

# Holland America Line Environmental Programs

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## Environmental Management System — ISO 14001 Certification

Holland America Line's Environmental Management System was certified to conform to the ISO 14001 standard by an independent registrar, Lloyd's Register Quality Assurance. The Environmental Management System is the collection of all environmental policies, training and procedures for every shipboard environmental aspect.

Holland America Line's Environmental Management System requires an Environmental Officer onboard each ship to provide environmental training and to oversee shipboard compliance with environmental laws, regulations, industry standards and company policies. The Environmental Officer reports directly to the ship's Master. Each ship in the fleet is further monitored and evaluated by aggressive environmental audit programs.

All crew members receive basic environmental training to assure they know the requirements and procedures necessary to protect the environment. Those with additional responsibilities receive further environmental training specific to their jobs. Every aspect of vessel operations, from the food preparation and hotel operations, to the navigation and ship operations on the bridge, to the engineering and maintenance activities in the engine room, are performed in a manner to minimize the impact on the environment while assuring a safe and satisfying experience for guests.

To facilitate this task, corporate headquarters has an Environmental Management Systems department that provides training and guidance to the fleet. The vice president of this department reports directly to the president and CEO.

## Seagoing Environmental Innovation:

- **Bilge Water Treatment**

Holland America Line pioneered the use of "cascade bilge-water treatment systems" in which oily bilge water is treated by two separate systems before being discharged overboard in conformance with international, state or local requirements. Bilge water is the engine maintenance run-off and condensation that collects in the ship's bilge. Enhanced maintenance practices also serve to minimize generation of bilge water.

- **Waste Water Treatment**

The waste stream with perhaps the greatest potential environmental impact is sewage, also called black water. Black water comes from the toilets and from the drains and sinks of the infirmary. All vessels are equipped with certified Marine Sanitation Devices meeting the specification of international and U.S. Coast Guard requirements. In fact, most of Holland America Line's ships are fitted with ZENON, Rochem or Hamworthy Advanced Waste Water Purification Systems that treat the black water with state-of-the-art Reverse Osmosis and Bioreactor technology. These systems employ a series of filters and disinfecting steps to treat the black water — and grey (shower and sink) water — before discharging into the sea. The resulting effluent exceeds the quality of most municipal treatment systems and is clean enough to meet the drinking water standards in many communities ashore.

- **Shore Power**

Holland America Line has outfitted five of its ships to use electricity (shore power) to reduce both fuel consumption and air emissions: *ms Westerdam*, *ms Noordam*, *ms Oosterdam*, *ms Amsterdam* and *ms Zuiderdam*. Holland America Line buys and uses shore power instead of burning ship-board fuels while stationed at ports with the capability such as Seattle and Vancouver, B.C.

## **Seawater Scrubber Pilot Program**

In cooperation with local regulatory agencies, the U.S. Environmental Protection Agency and B.C. Clean Air Research Fund, Holland America Line is participating in an in-depth feasibility study to develop and test a stack emission scrubber for possible use on board its cruise ships.

Holland America Line launched the technology demonstration project, costing more than \$1.5 million, to demonstrate the feasibility of using seawater to "scrub," or reduce, engine emissions on oceangoing vessels. Developed by Krystallon, scrubber system uses the natural chemistry of seawater to remove virtually all sulfur oxide (SOx) as well as significantly reduce particulate matter emissions. The sea water is then treated to remove harmful components prior to being discharged overboard.

This pilot program is being monitored by a technical advisory committee composed of representatives from each government agency. Following several years of collecting and studying the data, the program could dramatically change not only the cruise industry, but the entire maritime industry by reducing ship engine emissions.

## **Whale Conservation Program**

Holland America Line's "Avoiding Whale Strikes" program and its commitment to the conservation of whales have been recognized by the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service with a Conservation Partnership Award, part of a newly established Sustainable Fisheries Leadership Awards Program.

Holland America Line developed the interactive, computer-based training program designed to avoid whale strikes in cooperation with NOAA and the National Parks Service. All deck officers on Holland America Line vessels have taken the course, and the program is being shared with the cruise and maritime community.

## **Ship to Shelter Donation Program**

The line donates supplies through Ship to Shelter, an innovative community-giving program that is the first of its kind in the nation. Reusable goods are collected from Holland America Line ships sailing from homeports in Seattle, San Diego, Fort Lauderdale, Tampa and Vancouver, B.C., and donated to local charities serving people in need. Donated items include towels, linens, dishes, cookware, silverware, televisions, computers and mattresses. Ships sailing around the world also donate valuable, reusable items to communities in need, and crews often donate their own money, time and toys to organizations of need in ports of call.

## **Reduce, Reuse, Recycle**

Holland America Line takes many measures to minimize or reduce solid waste volumes. Approximately eight tons of garbage are collected onboard each ship during a seven-day cruise. Holland America Line employs many "best practices" to help minimize, manage and recycle this waste. For example:

- Holland America Line takes an aggressive approach to ordering the right quantities when purchasing products for use on vessels and minimizes the use of packaging, especially plastics.
  - Ships use paper or washable cups, wooden stirrers, paper bags and glass or metal packaging whenever possible.
  - Bulk dispensers for individual condiments and cream further reduce plastic packaging.
- Holland America Line buys products manufactured from or packaged in recycling packaging. Printed matter is on recycled paper when available.
- Cleaning products are selected to be environmentally friendly while providing the most effective sanitation program available. In addition, bulk formulators and dispensing systems have been installed onboard to dramatically reduce the generation of packing and container waste. These products both do the job and are compatible with Holland America Line's advanced waste water treatment systems to complement that technology.

- Holland America Line has a strict protocol for garbage handling that significantly reduces the volume of solid wastes generated.
  - All crew members are trained to use products fully, reuse when possible, and to sort garbage properly when disposing of material.
  - All ships also have crewmembers that are especially trained and responsible for final sorting, processing, storing, recycling and disposal.
  - All garbage is first separated into categories: food waste, glass, cans, paper, cardboard, cooking oil and wooden pallets.
  - Everything that can be recycled is sent ashore for recycling, depending on the available shore-side facilities.
  - All other waste is disposed of in a way that meets or exceeds international, national or local requirements.

### **New Technology to Reduce Hazardous Materials**

Holland America Line actively seeks to reduce both the quantity and toxicity of hazardous materials used on board. For example:

- Perchloroethylene-based dry cleaning machines are being replaced with soy, orange and banana oil-based "wet cleaning" machines.
- On board x-ray facilities have been converted to digital technology to reduce the use and disposal of hazardous materials.
- Onboard photo labs are equipped with a silver recovery system that removes the silver content from spent photo-chemicals, allowing both the silver and the spent chemicals to be further treated or recycled. Ships have also transitioned to digital photography equipment.
- All chemical waste materials are landed ashore for disposition in strict compliance with shoreside regulations and tracked using a computerized system.

### **Guest Participation in Environmental Awareness & Stewardship**

While aboard, guests are invited to view Holland America Line's environmental stewardship video. Presented by the Environmental Officer, this 20-minute video describes the company's environmental protection practices and is followed by a question and answer period.

Ships traveling to Alaska and Antarctica also have special presentations to ensure guests' sensitivity to those regions' special environmental conditions.

Holland America Line invites guests to participate in its onboard environmental programs. Guests are encouraged to use segregated waste containers stationed throughout the vessel, reuse bath towels, close exterior doors and reduce water and power usage.

For more information, contact [PR@HollandAmerica.com](mailto:PR@HollandAmerica.com) or 1-800-637-5029.