

# Waste Management

Since the inception of our Save the Waves® program more than 30 years ago, we process our waste through a rigorous waste management program.

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

Environmental Officers (EOs) onboard our ships ensure compliance with Save the Waves. EOs 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. Each crew member is responsible for following proper waste management protocols, which the EO outlines during regular environmental trainings onboard.

## 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 locations 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 *Celebrity Apex*, 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 is discharged no closer than 12 nautical miles from land, landed ashore, or dried and incinerated on board.

### 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 approved leak-proof containers and transfer them to approved shoreside disposal facilities. We also incinerate some types of bio-hazardous waste on board.

**91%**

We reduced our solid waste offloaded to landfills by 91% in 2022 from a 2007 baseline.

**100%**

All our ships are equipped to be landfill-free.

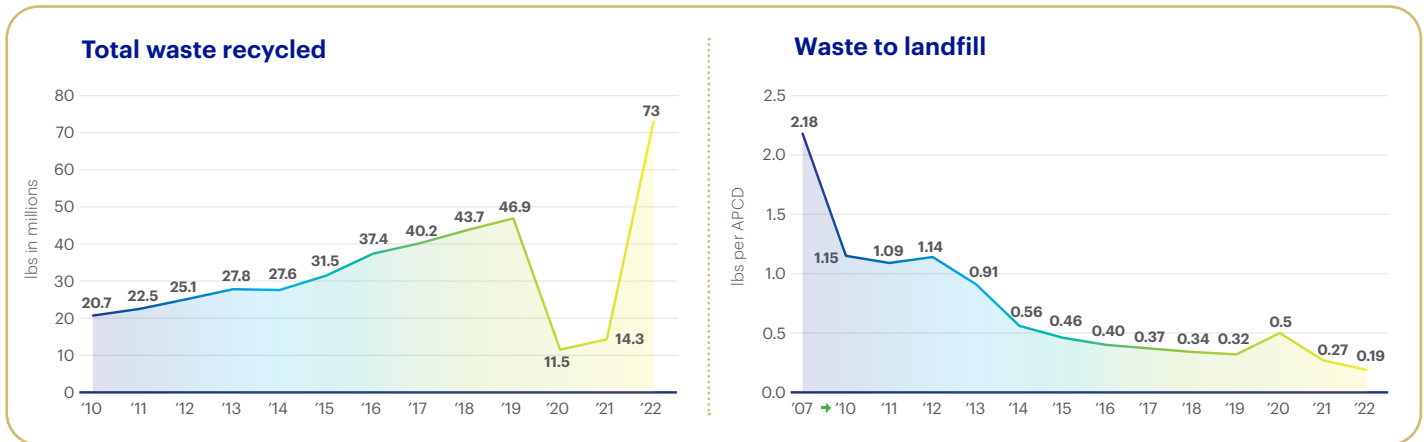
**60%**

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

**50%**

Our WIN on Waste initiative is intended to help us reduce food waste on our ships by 50% by 2026.

## Waste by the Numbers



## 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.

## Emerging Waste Management Technologies

Royal Caribbean International's upcoming *Icon of the Seas* will introduce a first-of-its-kind waste management system that converts waste to energy onboard, allowing us to completely repurpose our waste to reduce our energy consumption. The system converts solid and liquid waste into synthesis gas, or syngas, using controlled amounts of oxygen and/or steam. Because syngas is produced without combustion, it provides a low-carbon alternative to traditional marine incinerators. We can use this syngas as a fuel substitute to satisfy some energy demands on our ships.

## Reducing Single-Use Plastics

In 2022, we launched phase three of our initiative to eliminate single-use plastics on our ships. During the first two phases, we eliminated plastic straws, stirrers, steak markers, condiment packages, cutlery and shopping bags, helping reduce our single-use plastics onboard by 60% since 2019. Phase three focuses on eliminating plastic water bottles, food containers, cups and lids. Many of our ships have already switched to recyclable aluminum cans for drinking water.