**Section: Biodiversity**

**TITLE: Guide to ballast water treatment 2013**

**WEB LINK:** [http://www.rwo.de/rwo/ressources/documents/1/25412,Ballast-Water-Guide-2013.pdf](http://www.rwo.de/rwo/ressources/documents/1/25412%2CBallast-Water-Guide-2013.pdf)

**ISSUES:** Introduction of invasive species, shipping

**DESCRIPTION:** Extensiveresearch has gone into preventing the introduction of invasive species by ballast water. Technologies included in the guide are the following: chlorine dioxide, coagulation, cyclonic separation, electro-catalysis, electrochlorination/electrolysis, ozonation, Peraclean Ocean, residual control (sulphite/bisulphate), UV radiation, chlorination, and deoxygenation. This guide was produced by Lloyd’s Register and the topic is relevant to large vessel owners and operators.

**TITLE: Safer alternatives to copper based antifouling paints for marine vessels project**

**WEB LINK:** <http://www.epa.gov/region9/waste/features/safe-paint/pdf/alternative-coating-matrix.pdf>

**ISSUES:** Introduction of invasive species, shipping, boating

**DESCRIPTION:** Matrix to assist boaters in selecting appropriate coating for boat and boat use. There are many different types of antifouling paints for marine vessels which reduce the introduction of invasive species but some may be more suited to some types of vessels than others. This matrix, by the Unified Port of San Diego, is a tool that vessel owners and operators could use to aid the selection process

**TITLE: Global strategy on invasive alien species**

**WEB LINK:** <http://data.iucn.org/dbtw-wpd/edocs/2001-011.pdf>

**ISSUES:** Introduction of invasive species, strategic responses to invasive species

**DESCRIPTION:** While this strategy published by the IUCN is targeted at higher levels of government, it contains information that may be of interest to state/provincial governments, municipalities, and NGOs. This document describes how invasive species influence economic sectors, the sources and pathways of invasive species, and strategic responses to the introduction of invasive species.

**TITLE: Boater Fact Sheets**

**WEB LINK:** <http://www.mass.gov/eea/docs/czm/cwq/marinas/cmg-factsheets.pdf>

**ISSUES:** wastewater management, pollutant/contaminant removal and containment, invasive species, boating

**DESCRIPTION:** The Boater Fact Sheets provide user-friendly BMPs for owners and operators of personal watercrafts. The series covers boat operation and fueling, waste disposal, wastewater management, vessel maintenance, and non-toxic cleaning alternatives. Developed by the Massachusetts government, these fact sheets are targeted towards marinas, municipalities, and vessel owners/operators.

**TITLE: A guide to selecting pressure washing management practices and technologies**

**WEB LINK:** <http://www.mass.gov/eea/docs/czm/cwq/marinas/pressure-washing-guide.pdf>

**ISSUES:** wastewater management, pollutant/contaminant removal and containment, invasive species , boating

**DESCRIPTION:** The wastewater produced by power-washing contains microbial pathogens and toxic components therefore it must be properly managed. This guide includes information pertaining to why the management of pressure washwater is important, basic principles of pressure washwater management and some specific technologies that can be utilized. The Massachusetts Office of Coastal Zone Management produced this guide as a tool for marina operators and vessel owners/operators.

**TITLE: Massachusetts clean marina guide: Strategies to reduce environmental impacts**

**WEB LINK:** <http://www.mass.gov/eea/docs/czm/cwq/marinas/cmg-complete.pdf>

**ISSUES:** wastewater management, pollutant/contaminant removal and containment, invasive species, boating

**DESCRIPTION:** The Massachusetts Clean Marina Guide covers a variety of activities with environmental implications including hull maintenance, boat cleaning, engine maintenance, fueling, and wastewater management. Published by the Massachusetts Executive Office of Environmental Affairs and the Massachusetts Office of Coastal Zone Management, this guide is geared towards marinas, municipalities, boatyards, and vessel owners/operators.