

# Waste Management

Since its inception 30 years ago, through our Save the Waves program, we process our waste through a rigorous waste management program.

All of our ships are equipped to be landfill-free, with processes in place to keep every waste stream we produce out of local landfills.

Ensuring compliance of Save the Waves are Environmental Officers (EO). These senior ship officers report jointly to the ship's Captain and corporate headquarters in Miami. They are

responsible for daily monitoring, testing and compliance with International, National and Local environmental regulations.

For us, Save the Waves is everyone's responsibility on board. Each crewmember is responsible for following proper waste management protocols, which the Environmental Officer outlines during environmental trainings held regularly on board.

## REDUCE, REUSE, RECYCLE



**Reduce:** We work with our suppliers to "green" our supply chain, reduce packaging materials, and use more sustainable resources.



**Reuse:** We participate in container return programs with our vendors and maintain a standard donation database for our fleet, which includes mattresses, sheets, towels, furniture, and clothing.



**Recycle:** Our ships run a single-stream process, where all recyclables are hand-sorted in our waste management room on board. These rooms are equipped with bailers, shredders, and compactors, as well as crushers for glass, light bulbs, and aluminum.

## Responsible Waste Disposal

In addition to robust reduce, reuse, and recycling programs, our initiatives include:

### GREEN LOADING HUBS:

With these strategic ports across the globe, we're able to verify, through periodic audits, that the waste offloaded from our ships is treated properly by local waste vendors and diverted from a landfill. Specially designed, climate-controlled storage facilities allow us to hold recyclables until the optimal and approved recycling time or green loading hubs are reached.

### WASTE TO ENERGY:

We send any solid waste that can't be recycled, reused, or repurposed to an approved waste-to-energy facility. We continue to experiment with technologies like the pelletizer on our *Celebrity Apex* ship, which converts plastic and paper to fuel pellets for offloading at port.

### INCINERATION:

All our ships are equipped with onboard incinerators to help manage waste.

### FOOD WASTE PULPERS:

We carefully source our food and track onboard inventory. Food waste produced on board is sent to a pulper and pulverized to less than 25 mm, as per international standards, and discharged no closer than 12 nautical miles from land.

### HAZARDOUS WASTE MANAGEMENT:

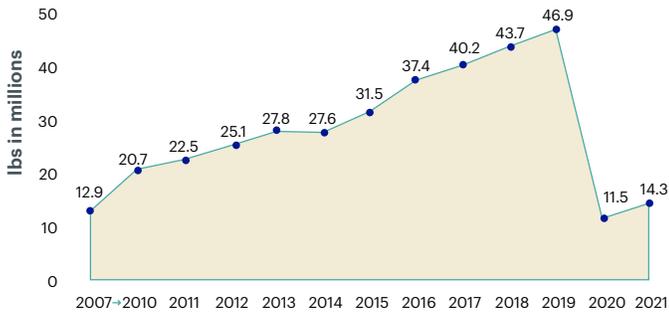
Although we produce very small quantities of hazardous waste (sometimes called special waste) as defined by the U.S. Resource Conservation and Recovery Act, the potential for negative environmental impacts makes the management of hazardous waste one of our highest priorities. We segregate all hazardous waste products into leak-proof containers and transfer them to approved shoreside disposal facilities. We also incinerate some types of bio-hazardous waste on board.

## Waste by the Numbers

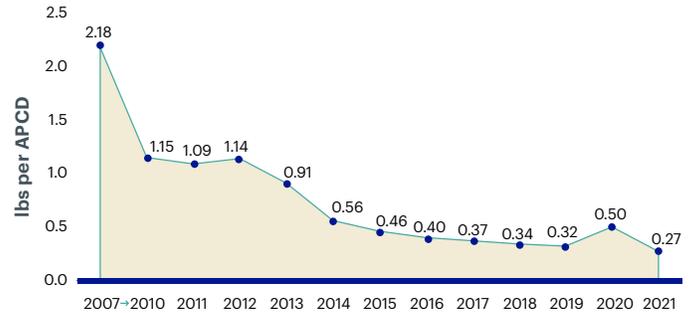
**100%** 100% of our ships are equipped to be landfill-free

**87%** We achieved our target in 2019 of reducing our waste-to-landfill by 85% compared with 2007, and continued our reduction into 2021, reaching 87%.

### TOTAL WASTE RECYCLED



### WASTE TO LANDFILL



Although we landed a smaller volume of waste in 2020 and 2021, our “available passenger cruise day” (APCD) metric was impacted by our reduced passenger load during the pandemic as well as a lack of access to our “green hub” ports.

## Chemical Management

**We take a systematic approach toward evaluating, procuring, handling, storing, using, and responsibly disposing of chemicals in our operations. Our approach includes:**

### ROYAL CARIBBEAN GROUP CHEMICAL PURCHASING LIST (CPL):

Our CPL is supported by the SDS Forums database, which contains detailed handling instructions, health and flammability ratings, and standardized training on how to manage chemicals efficiently while reducing environmental risk.

### GREEN RATING SYSTEM:

We rely on our Green Rating System for many procurement decisions. The system analyzes each ingredient in a chemical product and its environmental impact. The system has helped reduce potential chemical hazards at Royal Caribbean Group; improved our tracking, use, and storage of chemicals; and increased incentives for our suppliers to provide environmentally friendlier products.

### PURCHASING CONTROLS:

We use rigorous purchasing controls to help us facilitate purchasing approvals, improve our Green Rating System, and comply with the Globally Harmonized System of Classification and Labeling of Chemicals.

### Innovations in Food Waste Treatment

We installed a prototype for food waste treatment on *Celebrity Apex* in 2020 called Hydrothermal Oxidation Technology. The pilot, which ran through 2021, tested this innovative waste treatment method, which is designed to enable our ships to treat food waste without discharge to sea.

## Reducing Single-Use Plastics

We’ve completed two phases of a three-phase initiative to draw down our use of single-use plastics. As of 2021, we’ve eliminated plastic straws, stirrers, stake markers, condiment packages, cutlery, and shopping bags, helping us reduce our single-use plastics onboard by 60% since 2019. In phase three—which has already begun on some ships—we will draw down single-use water bottles and other food and liquid containers.

**60%** We have reduced our single-use plastics onboard by 60% since 2019.