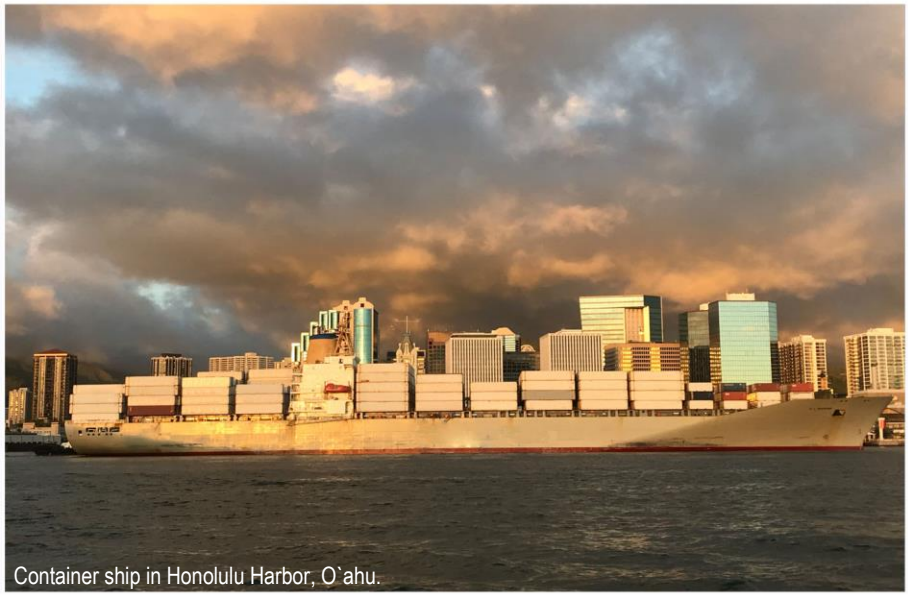
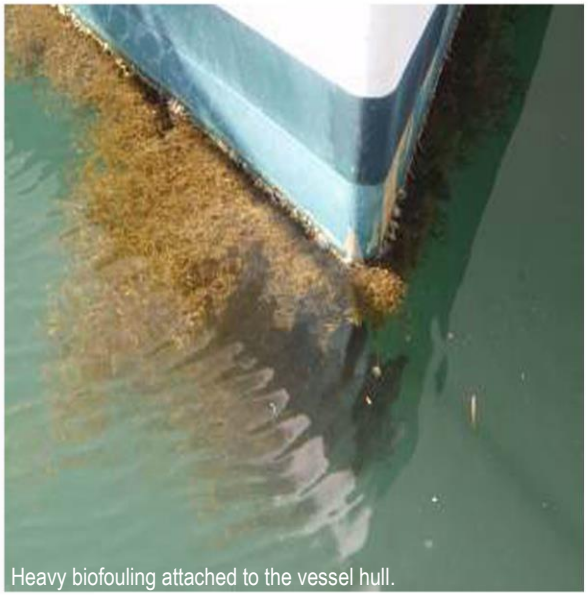
Ballast Water and Hull Fouling Program

Protecting Hawai`i from invasive species by managing ship biofouling and and ballast water



Container ship in Honolulu Harbor, O`ahu.



Heavy biofouling attached to the vessel hull.

Ballast Water and Biofouling Management

The number of aquatic non-indigenous species (NIS) established in the State of Hawai`i is nearly equivalent to the Continental US States combined—400 vs. 450 NIS, respectively. Up to 78% of the marine NIS of algae and invertebrates were unintentionally introduced through ballast water (large volumes of water used for stability during ship voyages) and vessel biofouling (organisms attached to submerged areas vessels). NIS threaten Hawai`i's environmental and socioeconomic health for current and future generations; therefore, proactive management of these top two vectors of aquatic NIS transfer is essential for the preservation of our limited and culturally significant resources.

Project description

Hawai`i State's Ballast Water and Hull Fouling Program is currently in development, to achieve goals and objectives identified in the Hawai`i Interagency Biosecurity Plan and the Hawai`i Ocean Resources Management Plan. The Program is heavily focused on preventative measures including developing or optimizing legislation for managing both sources of NIS transfer, conducting biosecurity risk assessments of commercial vessels, creating enforcement standard operating procedures, and monitoring current and newly established NIS. A summary of several ongoing projects are provided below:

Hull Fouling

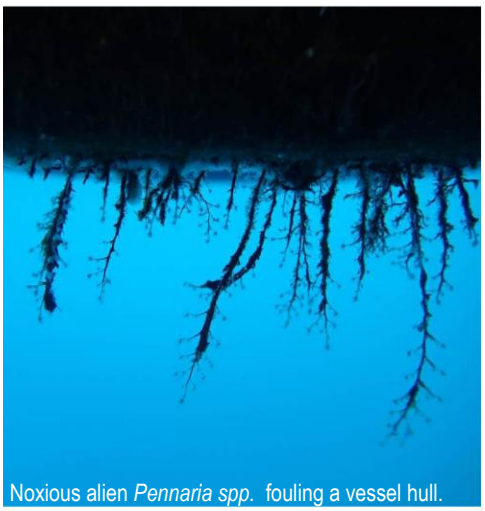
- Developing measurable biofouling compliance standards for vessels arriving to Hawai`i
- Identifying the best available technology and best management practices for managing ship biofouling
- Developing inspection and enforcement procedures for underwater biofouling inspections
- Monitoring coral reefs and commercial harbors to detect and quantify the spread of NIS

Ballast Water

- Amending Hawai`i State Ballast Water Rules (Ch. 13-76, see page 2) to mandate interisland management of ballast water discharge for protecting neighbor islands
- Conducting ballast water biosecurity risk assessments, in coordination with the US Coast Guard, on commercial ships by checking documentation and sampling ballast water
- Conducting stakeholder meetings with industry groups, federal agencies, state agency partners, scientists, and groups representing Hawai`i culture, to find workable solutions for managing these vectors
- Monitoring harbor water in commercial ports for microscopic NIS

EXPECTED BENEFITS

- Minimize the introduction of marine NIS into Hawai`i as well as their spread throughout the Hawaiian Archipelago
- Control aquatic NIS early-on, before they spread and inundate more pristine neighbor islands
- Raise overall public awareness to the top vectors of NIS transfer
- Increased fundamental communication among the stakeholder groups
- Preserve native marine environments thereby promoting socioeconomic health to Hawai`i nei



Noxious alien *Pennaria spp.* fouling a vessel hull.

DIVISION OF AQUATIC RESOURCES
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Vessel discharging ballast water.

WHAT IS IN BALLAST WATER?

PROJECT SUPPORTERS

- Hawaii Invasive Species Council
- US Fish and Wildlife Service
- Department of Land and Natural Resources, Division of Aquatic Resources

ADDITIONAL INFORMATION

For additional information please see:

www.dlnr.hawaii.gov/ais
http://dlnr.hawaii.gov/dar/files/2014/05/ch76.pdf

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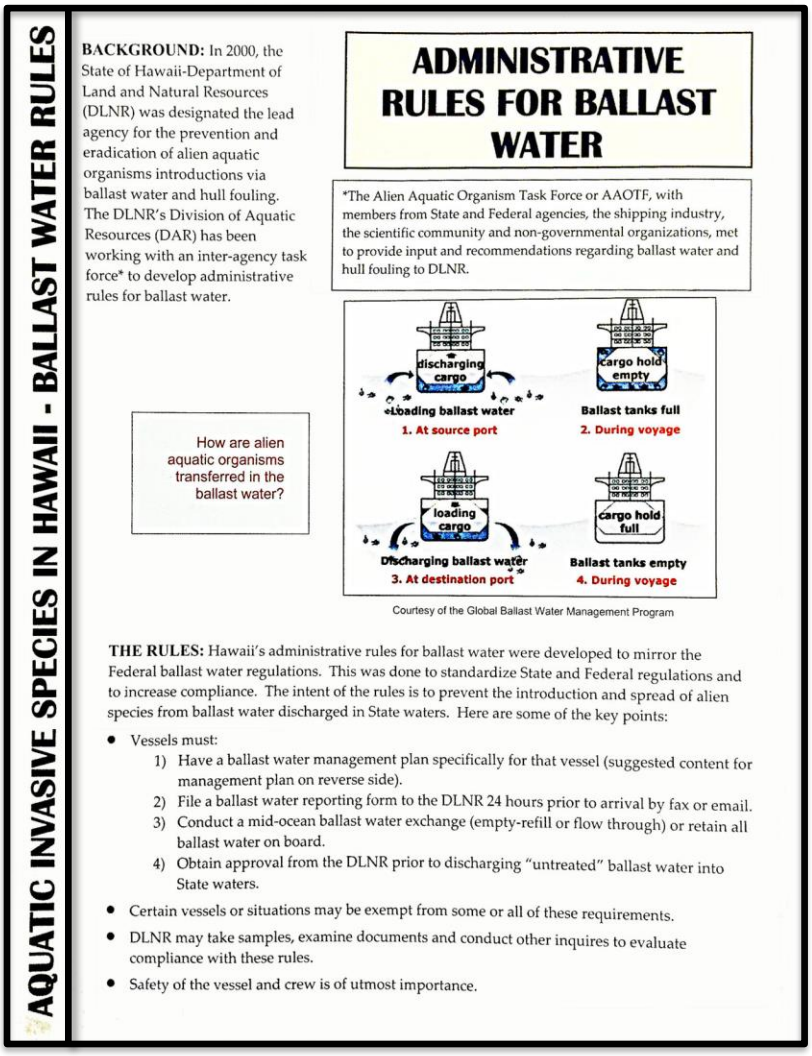

AQUATIC INVASIVE SPECIES IN HAWAII - BALLAST WATER RULES

BACKGROUND: In 2000, the State of Hawaii-Department of Land and Natural Resources (DLNR) was designated the lead agency for the prevention and eradication of alien aquatic organisms introductions via ballast water and hull fouling. The DLNR's Division of Aquatic Resources (DAR) has been working with an inter-agency task force* to develop administrative rules for ballast water.

ADMINISTRATIVE RULES FOR BALLAST WATER

*The Alien Aquatic Organism Task Force or AAOTF, with members from State and Federal agencies, the shipping industry, the scientific community and non-governmental organizations, met to provide input and recommendations regarding ballast water and hull fouling to DLNR.

How are alien aquatic organisms transferred in the ballast water?

Courtesy of the Global Ballast Water Management Program

THE RULES: Hawaii's administrative rules for ballast water were developed to mirror the Federal ballast water regulations. This was done to standardize State and Federal regulations and to increase compliance. The intent of the rules is to prevent the introduction and spread of alien species from ballast water discharged in State waters. Here are some of the key points:

- Vessels must:
  1) Have a ballast water management plan specifically for that vessel (suggested content for management plan on reverse side).
  2) File a ballast water reporting form to the DLNR 24 hours prior to arrival by fax or email.
  3) Conduct a mid-ocean ballast water exchange (empty-refill or flow through) or retain all ballast water on board.
  4) Obtain approval from the DLNR prior to discharging "untreated" ballast water into State waters.
- Certain vessels or situations may be exempt from some or all of these requirements.
- DLNR may take samples, examine documents and conduct other inquires to evaluate compliance with these rules.
- Safety of the vessel and crew is of utmost importance.