



# 2012 Cruise ship environmental report card

Millions of Americans take cruise vacations every year. Yet, most travelers don't realize that taking a cruise is more harmful to the environment and human health than many other forms of travel. The 2012 Cruise Ship Report Card lets vacationers decide which cruise to take based on a cruise ship or cruise line's environmental and human health impacts.



## What can you do about it? You can choose a greener cruise!

With new ships that can carry more than 8,000 passengers and crew, these floating cities pollute the air we breathe and the water we use and enjoy. Friends of the Earth's third Cruise Ship Report Card compares the environmental footprint of 15 major cruise lines and 148 cruise ships.

### We evaluated the cruise lines on three environmental factors:

**Sewage treatment** Whether a cruise line has installed the most advanced sewage and wastewater treatment systems available instead of dumping minimally treated sewage directly into the water;

**Air pollution reduction** Whether a cruise line has retrofitted its ships to "plug in" to available shoreside electrical grids instead of running polluting engines when docked; and

**Water quality compliance** To what degree cruise ships violated 2010 water pollution standards designed to better protect the Alaskan coast.

2012 Cruise ship report card					
Cruise line	Sewage treatment	Air pollution reduction	Water quality compliance	Change from 2010	2012 final grade
Disney Cruise Line	A	B-	N/A	▲	A-
Princess Cruises	C+	B+	A	▲	B+
Holland America Line	B+	C	B+	▬	B-
Norwegian Cruise Line	A	D-	A	▬	B-
Regent Seven Seas Cruises	C+	F	A	▲	C
Celebrity Cruises	A	F	N/A	▲	C-
Cunard Cruise Line	A	F	N/A	▬	C-
Seabourn Cruise Line	A	F	N/A	N/A	C-
Carnival Cruise Lines	F	C-	B+	▲	D+
Royal Caribbean Int'l	A-	F	N/A	▬	D+
Silversea Cruises	F	F	A	▲	D
Oceania Cruises	B	F	N/A	N/A	D
P&O Cruises	D-	F	N/A	N/A	F
Costa Cruises	F	F	N/A	N/A	F
Crystal Cruises	F	F	N/A	▬	F

Visit our website at [www.foe.org/cruise-report-card](http://www.foe.org/cruise-report-card) for an explanation of our grading system, to learn more about the environmental efforts of individual cruise ships, and to find out what actions you can take to make cruise lines clean up their act.



## Cruise sewage: What goes in must come out

The enormous amounts of food and drink consumed on cruise ships, along with water from laundry, pool, medical facilities, photo labs, spas, and dry cleaning stations, has to go somewhere. At sea, what you flush down the toilet can actually be dumped *untreated* into the ocean to contaminate fish and other marine life, so long as the ship is at least three nautical miles from shore. This sewage contains pollutants including fecal matter, bacteria, viruses, pathogens, nutrients, hazardous waste and pharmaceuticals, all of which can be harmful to human health and aquatic life.



## Sewage endangers

Seafood consumers, beachgoers, surfers, and water sport enthusiasts can contract illnesses, gastrointestinal diseases, diarrhea, ear nose and throat problems, vomiting, hepatitis, and respiratory diseases, when exposed to sewage-contaminated waters or seafood.

## Sewage kills

Fish, shellfish, coral reefs, and other aquatic life can suffocate due to surplus nitrogen and phosphorous from ship sewage that can promote excessive algal growth which reduces available oxygen levels in the water. More than 150 manatees off the Florida coast have died as a result of algal blooms.

## How much sewage comes from one ship?

The U.S. EPA estimates that a 3,000-person cruise ship generates 210,000 gallons of sewage weekly – enough to fill 10 backyard swimming pools, and 1 million gallons of graywater – another 40 swimming pools full of waste. **One cruise ship equals 50 swimming pools full of highly polluted waste which can be dumped into our oceans each week!**

## How does a cruise ship manage sewage?

There are three primary methods ships can use to manage sewage:

1. Cruise ships can use traditional Marine Sanitation Devices (known as Type II MSDs). Although cruise ships can legally use 30-year-old MSD technology to treat sewage, the U.S. EPA has found that sewage treated with this older technology often contains significant amounts of fecal bacteria, heavy metals, and nutrients in excess of federal water quality standards.
2. Cruise ships can use the most advanced sewage treatment technology available (AWTS), which provide better screening, treatment, disinfection, and sludge processing. Even AWTS have trouble removing all dissolved metals and nutrients and can release harmful substances into valuable coastal and marine environments.
3. The last and most environmentally protective method is for cruise ships to hold treated sewage onboard and not dump near our sensitive coasts and marine protected areas.

## Cruise ships pollute the air we breathe

Cruise ships are also responsible for significant air pollution from the dirty fuel they burn, which can lead to serious human health problems, especially in port communities. Even while at dock, cruise ships often run dirty diesel engines to provide electrical power to passengers and crew. Emissions from cruise ship engines include nitrogen oxides, sulfur oxides, carbon dioxide, and diesel particulate matter, the microscopic soot that is so damaging to human health. Among other health and environmental impacts, these emissions contribute significantly to serious cardiovascular problems, premature death, acid rain, habitat destruction, and climate change. Scientists estimate that by 2030, air pollution from ocean-going vessels in U.S. waters will increase by 100 to 200 percent.

## How can a cruise ship reduce air pollution in port?

Fortunately, a few cruise lines have adopted a technology with the potential to greatly reduce dirty air emissions from cruise ships in port. Known as cold ironing, this technology allows cruise ships at dock to plug in to shoreside power and receive electricity to operate their refrigeration, cooling, heating, and lighting systems without having to burn dirty fuel in ship engines.

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