

2019 Cruise Ship Report Card



Is there a Greener Cruise?

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 2019 Cruise Ship Report Card hands out F's to the biggest cruise company in the world—Carnival Corp.—for its seven subsidiary cruise lines' illegal environmental pollution over the past two+ years.

Carnival Corp. has been on criminal probation in the US for the last two years as part of a \$40 million fine and plea agreement for illegally dumping oily waste into the ocean and obstruction of justice. In April 2019, news broke that eight Carnival Corp. companies had violated its 5-year probation by dumping wastewater and plastic into the ocean and polluting our air in excess of federal and state rules. In June 2019, Carnival Corp. paid an additional \$20 million fine and again admitted guilt in a settlement with the US government.

We evaluated 16 major cruise lines on 4 environmental factors:

Sewage Treatment:	Air Pollution Reduction:	Water Quality Compliance:	Transparency:
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.	Whether a cruise line has retrofitted its ships to "plug in" to available shoreside electrical grids instead of running polluting engines when docked.	To what degree cruise ships violated 2010-2018 water pollution standards designed to better protect the Alaskan coast.	Did the cruise lines respond to our requests for information regarding their environmental practices.



Criminal Violations: All Carnival Corporation companies committed criminal environmental violations in 2017 & 2018.

CRUISE LINE	Sewage treatment	Air pollution reduction	Water quality compliance	Transparency	Criminal Violations	2019 FINAL GRADE
Disney	A	D+	A	A		A-
Princess	B	C	A-	F	✓	X F
Norwegian	A	D-	A	F		C-
Holland America	B+	D-	A	F	✓	X F
Seabourn	A	F	B+	F	✓	X F
Celebrity	A	D-	N/A	F		D+
Cunard	A	F	N/A	F	✓	X F
Regent Seven Seas	C-	F	A	F		D
Royal Caribbean	A	F	N/A	F		D
Carnival Cruise Line	F	D	A	F	✓	X F
Silversea	D	F	A	F		D
Oceania	C-	F	C+	F		D-
MSC Cruises	C-	F	N/A	F		F
P&O Cruises	D-	F	N/A	F	✓	F
Costa	F	F	N/A	F	✓	F
Crystal	F	F	N/A	F		F

Royal Caribbean International -
Carnival Corporation -
Norwegian Cruise Line Holdings -

For more information, visit Friends of the Earth: www.foe.org/cruise-report-card

Visit our website 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. Hundreds of manatees off the Florida coast die every year 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 150,000 gallons of sewage per week — enough to fill 10 backyard swimming pools. This adds up to more than 1 billion gallons of sewage a year for the industry.

How does a cruise ship manage sewage?

There are 3 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 35-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 provides 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. 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 NO_x, SO_x, CO₂, and diesel PM, 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. According to the EPA, each day an average cruise ship is at sea it emits more SO_x than 13 million cars and more soot than 1 million cars.

How can a cruise ship reduce air pollution in port?

In U.S. waters ships are required to use cleaner fuel and a few cruise lines have adopted technologies that reduce dirty air emissions from cruise ships. Cold ironing 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. Cruise ships have installed scrubbers to reduce smoke stack emissions but while they reduce air pollution most discharge contaminated waste water—trading one pollution source for another. Using cleaner fuel and adopting shorepower are the best options.



For more information, visit Friends of the Earth: www.foe.org/cruise-report-card