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The Vessel Incidental Discharge Act: Background and Issues

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July 12, 2016

Congressional Research Service
7-....
www.crs.gov
R44181

CRS REPORT
Prepared for Members and
Committees of Congress

Summary

Today stakeholders broadly agree on the need for strong measures to control vessel discharges, especially ballast water discharges, that can introduce a wide range of contaminants into U.S. and international waters. Ballast water has been identified as a major pathway for introduction of aquatic nuisance, or invasive, species that can harm aquatic ecosystems. Vessel discharge requirements in the United States are a result of U.S. Coast Guard regulations; a U.S. Environmental Protection Agency (EPA) permit; and individual state requirements that apply in nearly one-half of the states. Vessels also are subject to a number of international agreements, treaties, and Conventions. This report discusses the combination of regulations and standards, which is at issue today and is addressed in legislation in the 114th Congress, the Vessel Incidental Discharge Act (S. 373, H.R. 980, and titles included in S. 1611, S. 2829, and H.R. 4909, which the House passed on May 18).

The existing regulatory system presents several issues. First, for some time, the maritime industry has argued for harmonization of what it views as duplicative federal rules for vessel discharges, especially for ballast water discharges, through a single set of requirements. Shipping and other industry groups have raised concerns that EPA's permit overlaps with mandates in Coast Guard rules, making implementation costly and confusing for vessel owners. Others, especially some environmental groups, favor centralizing regulation with the EPA. Second, shipping and other industry groups also have objected to conditions that states attach to EPA's permit, which they argue create a patchwork of inconsistent requirements that are hard to implement. However, most states oppose proposals to preempt state action in this area. Third, although the current Coast Guard and EPA requirements for ballast water call for identical treatment standards, some states and environmental groups favor more stringent standards in order to eliminate invasions of aquatic invasive species. EPA and the Coast Guard believe that technology to meet more stringent standards is not technically or economically achievable at this time.

Legislation intended to strengthen regulation and management of vessel discharges, especially discharges that can be a source of non-native aquatic nuisance species in U.S. waters, has been introduced in Congress for more than a decade. The legislation in the 114th Congress addresses many of the concerns with the current regulatory system, especially issues of concern to the maritime and shipping industry.

The Vessel Incidental Discharge Act would establish a single federal ballast water management standard, specifying standards issued by the Coast Guard in 2012 as the baseline. Under the legislation, these standards would supersede existing state standards or permits and also would supersede EPA's ballast water management requirements under the Clean Water Act. Upon enactment, the legislation would be the exclusive statutory authority for federal regulation of vessel discharges. The Coast Guard would be directed to adopt more stringent ballast water standards within eight years, unless a feasibility review determines that the specified more stringent standards are not attainable. The Coast Guard could establish lower or higher revised performance standards with respect to classes of vessels, if appropriate. Following enactment of the bill, manufacturers of ballast water treatment technology could only sell, deliver, or import technology that has been certified by the Coast Guard as meeting criteria in the legislation. Finally, a state could adopt or enforce a more stringent ballast water performance standard if the Coast Guard determines that compliance with the state standard is achievable and is consistent with obligations under relevant international treaties or agreements.

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Introduction

As part of their normal activities, vessels may discharge a wide range of wastes and contaminants into U.S. and international waters, including nutrients, pathogens, oil and grease, metals such as copper, toxic chemical compounds, and non-native aquatic nuisance, or invasive, species (AIS). The discharges can include shower and laundry facility water, deck washdown and runoff, bilgewater, motor fuel, machinery wastewater, and ballast water, among others. Contaminants in these discharges can have a broad array of effects on aquatic species and human health, many of which can be harmful.

Similarly, the universe of vessels that may release these discharges is diverse and includes commercial fishing vessels, cruise ships, ferries, barges, mobile offshore drilling units, tankers, cargo ships, container ships, research vessels, and emergency response vessels, such as firefighting and police vessels. Including recreational vessels, the universe of vessels is in the millions.

Ballast water discharges from vessels have been a particular concern, because invasive species entering U.S. waters cause social, recreational, and ecological disturbances and result in significant economic losses. National attention was drawn to the invasive species problem with the arrival of zebra mussels in the Great Lakes in the late 1980s. Since then, virtually all coastal and Great Lakes states have experienced ecological change and loss from AIS. For example, zebra mussels attach to hard surfaces such as water intake pipes that are used for cooling water and municipal water supply. When this occurs, the infestation can cause significant reduction in pumping capacity and occasionally has caused plant shutdowns.

Ballast water has been identified as a major pathway for introduction of AIS. Ships use large amounts of ballast water to stabilize the vessel during transport. Ballast water is often taken on in the coastal waters in one region after ships discharge wastewater or unload cargo. It is then discharged at the next port of call, wherever more cargo is loaded. The practice of taking on and discharging ballast water is essential to the proper functioning of ships, because the water that is taken in or discharged compensates for changes in the vessel's weight as cargo is loaded or unloaded, and as fuel and supplies are consumed. However, ballast water discharge typically contains a variety of biological materials, including non-native, nuisance, exotic species. If these species are released into lakes or rivers as part of ballast water discharge, they can alter aquatic ecosystems.

Today stakeholders broadly agree on the need for strong measures to control vessel discharges, especially ballast water discharges, but there are differing views on how to do that. Vessel discharge requirements in the United States are a result of U.S. Coast Guard regulations; a U.S. Environmental Protection Agency (EPA) permit; and individual state rules, limitations, and requirements. Vessels also are subject to a number of international agreements, in particular to Conventions adopted by the International Maritime Organization (IMO),[1] which apply to vessels operating under flags of countries that are Parties to the Conventions. This report discusses the combination of regulations and standards, which is at issue today and is addressed in legislation in the 114th Congress, the Vessel Incidental Discharge Act (S. 373, H.R. 980, and titles included in S. 1611, S. 2829, and H.R. 4909, which the House passed on May 18).

[1] The IMO, a body of the United Nations, sets international maritime vessel safety and marine pollution standards.

Coast Guard Regulation: Ballast Water Discharges

Federal authority to address ballast water concerns in the United States is contained in the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA, P.L. 101-646), as amended by the National Invasive Species Act of 1996 (NISA, P.L. 104-332),[2] and is administered by the Coast Guard. Initially this authority required a program to prevent the introduction and spread of invasive species into the Great Lakes by managing vessel ballast water discharge, a program that subsequently was extended to all U.S. ports and waters. Ships that have operated outside the U.S. Exclusive Economic Zone[3] were directed to undertake high seas ballast exchange before entering U.S. waters. However, ballast water exchange is understood to be only partially effective to reduce the spread of aquatic organisms and pathogens and is often not carried out due to safety considerations that are dependent on weather and sea conditions.[4]

In 2012 the Coast Guard promulgated a rule establishing new requirements for ballast water management.[5] The Coast Guard amended its requirements to include numeric standards that establish allowable concentrations of living organisms in ballast water discharged in U.S. waters. It also established numeric limits on human health indicator microorganisms, such as intestinal pathogens. (See the text box on page 4.) The rule applies to all U.S. and foreign vessels equipped with ballast tanks and operating in waters of the United States, unless specifically exempt. The Coast Guard estimated the number to be 3,046 vessels over a 10-year period. Under the rule, the standards would apply to new vessels—meaning those constructed on or after December 1, 2013—on delivery and would apply to vessels constructed before December 1, 2013, according to a phased schedule beginning January 1, 2014, depending on a ship's ballast water capacity.

Under the Coast Guard rule, vessel owners and operators have several compliance options.

- They can eliminate ballast water discharge.
- They can discharge to an onshore facility or to another vessel for the purpose of treatment.
- They can use ballast water that is only drawn from a U.S. public water system.
- They can install a ballast water management system that has been approved by the Coast Guard. For this option—installation of treatment technology—the rule details procedures for land-based and shipboard testing and Coast Guard approval.

The numeric standards in the Coast Guard rule overlap with standards specified in a 2004 Convention of the IMO.[6] Like the Coast Guard rule, the IMO ballast water performance standard

[2] 16 U.S.C. §§4701-4741.

[3] The Exclusive Economic Zone (EEZ) means the area established by Presidential Proclamation Number 5030, dated March 10, 1983, which extends from the baseline of the territorial sea of the United States seaward 200 miles.

[4] Ballast water exchange involves replacing water that has been taken on in coastal areas with open-ocean water during a voyage. This process reduces the density of coastal organisms in ballast tanks, replacing them with oceanic organisms with a lower probability of survival in nearshore waters. See National Ballast Information Clearinghouse, Smithsonian Environmental Research Center and U.S. Coast Guard, "Present Ballast Water Management Practices," http://invasions.si.edu/nbic/managementpract.html.

[5] Department of Homeland Security, U.S. Coast Guard, "Standards for Living Organisms in Ships' Ballast Water Discharged in U.S. Waters," 77 *Federal Register* 17254-17320, March 23, 2012. The regulations are codified at 33 C.F.R. Part 151 and 46 C.F.R. Part 162.

[6] International Maritime Organization, *International Convention for the Control and Management of Ships' Ballast Water and Sediment*, 2004. Numeric discharge performance standards in the IMO ballast water Convention, referred to as the D-2 standards, will enter into force 12 months after ratification by at least 30 nations representing 35% of the (continued...)

identifies organisms of various sizes and also identifies concentrations of human health indicator microbes in ballast water that management systems are required to achieve prior to discharge. The numeric standards in the Coast Guard rule and the IMO Convention are the same.

EPA Permit for Vessel Discharges

EPA also has authority to regulate vessel discharges, including ballast water, but for many years the agency mostly chose not to do so. This authority stems from the Clean Water Act (CWA), which prohibits the discharge of pollutants from a point source into U.S. waters without a permit.[7] Vessels are defined in the statute as point sources. In 1973, EPA promulgated a regulation that excluded discharges incidental to the normal operation of vessels—including ballast water (but not including vessel sewage discharges, which are regulated)—from CWA permitting requirements. EPA's position was that, because vessels are mobile and move between jurisdictions, the traditional CWA mechanism of regulating through state-issued permits is problematic, because state requirements can vary widely.

This long-standing regulation was challenged in federal district court by environmental advocacy groups who wanted EPA to address ballast water as a source of AIS in U.S. waters. The court found that the 1973 regulation contradicted Congress's intention that discharges from vessels be regulated under the CWA, and it vacated, or revoked, the regulatory exclusion. In 2008, this ruling was upheld.[8]

EPA initially estimated that the court's ruling could affect and would require permits for as many as 98,000 commercial fishing, passenger, cargo and other vessels, plus over 13 million recreational boats. Congress responded to that estimate by enacting two bills to restrict the population of vessels subject to regulation. The first, the Clean Boating Act of 2008, provided a permanent exemption from CWA permitting requirements for discharges incidental to the normal operation of *recreational vessels of all sizes*.[9]

The second measure provided a two-year moratorium on CWA permitting for certain discharges from *commercial fishing vessels of all sizes and non-recreational vessels less than 79 feet in length*.[10] This moratorium has been extended three times, most recently until December 18, 2017, which was enacted in December 2014 as part of a Coast Guard reauthorization bill.[11]

In 2008 EPA issued a national CWA permit called the Vessel General Permit (VGP), giving permit coverage to an estimated 72,000 vessels including tankers, freighters, barges, and cruise ships that were not exempted by Congress's actions. It applied to 26 types of pollutant discharge types or waste streams, including but not limited to ballast water, that result from the normal operation of covered vessels. The ballast water requirements of the 2008 VGP were minimal, largely requiring what was required by then-existing Coast Guard rules—primarily use of ballast water exchange.[12] Like Coast Guard rules that had been in effect since 2004, EPA's permit

(...continued)

world shipping tonnage. As of April 2016, this Convention has been ratified by 49 nations, representing 34.79% of the world merchant shipping tonnage, but has not entered into force. The United States has not ratified the Convention.

[7] Clean Water Act Section 301(a); 33 U.S.C. §1311(a).

[8] Northwest Environmental Advocates v. U.S. Environmental Protection Agency, 537 F.3d 1006 (9th Cir. 2008).

[9] P.L. 110-288.

[10] P.L. 110-299.

[11] P.L. 113-281.

[12] Infra note 5.

mandated mid-ocean ballast water exchange for ships traveling outside the EEZ of the United States.

Some stakeholder groups urged EPA to include numeric ballast water discharge standards in the 2008 VGP, arguing that discharge standards would encourage adoption of technology that is more effective for controlling living organisms than ballast water exchange. But EPA did not do so at the time. Requiring a numeric effluent limit for the discharge of living organisms was not practicable, achievable, or available because adequate treatment technologies were not then commercially available, EPA said. Instead, the VGP specified ballast water best management practices, such as regular cleaning of ballast tanks in mid-ocean to remove sediment, as well as recordkeeping and monitoring requirements.

Because the VGP and other CWA permits are authorized for five-year periods and then must be renewed, in 2013 EPA re-issued the VGP. It is similar to the 2008 permit in many respects, but departs from the previous permit by specifying ballast water numeric discharge limits. Based on reports from the National Research Council and the agency's own Science Advisory Board since issuance of the 2008 permit, EPA concluded that ballast water treatment technologies are now available to meet numeric limits in the new VGP, and that the requirements are economically practicable and achievable.

The numeric limits in the 2013 VGP, which are the same as the performance standards in the Coast Guard's 2012 regulation and the D-2 standards in the IMO's ballast water Convention, are shown in the following text box. Likewise, the VGP matches the implementation timeframe in the Coast Guard rule for new and existing vessels.[13]

Ballast Water Numeric Discharge Limits in Coast Guard Rule, the EPA VGP, and IMO Convention

1. For organisms greater than or equal to 50 micrometers in minimum dimension: discharge must include fewer than 10 living organisms per cubic meter of ballast water.

2. For organisms less than 50 micrometers and greater than or equal to 10 micrometers: discharge must include fewer than 10 living organisms per milliliter (mL) of ballast water.

3. Indicator microorganisms must not exceed:

—For Toxicogenic *Vibrio cholerae* (serotypes O1 and O139): a concentration of less than 1 colony forming unit (cfu) per 100 mL.

—For *Escherichia coli*: a concentration of fewer than 250 cfu per 100 mL.

—For intestinal enterococci: a concentration of fewer than 100 cfu per 100 mL.

While they are similar in many respects, the Coast Guard rule and the EPA permit differ in several ways.

- **Number and types of vessels.** The Coast Guard rule applies to about 3,050 vessels that are equipped with ballast tanks, while the EPA permit applies to about 72,000 vessels, including many that do not discharge ballast water. The Coast Guard rule exempts crude oil tankers engaged in coastwise trade (i.e., coastwise trade essentially refers to a voyage that begins at any point within the United States and delivers a type of commercial cargo to any other point within the United States); the EPA permit has no such exemption.

[13] For additional discussion of the VGP, see CRS Report R42142, *EPA's Vessel General Permits: Background and Issues*, by (name redacted) .

- **Covered discharges.** The Coast Guard rule focuses just on ballast water discharges. The EPA permit authorizes discharges of ballast water and 26 other waste streams incidental to the normal operation of vessels.
- **Ballast water requirements are similar but not identical.** Both adopt the ballast water discharge standards in the IMO ballast water Convention, but they include somewhat different monitoring, recordkeeping, and reporting requirements. For example, the EPA permit regulates discharges of biocides that vessels may use as part of ballast water management; the Coast Guard rule has no such requirements.
- **Ballast water management technology.** The Coast Guard rule requires use of certified ballast water management technology. The EPA permit requires use of "best available technology," which under the permit is any appropriate technology that will meet the standards specified in the permit, but does not require technology certification.
- **Exemptions.** The Coast Guard has authority to grant temporary exemptions from its ballast water management standards if technology is not available. Because no technological system has yet received Coast Guard approval, the Coast Guard has granted two-year exemptions to nearly 350 vessels. EPA does not have authority to grant exemptions from requirements of the VGP.
- **Enforcement.** Under the National Invasive Species Act (NISA) and the CWA, respectively, the Coast Guard and EPA have enforcement authority, such as civil and criminal sanctions. Only the CWA authorizes citizen suits, that is, the ability of citizens to bring a lawsuit to enforce effluent limitations in a permit.

State Regulation of Vessel Discharges

The role of states in regulating vessel discharges is a controversial issue, because, beyond federal requirements, vessel discharges also are subject to regulation by nearly one-half of the states. The authority of states to regulate vessel discharges derives in part from NISA. Under current law, within the framework of the ballast water management program now implemented by the Coast Guard, state and local programs to control AIS are permitted.[14] This general non-preemption has allowed states like Michigan, California, and others to develop ballast water management programs with performance standards or technology requirements that are more comprehensive than the Coast Guard's rules require.

The states' authority to regulate vessel discharges also derives from provisions of the CWA. First, CWA Section 510 allows states to adopt standards, discharge limitations, or other requirements no less stringent than federal rules. States often want the flexibility to require standards more stringent than federal, and this general authority in the statute gives states the ability to tailor their implementation of federal water quality programs by adopting requirements under state law to address local conditions and circumstances. Several states, including Minnesota, Wisconsin, Michigan, and Hawaii, have used their authority to issue state permits independent of the VGP to regulate ballast water discharges.

Second, under CWA Section 401, an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the United States must provide the federal agency with a certification that the discharge will comply with applicable provisions of the

[14] 16 U.S.C. §4725.

federal law, including state-established water quality standards. Section 401 gives states two distinct powers: one, the power indirectly to deny federal permits or licenses by withholding certification; and two, the power to impose conditions on federal permits. Where states impose conditions on a federal permit—such as the VGP—the permittee must meet the additional state limitations as conditions of the federal permit.

Twenty-five states and Tribes certified the 2013 re-issued VGP with additional permit conditions covering one or more of the 27 effluent streams. Of the 25 states, 14 certified the permit with supplementary conditions applicable to ballast water discharges, including specific numeric discharge standards that are more stringent than those in the EPA permit (or the Coast Guard rule), state permit requirements such as Michigan's, or more general language prohibiting nuisance or other conditions in order to protect state waters. Some states certified with conditions for specific pollutant discharges, such as chlorine, which can harm aquatic life. Oregon and Washington have adopted reporting, recordkeeping, and inspection requirements, as well as certain ballast water open sea exchange measures. Two states that have used their state authority to adopt more stringent ballast water treatment standards are New York, which adopted standards 100 times more stringent than EPA's and the Coast Guard's, and California, which established numeric standards 1,000 times more stringent than EPA's and the Coast Guard's. Both New York and California have temporarily deferred their more stringent standards, but expect to implement them when technology to do so is available.

The commercial shipping industry and environmental groups challenged several separate state permits, on differing grounds, but courts have generally upheld the permits. A Minnesota court upheld that state's 2008 permit despite challenges from an environmental group over the state's failure to impose numeric limitations on ballast water discharges. Also, Michigan's permitting program and New York's certification of the 2008 EPA permit were upheld after challenges by shipping industry groups.

Issues in the Regulation of Vessel Discharges

The combination of multiple federal requirements, plus state requirements, presents several closely related issues. Some of these issues have been addressed in legislation for more than a decade, including House and Senate versions of the Vessel Incidental Discharge Act in the 114th Congress (discussed below).

Overlapping Federal Requirements

For some time, the maritime industry has argued for harmonization of what it views as duplicative federal rules for vessel discharges, especially for ballast water discharges, through a single set of requirements. Shipping and other industry groups have raised concerns that EPA's permit overlaps with mandates in the Coast Guard rule, making implementation costly and confusing for vessel owners. Many in these groups have called for centralizing responsibilities with the Coast Guard, which has long had administrative and regulatory authority over the industry.

Centralizing ballast water management with the Coast Guard might reduce confusion about ballast water, but questions would still remain. One question concerns how the more than two dozen non-ballast water waste streams that also are included in EPA's permit would be regulated. Options could include eliminating regulation of them entirely, or centralizing them with the Coast Guard, or having EPA continue to regulate non-ballast water discharges. If EPA were to continue regulating other discharges, such as shower and laundry water, bilgewater, and machinery waste,

vessels would still be subject to those portions of the VGP. Vessel owners and operators would still deal with two agencies' regulatory regimes. Some interest groups, especially some environmental advocacy groups, would prefer that if ballast water regulation is centralized with one federal agency, they favor EPA. These groups prefer EPA because its sole mission is protecting public health and the environment, while for the Coast Guard, regulating pollutant discharges is one of several of its existing missions and responsibilities. The maritime industry is concerned about any continuing regulation under the Clean Water Act, because of the potential for citizen suit enforcement, which that law allows.

State Role and Federal Preemption

Shipping and other industry groups have also objected to the conditions that states attach to EPA's permit, which they argue create a patchwork of inconsistent requirements that are economically inefficient and cumbersome to implement. A group of commercial shipping operators challenged state certifications under the 2008 VGP, contending that the shipping industry is placed in the difficult regulatory position of being subject to a single federal permit with multiple state requirements. The federal court rejected the challenge, ruling that under the CWA, EPA does not have the power to amend or reject state certifications under Section 401, which must be attached to and become conditions of the federal permit.[15]

Similar concerns were raised about the Coast Guard's 2012 rule. A number of commenters on the rule requested that the Coast Guard preempt all state ballast water treatment standards and requirements in favor of a uniform, national standard. Some argued that states with conflicting regulations burden interstate commerce and create confusion and would delay in eliminating invasions of AIS. In the final rule, the Coast Guard responded that it cannot legally preempt state action to regulate discharges of ballast water within state waters, citing a provision of NANPCA, as amended by NISA, that saves to the states or their political subdivisions their authority to "adopt or enforce control measures for aquatic nuisance species, [and nothing in the Act would] diminish or affect the jurisdiction of any State over species of fish and wildlife."[16]

States that have adopted additional requirements, such as their own permits or more stringent standards, strongly oppose proposals to preempt this authority. They argue that doing so would be contrary to Congress's clear intention in both the Clean Water Act and the National Invasive Species Act.

Ballast Water Discharge Standards

Previous Coast Guard rules and EPA's 2008 VGP did not include numeric standards to control ballast water discharges, largely because effective and economical technology was not available. This changed in the Coast Guard's 2012 rule and EPA's reissued permit in 2013. While the issue of numeric ballast water discharge standards would seem to have been resolved through these more recent actions, that is not necessarily the case. Both the Coast Guard and EPA believe that the standards specified in the IMO ballast water Convention, which their rules endorse, are technically and economically achievable. Some industry groups disagree. At the same time, some states and environmental advocacy groups continue to favor more stringent numeric standards in order to eliminate invasions of aquatic invasive species. For example, while New York agrees that a uniform, national standard is desirable, that state would like such a standard to match what it

[15] Lake Carriers' Association v. EPA, 652 F.3d 1, 10 (D.C. Cir. 2011).

[16] 16 U.S.C. 4725. See 77 *Federal Register* 17279-17280, March 23, 2012.

has adopted. Likewise, California continues to support its standards, which are the most stringent in the country. As noted above, both New York's and California's more stringent standards are currently deferred.

The Coast Guard's rule calls for a review of its standards in 2016, and EPA will review its standards before the current VGP expires in 2018.

Permit Moratorium for Small Vessels

A final issue is how to resolve the current temporary moratorium on EPA permitting of commercial fishing and small vessels that Congress enacted in December 2014.[17] That moratorium expires in December 2017. Many believe that discharges incidental to the normal operation of these vessels are not a significant source of harm to aquatic life in U.S. waters—compared with discharges from larger vessels—and that it would be appropriate, both administratively and environmentally, to exclude them permanently from CWA permitting. On the other hand, some may argue that, even if there is small potential risk of environmental harm from discharges from these vessels, it still warrants improved management and regulation because of the potentially significant consequences for the aquatic environment.

The Vessel Incidental Discharge Act

On February 4, 2015, the Senate Commerce Subcommittee on Oceans, Atmosphere, Fisheries, and Coast Guard held a hearing on issues concerning regulation and management of discharges incidental to the normal operation of vessels. On February 26, 2015, the full committee approved S. 373, the Vessel Incidental Discharge Act, and reported the bill on July 29.[18] In addition, in June 2015, the full committee approved and ordered reported S. 1611, Coast Guard Authorization Act of 2015. As reported, the bill includes the text of S. 373 as Title VIII. The Senate Commerce Committee also attached the text of the Vessel Incidental Discharge Act to S. 2829, the Maritime Administration Authorization and Enhancement Act for Fiscal Year 2017, which it ordered reported on April 27, 2016.

Legislation similar to S. 373 has been introduced in the House in the 114th Congress (H.R. 980). On May 18, the House passed H.R. 4909, the National Defense Authorization Act for FY2017. Title XXXVI of this bill, as passed, is identical to the text of H.R. 980. In the Statement of Administration Policy on H.R. 4909, the Administration indicated that it objects to Title XXXVI.[19]

The current legislation would establish a single federal ballast water management standard, specifying the Coast Guard's 2012 numeric standards as the baseline. Under the legislation, these standards would supersede existing state standards or permits and also would supersede EPA's ballast water management requirements under the CWA. The Coast Guard would be directed to adopt more stringent ballast water standards within eight years, unless a feasibility review determines that the specified more stringent standards are not attainable. The Coast Guard could establish lower or higher revised performance standards with respect to classes of vessels, if

[17] Extension of the moratorium was included in The Howard Coble Coast Guard and Maritime Transportation Act of 2014 (P.L. 113-281). See CRS Report R42142, *EPA's Vessel General Permits: Background and Issues*, for additional discussion.

[18] The legislation is similar to a measure that the Commerce Committee approved in the 113th Congress (S. 2094).

[19] Executive Office of the President, Office of Management and Budget, *Statement of Administration Policy,* H.R. 4909, *National Defense Authorization Act for Fiscal Year 2017*, May 16, 2016.

appropriate. Upon enactment of the bill, manufacturers of ballast water treatment technology could only sell, deliver, or import technology that has been certified by the Coast Guard as meeting criteria in the legislation. Finally, a state could adopt or enforce a more stringent ballast water performance standard if the Coast Guard determines that compliance with the state standard is achievable and is consistent with obligations under relevant international treaties or agreements. The following discussion describes the provisions of the Senate legislation (S. 373; the Senate Commerce Committee also included the text of this bill as provisions of S. 1611 and S. 2829).[20]

Section 1 is the short title and table of contents. **Section 2** provides several findings and states that the purpose of the act "is to provide for the establishment of nationally uniform and environmentally sound standards and requirements for the management of discharges incidental to the normal operation of a vessel." **Section 3** defines key terms, including ballast water, ballast water performance standard, and discharges incidental to the normal operation of a vessel.[21] The latter term is defined to include a lengthy specific list of discharges (e.g., ballast water, graywater, bilge water, cooling water, boat engine wet exhaust, weather deck runoff, fish hold, or fish hold cleaning effluent); any other pollutant associated with operation of a marine propulsion system; or a pollutant discharge to water in connection with engine or equipment testing, maintenance, or repair. The term "discharges incidental to the normal operation of a vessel" excludes certain vessel discharges that are regulated under other laws such as the CWA or the Act to Prevent Pollution from Ships[22] (e.g., rubbish, trash, or garbage; oil or hazardous substances; sewage; graywater; air pollutant emissions). Vessels subject to the bill's requirements are defined as "watercraft or other artificial contrivance used ... as a means of transportation on water." Section 7 of the legislation excludes Coast Guard vessels and Department of Defense vessels.

Section 4 directs the Secretary of the department in which the Coast Guard is operating,[23] in consultation with EPA, to establish and implement uniform national standards and requirements to regulate vessel discharges. The standards and requirements shall be based on the best available technology economically achievable and shall supersede any permitting requirement or prohibition under any other provision of law. The latter provision would effectively supersede the EPA VGP. The Coast Guard shall enforce the standards and requirements under the act, and each state may enforce the standards and requirements. Note that the bill does not include a mechanism for enforcement authority to be delegated to states (as is generally allowed under many federal environmental laws such as the CWA).

Section 5 details the specific uniform national standards and requirements. It specifies that the ballast water standards in the existing Coast Guard rule shall apply to vessel discharges of ballast water. It further directs the Coast Guard to conduct a review by January 2020 to determine the feasibility of achieving revised ballast water performance standards that would be 100 times more stringent than the initial standards for allowable concentrations of living organisms in the bill (i.e., existing Coast Guard rules). The bill details criteria to be followed in conducting the feasibility review. Subject to the findings of the feasibility review, the Coast Guard is directed to revise the ballast water performance standards—by adopting the revised standards specified in the

[20] The companion House bill, H.R. 980 (and identical provisions in H.R. 4909), is similar, except as noted below in this report.

[21] For convenience in the remainder of this report, the phrase "vessel discharges" without qualification is intended to refer to "discharges incidental to the normal operation of a vessel."

[22] 33 U.S.C. §§1901-1913.

[23] The legislation refers to the Secretary of the department in which the Coast Guard is operating, currently the Department of Homeland Security. For convenience, this report refers to the Coast Guard.

Vessel Incidental Discharge Act, by adopting lower performance standards if the Coast Guard determines that no ballast water treatment technology can meet the revised standards in the bill, or by adopting higher performance standards if treatment technology exists that exceeds the revised standards. Procedures are detailed for the Coast Guard to establish compliance schedules and a process for the Coast Guard to grant extensions to a vessel owner or operator.

Related to these provisions, **Section 8** of the bill authorizes the Coast Guard to establish one or more compliance programs as alternatives to the regulations under Section 5. Such an alternative program could apply to small vessels with maximum ballast water capacity of less than 8 cubic meters (or 2,113 gallons), vessels with less than three years of remaining useful life, or vessels that discharge ballast water into an on-shore facility. Section 8 directs EPA to promulgate standards for on-shore facilities that receive ballast water.

Section 5 also directs the Coast Guard to review ballast water performance standards every 10 years and initiate a rulemaking if it is determined that further revision would "result in a scientifically demonstrable and substantial reduction in the risk of the introduction or establishment of aquatic nuisance species."

This section and, indeed, most of the bill, focuses on standards and requirements applicable to discharges of ballast water. Other non-ballast water vessel discharges are addressed in two provisions. First, Section 5(a)(2) directs the Coast Guard, in consultation with EPA, to issue a rule to establish best management practices (BMPs)—not standards of performance—for vessel discharges other than ballast water. In contrast to standards of performance that typically specify numeric limits on discharges, BMPs generally identify practices, maintenance procedures, or operating procedures to reduce or prevent pollutant discharges. Many EPA regulations and the VGP contain both numeric standards of performance and BMPs. Second, Section 5(c)(2) provides that the Coast Guard, in consultation with EPA, may review the BMPs for non-ballast water vessel discharges during a decennial review (like the decennial review of ballast water standards) and may initiate a rulemaking to revise BMPs, if doing so would "substantially reduce" impacts of these vessel discharges to navigable waters.

Finally, Section 5 requires vessels to conduct saltwater flushing of ballast water tanks prior to entering the Great Lakes (as they already are required to do under Coast Guard rules).[24]

Section 6 requires EPA in consultation with the Coast Guard to develop protocols for certifying ballast water treatment technologies within six months of enactment and then establishes a process for the Coast Guard to certify ballast water treatment technology based on those protocols. Beginning one year after issuance of the testing protocols, the bill prohibits a manufacturer from selling, offering for sale, delivering, or importing into the United States for sale any ballast water technology unless the technology has been certified. As described previously, the Coast Guard's existing rules similarly require technology certification. Since no technological system has yet received approval, the Coast Guard has granted two-year exemptions, as allowed under their rules. Section 6 does not include a provision like the one in the Coast Guard rules that would allow granting of temporary exemptions in the event that no technology has been approved. Section 6 prohibits vessel owners/operators from using ballast water treatment technology that has not been approved by the Coast Guard, unless the technology is being evaluated under the Coast Guard Shipboard Technology Evaluation Program (STEP) for

[24] This provision is not included in H.R. 980 or H.R. 4909.

ballast water management system technologies,[25] or the technology has been certified by a foreign entity to meet equivalent requirements to those of the Vessel Incidental Discharge Act.

Section 7 makes permanent the current permit moratorium for small vessels that is due to expire in December 2017. Section 7 also codifies elements of the existing Coast Guard rules that provide exemptions from ballast water performance standards for vessels that do not discharge ballast water (i.e., vessels that carry permanent ballast water in sealed tanks, vessels that use continuous ballast flow-through systems that do not discharge AIS, or vessels with ballast water discharges consisting entirely of water suitable for human consumption). The provision also exempts vessels that operate in the Great Lakes or other geographically limited area or that take up and discharge ballast water exclusively within one Captain of the Port (COPT) zone established by the Coast Guard.[26]

Section 9 provides rules for judicial review, stating that review of final regulations under the Vessel Incidental Discharge Act shall be in the D.C. Circuit Court of Appeals. The bill does not authorize citizen suits to enforce any of its provisions. Although the Coast Guard has general law enforcement authority pursuant to 14 U.S.C. §89, there is no express authority in the bill, which is a free-standing measure (i.e., it would not amend NANPCA/NISA), for the Coast Guard to enforce its provisions.

Section 10 addresses the effect of the bill on state authority. Section 10 would generally prohibit a state or political subdivision from adopting or enforcing any law or rule concerning vessel discharges after enactment of the bill. However, it modifies this general prohibition by authorizing a state or political subdivision to adopt or enforce a ballast water law or rule that is more stringent than the standards under the Vessel Incidental Discharge Act if the Coast Guard makes a determination that compliance with the standard can be achieved and detected; that technology is commercially available;[27] and determines that the law or rule is consistent with international treaties or agreements to which the United States is a party. A state or political subdivision seeking to adopt or enforce its own more stringent law or rule is authorized in Section 10 to petition the Coast Guard, and the Coast Guard is required to make a determination on a petition within 90 days of receipt.[28]

[25] For information, see http://www.uscg.mil/marine_Event/docs/2010/presentations/Regulatory1.pdf.

[26] A geographically limited area is defined in the bill as an area with a physical limitation that prevents a vessel from operating outside the area, such as the Great Lakes and St. Lawrence River, or an area that is ecologically homogeneous. EPA similarly exempts bulk carrier vessels that are confined to the Great Lakes, called "lakers," from the ballast water standards of the VGP, but the permit does require these vessels to perform certain ballast water BMPs, such as sediment management measures. EPA's explanation for this exemption is that "lakers" cannot easily or economically be retrofitted with ballast water control technology. The VGP also exempts ballast water discharges from vessels that operate exclusively within one COPT.

[27] In developing the current VGP, EPA was urged by some states and environmental advocacy groups to specify ballast water performance standards more stringent than the Coast Guard/IMO requirements. In response, EPA sought advice from a panel of the National Research Council of the National Academy of Sciences and from EPA's Science Advisory Board. Based on their reports, EPA concluded that no existing technologies have been demonstrated that are capable of meeting more stringent standards, such as those adopted by California and New York. For discussion, see CRS Report R42142, *EPA's Vessel General Permits: Background and Issues*.

[28] The Senate legislation would allow a state or political subdivision to adopt or enforce its own law or rule under conditions specified in the bill, thus applying to a law or rule adopted by a state in the future. The provision also states that a petition to the Coast Guard may be submitted within one year of enactment and every 10 years thereafter, thus allowing for future action by a state. H.R. 980 and similar provisions to that bill in H.R. 4909, in contrast, only would authorize a state to enforce an existing law or rule.

Finally, **Section 11** states that upon enactment, the legislation shall be the exclusive statutory authority for federal regulation of vessel discharges. Further, any existing regulation relating to a permitting requirement or prohibition on vessel discharges shall be deemed to be a regulation under this act that remains in effect unless or until superseded by new rules under the Vessel Incidental Discharge Act.

Conclusion

Legislation intended to strengthen regulation and management of ballast water discharges that can be a source of non-native aquatic invasive species in U.S. waters has been introduced in Congress for more than a decade, including proposals to require vessels to achieve specific ballast water treatment performance standards. In recent years—especially since EPA's issuance of the first Vessel General Permit in 2008—some of the proposals have evolved and been expanded to address administrative aspects of ballast water regulation, that is, clarifying what some term a "jumble" of federal and state requirements.[29] While many in the maritime industry strongly support the legislation discussed in this report, others, including some states and environmental advocacy groups, continue to oppose aspects of the proposals. The Administration's position on the current legislation is unknown.

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[29] See U.S. Congress, Senate Commerce, Science, and Transportation Committee, *Vessel Incidental Discharge Act*, Report on S. 373, 114th Cong., 1st sess., July 29, 2015, S.Rept. 114-96 (Washington: GPO, 2015), p. 7.