



Title: Ballast Water and Hull Fouling Coordinator

Organization: Department of Land and Natural Resources, Division of Aquatic Resources

Award(s): \$30,547

Introduction: The mission of the Division of Aquatic Resources is to manage, conserve and restore the state's unique aquatic resources and ecosystems for present and future generations. A key threat to Hawaii's aquatic environment is aquatic invasive species (AIS) and DLNR has statutory responsibility for this issue. This position develops and implements policy to minimize the introduction and spread of AIS in Hawaii. The total funding need for this position and supporting work in FY13 was \$107,000. HISC provided 35% of this need.

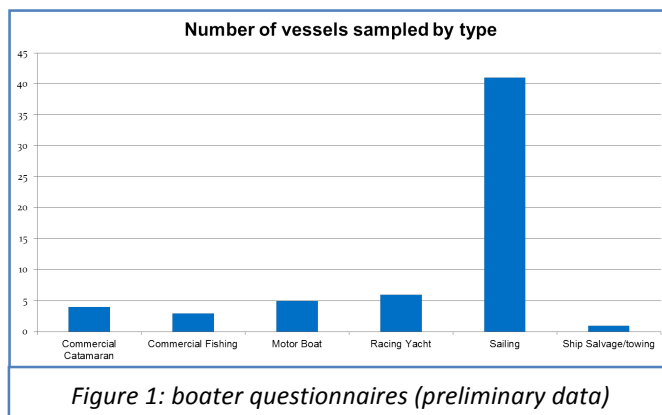
Achievements in FY13

Deliverable 1: Continue the administration of Hawaii Administrative Rules, Chapter 13-76. Maintain compliance of incoming vessels through evaluation of ballast water reports.

Ballast water reports were regularly processed to ensure vessels arriving into Hawaii were complying with the state's ballast water rules. The majority of vessels were compliant, with a small proportion discharging untreated ballast under safety exemptions. DAR began assessing gaps in ballast water management in Hawaii, including unmanaged ballast and verification of treated ballast. Also, the federal government introduced more stringent, numeric based ballast water standards in 2012. DLNR is considering the implications for the state's ballast water regulations.

Deliverable 2: A risk assessment characterizing the biofouling maintenance of vessels operating in Hawaii.

In early 2013 DAR reconvened the Hawaii's Alien Aquatic Organism Task Force (AAOTF) and led the group in discussions on how to manage vessel biofouling. This included issuing formal invitations to re-engage with members and seek new members to ensure a balanced stakeholder group. The group agreed that biofouling is a major risk for aquatic invasive species introductions in Hawaii and to assist with the development of a management framework. Firstly, questionnaires were finalized, for both commercial and recreational craft, to collect information on how boat and ship owners keep their hull and niche areas clean of biofouling. Data collection began in June



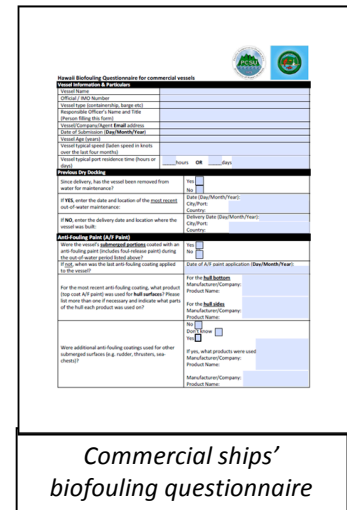
2013 and to date DAR has collected 60 boater questionnaires (Figure 1). Shipper questionnaires will be collected during the rest of 2013. This information will help DLNR to understand the drivers and barriers to the uptake of management actions for biofouling. It will be used to create a draft biofouling policy for Hawaii in 2014. Another key achievement was the biofouling inspection and sampling of a passenger vessel in dry dock in Hawaii, to support ship data collection.

Deliverable 3: A draft memorandum of understanding is prepared for collaborative work on biofouling and ballast water issues amongst the Pacific states.

Discussions on developing a MOU are still in progress and continuing. Importantly, a group of Pacific US states have begun discussing consistency in vessel biofouling management and in water cleaning management (also of vessels). These are important areas where reciprocity would be of value to resource management and for providing consistency to industry groups. There are good opportunities in the upcoming fiscal year for these discussions to materialize into a MOU.

Deliverable 4: Participate strategically in the aquatic invasive species (AIS) groups including the Pacific Ballast Water Working Group (remotely), HISC Prevention Working Group and Coordinating Group on Alien Pest Species.

The coordinator participated in regular meetings of the Hawaii Invasive Species Council, the HISC Working groups, and the Coordinating Group on Alien Pest Species by giving presentations on progress and engaging with partners. The Coordinator also participated remotely in aquatic invasive species working groups from neighboring states including the California State Land's Commission Technical Advisory Group (for vessel biofouling), the Washington State's Ballast Water Working Group, and in the Coastal Subcommittee of the Western Regional Panel on Aquatic Nuisance Species. The coordinator has been invited to chair this group in 2014.



The image shows a "Commercial ships' biofouling questionnaire" form. It includes sections for "Ship Information", "Biofouling Management", and "Contact Information". The form is designed to collect data on ship biofouling management practices and contact details for the HISC Prevention Working Group.

Other Activities in FY13

Japan Tsunami Marine Debris Response: The coordinator responded to numerous reports of suspected Japan tsunami marine debris in Hawaii. This debris has emerged as a potential vector for AIS introductions in Hawaii, though it is considered an unprecedented event and the volume of debris is expected to reduce in the near future. Potential invasive species were first detected on JTMD in Hawaii in late 2012. Outreach materials explaining how to respond and why the debris poses an AIS issue was developed for the public and first responders. Next year, surveys are planned for the areas where debris has landed in Hawaii with suspect invasive species attached, to determine if there have been any species transfers.

Other stakeholder meetings:

The coordinator was also very fortunate to participate at the Australia, New Zealand and Pacific biofouling workshop on Sustainable Shipping. Key outcomes included setting up a comparative biofouling study with Western Australia, engaging with the World Ocean Council who are based in Honolulu and have added biofouling to their agenda, and engagement with Samoa on addressing biofouling of ships.



The image shows an outreach material titled "Aquatic Invasive Species and Japanese Tsunami Marine Debris". It includes a list of "QUESTIONS AND ANSWERS" regarding the debris and its potential impact on Hawaii's resources. The material also features photographs of various types of marine debris, including large driftwood, smaller debris, and biofouling on ship hulls. A note at the bottom states: "FOR MORE INFORMATION, VISIT: [HTTP://DLNR.HAWAII.GOV](http://DLNR.HAWAII.GOV)".

Contact Information

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