INVASIVE SPECIES

Progress and Challenges in Preventing Introduction into U.S. Waters Via the Ballast Water in Ships

What GAO Found

Congress recognized ballast water as a serious problem in 1990 with passage of the Nonindigenous Aquatic Nuisance Prevention and Control Act, legislation intended to help reduce the number of species introductions in the Great Lakes. A reauthorization of this law in 1996, the National Invasive Species Act, elevated ballast water management to a national level. As directed by the legislation, the federal government has promulgated several regulations requiring certain ships to take steps, such as exchanging their ballast water in the open ocean to flush it of potentially harmful organisms, to reduce the likelihood of species invasions via ballast water. Initially these regulations applied only to certain ships entering the Great Lakes; now they apply to certain ships entering all U.S. ports. In addition to these domestic developments, the United Nation’s International Maritime Organization has recently adopted a convention on ballast water management that could affect the global fleet.

Since 1998, Coast Guard data show that compliance with existing ballast water exchange requirements has generally been high. However, key agencies and stakeholders recognize that the current ballast water exchange program is not a viable long-term approach to minimizing the risks posed by ballast water discharges. The primary reasons for this are that:

• many ships are exempt from current ballast water exchange requirements,
• the Coast Guard has not established alternate discharge zones that could be used by ships unable to conduct ballast water exchange for various reasons, and
• ballast water exchange is not always effective at removing or killing potentially invasive species.

Developers are pursuing technologies to provide more reliable alternatives to ballast water exchange, some of which show promise. However, development of such technologies and their eventual use to meet ballast water regulatory requirements face many challenges including the daunting technological task of developing large scale water treatment systems that ships can accommodate, and the lack of a federal discharge standard that would provide a target for developers to aim for in terms of treatment efficiency. As a result, ballast water exchange is still the only approved method for treating ballast water despite the concerns with this method’s effectiveness. Consequently, U.S. waters remain vulnerable to the introduction of invasive species via ships’ ballast water. State governments and others have expressed frustration over the seemingly slow progress the federal government has made on more effectively protecting U.S. waters from future species invasions via ballast water. As a result, several states have passed legislation that authorizes procedures for managing ballast water that are stricter than federal regulations.