful wastes into some of the most pristine parts of our oceans every day.** Each day a cruise ship generates as much as:

- 30,000 gallons of sewage, also called “black water;”
- 255,000 gallons of dirty water from shower, sinks, laundries and dishwashers, also called “gray water,” which can contain raw sewage and toxic chemicals from photo processing, dry cleaning and industrial cleaning products;
- 7,000 gallons of oily bilge water; and
- smokestack and exhaust emissions equivalent to 12,000 cars.

Every day a cruise ship operates, it produces 30,000 gallons of sewage and is allowed to dump treated sewage anywhere in the ocean, except in Alaska where the laws prevent such actions. It is also legal for the cruise industry to dump raw, untreated sewage in the ocean once a ship is more than three miles from the U.S. shore. This waste not only carries bacteria which are harmful to human health, but it also sickens and kills marine life including fish and corals.

After being heavily fined in the late 1990s, the cruise industry developed an industry-wide environmental policy. Many cruise lines boast about their environmental policies and say that the water from their new wastewater treatment systems is

so clean you could drink it. However, these systems are located on only a very few ships that cruise primarily in Alaska where it is required. While the industry keeps logs of its pollution and sewage treatment activities, the U.S. Coast Guard can't scrutinize each ship's safety and environmental activities during their infrequent inspections. So who is really watching the cruise industry? With the cruise companies record of ongoing violations of the laws, it is difficult to assume that they are doing all they can to protect the ocean environment.

❖ **The cruise industry's own customer base is appalled at the practice of cruise ships dumping untreated sewage into the ocean and the lax laws that enable this practice.** More than three in four cruise ship customers believe environmental protections are in place and some mistakenly believe that sewage from cruise ships is stored until the ships return to shore. When informed of common practices and the minimal laws that govern sewage, however, cruise customers overwhelmingly want to see upgrades to treatment systems and stronger laws to ensure improvements.

The findings from a Greenberg Quinlan Rosner survey conducted for Oceana¹, underscore the extent to which cruise customers want to see stronger actions to reduce ocean pollution. The following are highlights from these findings:

- Nearly three-quarters (72 percent) of respondents believe that untreated sewage should not be dumped into the ocean anywhere.
- Cruise customers want cleaner cruises and are willing to pay more for them. Six out of ten customers surveyed (61 percent) indicated they would pay more for a cruise to ensure that a cruise line is not polluting the ocean.
- More than 80 percent of those surveyed are most concerned about the dumping of untreated sewage into the ocean.



❖❖ **Cruise customers favor actions to require the cruise industry to upgrade treatment of waste and want to see tougher enforcement of these laws or requirements.**

- More than 90 percent of cruise customers support:
- a requirement for cruise ships to upgrade their on board waste treatment facilities in order to more fully treat sewage before it is released into the water;
- improved monitoring and inspection of cruise ships to ensure that cruise ship companies are complying with laws; and
- tougher sewage treatment standards.

Oceana and cruise ship customers are clearly appalled by the cruise industry's pollution practices, particularly dumping raw sewage in the ocean, partly because this is a totally preventable problem. Oceana is demanding that cruise companies stop dumping their raw sewage in the ocean. State-of-the-art, affordable technologies are available that do a far better job of treating waste and such technology should be installed on all cruise ships. Cruise line companies must take responsibility for keeping their waste out of our oceans.

FOOTNOTES

¹ This survey was prepared and supervised by Greenberg Quinlan Rosner Research, Inc for Oceana. Calling took place on December 2-5, 2002. These findings, based on a sample size of 633 people who have taken a trip on a cruise ship, are subject to a sampling error of 3.8 percent.



CRUISE SHIPS POLLUTE OCEANS NEEDLESSLY

Fun, fun, fun. This is all the cruise industry wants passengers to think about when planning their next vacation. The industry is also working hard to present themselves as good environmentalists who are doing everything they can to protect the oceans on which they rely for their business. The last thought the cruise industry wants their passengers to have is about the amount of pollution a cruise ship produces. Many of these ships house 3,000 passengers and crew. Think of a cruise ship as a floating city. Throughout that “city,” floors are mopped, sheets are washed, clothes are dry-cleaned, toilets are flushed, leftover food is tossed, and photographs are developed. That all adds up to an incredible amount of sewage, garbage, oil and toxic waste. Much of this waste is being needlessly dumped in some of the most pristine areas of our oceans.

❖ **An average cruise ship with 3,000 passengers and crew produces thirty thousand gallons of sewage.** This waste carries bacteria that are harmful to humans and can sicken and kill marine life, including corals. It also contains pollutants that contribute to algae blooms that cloud the water, reduce oxygen levels and kill fish. Raw sewage also contaminates shellfish beds, which could end up making people sick. Ships can dump treated sewage anywhere in the ocean except in Alaska, where the state regulates it more carefully. Once they travel three miles from the shore, cruise ships can eject raw sewage into our oceans without any treatment at all!

❖ **Every day an average-sized cruise ship generates 255,000 gallons of water from laundries, showers, sinks and dishwashers and pours it right into the ocean.** Gray-water, as it is commonly called, is dirty water generated by laundries, showers, sinks and dishwashers. It can also contain raw sewage and toxic chemicals from photo processing, dry cleaning and industrial cleaning products. Studies conducted by the U.S. Department of Defense and the U.S. Environmental Protection Agency (EPA) determined that gray-water “has the potential to cause adverse environmental effects” and in Alaska, the state found that gray water can have higher levels of disease-causing bacteria than raw sewage.

❖ **Seven thousand gallons of oily bilge water are released into the oceans each time bilge is released.** Bilge water collects in the bottom of ships and contains oil and chemicals from engine maintenance that are toxic to marine life. Although federal law limits the amount of oil that can be released into oceans, cruise ship companies have been fined repeatedly by the U.S. Coast Guard for violating this law.

❖ **Thirty-three tanker trucks-worth of ballast water per cruise ship, complete with aquatic plants and animals, are taken from faraway locations and released into U.S. harbors and bays.** Cruise ships take in and release millions of gallons of water to stabilize and trim the vessel to ensure safe operating conditions. As this ballast water is taken up, marine plants and animals are drawn into the ship too, and are often released when the tanks are flushed from the ship –sometimes thousands of miles from where they were taken up. Animals that are not native to the area where they are released can colonize the area and in doing so, replace and harm local species. Ballast water can also carry diseases like cholera and paralytic shellfish poisoning into our harbors.



❖ **A single cruise ship produces smokestack and exhaust emissions equivalent to 12,000 automobiles every day.**

Most ships burn low-grade fuel that produces 50 times more toxic pollutants than the dirtiest diesel trucks. Ships' waste incinerators release toxic chemicals, including cancer-causing chemicals like dioxins and mercury. These emissions add to the smog in the air, create dead zones and algae blooms in the ocean, and contribute to acid rain, global climate change and respiratory diseases like asthma. Yet, cruise ship air emissions are almost entirely unregulated. The proposed standards for governing air pollution from ships that are being considered by the EPA are not likely to significantly reduce air pollution from cruise ships.

❖ **The average cruise ship produces seven tons of garbage and solid waste every day.** In one year, 15 billion pounds of trash is dumped in oceans worldwide. Although trash is often incinerated on-board and the ash is dumped into the ocean, some ships have been fined for dumping their un-incinerated trash straight into the ocean. As a result, millions of animals become trapped or poisoned every year from this garbage. Sea turtles die from eating plastic bags mistaken for jellyfish. Sea lions, and birds and other marine life become entangled in plastics, causing starvation, strangulation and drowning. The trash also washes up on our beaches, endangering human health and the natural beauty of our shorelines.

❖ **Cruise ships can harm coral reefs.** Pollution from cruise ships can threaten coral reefs. Cruise ships can also damage reefs through collisions and anchors. Recent studies have linked coral diseases to human sewage not unlike what is released from cruise ships. A disease called white pox, which is caused by bacteria often found in human sewage, has affected some of the world's most popular coral reefs off of Key West and throughout the Caribbean, including Jamaica, Belize, St. Croix and the Bahamas.

THE CRUISE INDUSTRY IS GROWING AND EXPANDING TO NEW PORTS

Cruising is growing in popularity and the number of cruise passengers is expected to *more than double to nearly 22 million by 2010*. The cruise ship industry has averaged 8.4 percent growth per year over the last two decades. Since 1970 the number of people taking a cruise has increased by more than 1,000 percent. In North America the increase has been fivefold – from 1.4 million to almost seven million. Between 2001 and 2005, International Council of Cruise Lines (ICCL) member lines are expected to bring *38 new ships* into their fleets, which will increase the capacity of the industry by 45 percent over the five-year period.

U.S. ports handled 5.9 million cruise embarkations during 2001. This is 70 percent of global embarkations, an increase of 11 percent from 2000. *Florida*, whose ports handled approximately 4.1 million embarkations in 2001, accounted for 69 percent of U.S. cruise embarkations. Los Angeles also has traditionally been a major cruise ship port. Now, however, the cruise industry is aggressively working with new port cities to expand the number of locations from which cruise passengers can sail. New Orleans just opened a port for cruise lines and Houston is developing one as well. Other cruise ship ports are seeing expanded service. These include San Francisco, Seattle and Juneau as well as New York, Baltimore and Philadelphia.

Most cruise passengers are from the United States. *During 2001, 6.8 million U.S. residents took cruise vacations* throughout the world and accounted for 82 percent of the industry's global passengers. The Cruise Lines Industry Association (CLIA) recently reported that more than two million American vacationers cruised during the third quarter of 2002. *The number reflects a 17 percent increase from one year earlier.*



CRUISE SHIP ENVIRONMENTAL LAWS AND PERFORMANCE

Cruise ships are not held to the same important environmental protection standards that apply to cities and industries that produce similar types of waste. The current law says that cruise ships can dump treated sewage as close to shore as they want. The law also says ships can dump untreated or raw sewage, once they are more than three miles from the land, except in Alaska, where the state regulates it more carefully. Ships are only required to keep logbooks of their discharges and monitoring is lax.

❖ **Cruise ships are exempt from the discharge permitting program of the nation's preeminent water pollution law, the Clean Water Act.** Under the Clean Water Act, cities and industries are required to obtain a permit to treat and discharge wastes. These permits ensure that sewage treatment systems are effective, and that both the U.S. Environmental Protection Agency (EPA) and the public know how much pollution is actually being discharged. Limits in the permits regulate the amount of pollution to prevent long-term environmental harm. There are no such permits for cruise ships.

For factories and sewage treatment plants, the Clean Water Act also requires monitoring and reporting and gives citizens the right to enforce some provisions of the law that are not being enforced properly by the government. *Cruise ships, however, are not required to have permits to dump raw sewage into the oceans, and they are not required to monitor or report what they release. As a result, neither the government nor the public know how much pollution is released, and there are no means for citizen enforcement.*

The Clean Water Act does require that cruise ships have and use marine sanitation devices to treat sewage. However, most of these devices are outdated, do a poor job of treating sewage, and result in the influx of chemicals in the marine environment. And, there is no independent verification that they operate properly or are even used. Cruise companies do keep logs of their pollution activities, but they are not required to monitor the effects of their releases on the waters into which they routinely dump their waste.

In the few instances where laws apply to cruise ship pollution, enforcement is a major problem and the compliance record of the industry is abysmal. The major companies have been fined repeatedly for violations. For example, the top two cruise line companies (Royal Caribbean and Carnival) paid \$18 million each in fines for disabling pollution control equipment, falsifying records and discharging oil into the marine environment. In addition to the enforcement challenges, violations are difficult to detect and gathering evidence is complicated.

Better technology for treating cruise ship sewage is now available. Some companies are installing this equipment on a few new vessels. However, many new ships and older vessels cruising the oceans lack proper treatment technology and continue to dump vast quantities of raw sewage and other pollutants into the sea.

POLL RESULTS: CRUISE PASSENGERS APPALLED AT NEEDLESS SEWAGE POLLUTION

After having faced perhaps its toughest public relations battle over public health issues, their own customer base is appalled at the industry's practice of dumping untreated sewage into the ocean and the lax laws that foster this practice. Additionally, the direct link between human health concerns and the dumping of sewage should cause customers to sit up and take notice.

Cruise ship customers believe environmental protections are in place and mistakenly believe that sewage from cruise ships is stored until the ships return to shore. They believe that cruise lines are good environmental stewards. But, when educated about the laws that govern sewage, cruise customers overwhelmingly want stronger laws. Nearly three quarters (72 percent) believe that untreated sewage should not be dumped into the ocean anywhere, no matter how far from shore. These findings, from a survey conducted for Oceana of 633 people who have taken at least one cruise,¹ underscore the strength to which cruise customers want to see stronger actions to reduce ocean pollution.

The results from this survey are quite startling as they are not in line with customers' generally favorable impressions of cruises. These customers want to have fun on cruise ships, but want these ships to be clean. Perhaps most importantly, cruise customers strongly support requiring the cruise ships to upgrade their technology on the ships in order to fully treat sewage. Further, cruise customers want to see improved monitoring and inspection of ships to ensure compliance.

KEY SURVEY FINDINGS

❖ **Cruise customers do not want untreated sewage dumped into the ocean.** Nearly three-quarters (72 percent) of respondents believe that untreated sewage should not be dumped into the ocean anywhere. Respondents who are most likely to take another cruise are strongest in this belief.

❖ **Cruise customers want cleaner cruises and are willing to pay more for them.** Importantly, more than six in ten respondents (61 percent) indicate they would pay more for a cruise if that cruise line adhered to better environmental policies. Of those respondents who would pay more for a cruise, almost half (46 percent) indicate they are willing to pay one hundred dollars or more for such a cruise. In addition, almost half (48 percent) of the cruise ship customers polled indicated they would be more likely to take another cruise

if that cruise line implemented environmental policies that were approved by an environmental organization. The willingness of customers to pay at least \$25 more for a cruise is compelling because upgrading the entire fleet to state-of-the-art technology would cost considerably less than that per passenger. In fact, for the cost of a can of soda per passenger per day, the entire fleet could be upgraded in less than five years.

❖ **Cruise customers are most concerned about the dumping of untreated sewage into the ocean.** When offered a series of environmental problems produced by cruise ships, cruise customers were most concerned with the dumping of untreated sewage into the oceans. Once again, those who are most likely to take another cruise expressed this concern most strongly.

Although some of these following activities are illegal, they do occur in the absence of strong monitoring and enforcement. Respondents therefore were questioned on their concerns about these practices.

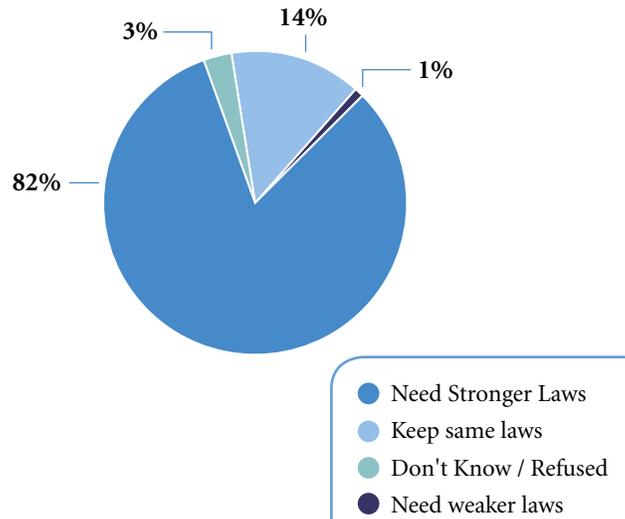
CONCERNS ABOUT CRUISE SHIPS

(Percent Responding)

Ships dump any amount of raw sewage once three miles offshore	81
Ships releasing ballast water	79
Thousands of square feet of live coral are killed by cruise-related actions	80
Ships can dump hazardous waste from dry cleaning and photo labs	81
Ships treat some sewage with chemicals and dump this sewage into ports	78
Ships dump "gray water" from washing dishes, showers, and cleaning supplies	79
Ships emit as much air pollution as 12,000 cars	69

❖ **Cruise customers want stronger laws.** When informed about the laws governing cruise ship waste, there is a cry for stronger laws. When respondents are read a statement about the laws governing cruise ship waste (The current law says that cruise ships can dump treated sewage as close to shore as they want. The law also says ships can dump untreated, or raw sewage, three miles out from shore.), a staggering 82 percent indicate the need for stronger laws. Importantly, this response was equally as strong among participants who are almost certain to take another cruise as it was among those unlikely to take another cruise.

LAWS GOVERNING SEWAGE FROM CRUISE SHIPS



❖ **Cruise customers favor actions to require the cruise industry to upgrade treatment of waste and want to see tougher enforcement of these laws.**

PROPOSALS FOR CRUISE SHIPS



PEOPLE'S MISTAKEN PERCEPTIONS

❖❖❖ Cruise customers assume cruise lines are good environmental stewards, and 78 percent believe that sewage is stored in tanks and disposed at shore or treated with chemicals before it is dumped into the ocean. It appalls cruise customers to discover that sewage is dumped untreated into the ocean. Amazingly, just 12 percent of respondents think that untreated sewage from cruise ships is dumped raw into the oceans. Thirty-eight percent of respondents mistakenly believe this sewage is stored in tanks and disposed of at shore. A nearly equal number (40 percent) believe that it is treated first and then dumped into the ocean (40 percent).

AFFORDABLE SOLUTIONS TO CRUISE SHIP POLLUTION ARE AVAILABLE

Cruise ship companies should take responsibility and stop dumping raw sewage in the ocean, especially given the fact that it is not just the marine environment that suffers but passengers as well. Solutions to cruise pollution exist and they work. Installation of these technologies would not significantly raise the cost of a cruise ticket. For example, over a five-year time frame, sewage treatment technology could be installed for little more than the cost each passenger would pay for a soda each day.

A few ships are testing these technologies and proving they work in Alaska, where stricter laws apply. This technology should be placed on every cruise ship so they can stop dumping raw sewage in our oceans, but so far the cruise industry has refused to do this. What's good for Alaska should be good for the rest of the country and the world.

Just installing technology is not enough. The industry has a history of by-passing and disabling pollution control devices, especially oil-water separators. Cruise companies must also guarantee that the technology is operating at all times to keep raw sewage out of our oceans. Electronic monitors or on-board observers should be used to make sure that the waste treatment solution is real.

CRUISE CUSTOMERS PERCEPTIONS OF SEWAGE DISPOSAL PROCEDURES

(Percent Responding)

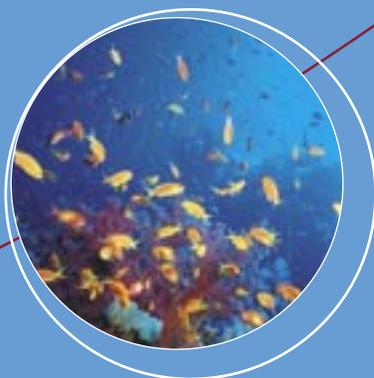
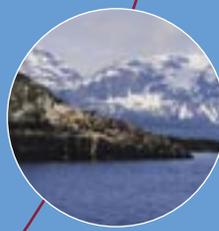
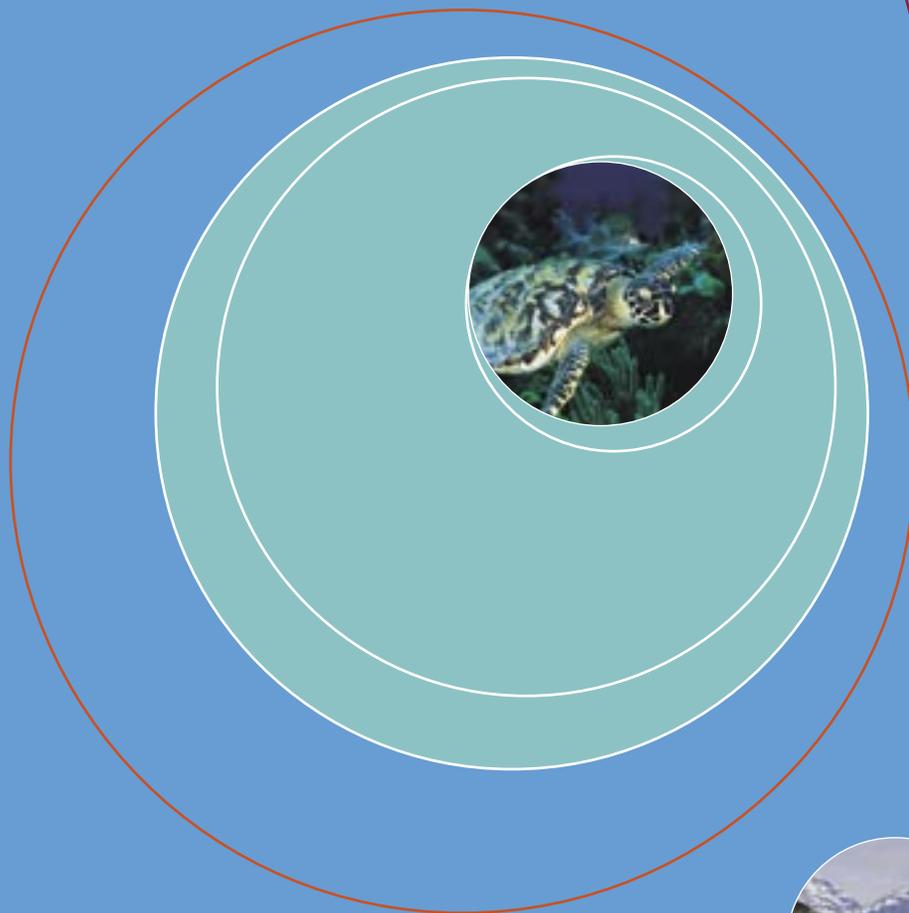
Treated and dumped into ocean	40
Stored in tanks and disposed at shore	38
Left untreated and dumped raw into the ocean	12
Combination of treated and dumped raw	1
Don't know / Refused	7

CONCLUSION: CRUISE PASSENGERS WANT THE INDUSTRY TO STOP NEEDLESS SEWAGE POLLUTION

Dumping untreated human waste from cruise ships is preventable. While the industry wants the cruising public to believe they are responsible stewards of the sea, there is no need to dump raw human waste into our oceans. Oceana and a majority of cruise passengers, according to this poll, want cruise companies to stop dumping their sewage in the ocean and put state-of-the-art technologies on-board existing and new cruise ships. For an industry whose market is projected to double, and whose profits are at an all-time high, this is a small price to pay to protect our oceans.

FOOTNOTES

¹ This survey was prepared and supervised by Greenberg Quinlan Rosner Research, Inc. Polling took place on December 2-5, 2002. These findings, based on a sample size of 633 people who have taken a trip on a cruise ship, are subject to a sampling error of 3.8 percent.





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