

effectiveness of BWE in removing NIS from ballast tanks can be quite variable. These drawbacks combine to make BWE less than desirable as a long-term approach to preventing introductions of NIS via ballast water discharges.

Recognizing that BWE is not a long-term solution, and that some vessels would not be able to consistently conduct effective BWE operations, Congress provided, as part of its recommended management actions, that vessel owners have the option of using BWM methods other than BWE. The Secretary of Homeland Security can approve such BWM methods if they are found to be at least as effective as BWE in reducing the risk of NIS introductions. The marine industry and scientific community are currently developing BWM methods and studying their biological efficacy and engineering performance. To comply with NISA and approve such BWM management methods as an alternative to BWE, the Coast Guard must develop objective criteria and administrative procedures for such approvals. The criteria include the quantitative treatment requirements that must be accomplished by treatment technologies. The first step to meeting the directives of NISA is to develop a BWD standard.

Alternatives

Reasonable alternatives that meet the established purpose and need will be evaluated and considered in detail. Currently the Coast Guard is examining a range of alternatives that vary in the degree to which the discharge of organisms would be prevented.

(1) *Alternative 1*: This alternative is the most stringent of all the alternatives in preventing the introduction of NIS. This alternative would comply with all current applicable environmental laws and other environmental mandates, and result in the discharge of no detectable viable organisms larger than 0.1 microns. This alternative would also require the removal or inactivation of all membrane-bound organisms (including bacteria), and most viruses, and would essentially require the sterilization of ballast water.

(2) *Alternative 2*: This alternative would fall between Alternative 1 and Alternative 3 in stringency. It would establish maximum acceptable discharge concentrations for various types of potential NIS—macrofauna, including fish and invertebrate zooplankton; heterotrophic and autotrophic protists (phytoplankton); and other microbes such as bacteria and viruses—to greatly reduce the risk of future introductions. Alternative 2 would also comply with all current

applicable environmental laws and other environmental mandates. It would result in the discharge of no more than a particular number of viable individuals per liter of zooplankton greater than a cut-off size in microns and no more than a particular number of phytoplankton greater than a cut-off size, and discharge of a specified set of indicator microbes not to exceed specified concentrations. These standards could include the establishment of indicator species for use in approval and compliance testing. Concentration numbers have not been stated in the above description, as we are requesting comments from the public regarding the conceptual approach and the quantitative concentrations that should be specified. However the Coast Guard anticipates that the concentration number will fall between Alternative 1 and Alternative 3.

(3) *Alternative 3: No Action*. This alternative is the least stringent of the range of alternatives in preventing the introduction of NIS and would not establish a BWD standard. Instead, under the mandatory BWM program established according to the directives in NISA, it would be applicable to vessels equipped with ballast tanks entering U.S. waters after operating beyond the Exclusive Economic Zone (EEZ). As currently framed, the mandatory BWM program directs vessels to either conduct BWE or retain ballast water onboard or use a reception facility or another environmentally sound management method approved by the Coast Guard. Currently, few vessels have the ability to retain ballast water onboard and still conduct commercial activities, and no reception facility has been built to treat ballast water for removal of NIS. In addition, no environmentally sound methods to manage ballast water, other than BWE, have been approved by the Coast Guard. Thus, for the near future, the No Action alternative would mean that the primary mandatory BWM practice vessels would conduct is mid-ocean BWE when safe and feasible. Those vessel owners desiring to use some other ballast water management method would be required to demonstrate that the proposed method was at least as effective as BWE, on that vessel.

The Coast Guard is requesting input on any additional alternatives for analysis, any environmental concerns the public may have related to the alternatives for establishing a BWD standard, suggested analyses or methodologies for inclusion in the PEIS, and possible sources of relevant data or information.

Scope

The following environmental requirements have been tentatively identified for analysis in the PEIS and are presented to facilitate public comment during the scoping process of the PEIS. This list of requirements is neither intended to be all-inclusive nor to be a predetermined set of potential impacts. Additions to or deletions from the list of issues may occur as a result of the scoping process. The environmental requirements include the following:

(1) *Endangered or Threatened Species*: Potential impacts to endangered or threatened marine life and birds from each of the alternatives.

(2) *Essential Fish Habitat*: Potential effects to waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity from each of the alternatives.

(3) *Other Biological Habitats and Organisms*: Potential impacts to aquatic vegetation and benthic organisms from each of the alternatives.

(4) *Coastal and Marine Birds*: Potential impacts to coastal marine and birds from each of the alternatives.

(5) *Aquatic Resources*: Potential effects to marine mammals, sea turtles, and fisheries species from each of the alternatives.

(6) *Water Quality*: Potential impact to water quality resulting from each of the alternatives.

(7) *Air Quality*: Potential impact to air quality resulting from each of the alternatives.

(8) *Great Lakes/Hudson River environment/resources*.

(9) *Socio-economics*: Potential impact to recreational activities (including fishing), tourism, commercial fisheries, commercial infrastructure (including power plants and water treatment facilities), maritime commerce, and subsistence activities due to each of the alternatives.

(10) *Public Health and Safety*: Potential impacts to public health and safety associated with each of the alternatives.

Public Meetings

Five public scoping meetings will be held during the public comment period of this notice. Notice of those meetings will be published in the **Federal Register**. All appropriate comments provided at the public scoping meetings, both written and oral, will be considered in the preparation of the Draft and Final PEIS and will become part of the public record (*i.e.*, names, addresses, letters of comments, comments provided during the public meeting).