As the cruise ship industry has grown, so has its impact on the ocean environment. Today, many ships are the size of small cities, yet they are not subject to the same wastewater regulations. Current cruise ship regulations are left over from the days when ships carried only a fraction of their current passengers.

Cruise Ships and Clean Oceans

The Clean Cruise Ship Act of 2004 would bring cruise ships' waste treatment practices in line with 21st-century technology. Most important, the Act would help to preserve and protect the vibrant yet fragile ocean ecosystems which we all enjoy.

Fast Facts

> Cruise ships built in the 1970s typically accommodated 600 to 700 passengers. Today, the largest cruise ship carries more than 5,000 passengers and crew and has its own zip code.

> Since 1970, the number of people taking cruises has grown by more than 1,000 percent. Worldwide, 9.2 million passengers boarded cruise ships in 2002; over 80 percent of these were U.S. residents.1

> Each cruise ship passenger generates up to 10 gallons of sewage and 85 gallons of gray water daily. A typical cruise ship with 3,000 passengers and crew can produce 255,000 gallons of wastewater and up to 30,000 gallons of sewage every day.2

> Cruise ships are permitted to discharge raw sewage and some other types of waste into the ocean beyond three miles from shore.
How Cruise Ships Affect Ocean Ecosystems

**Sewage (Black Water)**
Sewage, or black water, consists of wastewater generated from toilets and medical facilities. Under current law, cruise ships may not discharge untreated or inadequately treated sewage within three nautical miles of shore. Beyond the three-mile limit, ships can discharge raw sewage, which can wash back to shore.

Human sewage can carry enteric bacteria, pathogens, diseases, viruses, and the eggs of intestinal parasites. Untreated or inadequately treated sewage from ships can contaminate shellfish beds. Eating contaminated fish or swimming in water contaminated with sewage can cause serious illness.

Sewage also contributes to the harmful nutrients—particularly nitrogen—reaching our oceans. Excess nutrients can promote harmful algal blooms, decrease dissolved oxygen in water, and contribute to the decline of coral reefs.

**Gray Water**
Gray water consists of wastewater from sinks, laundries, galleys, and showers. It is the largest type of liquid waste generated by cruise ships. It can contain detergents, fecal coliform, food waste, oil and grease, shampoos, cleaners, pesticides, heavy metals, and on some vessels, medical and dental wastes. At least one cruise line has pled guilty to releasing pollutants through ships’ gray water discharges. A typical ship discharges between 90,000 and 255,000 gallons of gray water per day. Gray water is essentially unregulated and may be discharged almost anywhere in the oceans.

**Toxic Wastes**
Cruise ships also generate toxic wastes, including photo processing chemicals, dry cleaning solvents, and paint waste. These products can be highly toxic to marine organisms. It is illegal to dispose of toxics through the ships’ gray water. Nevertheless, the three largest environmental fines levied against cruise lines in the U.S. were specifically for fraudulently concealing the dumping of toxic substances into U.S. harbors.

**Solid Waste**
A cruise ship with 3,000 passengers and crew generates about 50 tons of solid waste in a single week. Many cruise ships do retain recyclable waste—such as bottles, cans, and cardboard—on board to recycle at port. But 75 to 85 percent of ships’ waste is incinerated at sea. This practice creates yet another pollutant—ash—which is deposited on the ocean through rain.

U.S. law prohibits dumping garbage within three miles of shore, and MARPOL Annex V—an international treaty—prohibits dumping garbage from three to 25 miles from shore, unless it is ground into pieces smaller than one inch. Disposing of plastics is prohibited in all U.S. waters, and in the territorial waters of all countries that have signed onto MARPOL Annex V.
**Air Emissions**

Air pollution from ships’ engines is significant; the U.S. Environmental Protection Agency (EPA) estimates that commercial shipping—including cruise ships—contributes about 42 percent of total U.S. emissions of nitrogen oxide.8 Where there is high cruise ship traffic—such as Alaska and the Caribbean—emissions have caused significant problems. In 2000, for example, the EPA cited six major cruise lines for violating Alaska’s air quality standards.9

---

**Cruise Lines Have a Mixed Record**

Over the past decade, nearly 70 ships affiliated with 42 different cruise lines have been cited for illegal discharges of oil, sewage, gray water, plastics, and other waste and fined more than $30 million for these violations.10 Several cruise lines have worked to develop—and implement—state-of-the-art waste treatment equipment, including new technologies for processing solid waste and garbage, for treating black and gray water to be recycled as ballast water or boiler water, and for treating gas emissions. Still, no government programs exist to verify the efficiency and benefits of new technologies.

---

**What Cruise Lines Should Do**

> To demonstrate their concern for the ocean environment, cruise lines should support the Clean Cruise Ship Act of 2004.

> Cruise lines should reduce air emissions by installing the latest nitrogen oxide control technologies on all ships, and by using low-sulfur fuels.

> All cruise ships should be outfitted with the latest environmental technology to reduce their harmful impacts on marine life and ocean ecosystems.

---

**What Government Should Do**

> The U.S. Congress should enact, and the president should sign, the Clean Cruise Ship Act of 2004 to control cruise ship pollution.

> In the meantime, EPA and the U.S. Coast Guard should enforce existing laws by increasing cruise ship inspections, sampling cruise ship discharges, and requiring better monitoring of waste streams.
The Ocean Conservancy in Action

Since the 1980s, The Ocean Conservancy has been active in addressing pollution from cruise ships, promoting the U.S. ratification of international treaties against dumping at sea, creating a cruise ship watchdog program for passengers, and training industry representatives on sound environmental practices.

In 2002, The Ocean Conservancy published *Cruise Control: A Report on How Cruise Ships Affect the Marine Environment*, a comprehensive study of cruise ship impacts. The report concluded that a lack of environmental regulations and numerous regulatory loopholes left marine life and ocean ecosystems vulnerable to cruise ship pollution. The Conservancy recommended that national legislation be written to address those deficiencies, and we have since worked collaboratively with members of Congress to draft the Clean Cruise Ship Act of 2004.

**What Citizens Should Do**

> Urge your congressional representatives to support the Clean Cruise Ship Act of 2004. Send them an email through The Ocean Conservancy’s Ocean Action Network at www.oceanconservancy.org/activist, or call the Capitol switchboard at 202-224-3121.

> Before you take a cruise, ask the cruise line whether or not they support the Clean Cruise Ship Act of 2004.

> Report any dumping that you witness while on board to the U.S. Coast Guard. To report a discharge, call 800-424-8802. Be sure to note the date, time, and location of the incident.

> We’d also like to know if you’ve seen any harmful discharges or practices on your cruise. If so, please email us at cruisewatch@oceanconservancy.org.

**The Ocean Conservancy in Action**

**Endnotes**


3 ICCL, August 2002, p. 3.

4 In 1998, Royal Caribbean Cruises, Ltd. pled guilty to the fleet-wide practice of illegally disposing of pollutants through ships’ gray water systems.

5 *Cruise Control*, p. 15.

6 “Large Environmental Fines ($100,000 or more),” www.cruisejunkie.com.

7 *Cruise Control*, p. 18.


9 *Cruise Control*, p. 20.