Coast Guard Proposes National Ballast Water Regulations

by Sharonne O'Shea

Sea Grant Legal Program

On April 10, 1998, the U.S. Coast Guard proposed voluntary guidelines and regulations to implement the National Invasive Species Act (NISA) of 1996, originally enacted in the wake of a zebra mussel invasion of the Great Lakes. NISA is one of the several programs internationally that addresses aquatic nuisance species (ANS); Canada, Australia, New Zealand, the United Kingdom, Germany, Sweden, Brazil, and Japan have programs. Additionally, the International Maritime Organization's (IMO) Marine Environmental Protection Committee (MEPC) issued voluntary guidelines and continues to evaluate the adoption of a ballast water protocol amendment to MARPOL, a treaty on marine pollution from ships.2

Plants, animals and pathogens can be carried in ships' ballast holds and introduced to new locations, worlds away. They can be costly both in monetary and public health terms. For example, the Coast Guard estimates that hydrilla, a single aquatic plant, costs over $14 million per year merely to control its growth in 14 states. In 1991, Mobile Bay, AL, experienced shellfish bed closures as a consequence of cholera documented in ballast tanks. Once these biological pollutants are established, it is impossible to fully eradicate them.3 Consequently, NISA and the proposed regulations adopt a preventative approach: ballast water exchange. Despite its flaws, ballast water exchange remains the most effective and efficient defense against aquatic invaders.

The principle of salinity variation is a primary rationale for ballast exchange as a means to thwart species introduction. Theoretically, exchange of water on the high seas increases the salinity of the water within the ballast hold, killing any species which remain after exchange. This salt water can then be exchanged in presumably less-salty nearshore ports, killing any species which may have been picked up during ballast water intake on the open ocean. Seasonal flooding, reservoir and dam modification of stream flow, tidal influences, and the constant influx of unfathomable quantities of water from ballast discharges, however, mean that the waters in many coastal areas naturally exhibit highly variable salinity. Consequently, they may possibly provide a suitable environment for a species that can withstand the salinity variation induced by ballast exchange; thus, might ballast exchange effectively be selecting for species that can survive in the new environment?

The Regulatory Scheme:
The performance goal for the program is 100 percent removal of the biologically dangerous water. The Coast Guard notes, "[h]owever, because existing ballast tank and piping systems in the worldwide shipping fleet were not designed to deal with this need, the economic costs of requiring complete retrofitting of those systems makes a 100 percent standard unrealistic at this time." Thus, the Coast Guard will accept an exchange of 90 percent of the ballast water a ship carries. The Coast Guard estimates that the two methods employed at this time, empty/refill and flow-through exchange, provide a 95
percent exchange. This means that "anywhere between ten to a few hundred metric tons of un-pumpable slop in the bottom of the tanks or trapped in internal structure..." will remain, along with the associated species residing in the "slop." The Coast Guard intends that the "90 percent solution" be a "useful goal by which to prompt the development of some short-term interim measures that are needed." Understanding how a standard set at 90 percent—five percent below the existing, realistic exchange standard of 95 percent—provides any incentive to research, develop, or implement means of achieving the 100 percent goal is difficult.

According to legislative directive, the Coast Guard created regulations that hark back to a favorite phrase of parents: "You aren't going to like it if I have to come in there and make you do it." If the Coast Guard finds compliance with the voluntary program, to be "inadequate" or if vessel operators fail to submit reports, the voluntary guidelines will become mandatory and carry civil and criminal penalties. Unfortunately for this unique approach, the regulations provide no standard or definition for "inadequate." Consequently, the program could languish in discretionary inaction indefinitely.

Enforcement authority includes sampling ballast water and sediment, examining ship documents, and making other appropriate inquiries.

The program exempts crude oil tankers engaged in coastwise trade from exchange of ballast water although they must participate in the reporting protocol described below. Additionally, passenger vessels fitted with treatment systems designed to kill aquatic organisms in their ballast water and operate them as designed are currently exempted.

The regulations allow the master of a vessel unable to conduct a ballast exchange "due to weather, vessel architectural design, equipment failure, or other extraordinary conditions" to either employ another method of ballast water management — retention or an alternative system approved by the Commandant — or request permission to exchange the ballast water at a designated, alternative location. Undergoing ballast exchange can compromise the integrity and stability of a ship. Thus, ballast exchange becomes an imprudent activity in times of foul weather. While recognizing that crew safety is a priority, however, this provision appears to provide no incentive to maintain ballast equipment or phase out those vessels which cannot meet the standard and bring more environmentally-sound vessels on-line. No mention is made of how the Coast Guard will ensure a vessel actually retains ballast water when that method is selected, for example.

The new regulations have three primary thrusts: changes to the existing standards applicable to the Great Lakes; creation of a voluntary ballast exchange program for vessels entering U.S. waters — other than the Great Lakes or the Hudson River — from outside the exclusive economic zone (EEZ); and a mandatory reporting requirement for all vessels entering U.S. waters from outside of the EEZ if their voyage included a destination beyond the EEZ, including Hawaii and Alaska. Because they address only voyages including ports of call beyond the EEZ, the regulations omit a significant number of interstate voyages that can assist in the spread of introduced species. For example, a ship taking on ballast in Houston may travel to New Orleans and Tampa with no restriction or monitoring of its ballast activity and contribute to the spread of a nuisance species throughout the Gulf Coast.

**Great Lakes Changes:**

Currently, the Great Lakes/Hudson River regulations require a ballast exchange which will result in a minimum ballast water salinity level of 30 parts per thousand (ppt). The Coast Guard has calculated that this standard can often mean an exchange volume of 83.33 percent or less depending upon the initial salinity of the ballast water. This represents a figure significantly below the 90 percent exchange proposed in this rule. Consequently, the Coast Guard proposes a 32.4 ppt salinity indicator as evidence of effective exchange for the Great Lakes. Salinity may be used to demonstrate an exchange for ships travelling to other regions but as detailed below, these exchanges are voluntary so no specific salinity parameter applies.

**Voluntary Ballast Exchange:**

Ship masters destined for ports other than the Great Lakes are encouraged to employ any one or a combination of ballast management methods: a 90 percent ballast water exchange in the open ocean; ballast water retention; or an approved alternate method.

Any alternative methods proposed for use must also be "environmentally sound." That is they "minimize adverse impacts on non-target organisms and ecosystems and... emphasize integrated pest management techniques and non-chemical measures. With respect to alternative ballast water treatment methods, chemical treatment of the ballast water will not be considered environmentally sound if it results, or is likely to result, in the release of harmful concentrations of chemicals or by-products into the environment outside the ballast tank." This provision demonstrates foresight on the part of the Coast Guard to ensure one environmental hazard is not merely traded for another.

**Reporting Requirements:**

Vessel masters must provide a variety of information including latest port of call; next port of call; the total amount of ballast water carried and total ballast water capacity; whether a ballast water management plan exists and is in use for the vessel; the date, location, volume and temperature of ballast water taken on prior to exchange; the date location, volume and percent exchanged of ballast water and the combined sea height at the time of the exchange; the date, location, volume, and salinity of
water to be discharged into U.S. waters; and the intended location for disposal of sediment from ballast tanks that may be discharged. This information can then be used to study patterns of discharge as related to introduction of new species as well as voluntary compliance with the ballast exchange program.

The Coast Guard will accept written comments on the proposed rules until June 9, 1998. Make your views known and get your questions answered. E-mail or write to the Coast Guard at the addresses below. Be sure to include your name, address, the notice number [USCG-98-3423], and the section or question in the Federal Register notice to which your question or comments apply.

Docket Management Facility, [USCG-98-3423]
U.S. Dept. of Transportation,
Room PL-401
400 Seventh St. SW
Washington, D.C. 20590-0001
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2IMO MEPC Resolution 50 (31), adopted.

Two different types of preemption exist: explicit and implied. As the name suggests, explicit preemption occurs when Congress states within the law an intention to preempt state law on a topic. Implied preemption is more common and more vague. "Determining when courts will find preemption, and what effect they will give it, is often complicated and not readily predictable. It is above all a matter of statutory interpretation and is highly text-specific, turning on the language, structure and purpose of the federal regulatory scheme at issue." 7

Implied preemption has three subcategories. The first, often called the occupied field, exists where a system of federal regulation is so pervasive that Congress left no room for states or that the federal interest in that field dominates to the exclusion of state laws on the subject. 8 The next form exists where state law would frustrate the accomplishment of federal purposes. In effect, state law is an obstacle to achieving fed-

A Place for States to Address Exotic Aquatics

by Sharonne O'Shea
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Because of its volume and the shortened voyage times of modern vessels, ballast water is one of the leading sources of aquatic species introduction.1 Exchanging the ballast water on the high seas may reduce the number of species in ballast tanks and thereby decrease the opportunity for an introduction. In 1996, Congress passed the National Invasive Species Act (NISA) to do just this.2 Among its provisions was the establishment of a voluntary, national ballast exchange program to be implemented by the Coast Guard.3 Until recently, however, ballast discharge regulation was a state prerogative.4

Often, the creation of a federal legislative scheme prohibits, or at least hinders, development of state laws. In times of tight fiscal resources, moreover, states have no incentive to take on a subject already addressed by the federal government. As this article will demonstrate, carefully crafted state legislation can avoid the common prohibition of preemption. Moreover, state programs can elaborate upon the skeletal federal program and protect vulnerable state resources in areas left untouched by the federal statute, such as coast-wise trade or the pet trade. With major ports along the Mississippi as well as numerous waterways along the Gulf Coast, Louisiana is particularly susceptible to the transfer of aquatic, exotic species and may want to consider state legislation in this area.

What is preemption?
The Supremacy Clause in Article VI of the U.S. Constitution gives priority to federal law. "Obviously, the effect of this clause is not for all federal law to supersede all state law. Federal law supersedes state law only to the extent necessary to give it its intended effect." 5 In fact, "when a State's exercise of its police power is challenged under the Supremacy Clause, "we start with the assumption that the historic police powers of the States were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress."" 6

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eral goals.\(^9\) An actual conflict is the third form of implied preemption. This arises in situations where compliance with one law necessarily results in violating the other.\(^10\)

**Consequences of Preemption**

When a state law is found to be preempted by a federal one, the state law is unconstitutional and invalid. However, finding preemption represents no small matter due to the significant implications for federal and state relations. In sum, it is politically unpleasant for federal officials to give the impression that they are usurping a traditionally state-held prerogative. Consequently, courts do their best to reconcile the two statutes, rather than striking one down.\(^11\)

**Does NISA preemt state law?**

Generally, NISA does not preempt state law. Certainly a state might enact a law which runs afoul of preemption if the legislature was careless. However, as demonstrated below, even within NISA's primary focus of ballast water exchange, there is room for state activity.\(^12\)

The text of NISA does not explicitly preempt state law. As for implied preemption, the U.S. Supreme Court in *Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Development Comm'n*,\(^13\) set forth a four part analysis applied here to NISA. A reviewing court will look for 1) the intention and aim of Congress as revealed by statute and legislative history, 2) the pervasiveness of the legislative scheme, 3) the nature of the subject matter as traditionally state or federal, and 4) the ability of both laws to coexist without serving as obstacles to one another.

**Intention of Congress:**

Expressing the aim and intention of Congress are several purposes found at 16 U.S.C. §4701 (b): "to prevent unintentional introductions of [non-indigenous species] into waters of the U.S. through ballast water management...; to coordinate [federal research], prevention, control, information dissemination...regarding [aquatic nuisance species]; to develop and carry out environmentally sound control methods to prevent, monitor and control unintentional introductions of [non-indigenous species] from pathways other than ballast water exchange; to understand and minimize economic and ecological impacts of [non-indigenous species]; to establish a program of research[,] development and assistance to states in the management and removal of zebra mussels."

Most Congressional testimony lauds NISA as a much needed effort and illustrates havoc stemming from an exotic species introduced to the home state conditions. However, some testimony suggests uniformity as a goal— despite the conspicuous absence of uniformity from the goal statements. For example, "in the interest of maintaining a level playing field nationally, the Coast Guard has authority to issue the same guidelines as regulations in regions where a review of ship records reveals poor cooperation with the voluntary approach. Thus, the maritime industry would see only one set of rules nationally."\(^14\) Moreover, due to the international nature of the maritime industry, assurances were made that "the bill now explicitly requires the equal treatment of U.S. and foreign-flag operators and encourages consistency of our guidelines with any international regulatory regime established through the IMO [International Maritime Organization]."\(^15\)

The text both supports and contradicts uniformity as an objective. For example, actions taken under the Clean Water Act are specifically exempted.\(^16\) Crude oil tankers and some passenger vessels are also exempted.\(^17\) Regulations may be promulgated on a regional level, rather than national, by the Coast Guard.\(^18\) Yet, the law requires uniformity with international regimes of ballast discharge that may develop.\(^19\)

**Pervasiveness of Regulation:**

Any court would be straining to find that the federal scheme embodied in NISA pervasively regulates the introduction of aquatic nuisance species. Ballast exchange reporting, and actual exchange in the Great Lakes, are the only topics addressed in a regulatory fashion. Studies and technology development are included for other areas. The pet trade, aquaculture, and coast-wise shipping are but three means of aquatic species introduction left untouched by NISA's regulatory scheme. Moreover, outside the Great Lakes, the ballast exchange program is voluntary at this time and gives much discretion to the ship's master because ballast water serves to stabilize a ship on the high seas. During the exchange of the water, this stability may be compromised and can be dangerous in stormy weather or rough conditions. Allowing the master discretion ensures the crew and cargo safety.

In one case, voluntary guidelines established by a trade organization were acknowledged by a federal agency as sufficient, if followed. Consequently, the agency did not develop a separate set of regulations. The court found that this type of arrangement had no preemptive effect over state laws addressing the same product safety concerns.\(^20\) While factually distinguishable, the case does suggest that self-regulation of compliance by an industry, even with federal acknowledgement, does not displace state regulatory authority in the area.

With some mental acrobatics, a court might reach the contrary conclusion. A court could interpret NISA as endeavoring to leave an area unregulated, similar to some labor relations practices under the National Labor Regulation Act. Simply because Congress has not created a vast regulatory web does not mean that the subject is open to states. Maybe Congress only wanted a reporting statute and intended for the subject to remain unregulated and open to market forces. On the subject of aquatic species transport, however, such a conclusion is at odds with the stated purposes.

**Subject Matter:**

Determining the nature of NISA's subject matter is more than an academic, semantic exercise. How a court conceives of the statute significantly impacts whether the statute addresses...
traditionally state or federal areas of law. For, when an area is a traditionally state regulated one, a presumption against preemption exists. Four readily apparent categories include the following: admiralty and maritime law, international trade and treaties, fish and game, and pollution control.

Under the U.S. Constitution, admiralty and maritime law are reserved for the federal government. Exceptions are made where the subject is of local interest, allowing states to legislate so long as it does not interfere with the federal system. Some examples include port regulations and safety in local harbors, ports by vessels within local ports, safety inspections, local pilotage laws, and local quarantine laws. States have been regulating ballast discharge in this fashion for over 100 years in order to protect their harbors. In specifically addressing ballast water, a focus on possible spread of waterborne disease from discharge of water likely falls under the state's police power to protect the health of its citizens.

International trade and treaties are federal prerogatives. Ballast exchange was an international concern as early as 1973 during discussions preceding the MARPOL Convention. This attention was primarily due to ballast water's potential for spreading disease. In July, 1991 the IMO adopted Resolution MEPC.50(31) and established international guidelines for preventing the introduction of pathogens from ballast water. These were published by the Coast Guard as voluntary guidelines in December, 1991, but were not made part of the MARPOL treaty. In September, 1997, the IMO again addressed ballast mediated spread of harmful organisms. The IMO again adopted guidelines and "requested the Marine Environment Protection Committee work towards completion of legally binding provisions ... in the form of a new Annex to Marpol 73/78 ... [and] guidelines for their ... implementation with a view to ... adoption in the year 2000."

Regulation of fish and game within state boarders is an exercise of state police powers. Where federal legisla-

Consequently, NISA provides an initial first step in recognizing the introduction of aquatic species as an issue of national significance and encouraging responsible shipping practices. Those states with the interest and the political will have significant room to tailor a program to their particular needs and take proactive, preventive action to maintain aquatic resources and habitat.

See Office of Technology Assessment, Harmful Nonindigenous Species in the United States (1993). "[A]t least 367 distinctly identifiable taxonomic groups of plants and animals have been found in the ballast water of ships arriving in Oregon from Japan." Id at 82.


See article outlining the program in this issue.


Schwarzer, supra, n. 5.


Hines v. Davidowitz, 312 U.S. 52 (1941).


Federal regulations also have preemptive effect over state law. Hillsborough Co. v. Automated Medical Laboratories, Inc. 471 U.S. 707 (1985). In short, a state interested in enacting a non-indigenous species program would need to bear in mind the regulatory provisions, not simply pay heed to the federal legislation. See the companion article in this issue for further detail regarding the Coast Guard's proposed rules.

Green Award

There is a new set of eyes watching out for the marine environment: The Green Award Foundation. The Foundation "encourages safe and environmentally friendly shipping." The Green Award Programme promotes a system of higher standards for ship operation while providing economic incentives to shipowners that meet Green Award Certification criteria.

Promoting a "green image" of shipping improves both the quality of shipping in addition to creating economic opportunities for shipowners and ports. For example, the State Ports Authority in Spain is a member of the Green Award Programme. All ships with Green Award Certificates are granted a seven-percent discount on the standard tariff when using Spanish ports. This benefits Spanish port development by encouraging traffic while reducing the risk of potentially dangerous and costly accidents from poorly managed ships. Other rewards of the program include rebates on harbor dues for docking at the Port of Rotterdam and the PORTNET South African ports. A "clean" image also reflects positively on the shipowner's reputation, an invaluable commodity for future business.

The certification process has three basic parts:

1. Compliance with international mandatory standards and rules;
2. Assessment of elements, including crew management, that go beyond the mandatory safety and environmental standards and rules;
3. Demonstration of a clean record regarding safety and environmental protection.

Certificates are valid for three years. Annual audits ensure the basic criteria continue to be met after certification and failure to meet the criteria results in withdrawal of certification. The first certificates were issued in 1994. Initially, the program was designed for crude-oil tankers above 50,000 dwt, but currently it is open to tankers above 20,000 dwt. An extension of the certification program to bulk carriers and chemical tankers is set for the turn of the century.

The number of certified ships and ports implementing the program is steadily growing. At the end of 1996, 33 tankers aggregating 7.1 million dwt had been certified. Those ships were entered by 14 owner/management companies from eight different countries. Another 36 applications were under review at the time. Currently, the ports of New Orleans and Baton Rouge do not participate in the Green Award Programme.

The Port of Rotterdam and the Netherlands Maritime Directorate created the Green Award Program in 1991 and have provided funding for the program since 1995. The Foundation, along with the Bureau Green Award executive body, operates and administers the program as an independent and nonprofit organization with corporate rights and its own Charter. For additional information on the Green Award Programme, contact the Bureau Green Award at

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Green Award Rewards Environmentally Friendly & Safe Shipping

by Quay McKnight and Sharonne O'Shea

1079 (Cir 1, 1987).
22 Constitution Art. III, §2, cl.1.
24 Constitution Art. VI, 2, cl.2.
26 Memorandum from the Marine Environmental Protection Committee of the International Maritime Organization, Harmful Aquatic Organisms in Ballast Water (Sept. 24, 1997)
28 35 Am. Jur. 2d Fish and Game §43.
New Coastal Law Scholarship

The Louisiana University Sea Grant Legal Program is a rare opportunity for law students with interest in coastal legal issues. Only a handful of similar programs exist in the nation. Each semester, we employ a few law students to assist in researching issues ranging from aquaculture and beach access to Natural Resources Damage Assessments and water rights. Constituent coastal community members, coastal industries, and government agencies all request research from our organization and presentations from the students.

The students enjoy an opportunity to explore the realm of environmental law in ways applicable to the coastal communities of Louisiana and the citizens who reside there. The students also hone their research and writing skills, critical to the practice of law in any field. In an effort to expand this opportunity to a wider number of students, we endeavor to establish a scholarship fund. Already, alumni of the program have responded favorably to solicitation for donations. However, as you may be aware, legal education is not cheap. Moreover, environmental experience often requires students to support themselves while interning. LSU's Sea Grant Legal Program would like to make environmental work possible for students from a variety of economic backgrounds. If you or your organization are seeking an opportunity to make a worth-while, tax-deductible contribution, please consider our scholarship endowment.

Ideally, the scholarship would provide a qualified law student with an interest in environmental and coastal issues with tuition for an entire academic year. During this time, the student would author one paper on a topic related to coastal law issues and make an informal presentation of the findings to interested members of the LSU and coastal communities. This provides the student with experience in coastal law and evidence of their writing ability to present to a future employer. It also educates citizens on important coastal issues. Finally, a scholarship fund allows us to expand the number of positions available, thereby meeting the increasing constituent demand for research on coastal issues and providing more students with an opportunity for rewarding legal research.

For further information on how you can help make this scholarship a reality, please contact Jim Wilkins at 504/388-5931 or sglegal@lsu.edu.

In celebration of The Year of the Ocean, Sea Grant Legal presents:

Things You Can Do to Protect Our Oceans

*Information taken from www.yoto.com*

Learn all you can. Read, surf the Internet and experience the ocean directly.

Be an educated consumer. Learn about the source and quality of your seafood.

Conserve water. Be careful when washing your car, watering your lawn, and running the washer. Use a broom instead of a hose to clean your driveway or sidewalk.

Reduce household pollutants, especially herbicides, pesticides and cleaning products, which are often harmful to the environment.

Recycle, reuse and reduce waste whenever possible. Composting is also beneficial.

Reduce automobile pollution by using fuel efficient vehicles or carpooling. Repair oil and air conditioning leaks and recycle motor oil.

Protect the marine habitat. Don’t dispose of plastic items or old nets or fishing lines in or near water.

Be considerate of ocean wildlife. Don’t feed sea animals or disturb their nesting grounds. Support marine protected areas.

Get involved in your local community to help protect your environment. Take part in a beach clean up or other ocean -oriented activities.

Care! Pass on your knowledge!
New Director of Sea Grant Legal Named

On February 1, 1998, James G. Wilkins became the new Director of the Sea Grant Legal Program. In addition, Jim was designated Associate Professor. He becomes the fourth Director of the Sea Grant Legal Program in its 28-year history.

Jim previously served as Associate Attorney with the Sea Grant Legal Program, focusing on coastal zone management, public trust, fisheries, and marsh management issues. Jim is a graduate of the LSU Law Center and holds a B.S. degree in Biology from Centenary College and an M.S. degree in invertebrate Biology from Texas A&M University.

He currently serves as Editor of The Louisiana Environmental Lawyer, legal newsletter of the Environmental Law Section of the Louisiana State Bar Association and as a member of The Scientific and Statistical Committee of the Gulf of Mexico Fishery Management Council. Prior to law school, Jim was a research scientist at LSU and also served as a permit analyst for Louisiana's coastal management program.

Louisiana Sea Grant and Louisianians are indeed fortunate to have Jim as Director of the Sea Grant Legal Program.

Sea Grant Legal has found its home on the World Wide Web!

Check our home page out at http://www.lsu.edu/guests/sglegal/

or E-Mail us at sglegal@lsu.edu

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