



**House  
Legislative  
Analysis  
Section**

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**BALLAST WATER: AQUATIC  
NUISANCE SPECIES**

**Senate Bill 152 (Substitute H-1)  
First Analysis (6-12-01)**

**Sponsor: Sen. Ken Sikkema  
House Committee: Land Use and  
Environment  
Senate Committee: Natural Resources  
and Environmental Affairs**

***THE APPARENT PROBLEM:***

The invasion of exotic species has been identified as the number one threat to the ecosystem of the Great Lakes, according to the Michigan United Conservation Clubs (MUCC). These species are said to be introduced into the region from ballast water discharged from cargo ships traveling the lakes. These species can do great damage. For example, experts say that native perch populations have declined 75 percent since the introduction of the ruffe from Europe and that an adult sea lamprey can kill up to 40 pounds of lake trout in 12 to 20 months. The zebra mussel could cause as much as \$5 billion in damage during the next decade to factories, power plants, water suppliers, ships, and fisheries, according to the United States Fish and Wildlife Service. A recent background paper (Backgrounder, Volume 5, Issue 6-2001) on ballast water management from the Science and Technology Division of the Legislative Service Bureau provides a useful overview of this topic. The report notes:

*Ballast water is used to offset weight gains and losses during cargo transfers while ships are in port as well as to redistribute weight while a ship is at sea. Ballast water manipulation helps to maximize the ship's stability, maneuverability, speed, and ultimately, its safety under various sea conditions and as fuel is consumed during the voyage. In an average year, the total amount of ballast water discharged from overseas vessels in the Great Lakes is estimated to be 1.5 billion gallons.*

*The problem is that ballast water also contains aquatic organisms. Ships take up ballast water and any associated aquatic organisms in one port and may release that ballast water and any surviving organisms in another port. Therefore, a ship's ballast water is a significant pathway for introducing exotic species to and spreading exotic species throughout a new region. For example, zebra*

*mussels were most likely carried from Europe and introduced to the Great Lakes in ballast water from ocean-going ships, referred to as salties. Once they were introduced, freighters operating within the Great Lakes, referred to as lakers, may have helped quickly spread them throughout the Great Lakes by exchanging ballast water at various points.*

Some of these exotic species are classified as "aquatic nuisance species", which is a term that refers to organisms that "threaten the diversity or abundance of native species, the ecological stability of impacted waters, or threatens a commercial, agricultural, aquacultural or recreational activity", according to a pamphlet prepared by the Office of Great Lakes in the Michigan Department of Environmental Quality (DEQ). That pamphlet, entitled Aquatic Nuisance Species Handbook for Government Officials, says:

*These species have the potential to cause significant ecological problems because they have been introduced into a habitat in which there are no natural controls, such as pathogens, parasites, and predators. Lack of natural controls in a new habitat may allow a species to grow at or near its potential, exponential growth rate. If such species become established, they may disrupt species relationships in the new habitat. As a nuisance species proliferates, other species' relationships change in the habitat. The introduced species may prey upon, outcompete, or cause disease in a native species. [Their introduction] into the Great Lakes region causes ecological, economic, societal and public health impacts that threaten the value of the region's water resources.*

Federal legislation enacted in the 1990's addresses this issue and requires that ships engage in various practices to prevent ballast water from introducing

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exotic species into the Great Lakes, such as ballast exchanges. Some people, however, do not find the federal regulations and enforcement adequate and have advocated that Michigan act separately to regulate the activities of shippers. In the 1999-2000 session, legislation was introduced that would have required oceangoing vessels to use the best available treatment technologies and required all vessels to follow certain operational practices. This approach proved controversial. New legislation on the issue, adopting a different approach, has been introduced in the current legislative session.

### ***THE CONTENT OF THE BILL:***

The bill would amend the Natural Resources and Environmental Protection Act (NREPA) in a number of ways related to ballast water management and ballast water treatment. Generally speaking, the bill would require the Department of Environmental Quality (DEQ) to compile lists of vessels that were complying with certain specified ballast water management practices or, subsequently, that were using certain ballast water treatment methods. The lists would be distributed to companies that had contracts with vessel operators for the transportation of cargo. Owners or operators of vessels that were not on these lists and persons who had contracts with vessel owners or operators not on the lists would not be eligible for any new grants, loans, or awards administered by the DEQ. Specifically, the bill would do the following.

- The bill would make a finding that that it is a goal of this state to prevent the introduction of and minimize the spread of aquatic nuisance species within the Great Lakes, and that, to achieve this goal, the state would have to cooperate with the United States and Canadian authorities, other states and provinces, and the maritime industry.
- The Department of Environmental Quality (DEQ) would be required to make a set of determinations by March 1, 2002, regarding whether certain specified ballast management practices that have been proposed for oceangoing vessels by the Shipping Federation of Canada and have been proposed for nonoceangoing vessels jointly by the Lake Carriers Association and the Canadian Shipowners Association were being complied with by vessels operating on the Great Lakes and the St. Lawrence Seaway. This would involve the reporting of compliance or noncompliance by owners or operators of vessels at the request of the DEQ on a form developed by the department and the Shipping Federation of Canada. The department would also

have to determine if either or both of the set of proposed management practices had been made conditions of passage on the St. Lawrence Seaway by the St. Lawrence Management Corporation or the St. Lawrence Development Corporation.

- The DEQ would have to compile and maintain a list of all oceangoing vessels and nonoceangoing vessels that had complied with the practices described in the previous paragraph during the previous 12 months. Copies of the list would have to be distributed annually to persons in the state who had contracts with oceangoing and nonoceangoing vessel operators for the transportation of cargo. It would also have to be provided to the governor and the standing committees of the legislature with jurisdiction over issues pertaining to natural resources and the environment. The list would have to be continually updated and maintained on the department's web site.
- Also by March 1, 2002, the DEQ would have to determine whether one or more ballast water treatment methods that protect the safety of a vessel, its crew, and its passengers could be used by oceangoing vessels to prevent the introduction of aquatic nuisance species into the Great Lakes and determine the time period after which the method or methods could be used by all such vessels. If the department determined a method was not available, it would then have to determine the actions necessary to be taken for a method to be developed, tested, and made available to vessel owners and operators and a time period after which such a method could be used. (If the DEQ subsequently determined that a method or methods could be used, it would have to determine a date when it could be used by all oceangoing vessels on the Great Lakes.)
- By March 1, 2003, the DEQ would have to determine whether all oceangoing vessels operating on the Great Lakes were using a department-identified treatment method (of the kind described in the previous paragraph). Upon request by the department, the owner or operator of an oceangoing vessel would have to provide confirmation of whether or not the vessel was using such a method, on a form developed by the DEQ and the Shipping Federation of Canada. If the DEQ determined that all oceangoing vessels were not using an identified treatment method by the dates set by the department, the department would have to determine what the reasons were for not doing so. The DEQ would also have to determine whether use of the method or methods had been made a condition of passage on the St. Lawrence Seaway.

- If the department had determined that one or more ballast water treatment methods could be used by oceangoing vessels, it would have to compile and maintain a list of all oceangoing vessels that, after the department-determined date for using the methods, had been using them during the previous 12 months. This list also would have to be distributed to persons with contracts with vessel operators for the transportation of cargo and be provided to the governor and legislative committees with jurisdiction over issues pertaining to natural resources and environment. This list also would have to be continually updated and posted on the DEQ web site.

- All of the determinations made by the DEQ, both those made in 2002 and those made in 2003, would have to be submitted to the governor and the standing committees of the legislature with jurisdiction primarily over issues pertaining to natural resources and the environment.

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### ***HOUSE COMMITTEE ACTION:***

The House Committee on Land Use and Environment adopted three amendments to the Senate-passed version of Senate Bill 152 (incorporated into Substitute H-1). One would allow for the establishment of alternative ballast water management practices for a ferry transporting motor vehicles across Lake Michigan. The other two are related to one another. The Senate-passed bill referred in several places to persons in the state “who use” vessels for shipping. The House substitute refers instead to persons “who have contracts with” vessel operators for the transportation of cargo.

### ***BACKGROUND INFORMATION:***

The Office of Great Lakes with the Department of Environmental Quality has published a guide to this subject entitled, [Aquatic Nuisance Species Handbook for Government Officials](#). It is also available at the departmental web site at [www.deq.state.mi.us/og1](http://www.deq.state.mi.us/og1). There are a number of other reports on the topic at that same site. There is also a useful background report from the Science and Technology Division of the Legislative Service Bureau, entitled [Ballast Water Management](#). That report is available at the LSB web site. It contains explanations of the current federal regulations; a brief history of the debate over imposing state regulation; and a discussion of the current research into treatment technologies.

### ***FISCAL IMPLICATIONS:***

The House Agency reports the bill would result in an indeterminate increase in administrative costs related to preparation, distribution, and Internet posting of the required lists. (6-8-01)

### ***ARGUMENTS:***

#### ***For:***

Proponents of this bill say it is an important step in addressing the problem of aquatic nuisance species, which has been called the biggest single problem facing the Great Lakes ecosystem. Unlike previous legislative proposals, which would have had the state take a regulatory approach to the problem, the bill takes a different “market based” approach, and emphasizes research on treatment methods, voluntary compliance with currently accepted standards, and the use of incentives and public pressure. It encourages cooperation between state regulators and the maritime industry. Initially, the bill would require the DEQ to make a list of vessels on the Great Lakes that were complying with ballast management practices proposed by industry groups and distribute the list to business that contract with such vessels. The DEQ would also be required to investigate methods for treating ballast water. If it determined that there was one or more acceptable methods that should be on all vessels, it would then compile lists of vessels that made use of the method or methods and distribute that to potential customers. This approach encourages research into safe, effective, affordable methods of treating ballast water. Once such a method is identified by the DEQ, vessel owners and operators who did not use it would need to explain why not. And, although the exotic species issue is an international one that requires the cooperation of many governmental jurisdictions, once the state has acted to identify a treatment method or methods that vessels should be using, other jurisdictions will have to pay attention. The bill also would deny grants, loans, and awards from the DEQ to vessel owners and operators who were not on compliance lists and to their customers.

#### ***Response:***

While supporting the steps taken in this bill, some people believe it could go further. For example, the bill would not require that a list be made of the vessels not following recommended management or treatment practices or that a list be made of the customers doing business with such vessels. While this bill represents a useful step in the right direction, more needs to be done by the state to address this problem.

***POSITIONS:***

The following are among those indicated support for the bill to the House Committee on Land Use and Environment on 6-7-01: The Department of Environmental Quality; the Michigan Manufacturers Association; the Michigan Chamber of Commerce; the Michigan United Conservation Clubs; the Michigan Environmental Council; the Michigan Council of Trout Unlimited; the Michigan Chemistry Council; the Michigan Association of Counties; the Michigan Municipal League; the Lake Carriers' Association; Detroit Edison; the Detroit/Wayne County Port Authority; the Michigan B.A.S.S. Chapter Federation; and Fednav Limited (identified as the largest owner and operator of ocean vessels trading into the Great Lakes).

Analyst: C. Couch

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■ This analysis was prepared by nonpartisan House staff for use by House members in their deliberations, and does not constitute an official statement of legislative intent.