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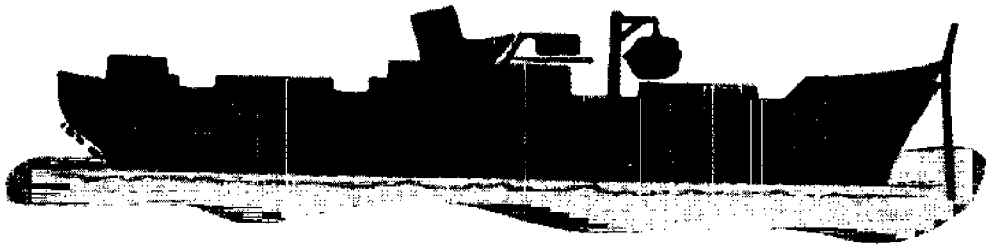

Invasive Species and Ballast Water Management in the Gulf of Mexico Region

October 6, 1999 New Orleans, Louisiana

Workshop Proceedings

edited by

Susan Grantham and Marilyn Barrett-O'Leary

UNIVERSITY OF FLORIDA

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and

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Technical Paper - 102

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Introduction

The Invasive Species and Ballast Water Management in the Gulf of Mexico Workshop[1] was held to provide information on current and future approaches for dealing with the dispersal of invasive non-indigenous species (NIS) via ballast water in this geographic region[2]. Ballast water exchange in port, or nearshore, has been identified as a high probability vector for delivering NIS into local aquatic environments. These invasive species come from both domestic and foreign sources. Via ballast water exchanges, these invasive species can be introduced into a non-native but equally hospitable environment.

While the phenomenon of invasive species is not new, this issue is now receiving attention both nationally and internationally. When ships exchange ballast water, millions of gallons of water may be taken or released into ballast tanks as well as the Gulf of Mexico. If the exchange takes place in port, a common practice with certain types of vessels, the potential increases for an invasive species to be released and possibly to become established. If this occurs, the invasive species can alter the native environment by displacing or eradicating native plants and animals. The displacement of native species can, and has, wreaked environmental and economic havoc.

The Gulf of Mexico region has both coastal and riverine ports. These ports are accessed through two major routes, the Straits of Florida and the Straits of Yucatan. Open ocean ballast water exchange (OOBWE) areas that fit the Coast Guard recommended parameters of 200 nautical miles out and 200 meters deep, are not conveniently located along these shipping routes. In order to comply with the recommended OOBWE practices, these vessels could be adding days on to their trip along with additional expenditures for fuel resulting in lost revenues.

When and where to take on ballast water is determined by the vessel's cargo load and destination. Ballast water exchange practices require specific steps in order to maintain the safety of personnel and the integrity of the vessel. No strategy for dealing with the NIS issues as it pertains to ballast water can be advanced without addressing these issues.

This one-day workshop focused on the topic in two sessions: *The Situation* and *Gulf of Mexico Considerations*. Presenters representing scientific, regulatory and shipping concerns regarding the invasive species dispersed in ballast water provided current information and suggested future strategies for dealing with this issue in the Gulf of Mexico region. From these presentations, participants responded to the question, " Do we have enough information on this topic?" with, "No we don't." To the question, "Are strategies being implemented to provide information which can be used to deal with invasive species in the region?" they responded, "Yes, but only a beginning."

Following is a synopsis from the workshop of each presentation and highlights of the resulting discussion. The focus of this information was the Gulf of Mexico region. However, this is not simply a regional issue, it is a worldwide concern. Ultimately, all areas of the world must control the species imported and exported through this vector.

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[1] This workshop was sponsored by : EPA Gulf of Mexico Program, Gulf of Mexico Regional ANS Panel, National Oceanic and Atmospheric Administration, and the Louisiana Sea Grant Program.

[2] A list of attendees and presenters can be found in Appendix A.

NIS in Gulf of Mexico and in Ballast

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Non-indigenous species (NIS) are increasingly recognized as important agents of change in marine and estuarine ecosystems. The effects of NIS may be manifested ecologically, economically, and in terms of public health. Understanding these effects requires that we investigate the extent and rate of invasion to the nation's aquatic systems. Additionally, the development of effective management strategies and systems is essential if future invasions are to be prevented.

With respect to NIS, the best-studied aquatic ecosystems in the continental United States are probably San Francisco Bay, the Great Lakes, and Chesapeake Bay. Research in these systems has uncovered hundreds of exotic species, including many ballast-mediated introductions. By comparison, the Gulf of Mexico has received far less scientific attention. Given the extent of historical and contemporary shipping in this region, the Gulf of Mexico has undoubtedly been invaded by many, as yet, unrecorded NIS. To date, more than 90 non-indigenous species are known to exist in the Gulf of Mexico. Of these, 13 invertebrates (3 annelids, 1 diatom, 1 cnidarian, 7 crustaceans and 1 mollusk) are thought to have arrived in ballast water. Eleven of the above list are believed to be established in the Gulf of Mexico.

Today, ballast water appears to be the most important vector for aquatic species transfer throughout the world. The transfer of organisms in ballast water has resulted in the unintentional introduction of tens to hundreds of freshwater and marine species to the U.S. and elsewhere. Furthermore, the rate of new invasions from ballast water has increased in recent years. In addition to animals and plants, ballast water can contain a diverse suite of microorganisms (e.g., bacteria and viruses) some of which may be pathogenic to humans. Thus, the problem of exotic marine and estuarine species is not limited to just one of zebra mussels.

Currently, ballast water exchange is the most widely recognized management tool to reduce the risk of ballast-mediated invasion. Ballast water exchange involves replacing coastal water with open-ocean water during a voyage. This process reduces the density of coastal organisms in ballast tanks that may be able to invade a recipient port, and replaces them with oceanic organisms with a lower probability of survival in nearshore waters.

The National Invasive Species Act of 1996 (NISA) directed the United States Coast Guard in conjunction with SERC to develop a clearinghouse for the synthesis, analysis, and interpretation of national data concerning ballast water management and ballast-mediated invasions. NISA requires that all vessels entering from outside the United States' exclusive economic zone report their ballast management practices via a ballast management reporting form (see page 55 for a sample form). Since July 1, 1999, the National Ballast Water Information Clearinghouse has been receiving such ballast water reports. The Clearinghouse will use these and other data to determine (1) the degree of compliance

with mandatory reporting requirements and (2) the extent of voluntary ballast water exchange. The Clearinghouse is scheduled to report its initial biennial report to the United States Congress in 2001.

U.S. Coast Guard Regulations and Guidelines

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In 1996 the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 was amended by the National Invasive Species Act of 1996 (NISA) to further address the spread of nonindigenous species. To implement NISA, the Coast Guard has developed regulations that (1) promote ballast water management for operators of all vessels in waters of the United States (2) provide voluntary ballast water management guidelines for all vessels entering U.S. waters from outside of the Exclusive Economic Zone (EEZ) and (3) require the reporting of ballast water management data by all vessels entering U.S. waters from outside of the EEZ. An interim final rule was published May 17 1999. (See Appendix B for a history of the legislation on this issue and Appendix C for the regulations printed in the federal register).

The Coast Guard, in cooperation with the Smithsonian Environmental Research Center, has developed a nationwide program to measure ballast water management and delivery patterns for commercial vessels that arrive in U.S. ports from outside of our EEZ. This National Ballast Survey (see page 55) is designed explicitly to create a national database on ballast water practices. Coast Guard field personnel are involved in the collection of data to verify the accuracy of data submitted under the new regulations. The goal of this project is to determine best practices for ballast water management by studying ballast water patterns.

For ships entering into the Gulf of Mexico (GOM) region, report and record keeping can provide critical information about the source of ballast water and where the water was exchanged or dispersed. This information not only has domestic implications, but also international implications when determining guidelines for best management practices.

Some vessels are exempt from reporting, most are not (See page 50 in Appendix C for exemptions). If a vessel retains residual or unpumpable ballast, that water is still considered ballast water and the regulations do apply. Retaining ballast water is a viable alternative management technique and should be reported on the ballast water reporting form. While it is true that retaining ballast water is considered a valid treatment, that is not the protocol used by most vessels and other technologies for treating ballast water do not yet exist. The database should provide information about the types of organisms ballast water should be treated for, their source and probable local of dispersal.

IMO Debates on Ballast Management

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The International Maritime Organization (IMO) is independent of the United Nations, sets policy for shipping, administers MARPOL and is composed of port states and flag states. While there is no formal position or resolution, IMO members do support moving forward on the ballast water issue as it concerns invasive non-indigenous species.

It is noted that open water ballast water exchange is an interim solution. Due to safety concerns and route designation, performing this type of ballast water exchange is not always possible.

Internationally there remain many unresolved issues.

- Is this the responsibility of flag or port states?
- What are the safety related issues and how can they be addressed?
- What applications will work with varying types of vessels?
- What are the geographic restrictions?
- Should there be an overall ballast management application?

Additional consideration should be given to the format under which ballast water management policies are developed and implemented.

- Should there be an annex to MARPOL?
- Should there be a separate treaty?
- Who would enforce established provisions?
- Should there be an option to opt in or opt out by various countries?
- Can this issue be handled by regional agreements?
- Is this perceived as a US or international issue?

What are some of the ballast water management alternatives?

- Risk assessment approach: Determining the level of risk by rating the probability of infestation based on the last port of call where water was taken into the ballast water system.
- Approval process: Allowing certain waters to be dispersed into port.
- Standardization of effectiveness: Alternatives can range from zero ballast discharge to a variety of treatments.

Consensus needs to be reached for the following issues:

- Flag/Port states and NGO recognize that action is required.
- It is imperative to get beyond the localization issues.
- Vessel based management procedures are preferable to paying port user fees.
- Standardized ballast water management is key to moving forward.

- Treaty via the IMO is not likely until 200-2002 with additional years for treaty to be implemented.
- Once performance standards have been determined, industry will develop devices to meet standards.

Liabilities for Gulf Waters through Gulf Shipping - Discussion Points

- There are two main shipping routes into the GOM ports – Straits of Florida and Straits of the Yucatan.
- Most ships are headed for the Mississippi River.
- Most ships come from Atlantic and amount of time to perform the exchange is 30 hours costing thousands of dollars in lost time which does not include the amount of fuel and additional time spent traveling to and from the area.
- Should coastwide trade be exempt from ballast water considerations?
- Locations for open ocean ballast water exchange that fit the Coast Guard criteria in the GOM are few.
- Why do some organisms who invade lay dormant for years become established later?
- Are the number of invasive species increasing or is the identification of these species a result of increased study effort?
- How can you determine the true risk? Port water characteristics where ballast water taken on if open ocean ballast water exchange not conducted? Amount of water discharged?
- Is there an increased risk to shellfish from concentrated pathogens being exchanged in or near their habitat?

Ballast Water Management:
Shipping and Vessel Considerations for
Open Ocean Ballast Exchange[3]

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Presentation Outline

- Practical Ways to Mitigate Invasions
- Open Ocean Exchange
- Ballast Water Management Plans
- Sample Exchange Sequence
- Ship Type Operational Experience
- Proposed Ship Modifications for Exchange
- Recommendations & Conclusions

Practical Ways To Mitigate Aquatic Invasions

- Reducing organisms taken on board
- Retention of ballast on board
- Exchange of ballast at sea
  - overflow
  - sequential
- Shipboard ballast water treatment
- On-Shore ballast water treatment

Overflow Exchange - (See photos on page 9)

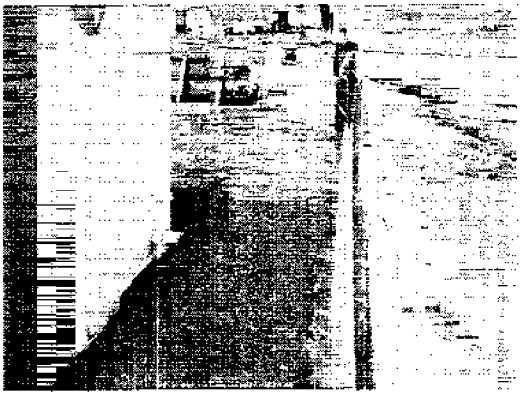
- Dilution by 3x overflowing - process takes approximately 48 hours
- Assumed to be about 95% effective
- No stability, trim, slamming problems

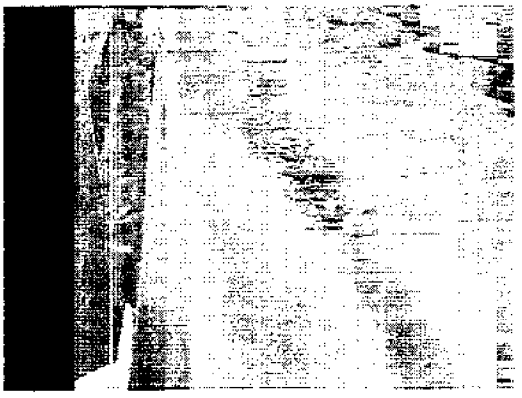
Overflow Exchange Safety Considerations

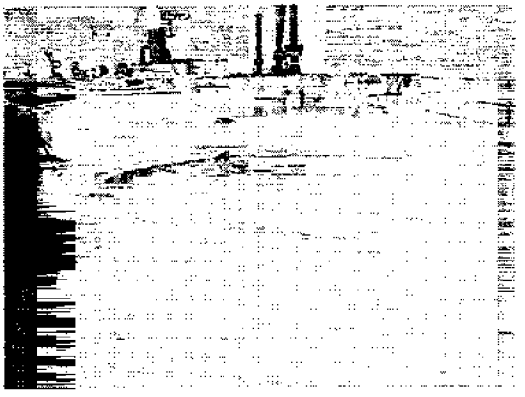
- Tank Over Pressurization
- Personnel on deck

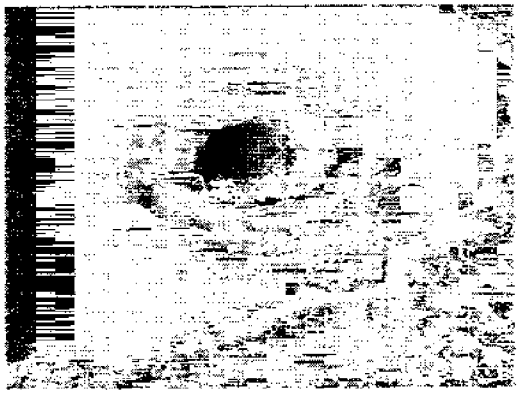
[3] All photographs and graphics in this presentation are copyrighted.

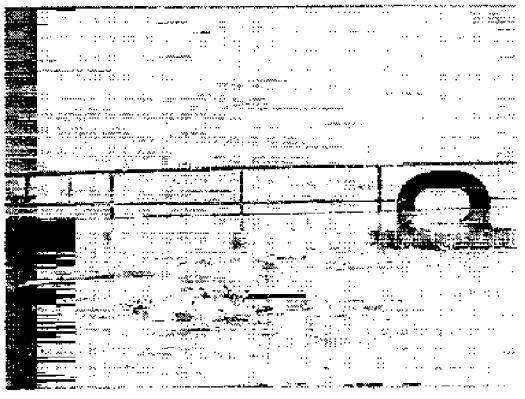
Photos of Open Ocean Water Ballast Water Exchange- ©1999

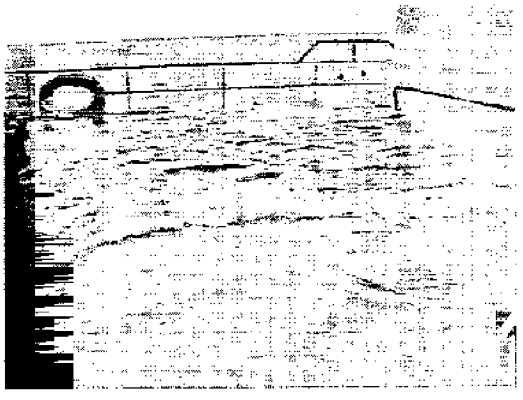


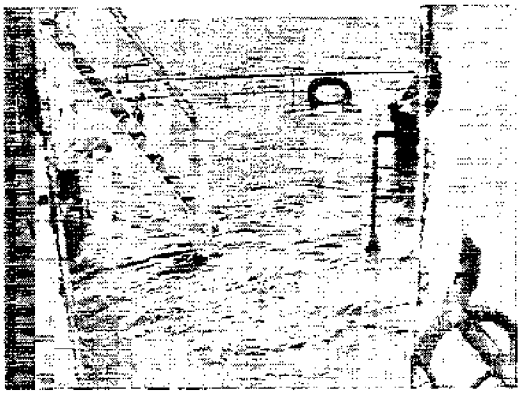










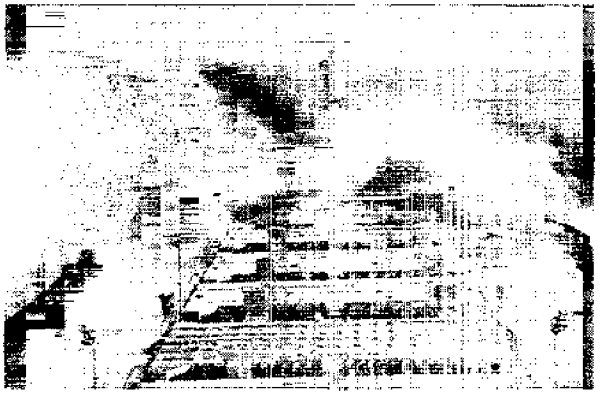


Sequential Exchange

- discharging port ballast - 30 steps taking 48 hours
- refilling with deep ocean water
- also assumed to be about 95% effective
- requires careful planning
- "attention" intensive

Sequential Exchange Safety Considerations

- Maneuvering
- Slamming (see photo at right)
- Trims
- List
- Strength
- Visibility
- Stability
- Sloshing



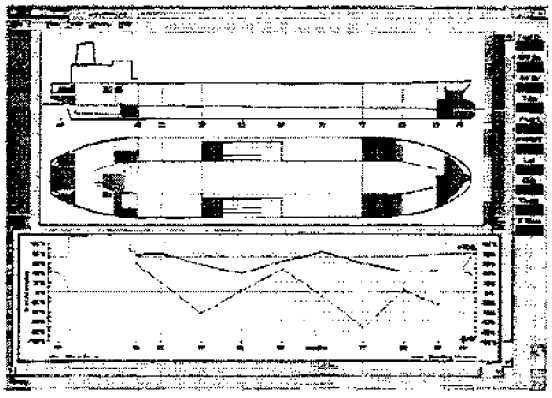
Development of Ballast Water Management Plans

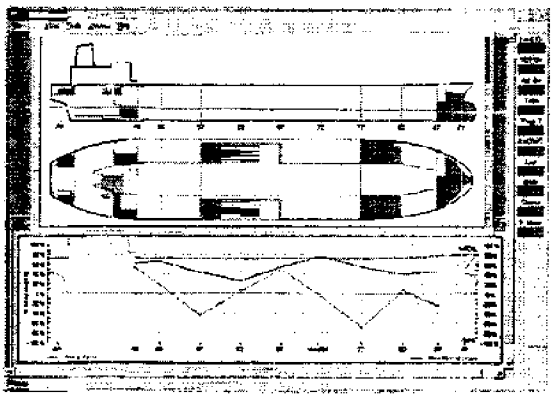
- Regulations
- Ballast Tank & Piping Arrangement
- Guidelines and Safety Procedures
- Sequence descriptions
- Documentation

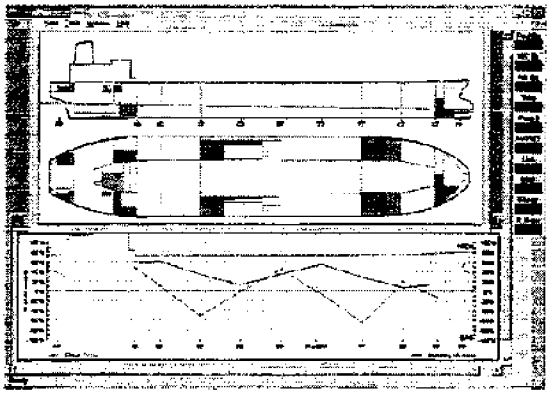
Sample Ballast Water Exchange[4]

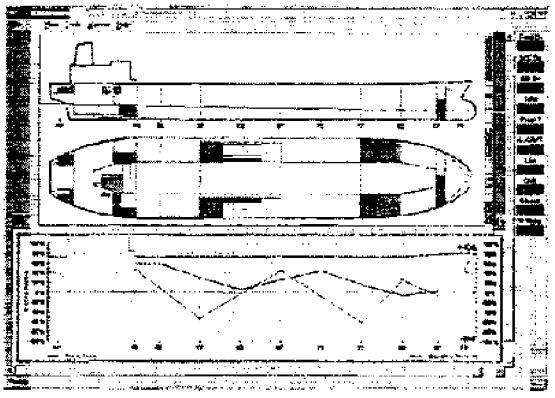
- Single Hull Tanker
- 2 pairs of large Ballast Tanks
- Forepeak & Aft Peak
- 90,000 tons Cargo Capacity
- 35,000 tons Ballast Capacity

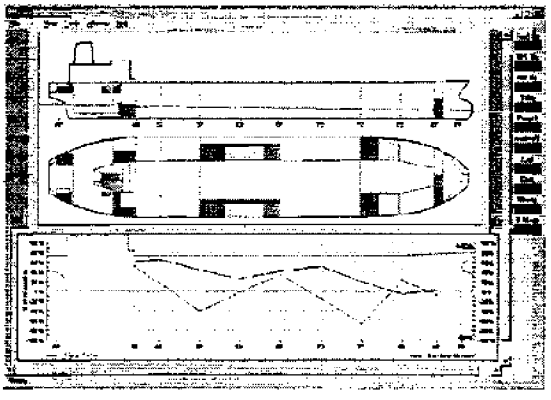
[4] The following pages show a sequential open ocean ballast water exchange procedure for a single hull tanker. The pictures were presented in color at the workshop which made the sequencing steps easier to follow. However, the steps can be ascertained in this black and white version by paying close attention to the level of fill in the ballast water compartments as you read from left to right.

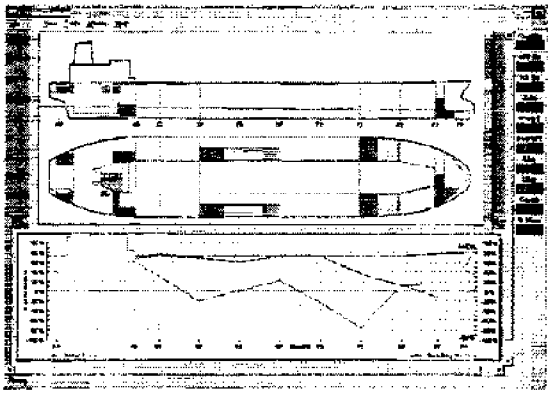


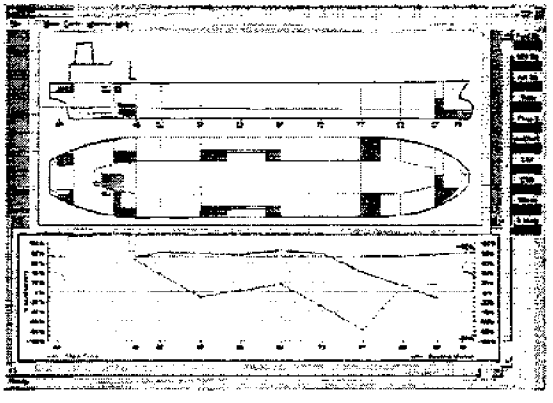


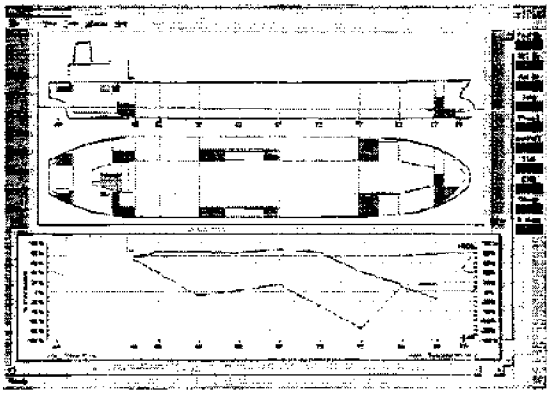


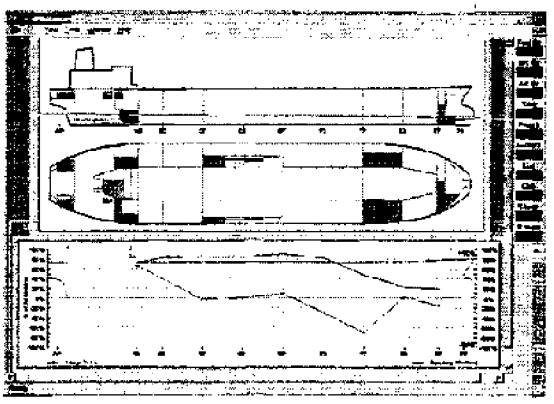


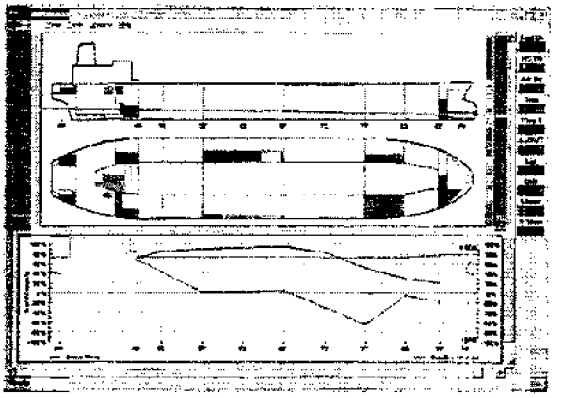


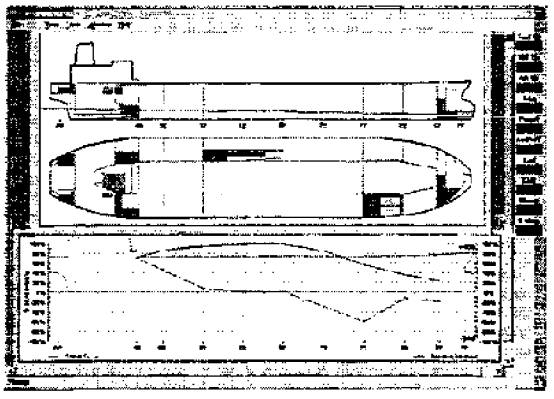


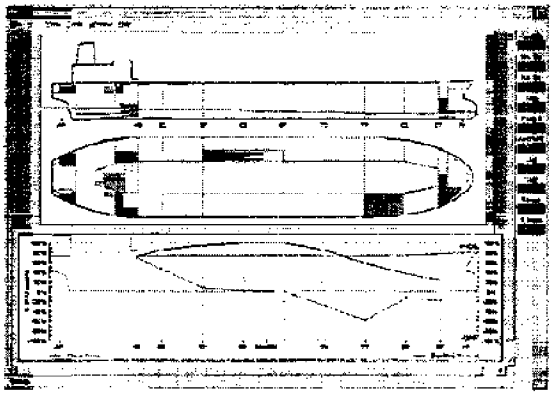


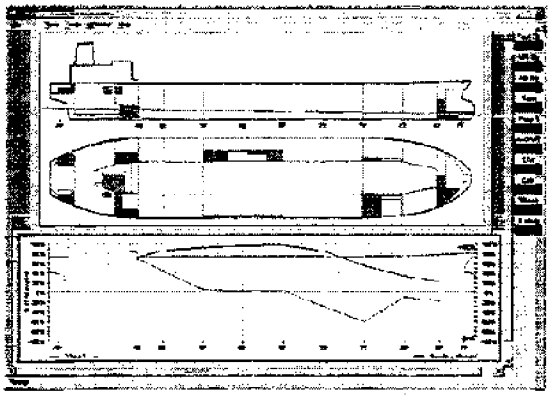


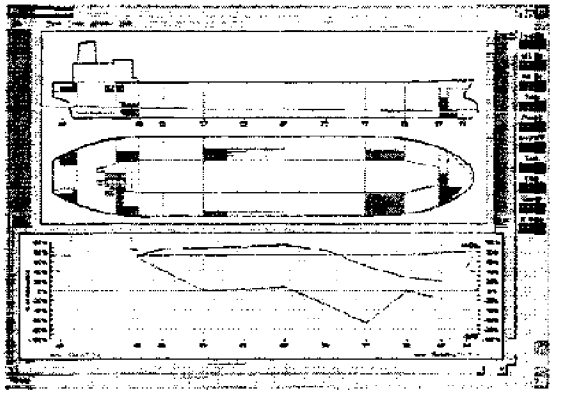


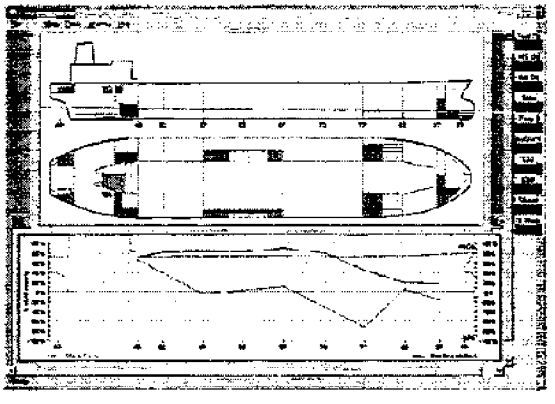


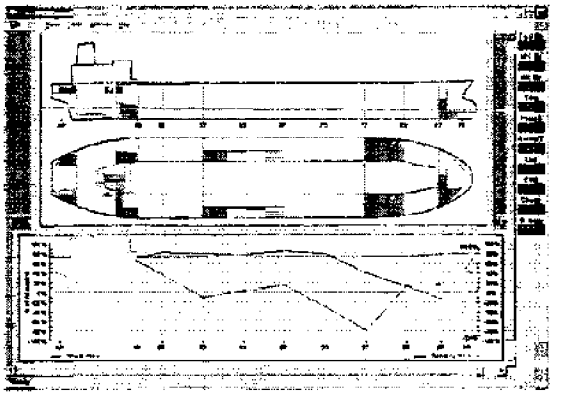


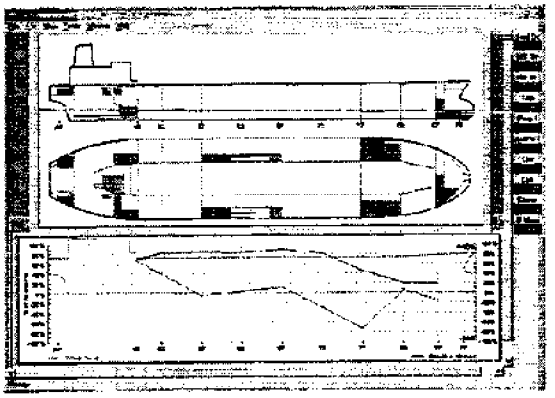


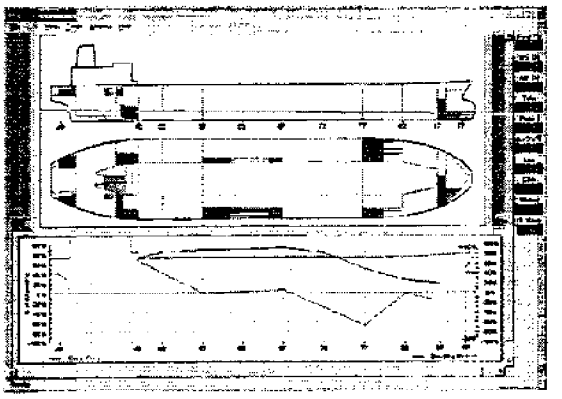


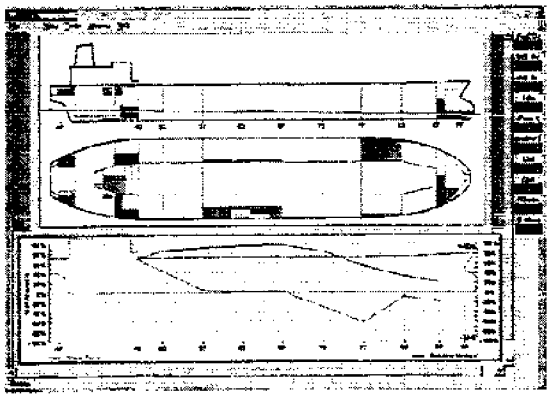


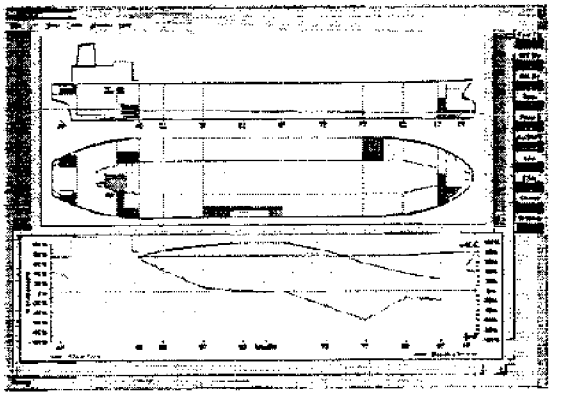


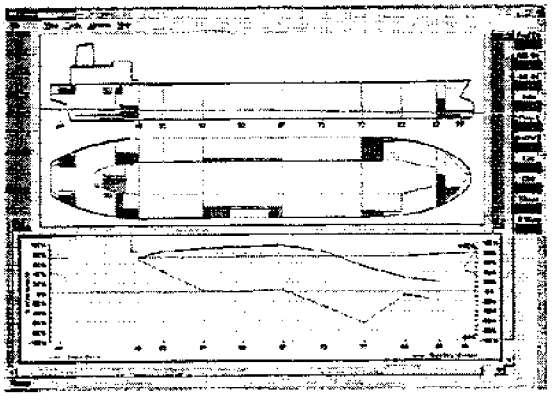


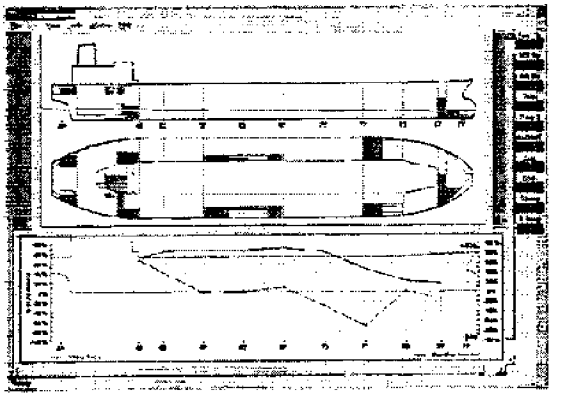


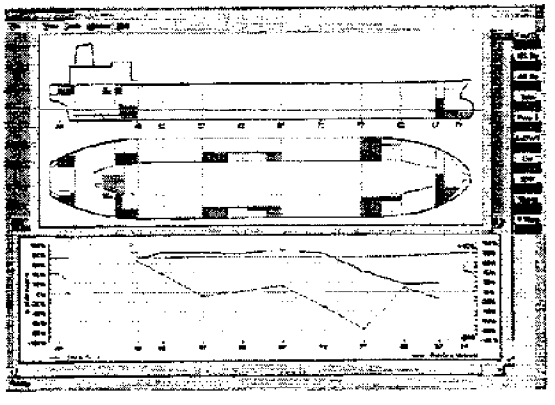


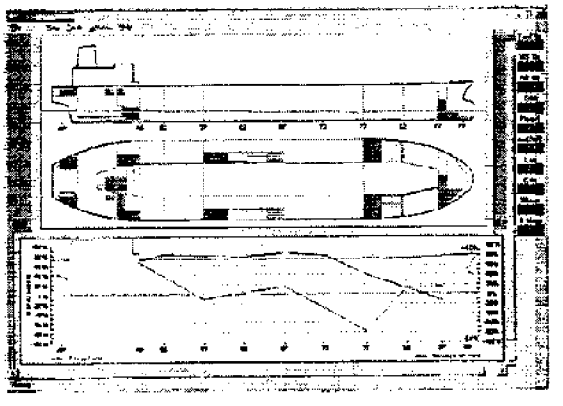


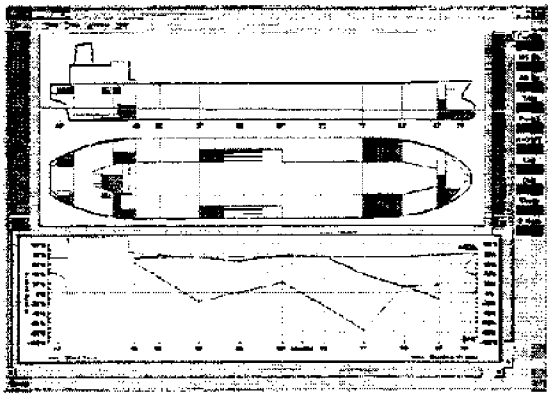


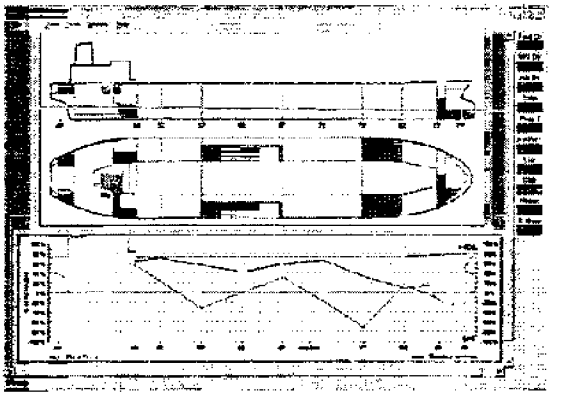


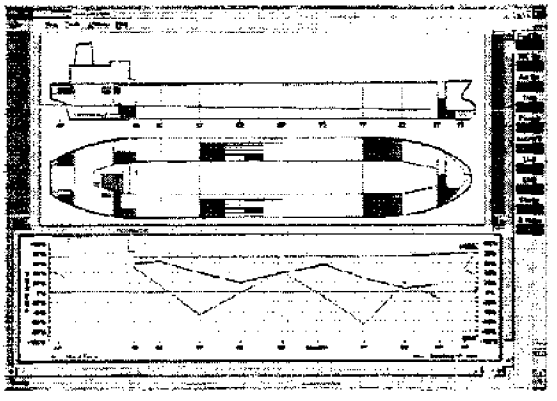


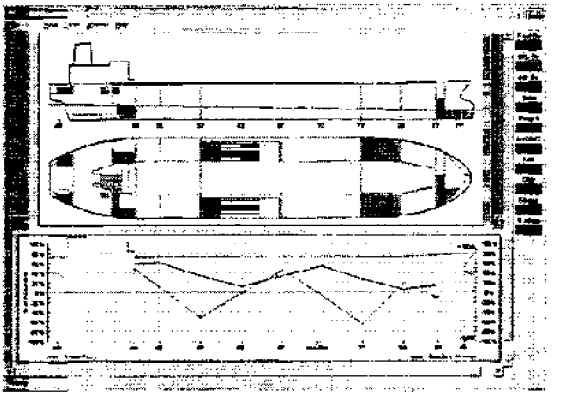


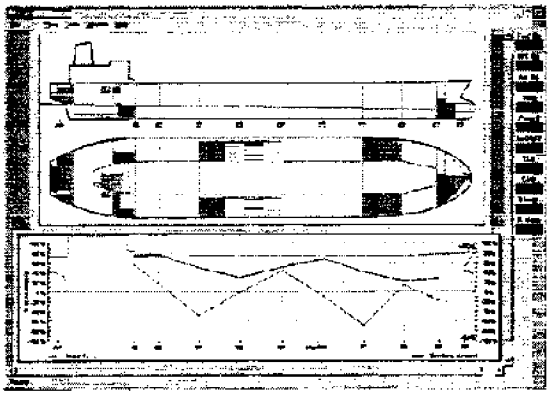


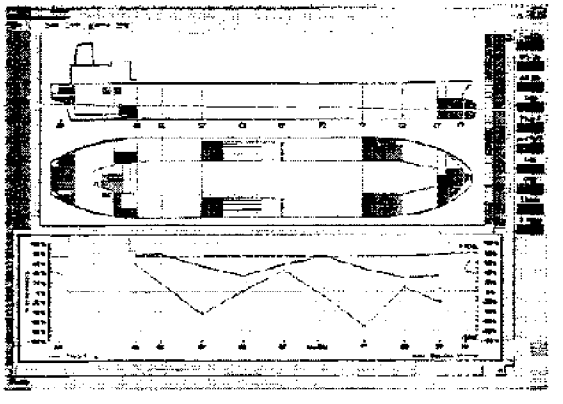


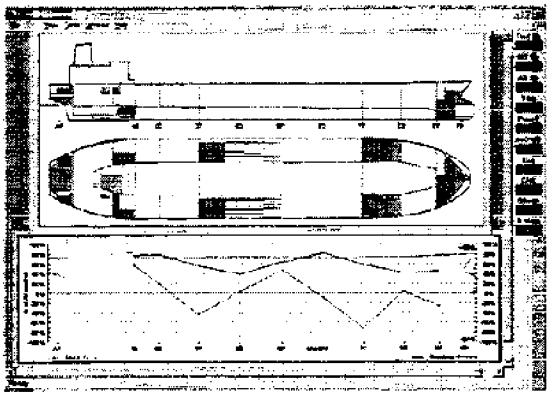












Operational Experience

- Single Hull Tankers
- Double Hull Tankers
- Bulk Carriers
- Containerships

Single Hull Tankers

- Small number of large ballast tanks
- Sequential exchange is often difficult
  - complex multi-day sequences
  - light forward drafts (slamming)
  - diagonal exchange required
  - bending stresses high
  - no stability problems
- Overflow often more suitable

Double Hull Tankers

- Large number (12-15) of smaller tanks
- Typically well suited for exchange
- Somewhat sensitive to bending stress

Bulk Carriers

- Similar to single hull tankers
- Sequential Exchange is often difficult
  - complex sequences
  - light forward drafts
  - bending stresses high
- Ballasted cargo holds are problematic
  - sloshing loads
  - bending stresses
  - minimum drafts

Containerships

- Ballast / Cargo profile very different from Tankers
- Ballast transfer can be minimized by cargo planning
- Large Double Bottoms can be difficult to exchange
- Some tanks can remain full for entire voyage cycle
- on-board heel and trim control very beneficial
- Post-Panamax suitable for "zero" discharge

Discussion of Proposed Ship Modifications

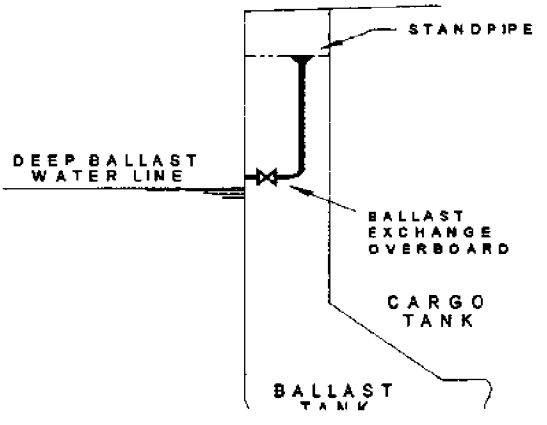
- Facilitate Exchange
  - Overflow Standpipe - see drawing on next page
  - Improved Mixing - see drawing on next page
  - Top-Down Exchange
- Shore Discharge
  - On-Deck Discharge Manifold Connection

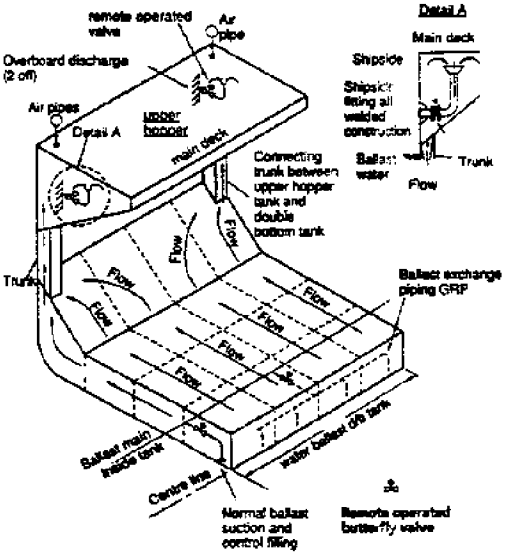
- Retain Ballast Onboard
  - Heel Control tanks
  - Internal Ballast Transfer (Trim Control)

Recommendations

- Implement Exchange ASAP
- Develop formal BW Management Plans
- Analyze typical voyages to minimize port pumping
- Consider piping modifications
- Consider "locked-in" ballast
- Evaluate implications of possible "zero discharge" policy

Overflow Standpipe - below left and Improved Mixing - below right.





Port Perspectives on Ballast Water Management

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This presentation involves the public port view concerning ballast water management issues presented from the regional and national port perspective. The presentation will address the role of ports, considerations on various policy and regulatory issues such as recently promulgated US Coast Guard rule, NANCPA 1990, NISA 1996, Executive Order 13112, and NPDES. It will also discuss potential ballast water management strategies including the application of risk assessment and risk reduction methodologies, suggest possible prevention and control technologies, and policy initiatives.

Public ports are typically landlords for various businesses relative to a geographic area. Ports themselves vary in funding and administrative structures. Some ports are totally self-funded based on revenue. Many other ports receive full or partial funding from various local or state government sources. Additionally, ports in the GOM range in size, the type of cargo they handle, and the types of vessels that regularly visit their sites. It is important to distinguish between public port terminals and cargo handling facilities and privately operated terminals. Private terminals typically dominate a port or port system in both number and in tonnage handled.

In terms of non-indigenous species, it does not make sense for public ports to be the ground zero responsible party. While public ports support 100 percent compliance with the Coast Guard ballast water management reporting requirement s and 100 voluntary open ocean exchange, they are not in a position to enforce them. The US Coast Guard is the appropriate lead federal agency responsible for compliance in the nation's ports. However, public ports bring along experience with similar regulatory issues and thus a valuable perspective to this subject. Because ports are directly affected by any proposed policy, regulation or guidance associated with ballast water, ports insist on having a seat at the table when any ballast policy is being considered.

Ports support the application of sound and pragmatic risk assessment practices toward reduction of the potential for non-indigenous species. By evaluating trade partners, trade practices and associated ship board operational management practices, the risk assessment should:

a. determine the potential for NIS introduction via ship ballast water in relationship with the chemical and biological characteristics of the port region where the ballast originated in comparison to the water of the recipient port.
b. acknowledging that 5-10 percent of the vessels worldwide represents 80-95 percent of the risks.
c. identifying vessels and/or trade that fall into that category, and,
d. develop a logical and practicable course of action based on risk assessment which focuses on risk reduction practices.

From a policy perspective public ports believe it is essential that a standard defining what is "clean ballast" and what is an acceptable level of risk, be established. In the absence of a definition of standards and acceptable levels of risk, there is no clear goal toward which the public debate, ship operational management practices, or treatment technologies can be investigated, developed or directed.

Ports prefer an international approach versus unilateral measures for or by individual ports, states or nations. An international approach reduces competitive issues, capitol cost outlays and confusion for customers.

Ports will be impacted by any agreement that is enacted, so they should be part of the process in determining guidelines. Besides the wealth of information ports brings to the table, they also have a real understanding of the publics' expectations in their port or region. They can support development concerning infrastructure development costs and investment expectations. They can address the potential ecological costs to the environment if certain regulations are required, or if nothing is done. Ports have long term planning, project development and construction that must be considered during the time an agreement is being considered, proposed and promulgated.

Ports believe the most practicable way to address NIS is stopping the NIS at the source or before it has the potential to be introduced. Open ocean exchange is only one, possibly interim, solution. Ports encourage development of control technologies that emphasize on-board treatment, such as filtration and disinfection. Ports encourage research and development that focus on ship operational management practices for NIS reduction and control whereby acceptably clean ballast can be taken on board at the point of ballast water origin. This would allow clean ballast to be discharged when necessary and provides the ship owner or operator the freedom to trade anywhere within the world market and as market conditions change. Ports do not favor port or harbor-based treatment options.

Ordinances and Legal Jurisdictions

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Federal Programs
- National Invasive Species Act (NISA) 1996
- Clean Water Act / Section 402
- Clean Water Act / Section 303(d)
- Lacey Act
- Marine Protection, Research & Sanctuaries Act (Ocean Dumping)
- National Environmental Protection Act (NEPA)
- Endangered Species Act
- Presidential Order11987 (1977) /Presidential Order 13112 (1999)

Presidential Order 13112

Federal Agencies must:
- prevent introduction
- detect and rapidly respond
- monitor
- provide for restoration of native species
- develop technologies
- public education

Presidential Order 13112
- Creates the Invasive Species Council
- Establishment of a Federal Advisory Committee to advise the Council
- Development of an Invasive Species Management Plan

Is there room for state regulation?

Federal Preemption
- Direct
- Implied
  - impossibility (could not comply with both)
  - occupied field
  - impaired federal objective (uniformity)

Commerce Clause
- Facially discriminatory
- Impacts interstate commerce (Balancing of impact and state interest)

Other State Action

- Alaska: (1992) asked U.S.C.G. to prohibit foreign ballast water discharge
- Maryland, Pennsylvania and Virginia: (1995) asked Congress for programs, research and funding to prevent invasive species introduction
- Hawaii: (1997) allows for inspection of foreign ballast water, and if invasive species are revealed treatment can be required
- Washington: (1998) creates a task force of study controls for green crab and zebra mussels

California Assembly Bill 703

- Ballast Water Management for Control of Indigenous Species
- Passed the CA Senate: Sept. 8, 1999
- Passed the CA Assembly: Sept. 9, 1999
- The Governor has signed

California: Ballast Management

- Sets requirements for ships that carry ballast into state waters from outside of the EEZ
- Management measures are NOT mandated in situations where the vessel, crew or passengers would be endangered

California: Ballast Management (Exemptions)

- Crude oil tankers (coastwise trade)
- Passenger vessels (treatment systems)
- U.S. DOD or U.S.C.G. vessels subject to section 1103 of NISA or any ship subject to National Discharge Standards for Vessels of the Armed Forces Vessel in Innocent passage Vessel discharging ballast at origin.

California: Ballast Management

Five Management Measures:

- open water exchange
- retain all ballast
- used approved environmentally sound alternative
- discharge into approved facility
- conduct exchange in an agreed upon area

California: Ballast Management

8 Methods of minimizing uptake/release:

- Avoid discharges in marine sanctuaries, preserves, parks or coral reefs
- Avoid uptake in infested areas, near sewage outfall, tidal flushing and dredging, and in darkness
- Clean ballast tanks regularly
- Discharge the minimum
- Rinse anchors and chains to leave sediment where it originate
- Remove fouling agents from hulls, piping and tanks
- Maintain ballast management plan
- Train staff on management and treatment

California: Ballast Management

Enforcement Powers
- State Lands Commission
- A vessel operating in violation of this division may be required to depart state waters and exchange or treat ballast waters

California: Ballast Management
- Research and Program Evaluation
- Exotic Species Control Fund
- Civil Penalties
- Reporting requirement (U.S. Coast Guard forms)

Is there room for port regulation of ballast water?

Port of Oakland
- Port Ordinance No. 3516
- Effective August 1, 1999
- General Rule: No vessel shall discharge ballast water into the San Francisco Bay..., unless immediately prior to arrival the vessel carried out an ocean ballast water exchange

Port of Oakland

Exceptions to the no discharge rule:
- safety considerations make exchange impossible
- vessels can prove that IMO resolution A774(18) were conducted
- vessels coming from Baja California and the northern border of Alaska, if ballast originated from those waters

Port of Oakland
- Require a copy of vessel's ballast water management policy
- May require a Ballast Water Reporting Form
- If no form can be provided, then no discharge without samples and analysis being conducted

Some Developing Alternatives to Ballast Exchange

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The Coast Guard considers ballast exchange an interim process and supports the fact that alternatives to this mechanism must be identified and eventually replace it when possible. A general review of the various methods to replace ballast exchange have been identified:

Thermal Techniques: It has been demonstrated that elevating water temperatures to 45° for several minutes or 35° for approximately 12 hours can effectively destroy some larger, cold water species. Utilization of waste heat from a vessel's engine to raise the temperature within the ballast tanks, may be a viable option for ballast water treatment in some cases. However, tradeoffs must be considered if shipboard implementation of heat treatment were to replace ballast exchange. Costs of the additional fuel, piping, and equipment required to circulate hot water must be considered when determining cost-effectiveness. Limitations of using heat treatment as a viable ballast water treatment method would depend upon such factors as voyage time, volume of ballast water, and ambient water temperature. Specificity to target organisms must also be considered as temperatures between 35-45° are within the optimum range to promote growth and reproduction in some microbial species, such as pathogenic bacteria and viruses. Although, discharge from the vessel would not include any chemical by-products or residuals, releasing heated water could pose an environmental concern.

Filtration Systems: In 1997 a consortium of different groups financed what will be known in the future as the "Algonorth Experiment". This study involved placing a filtration system aboard the Great Lake Carrier *Algonorth* to filter ballast water while it was in commercial operation. This was the first attempt to place a system aboard a ship to determine the feasibility of a filtering system. The results indicated that periodic back-flushing had to take place frequently and that a 50 Fm (micron) filter was the smallest mesh size to be used which was capable of approaching the ship's commercial operating requirements. This size of filter cannot remove pathogenic bacteria and viruses. The results of this work have led to more investigations on filtration aboard a barge used in Duluth, MN.

Most recently, two companies, Velox in Canada and OptiMarin in Norway, have introduced an apparatus utilizing a cyclonic separation (filtering) and ultraviolet (UV) light as a means to kill organisms in ballast water. This idea holds some promise to extend the use of filtration as a mechanism to be used in ballast water management but the engineering details and scientific data on the performance of this equipment are not available at this time.

Ultraviolet Treatment: Ultraviolet irradiation of contaminated water is an effective method of eliminating water-borne microorganisms. At wavelengths ranging from approximately 200-300nm, UV energy is capable of destroying the cellular components of most pathogenic bacteria and viruses, thus killing them. Its effectiveness, however, is limited to very small active organisms. There is little effectiveness against larger organisms or dormant stages of microbes, such as cysts and spores of protozoa, fungi, and algae (including dinoflagellates). Effectiveness of UV disinfection is greatly reduced in water containing suspended matter due to absorption and screening effects by the sediment.

Therefore, UV treatment is an option most likely to be used, in conjunction with other technologies, such as filtration.

Wastewater: Municipal wastewater treatment facilities are not able to purify or handle saline ballast water since salt water kills the active biological organisms used in treatment. Flocculation of sediment, mixing, and chemical efficiency are also reduced or hindered in the process. Salinity requirements for discharged water would prohibit its use for irrigation or drinking water and a massive effort to dilute it would have far-reaching effects on the volume of water that would be required to solve the problem. Costs and major engineering studies must be implemented before adopting this idea or mechanism as an alternative.

Chemicals: The Coast Guard will look at the possibilities of using chemical as a method to replace ballast exchange. However, the regulatory agencies will determine when they will be used and if they can be used. The outlook for using chemicals and introducing them to the environment will become an environmental issue. Using these chemicals in a closed system would protect the environment but also elevate operational costs.

Oxidizing Biocides: Oxidizing agents are highly effective biocides that destroy the cell membranes of microorganisms. Ozonation and chlorination are the most frequently used oxidation methods in wastewater treatment plants. However, most strong oxidants generate toxic by-products (e.g., Cl^-, Br^-, I^-,) in saltwater which may preclude their use on board ships. Both chlorine and ozone would be extremely difficult to use as a disinfectant in saltwater and their use would also expedite corrosion of the ballast tanks= interior walls.

Nonoxidizing Biocides: Nonoxidizing Biocides include many compounds frequently used in industry for treating biological growth and sediment accumulation in large water storage tanks. Glutaraldehyde is one nonoxidizing biocide that shows some promise in treating small volumes of ballast water, e.g., NOBOB situations. However, it is relatively expensive and unlikely to be cost-effective in treating large volumes of ballast water.

*Deoxygenation:*Deoxygenation (or removal of oxygen) can be achieved by purging ballast water with an inert gas or binding oxygen to a chemical additive. Extended periods of exposure to these anoxic environments can destroy most aerobic organisms, although they are often ineffective against cysts, spores, or anaerobic bacteria.

It is inconceivable to think that any one technological possibility shall prevail by itself. Due to the complexity of the situation involving the number of different ship types, the desire to kill bacteria, viruses and large organisms, warm water versus cold water ports, and harbor configurations, an array of different methods will probably be chosen. These methods will be utilized at different locations depending upon their costs and environmental impacts on the site location. Although some preliminary investigations are being made, it is too early to identify or predict which methods would be shore-based or ship-based.

Best Approaches for the Region – Discussion Points

- Establish forums for scientific discussions.
- Risk assessment – in order to develop risk assessment parameters, a sampling regime should be enacted which gives baseline data on temperature, salinity and other factors for the waters of each port. Additionally, a sampling regime should be developed for sampling ballast waters.
- There will not be a single solution that fits all vessels.
- Develop a resource for defining organisms, their source, and how they exist in their native environment.
- Explore opportunities for the exchange of technical information. Who is doing what, and how is it working?
- Different organisms will require different treatment methods.
- It is almost impossible to predict how an organism will do outside of its native environment. There are many factors to consider such as temperature, salinity, and load of dispersal.
- Public education could and should play a big role in these efforts.

Where Do We Go From Here?

Global trade is on the rise. Vessels are transporting more cargo than ever before to more places than ever before. Utilizing ballast water for vessel stability in transporting cargo is simply part of conducting business. However, we cannot avoid the invasive non-indigenous species issue as it pertains to ballast water.

To date, there are many unknowns but there are some common sense facts. There is no blanket solution that will work for all vessels in all ports. Researching and developing technologies is an expensive and time consuming proposition. Developing policy can be even more time consuming. However, it is important that progress continue to be made in developing solutions to this problem.

A unified approach has a much better chance to succeed than many regional or unilateral approaches. The voluntary reporting to SERC is a step in the right direction in evaluation which will ultimately result in recommendations for management practices that have the least negative impact within vessel and port ecosystems.

By filling out and submitting the Coast Guard Survey form, shippers and their agents may avoid having to fill out multiple forms in the future or different forms for different ports. By establishing the database, SERC can provide some baseline information about shipping patterns. But more information is needed.

A sampling regime for port waters and ballast waters should be established in order to analyze the native environment of the most prolific invaders. Based on this information, risk assessment analysis can be conducted.

Technologies and management plans already exist outside the United States, but very little is known about them, or their success rates. Information sharing needs to be increased for scientific and technology development and expansion. All the partners affected by this issue need to provide adequate funding for land-based research and analysis.

Invasive aquatic nuisance species is an issue that is not going to resolve itself. Once established, these species are almost impossible to eradicate. Our goal should be to prevent further introductions, and to identify and control the invasive species that currently exist in a specific system.

Appendix A

Ballast Water Management Conference
List of Presenters and Attendees

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Appendix B

History of Non-Indigenous Aquatic Nuisance Species Legislation

NONINDIGENOUS AQUATIC NUISANCE SPECIES PREVENTION AND CONTROL ACT OF 1990

- Shipping Study
- Mandatory open ocean exchange of ballast water for vessels entering the Great Lakes
- Funding for Research

NATIONAL INVASIVE SPECIES ACT OF 1996

- Voluntary Guidelines for ballast management for vessels entering all U.S. Ports other than the Great Lakes.
- Funding for Research.
- Development of guidelines for recreational boaters.

INTERNATIONALLY

- Voluntary guidelines in place
- Working Group drafting amendment to MARPOL or Stand Alone document
- Recognize technology not yet available

33 Code of Federal Regulations Subpart C

- Joint U.S. and Canadian Voluntary Guidelines predated regulations
- Mandatory ballast water exchange for vessels entering the Great Lakes(93)and Hudson River North of George Washington Bridge(94)
- Enforcement for Great Lakes- All vessels with ballast water checked by MSD Massena (choke point- St.. Lawrence Seaway)

33 Code of Federal Regulations Subpart D

- Promote ballast water management for all vessels
- Provide voluntary guidelines for all vessels entering the waters of the United States after operating beyond the EEZ
- Require reporting and recordkeeping for ballast water brought into the United States

Voluntary Precautions for all vessels

- Avoid taking on ballast water:
  - with harmful organisms and pathogens, such as toxic algal blooms
  - near sewage outfalls.
  - near dredging operations.
  - where tidal flushing is poor or when a tidal stream is known to be more turbid.
  - in darkness when organisms may rise up in the water column.

- in shallow water or where propellers may stir up the sediment.
- Avoid ballast operations in or near marine sanctuaries, marine preserves, marine parks, or coral reefs
- Clean ballast tanks regularly.
- Discharge minimal amounts of ballast water in coastal and internal waters.
- Rinse anchors and anchor chains during retrieval to remove organisms and sediments at their place of origin.
- Remove fouling organisms from hull, piping, and tanks on a regular basis and dispose of any removed substances in accordance with local, State and Federal regulations.
- Maintain a vessel specific ballast water management plan.
- Train vessel personnel in ballast water management and treatment procedures ballast operations .

Voluntary Guidelines after operating beyond the EEZ.

- Mandatory for vessels entering the Great Lakes and the Hudson River North of George Washington Bridge
- Exchange ballast water beyond the EEZ, from an area more than 200 nautical miles from any shore, and in waters more than 2,000 meters in depth;
- Retain the ballast water on board the vessel;.
- Use an alternative environmentally sound method of ballast water management that has been approved in advance by the Commandant of the U.S. Coast Guard;
- Discharge ballast water to an approved reception facility;
- Exchange ballast water in other waters recommended by the ANS Task Force and approved by the USCG Captain of the Port.

Mandatory Reporting and Recordkeeping

- All vessels with ballast water that enter the waters of the United States after operating beyond the EEZ.
- Vessel information
- Particulars on Ballast Water such as source, volume, and where it will be discharged

National Ballast Water Information Clearinghouse

- All reports to be entered
- Data to be used to determine patterns of ballast management practices and discharge
- Research directory.
-

Ballast Water and Shipping committee

- Advise and support the Aquatic Nuisance Species Task Force on issues related to ballast water and shipping.
- Develop recommendations for a comprehensive program of testing, evaluation and demonstration of ballast water management (BWM) technologies and practices consistent with Section 1104 of NANPCA.

Future

- Report to Congress on effectiveness of Guidelines 24-30 months after implementation
- Determine standards for alternate compliance technologies
- Identify parameters to verify open ocean exchange

Appendix C

Federal Register

33 CFR Part 151

Implementation of the National Invasive Species Act of 1996

(information begins in right hand column)

Approval of this supplement is based on data and information in Public Master File (PMF) 5157. The notice of availability of a summary of the data and information in PMF 5157 and of permission to use it to support approval of a NADA or supplemental NADA was published in the **Federal Register** of July 19, 1996 (61 FR 37753).

In accordance with the freedom of information provisions of 21 CFR part 20 and 514.11(e)(2)(ii), a summary of safety and effectiveness data and information submitted to support approval of this application may be seen in the Dockets Management Branch (HFA–305), Food and Drug Administration, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852, between 9 a.m. and 4 p.m., Monday through Friday.

FDA has determined under 21 CFR 25.33(d)(4) that this action is of a type that does not individually or cumulatively have a significant effect on the human environment. Therefore, neither an environmental assessment nor an environmental impact statement is required.

List of Subjects

21 CFR Part 556

Animal drugs, Foods.

21 CFR Part 558

Animal drugs, Animal feeds.

Therefore, under the Federal Food, Drug, and Cosmetic Act and under the authority delegated to the Commissioner of Food and Drugs and redelegated to the Center for Veterinary Medicine, 21 CFR parts 556 and 558 are amended as follows:

PART 556—TOLERANCES FOR RESIDUES OF NEW ANIMAL DRUGS IN FOOD

1. The authority citation for 21 CFR part 556 continues to read as follows:

Authority: 21 U.S.C. 342, 360b, 371.

2. Section 556.490 is revised to read as follows:

§ 556.490 Ormetoprim.

(a) [Reserved]

(b) *Tolerances.* A tolerance of 0.1 part per million (ppm) is established for negligible residues of ormetoprim in uncooked edible tissues of chickens, turkeys, ducks, salmonids, catfish, and chukar partridges.

3. Section 556.640 is revised to read as follows:

§ 556.640 Sulfadimethoxine.

(a) [Reserved]

(b) *Tolerances.* (1) A tolerance of 0.1 part per million (ppm) is established for negligible residues of sulfadimethoxine in uncooked edible tissues of chickens, turkeys, cattle, ducks, salmonids, catfish, and chukar partridges.

(2) A tolerance of 0.01 ppm is established for negligible residues of sulfadimethoxine in milk.

PART 558—NEW ANIMAL DRUGS FOR USE IN ANIMAL FEEDS

4. The authority citation for 21 CFR part 558 continues to read as follows:

Authority: 21 U.S.C. 360b, 371.

5. Section 558.575 is amended by revising paragraph (a), redesignating paragraph (c) as paragraph (d), reserving paragraph (c), and adding paragraph (d)(7) to read as follows:

§ 558.575 Sulfadimethoxine, ormetoprim.

(a) *Approvals.* Type A medicated articles to sponsors as identified in § 510.600(c) of this chapter for uses as in paragraph (d) of this section as follows:

(1) 25 percent sufadimethoxine and 15 percent ormetoprim to 000004 for use for poultry as in paragraphs (d)(1), (d)(2), (d)(3), (d)(4), and (d)(7) of this section.

(2) 25 percent sulfadimethoxine and 5 percent ormetoprim to 000004 for use for fish as in paragraphs (d)(5) and (d)(6) of this section.

* * * * *

(c) [Reserved]

(d) * * *

(7) *Chukar partridges*—(i) *Amount per ton.* Sulfadimethoxine 113.5 grams (0.0125 percent) plus ormetoprim 68.1 grams (0.0075 percent).

(ii) *Indications for use.* For prevention of coccidiosis caused by *Eimeria kofoidi* and *E. legionensis.*

(iii) *Limitations.* Feed continuously to young birds up to 8 weeks of age as sole ration.

Dated: April 30, 1999.

Stephen F. Sundlof,

Director, Center for Veterinary Medicine.

[FR Doc. 99–12285 Filed 5–14–99; 8:45 am]

BILLING CODE 4160–01–F

DEPARTMENT OF TRANSPORTATION

Coast Guard

33 CFR Part 151

[USCG 1998–3423]

RIN 2115–AF55

Implementation of the National Invasive Species Act of 1996 (NISA)

AGENCY: Coast Guard, DOT.

ACTION: Interim rule with request for comments.

SUMMARY: To comply with the National Invasive Species Act of 1996 (NISA), the Coast Guard establishes both regulations and voluntary guidelines to control the invasion of aquatic nuisance species (ANS). Ballast water from ships is one of the largest pathways for the intercontinental introduction and spread of ANS. This rule amends existing regulations for the Great Lakes ecosystem, establishes voluntary ballast water management guidelines for all other waters of the United States, and establishes mandatory reporting for nearly all vessels entering waters of the United States.

DATES: This interim rule is effective July 1, 1999. Comments and related material must reach the Docket Management Facility on or before July 16, 1999. Comments sent to the Office of Management and Budget (OMB) on collection of information must reach OMB on or before July 16, 1999.

ADDRESSES: You may submit your comments and material by mail, hand delivery, fax, or electronic means to the Docket Management Facility at the address under **ADDRESSES**; but please submit your comments and material by only one of the following methods to help us avoid confusion in the public docket:

(1) By mail to the Docket Management Facility (USCG–1998–3423), U.S. Department of Transportation, room PL–401, 400 Seventh Street SW., Washington, DC 20590–0001.

(2) By hand delivery to room PL–401 on the Plaza level of the Nassif Building, 400 Seventh Street SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The telephone number is 202–366–9329.

(3) By fax to Docket Management Facility at 202–493–2251.

(4) Electronically through the Web Site for the Docket Management System at http://dms.dot.gov.

You may also mail comments on collection of information to the Office of Information and Regulatory Affairs,

Office of Management and Budget, 725 17th Street NW., Washington, DC 20503, ATTN: Desk Officer, U.S. Coast Guard.

The Docket Management Facility maintains the public docket for this rulemaking. Comments and material received from the public, as well as documents indicated in this preamble as being available in the docket, will become part of this docket and will be available for inspection or copying at room PL–401 on the Plaza level of the Nassif Building at the same address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. You may also find this docket on the Internet at http://dms.dot.gov.

You can get the International Maritime Organization (IMO) publications and documents referred to in this preamble from the International Maritime Organization, Publications Section, 4 Albert Embankment, London SE1 7SR, England.

FOR FURTHER INFORMATION CONTACT: For questions on this rule, contact Lieutenant Mary Pat McKeown, Project Manager, U.S. Coast Guard Headquarters, Office of Operating and Environmental Standards (G–MSO), telephone 202–267–0500. For questions on viewing, or submitting material to, the docket, contact Dorothy Walker, Chief, Dockets, Department of Transportation, telephone 202–366–9329.

SUPPLEMENTARY INFORMATION:

Request for Comments

The Coast Guard encourages you to participate in this rulemaking by submitting comments and related material. If you do so, please include your name and address, identify the docket number for this rulemaking (USCG–1998–3423), indicate the specific section of this document to which each comment applies, and give the reason for each comment. If you submit comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. If you submit them by mail and would like to know they reached the Facility, please enclose a stamped, self-addressed postcard or envelope. We will consider all comments and material received during the comment period. We may change this interim rule in view of the comments.

Public Meeting

We do not now plan to hold a public meeting. But you may request one by submitting a request to the Docket Management Facility at the address under **ADDRESSES** explaining why one would be beneficial. If we determine that one would aid this rulemaking, we will hold one at a time and place announced by a later notice in the **Federal Register**.

Regulatory History

On April 8, 1993, the Coast Guard published a final rule titled "Ballast Water Management for Vessels Entering the Great Lakes" in the **Federal Register** (58 FR 18330). The rule established mandatory procedures for the Great Lakes in 33 CFR part 151, subpart C.

On December 30, 1994, we published a final rule titled "Ballast Water Management for Vessels Entering the Hudson River" in the **Federal Register** (59 FR 67632). The rule amended the regulations in 33 CFR part 151 to include requirements for portions of the Hudson River, which connects to the Great Lakes.

On April 10, 1998, we published a notice of proposed rulemaking (NPRM) titled "Implementation of the National Invasive Species Act of 1996 (NISA)" in the **Federal Register** (63 FR 17782). The Coast Guard received 53 letters commenting on the NPRM. Several letters requested more time to comment.

On June 16, 1998, we published a notice (63 FR 32780) to reopen the comment period until August 8, 1998. On June 16, 1998, we also published a correction notice in the **Federal Register** (63 FR 32780), making minor editorial corrections to the NPRM. No public meeting was requested, and none was held.

Background and Purpose

Aquatic nuisance species invasions through ballast water are now recognized as a serious problem threatening global biological diversity and human health.

On November 29, 1990, Congress enacted the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA) (Pub. L. 101–646). Congress enacted NANPCA to prevent and control infestations of zebra mussels and other nonindigenous aquatic nuisance species in coastal and inland waters of the United States.

On October 26, 1996, Congress enacted the National Invasive Species Act of 1996 (NISA) (Pub. L. 104–332) which amended and reauthorized NANPCA (the Act). Congress enacted the Act to provide for ballast water management to prevent the introduction and spread of nonindigenous species into the waters of the United States.

On November 27, 1997, the IMO Marine Environmental Protection Committee (MEPC) adopted Resolution A.868(20), "Guidelines for the Control and Management of Ships' Ballast Water to Minimize the Transfer of Harmful Aquatic Organisms and Pathogens." The IMO recommends that all maritime nations of the world adopt and use these voluntary guidelines.

The regulations and guidelines in this rule will help control the spread of invasive species. This rule will implement the Act by—

- Requiring operators of vessels entering waters of the United States from beyond the EEZ to submit a ballast water management report;
- Providing voluntary ballast water management guidelines for operators of vessels entering waters of the United States from beyond the Exclusive Economic Zone (EEZ); and
- Promoting ballast water management for operators of all vessels in waters of the United States.

Discussion of Comments and Changes

The Coast Guard received 53 comment letters, containing 361 specific comments on the NPRM. The paragraphs in this section discuss the comments we received and the Coast Guard's responses, and explain any changes we made to the proposed regulations. General comments on the rulemaking are discussed first, followed by comments on specific sections of the regulation. Other changes to the proposed rule, not based on comments, are discussed last.

General Comments

Several comments asked the Coast Guard to extend the comment period to allow adequate time to comment on the proposed requirements in the NPRM. We determined that allowing the public more time to comment would help us develop a better rule. Therefore, we extended the comment period until August 8, 1998.

Numerous comments asked for more stringent regulations and more restrictive ballast water management control methods. Other comments asked for less strict regulations and more lenient requirements for ballast water management control methods.

The Coast Guard has determined that the regulations adopted in this rule accurately reflect the requirements of the Act and represent the most practical and effective ballast water management method available at this time. We will continue to support and encourage the development of more efficient and effective methods of protecting waters of the United States from non-indigenous aquatic nuisance species.

Three comments wanted to make sure that the regulations in the proposed rule will be the national requirements. The

comments didn't want States or other levels of government to issue other regulations that exceed or make significant changes to these regulations.

It has long been the Coast Guard's position that consistent standards of universal application, coupled with Federal initiatives to address unique regional concerns, are the best means of meeting local and national environmental goals with the least disruption to international maritime commerce. To avoid potential conflicts and duplication, we request that any political subdivision of the United States contemplating any laws, regulations, or requirements regarding the discharge of ballast water, consider this regulation prior to taking action.

The Coast Guard will try to maintain nationwide consistency in methods for control of invasive species and is committed to ensuring national consistency for any regulations touching on the design, construction, equipment, manning and operation of vessels that were established as international rules and regulations adopted by the International Maritime Organization and ratified by the United States.

However, this regulation isn't intended to preempt any State, regional, or local efforts that exceed but do not conflict with the standards set forth in this rule. Section 1205 of the Act states that—

> Nothing in this title shall affect the authority of any State or political subdivision thereof to adopt or enforce control measures for aquatic nuisance species, or diminish or affect the jurisdiction of any State over species of fish and wildlife.

Five comments addressed statements in the Background and Purpose section of the NPRM. One comment noted that cholera was detected in ballast water; however, there wasn't conclusive evidence that linked the strain of cholera detected to the contaminated shellfish in Mobile Bay. Another comment agreed with the statement that more than 40 species have appeared in the Great Lakes since 1960. However, the comment noted that "very few (species) if any, have been introduced since the Canadian voluntary ballast water exchange guidelines of 1989 and the USCG exchange requirements of 1993." Another comment noted that in the Description of the Problem section of the NPRM, the reference to Purple Loosestrife implies that the species entered the United States only through ballast water. The comment noted that the species may have entered the United States through solid ballast, but the floral industry is primarily responsible for bringing the Purple Loosestrife into the United States. Therefore, the comment suggested that we use other suitable examples such as the round nosed goby or the spiny waterflea.

Fifty-six comments discussed the organization and clarity of the regulations. Four comments expressed support for the proposed rule and suggested minor modifications. One comment supported the proposed rule as written. Ten comments stated that the regulations were confusing as written. One comment requested a "plain English guide for mariners." The Coast Guard has revised this rule to better organize and clarify the information. Specific changes are discussed within each section.

We received eight comments on the IMO "Guidelines for the Control and Management of Ships' Ballast Water to Minimize the Transfer of Harmful Aquatic Organisms and Pathogens" (IMO Resolution A.868(20), adopted November 1997). Two comments wanted the Coast Guard to continue to issue regulations that are consistent with IMO guidelines.

The Coast Guard will be consistent with any international agreement, agreed to by the United States, governing management of the transfer of nonindigenous aquatic species by vessel.

Five comments discussed the ballast water management plan. Four of the comments supported a request that a ballast water management plan be carried and maintained aboard the vessel. The other comment opposed the request to carry and maintain a ballast water management plan.

In § 151.2035(a)(7), we request that owners and operators develop ballast water management plans specific to their vessels. The Coast Guard is working with IMO to identify what information needs to be contained in the ballast water management plan. When that information is determined, we will publish it in the **Federal Register**.

Fifteen comments related to what would trigger the implementation of mandatory national ballast water management regulations.

The Act requires the Coast Guard to publish national voluntary guidelines for the control of aquatic nuisance species. The Act lists the specific criteria that will cause or allow these guidelines to become mandatory. These are detailed in the following paragraphs.

Two comments asked what would happen if a vessel fails to comply with the mandatory reporting requirements. The Act directs the Coast Guard to assess the rate of compliance with the guidelines, using the ballast water management reports we receive from the owners and operators who submit the reports in accordance with the Act. If we can't assess the rate of compliance with these guidelines because we don't have adequate reports (i.e., numbers of reports or accurate reports), then we are required to issue regulations making the voluntary guidelines mandatory.

If we find that the voluntary guidelines are not adequate or effective, at reducing introduction and spread of nonindigenous aquatic species into waters of the United States, the Coast Guard must establish mandatory requirements.

Thirteen comments asked us to clarify what criteria we will use to determine the adequacy and effectiveness of the voluntary guidelines.

The authority and responsibility for developing these criteria was given to the Aquatic Nuisance Species Task Force (ANSTF) by the Act. The ANSTF has formed the Ad Hoc Voluntary Ballast Water Guidelines Effectiveness Criteria Committee to develop these criteria. The committee's meetings will be open to the public. The U.S. Fish and Wildlife Service will announce the dates and times for the meetings in the **Federal Register**. In addition, the Coast Guard worked with the Smithsonian Environmental Research Center and came up with suggestions for monitoring the rate of compliance with the guidelines. The suggestions are listed in the "National Ballast (Water) Information Clearinghouse: Function, Design, and Implementation" Progress Report I, which has been submitted by the Department of Transportation to Congress and the ANSTF.

One comment asked us to consider conducting a risk assessment of the Gulf Coast. The Coast Guard encourages studies which would detail what species are present and what species may threaten specific water bodies. We recommend that you submit your proposals to conduct these studies to the ANSTF, and to any other appropriate funding agency.

One comment asked the Coast Guard to develop a chart showing the 500 meter (1640 feet/273 fathoms) or 2,000 meter (6,650 feet/1,093 fathoms) contour line. Bathymetric charts which show the measurement of the depth of large bodies of water are already available. You can buy the charts from a vendor, or from an organization such as the National Oceanographic and Atmospheric Administration National Data Center or the U.S. National Geophysical Data Center. However, vessel owners and operators are already required to maintain detailed navigation charts aboard their vessels that show the depths of the waters where they operate.

Several comments were concerned that the estimate of costs for preparing, submitting, collecting, collating, and filing the information obtained seemed to be a low estimate. Due to the expansion of the Coast Guard Aquatic Nuisance Species program efforts this fiscal year, and the current number of vessels to be considered (as obtained from the Coast Guard Marine Safety Management System), these comments are correct. The Coast Guard has reexamined these costs and the current Regulatory Evaluation accurately reflects current costs.

Several comments wanted the Coast Guard to consider costs associated with ballast exchange and ballast water management plans in the rule implementing the voluntary national guidelines. The Coast Guard will estimate the costs and benefits of required portion of the rulemaking. Costs associated with the ballast water management plan and ballast water exchange are voluntary and we didn't address these costs in this rule.

Two comments specified that the spread of aquatic nuisance species is a naturally occurring phenomenon and not pollution. These comments further stated that nature will always "create checks and balances in the medium and long term." These comments also stated that aquatic nuisance species are a quarantine problem, not a pollution problem.

The Coast Guard disagrees with some of these comments. We agree that some spread of exotic species does occur naturally and nature does create "checks and balances." However, shipping allows many organisms to bypass natural barriers such as the open ocean, different salinity levels, and ability to reach hospitable ecosystems, etc. This means that the natural checks and balances are disrupted and can no longer prevent introductions and degradation of ecosystems. Further, while there is overlap with quarantine issues, anything that makes an ecosystem less suitable for an activity, or unfit for or harmful to living things is a pollutant.

One comment asked the Coast Guard to accept dual load lines. The comment stated that dual load lines on the vessel will reduce the amount of ballast water the vessel will carry into waters of the United States.

We would have to consider many factors not within the scope of this rulemaking to determine whether the United States should accept dual load lines. This rulemaking doesn't address dual load lines and we didn't make any changes based on this comment.

One comment wanted to know if the Coast Guard intended to "incorporate by reference" or require vessel operators to carry the "Guidelines for the Control and Management of Ships' Ballast Water to Minimize the Transfer of Harmful Aquatic Organisms and Pathogens (IMO Resolution A.868(20), adopted November 1997)." We want to ensure that vessel operators are aware that these guidelines exist, but we aren't incorporating them by reference or requiring vessel operators to carry the guidelines on board their vessels. Many of the recommendations we make in this rule are adapted from those guidelines. However, we have made revisions based upon the needs of our domestic waters.

Two comments wanted to know how the Coast Guard will handle the issue of a vessel operator who declares "No Ballast on Board (NOBOB)." A vessel with NOBOB may not have a large quantity of ballast water on board, but the vessel does retain sediment and residual ballast water. The Coast Guard requests in this regulation that all vessels remove sediments in an appropriate manner on a regular basis. We are working on identifying possible management methods to reduce the threat of a vessel operator claiming NOBOB. However, it would be premature to issue regulations specifically for these vessels at this time. To ask a vessel operator in a NOBOB status to conduct a ballast water exchange could destabilize a vessel, causing it to submerge its load line or compromise seaworthiness by exceeding hull girder stress limits, or increase the stresses on the hull to the point they fracture.

Comments on Specific Sections of the Rule

What Vessels Does This Subpart Apply to (§ 151.1502)?

Thirty-eight comments discussed the NPRM's applicability section, § 151.1502. Many of the comments seemed to misunderstand the applicability section. Others seemed to misunderstand who is exempt from the requirements of this rule. One comment suggested that we separate the existing mandatory ballast control regulations for the Great Lakes and the Hudson River to make it easier to understand the national program. Two comments stated that the NPRM proposes changes that could increase the chances of invasive species entering the Great Lakes.

In response to these comments, we have changed the organization of the rule. We will revise the existing regulations in 33 CFR 151 subpart C. The new subpart C will detail the additional requirements for vessels entering the Great Lakes and Hudson River. We will add a new subpart D to 33 CFR part 151. Subpart D will detail mandatory and voluntary requirements for all vessels operating in waters of the United States (including the Great Lakes and Hudson River). The section numbers in this rule are different from the section numbers in the NPRM because of these changes. Please use the following cross-reference table to follow these changes.

Instructions for the Table: Find the old section number listed in the NPRM in the first column and read across to the second column to find the corresponding new section number in this rule. The third column lists the section numbers for subpart C.

Description of section	33 CFR		
	Section numbers in the NPRM	Section numbers in subpart D (waters of the United States including the Great Lakes and Hudson River)	Section numbers in subpart C (Great Lakes and Hudson River)
Purpose	151.1500	151.2000	151.1500.
Applicability:			
For Vessels	151.1502	151.2005, 151.2010 and 151.2015.	151.1502.
For Ballast Water		151.2020	
Definitions	151.1504	151.2025	151.1504.
Penalties	151.1506	16 U.S.C. under certain provisions.	151.1506, 151.1508, 16 U.S.C.
Mandatory Requirements	151.1508	151.2040	151.1510.
Safety	151.1510	151.2030	151.1512.

Description of section	33 CFR		
	Section numbers in the NPRM	Section numbers in subpart D (waters of the United States including the Great Lakes and Hudson River)	Section numbers in subpart C (Great Lakes and Hudson River)
Alternative Methods:			
Required	151.1512		151.1514.
Requested		151.2035(b)	
Mandatory:			
Reporting	151.1514	151.2040	151.2040.
Recordkeeping	151.1514	151.2045	151.2045 (also satisfies § 151.1516).
Voluntary Guidelines	151.1516	151.2035	
Compliance and Monitoring	151.1518	151.2050	151.1516.

Five comments requested that we add an exemption for other types of vessels operating on voyages between the States and Territories of the United States. One comment stated that there shouldn't be any exemptions for owners and operators of passenger vessels.

The applicability and exemptions in this rule are taken directly from the Act. Additionally, we don't have scientific and technological support to include exemptions for other vessels, or for other voyages outside of the EEZ. The Coast Guard can only remove the exemption for passenger vessels if we find that their ballast water treatment systems are less effective than ballast water exchange. The regulations that apply to voyages between States and Territories of the United States are in subparts C and D.

Two comments expressed concern about the regulations that apply to Mobile Offshore Drilling Units (MODU). One of these comments had specific concerns about ballast procedures for tanks that may be in continuous contact with the sea.

The Coast Guard has determined that a blanket exemption for MODUs isn't warranted. However, we encourage vessel owners and operators to bring their specific ballast issues to the Coast Guard for consideration for alternative compliance. Methods for submitting alternative compliance proposals are detailed in § 151.2035(b)(3) of this regulation. We will need more detailed information on flow rates, volumes exchanged, etc., before we can make a determination on whether a particular MODU should be exempt.

Two comments asked us to clarify whether this rule applies to foreign vessels. In § 151.2005, we state that this regulation applies to the owners and operators of U.S. and foreign vessels.

Three comments asked us to clarify whether the mandatory requirements in this rule apply to military vessels. In § 151.2010, we clarify that mandatory provisions of this rule don't apply to vessels of the Department of Defense, the Coast Guard, or those vessels of the Armed Forces that are subject to the "Uniform National Discharge Standards for Vessels of the Armed Forces (UNDS)." (Federal Water Pollution Control Act—33 U.S.C. 1322(n)). We don't intend for these regulations to replace or interfere with practices already addressed by section 1103 of the Act or by UNDS.

Five comments suggested that we also provide guidelines or requirements for owners and operators on domestic voyages.

The Coast Guard agrees with these comments. In § 151.2035(a), we have included guidelines (precautionary practices) for all vessels equipped with ballast tanks that operate in waters of the United States. However, the Act doesn't give the Coast Guard the authority to require owners and operators of vessels engaged in domestic trade to perform ballast water management methods such as ballast water exchange.

One comment requested that ballast water management methods, such as ballast water exchange only apply to vessels that have operated beyond the EEZ for more than 48 hours. The Coast Guard has reviewed the legislation and determined that this is contrary to the intent of the Act.

One comment noted that in the regulations we consider a transit from Alaska, or Hawaii to the continental United States a voyage, but we don't consider a transit from a Canadian port to the continental United States, Hawaii, or Alaska a voyage. Two comments wanted to know if the proposed regulations apply to voyages from U.S. territories.

We understand that the wording of this section in the NPRM was unclear. We have reworded § 151.2025 to clarify when this regulation applies. Any vessel, unless exempted by § 151.2010, on a voyage to a U.S. port, that in any portion of that voyage has operated beyond the EEZ of the United States or an equivalent zone of Canada (generally 200 miles seaward of the baseline) is subject to the mandatory reporting requirements. The vessel operator must or may (depending on which port they are going to) conduct ballast water management practices as detailed in the regulation. This includes voyages to any port in the U.S. or its territories, from any other port in the U.S. or its territories, if the vessel has operated more than 200 miles from the baseline of the United States or Canada. If a vessel operator remains in areas less than 200 miles from the baseline of the United States or Canada during a voyage, then they are not subject to the mandatory requirements. However, we request that the operator follow the voluntary guidelines in § 151.2035.

One comment wanted to know if the regulations apply to only segregated ballast water. Two comments wanted to know if all ballast water, including that which was taken on in the high seas, was subject to the regulations in the NPRM. One of these comments also stated that we shouldn't require an open ocean exchange of water that has been taken on in open ocean.

We have revised the regulations to clarify these issues. The regulations apply to any ballast water, taken in waters within 200 miles from any shore, or in waters less than 2,000 meters (6,650 feet/1,093 fathoms) deep, that could be discharged into waters of the United States.

One comment asked the Coast Guard to address "innocent passage" in this rule. Innocent passage occurs when a foreign vessel navigates through the U.S. territorial sea for the purpose of traversing the sea without entering U.S. internal waters or calling at a U.S. port. A foreign vessel is also considered in innocent passage when in transit to or from a U.S. port. However, a vessel that actually enters U.S. internal waters (i.e., waters shoreward of the territorial sea baseline) or that enters a U.S. port no

longer has innocent passage status, and the mandatory reporting requirements of this rule, as well as the voluntary ballast water management guidelines apply. In plain terms, if you are bound for or departing from a U.S. port, these regulations apply.

We have added a provision for innocent passage to § 151.2015. For the purpose of defining whether a vessel is navigating in the territorial sea, the Coast Guard defines the territorial sea for this regulation as extending to 12 nautical miles from the baseline, under Presidential Proclamation No. 5928 of December 27, 1988. Innocent passage doesn't include a vessel that enters the Snell Lock at Massena, New York, on the St. Lawrence River, regardless of its destination.

Two comments questioned if the mandatory regulations for the Great Lakes and Hudson River apply to a vessel that operates beyond the EEZ, and then makes stops in other waters of the United States before entering the Great Lakes or Hudson River.

The Coast Guard has determined that the mandatory regulations in 33 CFR part 151, subpart C apply to any vessel operated as described in the previous paragraph. In addition, §§ 151.2035(b), 151.2040, and 151.2045 of subpart D do not apply to vessels that only transit between ports in the United States, or between ports in the United States or Canada without entering waters beyond the EEZ of Canada or the United States.

What Definitions Apply to Subpart C (§ 151.1504)?

Thirty-three comments discussed the definitions section of the NPRM. Four comments concerned the definition of "environmentally sound." One of these comments noted that people might misinterpret the definition with regard to releases of "harmful concentrations" of chemicals, as some individuals don't consider concentrations to be harmful when released into water bodies where significant dilution occurs.

The Coast Guard agrees that the proposed changes to the definition could cause confusion. No ballast water management method would be accepted if it violated any existing water quality standards. Therefore, the definition of "environmentally sound" currently in force in 33 CFR 151.1504 will not be changed. The definition is the same definition used in the Act.

Two comments questioned whether we had scientific support for the definition of "reasonably effective ballast water management system." Eight comments stated that we should be cautious when we estimate percentages for the volume of ballast water exchanged, and for the kill or removal rate. Four comments wanted a method for determining when you have met a 90 percent kill or removal rate.

The Coast Guard agrees with these comments and we have deleted this definition. The Coast Guard will continue to support research that will identify ballast water management methods that are "as effective as ballast water exchange."

One comment stated that this rule should also address ballast water carried in cargo tanks. In § 151.1504, we have revised the rule to clarify that the definition of "ballast tanks" includes any tank or hold used for carrying ballast water. In § 151.1504, we have also added the phrase "regardless of how it is carried on the vessel" to the definition of "ballast water."

Eight comments discussed the definition of "reasonably complete ballast water exchange." Three comments stated that they support the standard to exchange 90 percent of the original water in the ballast tank. Two comments suggested that we raise the standard, and two comments suggested that we lower the standard.

The Coast Guard's goal is for owners and operators to exchange 100 percent of the original water in the ballast tank. However, owners and operators should consider the operating systems and physical limitations of the vessel before conducting an exchange. We didn't change the existing regulations for the Great Lakes and Hudson River in § 151.1510 of subpart C. Owners and operators of all other vessels are requested to conduct an exchange as follows:

- *For a flow through exchange.* Exchange the equivalent of three times the volume of water in the ballast tank.
- *For an empty/refill exchange.* If conditions are safe and it is practical, try to replace 100 percent of the volume of ballast water.

Four comments concerned the proposed change to the minimum depth requirement from 2,000 meters to 500 meters, for a ballast water exchange. Two comments pointed out deficiencies in the scientific support for such a change. One comment indicated that reducing the requirement may create a conflict for complying with U.S. regulations and following Canadian voluntary guidelines.

In response to these comments, and to ensure that owners and operators are able to satisfy the requirements of the United States and Canada, we do not plan on changing the depth requirement until agreement, based upon sound scientific evidence, is reached.

Why Must I Meet the Requirements of the Regulations in This Subpart and What Are the Penalty Provisions (§ 151.1506)?

Two comments requested clarification of the penalty provisions. The penalty provisions for the Great Lakes and Hudson River ballast water management requirements will remain unchanged. The penalty provisions include restriction of operation, revocation of Customs clearance, and possible civil and criminal penalties. The new voluntary national guidelines do not carry penalty provisions. However, if vessel operators fail to make the mandatory reports, then the Coast Guard is directed under NISA to implement a mandatory national program that will carry the same penalty provisions that apply in Great Lakes and Hudson River.

What are the Mandatory Ballast Water Management Requirements (§ 151.1508)?

Three comments expressed concern that the proposed rule may make ballast water exchange a standard, and rule out other ballast water management techniques that may be more effective.

The Coast Guard agrees with these comments. We have revised the rule to include language that encourages the development of alternative technologies for managing ballast water.

Eleven comments discussed an acceptable salinity level for an open ocean exchange as it applies to mandatory exchange for the Great Lakes and Hudson River. Four comments questioned the scientific support for the proposed change. One comment questioned whether we considered "instrument error" when we proposed changing the salinity level. One comment stated that measuring the level of salinity is not enough to determine if an exchange has been done as it applies to coastal ports. The comment also asked the Coast Guard to develop alternative tests.

The Coast Guard agrees with these comments. We are not changing the salinity standard as proposed in the NPRM. The Coast Guard recognizes that salinity can't be used as the only verification of open ocean exchange at a coastal port. Salinity also can't be used as the sole measure to confirm proper operation of alternative control methods as developed. The Coast Guard is awaiting a final report on parameters to be used for verification, and is engaged in preliminary stages of additional studies to obtain a full complement of methods to be used. Over the next 30 months, we will test the identified parameters in the field to ensure their

efficiency and accuracy and to streamline sampling procedures. We will also test protocols and parameters during this phase. The Coast Guard finds it inappropriate to publish parameters under consideration for coastal ports, other than the screening mechanism of salinity, until those parameters have been confirmed as definitive.

Twenty-eight comments concerned alternative environmentally sound methods of ballast water management. Twenty-eight comments asked that we clarify the requirement for approval of other environmentally sound methods of ballast water management. The comment also asked the Coast Guard to explain the process of submitting alternative ballast water management methods for approval.

The Coast Guard will approve alternative methods of ballast water management (under 33 CFR 151.2035(b)(3)). The request to approve an alternative method must be submitted to, and approved by, the Coast Guard before a vessel's scheduled voyage. The requestor must provide adequate time for the Coast Guard to process, analyze, and consider the alternative method for approval. Send your request to U.S. Coast Guard Headquarters, (G–MSO–4), 2100 Second Street SW., Washington, DC 20593–0001. The phone number is (202) 267–0500. Each proposal is evaluated on a case-by-case basis. The Coast Guard is working with the ANSTF Ballast Water and Shipping Committee to develop a standardized protocol and requirements for approval. Industry, government agencies, and non-government organizations will develop the requirements. We will approve an alternative method only after we consider the following:

- Does the method conform to existing laws and standards?
- How effective is the method in reducing the viability of organisms within the vessel's ballast water?
- How will the vessel operator verify that the system is operating as designed?

We will incorporate the protocol and requirements into 33 CFR part 151 subpart D when it's completed.

Four comments asked us to clarify if retaining ballast water on board is a viable ballast water management method. Section 151.2035(b)(2), states that retaining ballast water on board is an option.

Three comments asked the Coast Guard to consider whether discharge to an approved reception facility is a viable method of ballast water control management. We agree. Section 151.2035(b)(4) states that discharging ballast water to an approved reception facility is an option.

One comment suggested that we allow vessel owners and operators to discharge ballast water at publicly-owned treatment plants. The Coast Guard has determined that each treatment plant will have to be considered on a case-by-case basis. To determine if vessel owners and operators can be allowed to discharge ballast water at a publicly-owned treatment plant, we will need specific information, including whether or not—

- The plant has the capacity to handle the volume of ballast water discharged from a vessel;
- The treatment methods used at the plant are effective in killing the full range of genus and species of organisms found in the ballast water;
- Allowing vessel owners and operators to discharge ballast water will violate any local or State regulations;
- The waste water treatment plant will accept the ballast water; and
- The waste water treatment plant is aware of the salinity levels of the ballast water.

Two comments encouraged the development of shoreside ballast water reception facilities. Two comments suggested that we continue to develop alternative technologies to ballast water exchange. Two comments asked that we give chemical treatment methods fair consideration as an alternative method of ballast water management. One comment stated that chemical treatments are an essential tool for "integrated pest management." Four comments asked that we also consider by-products and concentration levels in any effluent when we consider chemical treatments.

The Coast Guard supports all of these statements. We will continue to encourage advances in methods of treating ballast water. We will consider applicable laws, regulations, and the consequences of a treatment before we approve any method.

Two comments recommended that we consider risk-based assessment as an acceptable alternative compliance mechanism. The Coast Guard recognizes that some waters may pose higher risks of containing potential invasive species than other waters. However, it has not been proven that any waters pose no risk. Historical patterns show that zebra mussels may have been shipped for more than 50 years before establishing a sustainable population in the Great Lakes and becoming a nuisance species. Therefore, we have determined that we don't have a sound, definitive scientific basis to approve risk-based assessment as an alternative ballast water management option.

Two comments requested a means of sharing knowledge of alternative compliance methods. The Coast Guard is working with the Smithsonian Environmental Research Center to incorporate a research and technology section into the National Ballast Water Information Clearinghouse (NBIC) (NBIC Web site: *www.serc.si.edu/invasions/ballast.htm).*

Two comments discussed the research and development of specific ballast water control methods. The Coast Guard encourages companies to continue to research and develop other ballast control methods. Two comments suggested that we specify alternate ballast water exchange sites in this rule. The establishment of alternative discharge areas must be based on the best scientific data available. Therefore, the Coast Guard leaves in place the provisions in § 151.1514 that address ballast water management alternatives under extraordinary conditions. This section applies specifically to the waters of the Great Lakes and Hudson River, North of George Washington Bridge. The requests for alternative sites requests go directly to the Captain of the Port (COTP) of the affected zone. In addition, the Coast Guard is reviewing a study entitled "Ballast Exchange Study Consideration of Back-up Exchange Zones and Environmental Effects of Ballast Exchange and Ballast Release." After this study is accepted by the ANSTF, the Coast Guard will consider the areas detailed for pre-accepted alternate exchange sites. If accepted, we will publish a detailed list of these areas with a request for comments in the **Federal Register**. We have reserved § 151.2055 in this rule and will list the sites in that section when they are approved.

We received three comments on the disposal of sediment ashore. One comment suggested removing the reference to "sediment ashore" from the rule. One comment suggested that we require a disposal facility be built at every port. One comment noted that the proposed regulation might contradict existing Federal regulations. One comment noted that restrictions on disposal of sediments ashore may also be under the jurisdiction of entities other than the Coast Guard, such as the Animal and Plant Health Inspection Service, 7 CFR part 330.

We have changed § 151.2035(a)(3) to state that sediments must be disposed in accordance with local, State, and Federal regulations. This requirement is to ensure that vessel representatives are aware that disposal of sediments within

the United States must be done in accordance with existing regulations or laws.

Three comments suggested that we refer to the owner, operator, agent, or person-in-charge within the appropriate sections of the rule. Two comments noted that some types of vessels subject to this rule might not be under the command of a master. One comment noted that reporting requirements on a vessel are often satisfied by the vessel agent. The Coast Guard agrees with these comments. We refer to the owner, operator, agent, or person-in-charge in the appropriate sections of the rule.

Is the Master Still Responsible for the Safety of the Vessel (§ 151.1510)?

Seven comments stated that the NPRM didn't adequately address safety exemptions. The Coast Guard agrees with this comment. In § 151.2030, we now use language similar to the Act, which clearly states the safety exemptions.

Three comments asked what will happen if they use the safety exemption, and don't conduct a ballast exchange. We have included in § 151.2030(b) the provisions of the Act which address this concern. Vessels subject to 33 CFR part 151 subpart C must comply with the requirements of § 151.1514 subpart C (Ballast water management alternatives under extraordinary conditions). Vessels not subject to 33 CFR part 151 subpart C shall not be required to perform a ballast water management practice which the master has found to threaten the safety of the vessel, its crew, or its passengers because of adverse weather, vessel design limitations, equipment failure, or any other extraordinary conditions.

What Are the Mandatory Reporting and Recordkeeping Requirements (§ 151.1514)?

Four comments suggested that we provide more options for submitting the required information to the Coast Guard. One comment noted that the proposed requirements for submitting information may bypass existing Canadian reporting requirements for shared waters. One comment asked that we allow the information to be submitted electronically.

The Coast Guard agrees with these comments. In § 151.2040(c), we have added other options for submitting the required information.

Two comments wanted to submit "one standard voyage profile regarding ballast water management versus trip by trip reports." The Coast Guard is not prepared to approve this. We will require individual reports. This approach may be reconsidered at a later date depending on the quality and detail of the reports that are received.

Two comments stated that owners and operators of container ships and roll-on/roll-off (RoRo) vessels may have difficulty submitting the information as proposed in the NPRM. These comments noted that the actual discharge amount and location of discharge might be different than expected because of operational considerations.

We have determined that the owners and operators of these vessels must still submit the required information. However, in § 151.2040(d), we allow owners and operators to submit an amended form before leaving waters of the United States. This allowance will accommodate the owner or operator of any vessel who finds that the information they originally submitted to the Coast Guard has changed.

Two comments stated that we should remove the requirement to submit information about the salinity of the ballast water discharged, and the temperature of the ballast water at its source. The Coast Guard disagrees with this comment. The Act directs the Coast Guard to consider the various characteristics of the point of origin (of ballast water) and receiving water bodies. Salinity and temperature are essential to obtaining that information.

One comment requested the removal of sea height at the time of an exchange as required information. This comment expressed concern that this data may be dangerously extrapolated to set definitive sea state standards at which ballast water exchange must be conducted.

The Coast Guard has determined that this information is necessary to get an accurate collection of data on ballast water practices. However, we will ensure that any reports of data include qualifying statements. For example, "while 65 percent of vessels conducting ballast water exchange did so in seas with waves of up to 1 foot in height, complete data is not available on vessels not conducting an exchange for safety reasons under those same conditions. This data should never be used to determine safe operating parameters at which all ships can conduct an exchange. We must consider each ship's unique operating, structural, and stability issues."

Are There Methods to Monitor Compliance With This Subpart (§ 151.1518)?

Three comments suggested that the phrase "may take samples" should be replaced with "shall take samples." The Coast Guard recognizes the concern; however, logistical constraints may preclude the taking of samples during each boarding of the vessel. Additionally, as parameters are identified for testing procedures, cost per sample analysis may increase. Resources availability will determine the number of samples taken. Use of the term "may" leaves the Coast Guard flexibility to address these issues and to implement valid sampling procedures.

Appendix to Subpart C of Part 151

We received nine comments about the sample ballast water reporting form and its directions. One comment suggested "streamlining the form" or making the form more efficient. One comment asked the Coast Guard to use standard forms. Two comments asked that we make the forms consistent with IMO forms. Three comments suggested changes to the instructions for the forms. Two comments noted that § 151.1514 of the NPRM affects the information requested on the form.

In response to these comments and based on what we have learned during pilot programs, we have changed the proposed form to make it easier to use and quicker to convert from a paper copy to an electronic submittal form. The Coast Guard will continue to accept the IMO "Ballast Water Reporting Form" and the St. Lawrence Seaway required "Pre-entry Information from Foreign Flagged Vessels Form" as satisfying the information and reporting requirements of this rule. The Coast Guard will coordinate with IMO and Canada to encourage standardization of a ballast water reporting form. The Coast Guard feels that to sacrifice an improved product in attempt to maintain standardization of the proposed form is not in the best interest of this program.

Two comments asked the Coast Guard to ensure that the data obtained from the mandatory reports will be useful for local, regional, and state governments and organizations. The Coast Guard has been working to ensure that the data will be entered in a usable form to identify ballast patterns that are essential to sound decisions on ballast water management. For a more detailed description of the NBIC, please review the NBIC Web site at *www.serc.si.edu/invasions/ballast.htm.*

One comment wondered if there are plans to distribute the form and instructions. The Coast Guard will distribute copies of the form and provide multiple copies to agencies and entities that will be able to disseminate them. The form and instructions will also be available at the NBIC Web site.

Other Changes to the Proposed Regulations

In addition to the changes made to the regulations as a result of the comments, we have defined the term "voyage" in § 151.2025 to include intermediate port calls and avoid confusion with the definition of (Great Lakes or Hudson River) voyage in § 151.1504 of subpart C. We have also revised the definition in § 151.2025 to clarify that the equivalent zone of Canada is considered part of the EEZ, as provided in the Act.

Regulatory Evaluation

The rule is not a significant regulatory action under section 3(f) of Executive Order 12866 and does not require an assessment of potential costs and benefits under section 6(a)(3) of that order. It has not been reviewed by the Office of Management and Budget (OMB) under that order. It is not significant under the regulatory policies and procedures of the Department of Transportation (DOT) (44 FR 11040, February 26, 1979).

The Coast Guard expects the economic impact of this rule to be so minimal that a full Regulatory Evaluation under paragraph 10e of the regulatory policies and procedures of DOT is unnecessary.

Summary of Costs

The rule will cost industry the time and resources it will take to submit the paperwork required by this rule. A vessel's officer is likely to be the person tasked with completing the report, so we based our estimate on the current annual salary for a third mate on a U.S. merchant vessel, and included administrative costs ($9 per report for photocopying, etc.). We calculated that it will cost $35 to submit each report. The following equation illustrates the calculation:

$81,840 ÷ 2,080 hours × 40 minutes + $9 = $35

We used the U.S. Coast Guard Marine Safety Management System (MSMS) to determine that this rule will apply to 30,877 vessel transits (this includes transits on the Great Lakes). We multiplied the cost of each report ($35) by the number of vessel arrivals from outside the Exclusive Economic Zone (30,877) to get a total annual cost of $1,080,695. The following equation illustrates the calculation:

$35 × 30,877 = $1,080,695

The rule will cost the Federal government the time it will take Coast Guard personnel to review ballast water management record information. The Coast Guard will add 30 E–5 billets to verify compliance and collect the information this rule will require. Commandant Instruction 7310.1E states that the hourly cost for an E–1 to E–5 range billet is $15 per hour. This translates to yearly cost of $31,200 per billet (2080 × $15 = $31,200). Therefore, the cost of 30 billets will equal $936,000 ($31,200 × 30=$936,000). We estimate that the total cost to the Coast Guard to collect and send the appropriate paperwork to the National Ballast Water Information Clearinghouse (NBIC) is $75,000. The total annual cost was calculated as illustrated in the following equation:

30 [billets] × $2,500 [administrative costs] = $75,000

The Coast Guard will also allocate $300,000 per year to the NBIC. The NBIC will provide analysis, synthesis, and interpretation of data collected under the Act. Therefore, the total government cost of this rule is $1,311,000 annually. The total government cost was calculated as illustrated in the following equation:

$936,000 + $300,000 + $75,000 = $1,311,000

Summary of Benefits

This rule is the next step in an ongoing effort to reduce the numbers of non-indigenous species invading the waters of the United States.

According to the U.S. Congress' Office of Technology Assessment, "Harmful Non-Indigenous Species in the United States," the economic impact on the United States from introductions of non-indigenous species has exceeded several billions of dollars through—

- Efforts to prevent and reduce further infestations;
- Repairs of damage to various infrastructures; and
- Lost revenues.

For example, the Great Lakes Fishery Commission estimates the European ruffe, a fish that entered the Great Lakes via expelled ballast water in the early 1980's, could cause annual losses of $90 million if the European ruffe is not controlled.

As international maritime trade continues to expand, the economic impact of non-indigenous species invasions will continue to increase. This increase may necessitate more extensive long-term control efforts, including improving ballast water management practices. The reporting requirements in this rule will allow the Coast Guard to receive the information it needs to make decisions on what measures may be required in the future to help solve the aquatic nuisance species problem.

Impact on Small Entities

The provisions of the Regulatory Flexibility Act (5 U.S.C. 601–612), require the Coast Guard to consider whether the interim rule will have a significant economic impact on a substantial number of small entities. "Small entities," include: (1) Small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and (2) governmental jurisdictions with populations of less than 50,000.

The rule applies to any vessel with ballast tanks entering the waters of the United States after operating beyond the EEZ. Vessels engaged in coastwise trade (within the EEZ) and passenger vessels equipped with treatment systems designed to eliminate aquatic species in their ballast tanks will be exempt from the mandatory provisions of the rule. The rule requires vessel operators to report their ballast water management efforts. We estimate that each report will cost the vessel operator $35. This sum is very low on an absolute dollar basis. We believe that it will account for a very low percentage of the operating costs of even the smallest commercial vessel operations. For this reason, the Coast Guard certifies under 5 U.S.C. 605(b) that the rule will not have a significant economic impact on a substantial number of small entities.

Assistance for Small Entities

In accordance with section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121), the Coast Guard offers to assist small entities in understanding this rule so that they can better evaluate its effects on them and participate in the rulemaking process. If your small business or organization is affected by this rule and you have questions concerning its provisions or options for compliance, please contact Lieutenant Mary Pat McKeown, Project Manager, Office of Operating and Environmental Standards (G–MSO) at 202–267–0500.

The Small Business and Agriculture Regulatory Enforcement Ombudsman and 10 Regional Fairness Boards were established to receive comments from small businesses about Federal agency enforcement actions. The Ombudsman will annually evaluate the enforcement activities and rate each agency's responsiveness to small business. If you wish to comment on the enforcement actions of the Coast Guard, call 1–888–REG–FAIR (1–888–734–3247).

Collection of Information

The provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–

3520) require the Office of Management and Budget (OMB) to review each rule that contains a collection-of-information. The Office of Management and Budget must determine if the practical value of the information is worth the burden of collecting the information. Collection-of-information requirements include reporting, recordkeeping, notification, monitoring, posting, labeling, and other similar requirements.

The rulemaking will require the owner or operator of a vessel with ballast tanks, entering the waters of the United States from outside the EEZ, to submit paperwork to the Coast Guard. The paperwork will document the owner's or operator's ballast water management practices. The provisions of the Act require the Coast Guard, in consultation and cooperation with the Aquatic Nuisance Species Task Force and the Smithsonian Institution Environmental Research Center, to develop and maintain the National Ballast Water Information Clearinghouse (NBIC). The purpose of the NBIC is to determine the patterns of ballast water delivery and management in the waters of the United States. The information obtained from the mandatory reports that owners and operators must submit will be entered into a database at the NBIC. The rulemaking requires submission of the following information:

- Vessel type, owner or operator, gross tonnage, call sign, and Port of Registry (Flag);
- Port of arrival, vessel agent, last port and country of call, and next port and country of call;
- Total ballast water capacity, total volume of ballast water on board, total number ballast water tanks, and total number of ballast water tanks in ballast;
- Total number of ballast tanks/holds that are to be discharged into the waters of the United States or at a reception facility, the number of tanks that were exchanged or treated using an alternative method of compliance; type of alternative compliance method, if used for treatment; whether the vessel has a ballast water management plan and IMO guidelines on board, and whether the ballast water management plan was used;
- Origin of ballast water—this includes date(s), location(s), volume(s) and temperature(s) (if a tank has been exchanged this is the ballast water that was taken on in port and then replaced during the exchange);
- Date(s), location(s), volume(s), method, thoroughness (percentage exchanged if exchange conducted), sea height at time of exchange if exchange conducted, of any ballast water exchanged or treated;
- Expected date, location, volume, and salinity of any ballast water to be discharged into the waters of the United States or at a reception facility; and
- Location of the facility used for disposal of sediment carried into the waters of the United States, if sediment is to be discharged within the jurisdiction of the United States.

If we did not require owners or operators to provide this information, it would be impossible to produce the studies and congressional reports on ballast water management patterns that the provisions of the Act require. The Coast Guard will use the information to—

- Ensure that an owner or operator has complied with the ballast water management regulations; and
- Assess the rate of compliance with the voluntary guidelines listed in the rule.

As stated under **Regulatory Evaluation** in this document, the vessel's officer is likely to be the person tasked with completing the report, so we based our cost estimate on the current annual salary for a third mate on a U.S. merchant vessel and included administrative costs. We calculated that it will cost $35 to submit each report. We used the U.S. Coast Guard Marine Safety Management System to determine that this rule will apply to 30,877 vessel transits (this includes transits on the Great Lakes). We multiplied the cost of each report ($35) by the number of vessel arrivals from outside the EEZ (30,877) to get a total annual cost of $1,080,695. The annual burden on industry will be 20,585 hours per year, and the cumulative burden for 3 years is 61,755 hours.

The title and description of the information collection, a description of the respondents, and an estimate of the total annual burden follow. Included in the estimate is the time for reviewing instructions, searching existing sources of data, gathering and maintaining the data needed, and completing and reviewing the collection.

Title: Implementation of the National Invasive Species Act of 1996 (NISA)

Summary of Collection of Information: This rule contains collection-of-information requirements in the following sections: §§ 151.2040 and 151.2045.

Need for Information: This rule will require owners or operators of each vessel with ballast water tanks, who enter the United States after operating outside the EEZ, to provide to the U.S. Coast Guard information regarding ballast water management practices.

Proposed Use of Information: The information is needed to ensure that the mandatory ballast water management regulations are complied with prior to allowing the vessel to enter U.S. ports, and to assess the effectiveness of the voluntary guidelines. The information will be used by the Coast Guard Headquarters staff and researchers from both private and other governmental agencies to assess the effectiveness of voluntary ballast-water management guidelines for vessels with ballast tanks that enter U.S. waters after operating outside the EEZ. The information will be provided to Congress on a regular basis as required by the Act.

Description of the Respondents: Any vessel (owner or operator) with ballast tanks entering U.S. waters after operating outside the EEZ.

Number of Respondents: 30,877 vessel entries.

Frequency of Response: Whenever a vessel with ballast tanks enters the United States after operating outside the EEZ.

Burden of Response: 40 minutes per respondent.

Estimated Total Annual Burden: 20,585 hours.

As required by section 3507(d) of the Paperwork Reduction Act of 1995, the Coast Guard has submitted a copy of this rule to OMB for its review of the collection of information.

If you are submitting a comment on the collection of information, you should submit it to OMB and to the Coast Guard where indicated under **ADDRESSES** by the date under **DATES**.

No one is required to respond to a collection of information unless it displays a currently valid OMB control number. The Coast Guard will publish notice in the **Federal Register** of OMB's decision to approve, modify, or disapprove the collection.

Federalism

The Coast Guard has analyzed this rule under the principles and criteria contained in Executive Order 12612 and has determined that this rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Unfunded Mandates

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) (Pub. L. 104–4, 109 Stat. 48) requires Federal agencies to assess the effects of certain regulatory actions on State, local, and tribal governments, and the private sector. The Unfunded Mandates Reform Act requires a written statement of economic and regulatory alternatives for rules that contain Federal mandates. A

"Federal mandate" is a new or additional enforceable duty imposed on any State, local, or tribal government, or the private sector. If any Federal mandate causes those entities to spend, in the aggregate, $100 million or more in any one year, the UMRA analysis is required. This rule will not impose Federal mandates on any State, local, or tribal governments, or the private sector.

Taking of Private Property

This rule will not effect a taking of private property or otherwise have taking implications under E.O. 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

Civil Justice Reform

This rule meets applicable standards in sections 3(a) and 3(b)(2) of E.O. 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

Protection of Children

We have analyzed this rule under E.O. 13045, Protection of Children from Environmental Health Risks and Safety Risks. This rule is not an economically significant rule and does not concern an environmental risk to health or risk to safety that may disproportionately affect children.

Environment

The Coast Guard considered the environmental impact of this rule and concluded that preparation of an Environmental Impact Statement is not necessary. An Environmental Assessment and proposed Finding of No Significant Impact are available in the docket for inspection or copying where indicated under **ADDRESSES**.

The Coast Guard is establishing voluntary guidelines for all vessels equipped with ballast tanks that operate in waters of the United States. The Coast Guard is also establishing additional voluntary ballast water management guidelines and mandatory reporting requirements for all vessels carrying ballast water into the waters of the United States after operating beyond the exclusive economic zone. These reporting requirements are intended to monitor the level of participation by vessels in the voluntary national guidelines program. If participation levels in this program are inadequate, the Act requires the Secretary of Transportation to mandate the ballast water management guidelines. Once reported, the information will be used to develop and maintain a ballast water information clearinghouse, which will monitor the effectiveness of the program and identify future needs for better protecting domestic waters from the introduction of invasive species.

Therefore, the regulations to implement provisions of the Act concerning ballast water control, when using voluntary guidelines for ballast water management and mandatory reporting requirements, will not have a significant impact on the environment.

List of Subjects in 33 CFR Part 151

Administrative practice and procedure, Oil pollution, Penalties, Reporting and recordkeeping requirements, Water pollution control.

For the reasons discussed in the preamble, the Coast Guard amends 33 CFR part 151 as follows:

PART 151—VESSELS CARRYING OIL, NOXIOUS LIQUID SUBSTANCES, GARBAGE, MUNICIPAL OR COMMERCIAL WASTE, AND BALLAST WATER

1. The authority citation for part 151 continues to read as follows:

Authority: 33 U.S.C. 1321(j)(1)(C) and 1903; E.O. 12777, 3 CFR, 1991 Comp. p.351; 49 CFR 1.46.

Subpart C—Ballast Water Management for Control of Nonindigenous Species in the Great Lakes and Hudson River

2. The authority citation for part 151 subpart C continues to read as follows:

Authority: 16 U.S.C. 4711; 49 CFR 1.46.

3. Revise the subpart heading to read as shown above.

4. In § 151.1504, revise the definition of "ballast water" and add definitions in alphabetical order to read as follows:

§ 151.1504 Definitions.

* * * * *

Ballast water means any water and suspended matter taken on board a vessel to control or maintain, trim, draught, stability, or stresses of the vessel, regardless of how it is carried.

Ballast tank means any tank or hold on a vessel used for carrying ballast water, whether or not the tank or hold was designed for that purpose.

* * * * *

Sediments means any matter settled out of ballast water within a vessel.

* * * * *

5. Add subpart D, consisting of §§ 151.2000 through 151.2065, to read as follows:

Subpart D—Ballast Water Management for Control of Nonindigenous Species in waters of the United States.

Sec.

Subpart D—Ballast Water Management for Control of Nonindigenous Species in Waters of the United States

Authority: 16 U.S.C. 4711; 49 CFR 1.46.

§ 151.2000 What is the purpose of this subpart?

This subpart implements the provisions of the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA) (16 U.S.C. 4701–4751), as amended by the National Invasive Species Act of 1996 (NISA).

§ 151.2005 To which vessels does this subpart apply?

(a) Sections 151.2000 through 151.2035(a) of this subpart apply to all vessels, U.S. and foreign, equipped with ballast tanks that operate in the waters of the United States.

(b) Sections 151.2035(b) through 151.2065 apply to all vessels, U.S. and foreign, carrying ballast water into the waters of the United States after operating beyond the exclusive economic zone, except those vessels exempted in §§ 151.2010 and 151.2015.

§ 151.2010 Which vessels are exempt from the mandatory requirements?

Four types of vessels are exempt from the requirements in §§ 151.2040 and 151.2045:

(a) A crude oil tanker engaged in the coastwise trade.

(b) A passenger vessel equipped with a functioning treatment system designed to kill aquatic organisms in the ballast water. The treatment system must operate as designed.

(c) A Department of Defense or Coast Guard vessel subject to the requirements of section 1103 of the Act, or any vessel of the Armed Forces, as defined in the Federal Water Pollution Control Act (33 U.S.C. 1322(a)) that is subject to the "Uniform National Discharge Standards for Vessels of the Armed Forces" (33 U.S.C. 1322(n)).

(d) A vessel that will discharge ballast water or sediments only at the same location where the ballast water or sediments originated. The ballast water or sediments must not mix with ballast water or sediments from areas other than the high seas.

§ 151.2015 Is a vessel in innocent passage exempt from the mandatory requirements?

A foreign vessel merely traversing the territorial sea of the United States (i.e., not entering or departing a U.S. port, or not navigating the internal waters of the U.S.) is exempt from the requirements of §§ 151.2040 and 151.2045, however such vessels are requested not to discharge ballast water into the waters of the United States unless they have followed the voluntary guidelines of § 151.2035.

§ 151.2020 To what ballast water does this subpart apply?

This subpart applies to all ballast water and associated sediments taken on a vessel in areas—

(a) Less than 200 nautical miles from any shore, or

(b) With water that is less than 2,000 meters (6,560 feet,1,093 fathoms) deep.

§ 151.2025 What definitions apply to this subpart?

(a) Unless otherwise stated in this section, the definitions in 33 CFR 151.1504, 33 CFR 160.203, and the United Nations Convention on the Law of the Sea apply to this part.

(b) As used in this part—

ANSTF means the Aquatic Nuisance Species Task Force mandated under the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA).

Captain of the Port (COTP) means the Coast Guard officer designated as the COTP, or a person designated by that officer, for the COTP zone covering the first U.S. port of destination. These COTP zones are listed in 33 CFR part 3.

Exchange means to replace the water in a ballast tank using one of the following methods:

(a) *Flow through exchange* means to flush out ballast water by pumping in mid-ocean water at the bottom of the tank and continuously overflowing the tank from the top until three full volumes of water has been changed—to minimize the number of original organisms remaining in the tank.

(2) *Empty/refill exchange* means to pump out the ballast water taken on in ports, estuarine, or territorial waters until the tank is empty, then refilling it with mid-ocean water; masters/operators should pump out as close to 100 percent of the ballast water as is safe to do so.

IMO guidelines mean the Guidelines for the Control and Management of Ships' Ballast Water to Minimize the Transfer of Harmful Aquatic Organisms and Pathogens (IMO Resolution A.868 (20), adopted November 1997).

NANCPA means the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990.

NBIC means the National Ballast Water Information Clearinghouse operated by the Coast Guard and the Smithsonian Environmental Research Center as mandated under NISA.

NISA means the National Invasive Species Act of 1996, which reauthorized and amended NANCPA.

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands.

Voyage means any transit by a vessel destined for any United States port from a port or place outside of the EEZ, including intermediate stops at a port or place within the EEZ. For the purpose of this rule, a transit by a vessel from a United States port to any other United States port, if at any time the vessel operates outside the EEZ or equivalent zone of Canada, is also considered a voyage.

Waters of the United States means waters subject to the jurisdiction of the United States as defined in 33 CFR § 2.05–30, including the navigable waters of the United States. For this regulation, the navigable waters include the territorial sea as extended to 12 nautical miles from the baseline, pursuant to Presidential Proclamation No. 5928 of December 27, 1988.

§ 151.2030 Who is responsible for determining when to use the safety exemption?

(a) The master, operator, or person-in-charge of a vessel is responsible for the safety of the vessel, its crew, and its passengers.

(b) The master, operator, or person-in-charge of a vessel is not required to conduct a ballast water management practice (including exchange), if the master decides that the practice would threaten the safety of the vessel, its crew, or its passengers because of adverse weather, vessel design limitations, equipment failure, or any other extraordinary conditions. If the master uses this section, and the—

(1) Vessel is on a voyage to the Great Lakes or Hudson River, the vessel must comply with the requirements of § 151.1514 of subpart C of this part (Ballast water management alternatives under extraordinary conditions); or

(2) Vessel is on a voyage to any port other than the Great Lakes or Hudson River, the vessel shall not be required to perform a ballast water management practice which the master has found to threaten the safety of the vessel, its crew, or its passengers because of adverse weather, vessel design limitations, equipment failure, or any other extraordinary conditions.

(c) Nothing in this subpart relieves the master, operator, or person-in-charge of a vessel, of the responsibility for ensuring the safety and stability of the vessel or the safety of the crew and passengers, or any other responsibility.

§ 151.2035 What are the voluntary ballast water management guidelines?

(a) Masters, owners, operators, or persons-in-charge of all vessels equipped with ballast water tanks that operate in the waters of the United States are requested to take the following voluntary precautions to minimize the uptake and the release of harmful aquatic organisms, pathogens, and sediments:

(1) Avoid the discharge or uptake of ballast water in areas within or that may directly affect marine sanctuaries, marine preserves, marine parks, or coral reefs.

(2) Minimize or avoid uptake of ballast water in the following areas and situations:

(i) Areas known to have infestations or populations of harmful organisms and pathogens (e.g., toxic algal blooms).

(ii) Areas near sewage outfalls.

(iii) Areas near dredging operations.

(iv) Areas where tidal flushing is known to be poor or times when a tidal stream is known to be more turbid.

(v) In darkness when bottom-dwelling organisms may rise up in the water column.

(vi) Where propellers may stir up the sediment.

(3) Clean the ballast tanks regularly to remove sediments. Clean the tanks in mid-ocean or under controlled arrangements in port, or at dry dock. Dispose of your sediments in accordance with local, State, and Federal regulations.

(4) Discharge only the minimal amount of ballast water essential for vessel operations while in the waters of the United States.

(5) Rinse anchors and anchor chains when you retrieve the anchor to remove organisms and sediments at their place of origin.

(6) Remove fouling organisms from hull, piping, and tanks on a regular basis and dispose of any removed substances in accordance with local, State and Federal regulations.

(7) Maintain a ballast water management plan that was developed specifically for the vessel.

(8) Train the master, operator, person-in-charge, and crew, on the application of ballast water and sediment management and treatment procedures.

(b) In addition to the provisions of § 151.2035(a), you (the master, operator, or person-in-charge of a vessel) are requested to employ at least one of the following ballast water management practices, if you carry ballast water into the waters of the United States after operating beyond the EEZ:

(1) Exchange ballast water beyond the EEZ, from an area no less than 200 nautical miles from any shore, and in waters more than 2,000 meters (6,560 feet, 1,093 fathoms) deep, before entering waters of the United States.

(2) Retain the ballast water on board the vessel.

(3) Use an alternative environmentally sound method of ballast water management that has been approved by the Coast Guard before the vessel begins the voyage. Submit the requests for approval of alternative ballast water management methods to the Commandant (G–MSO–4), U.S. Coast Guard Headquarters, 2100 Second Street SW., Washington, DC 20593–0001. The phone number is 202–267–0500.

(4) Discharge ballast water to an approved reception facility.

(5) Under extraordinary conditions, conduct a ballast water exchange within an area agreed to by the COTP at the time of the request.

§ 151.2040 What are the mandatory requirements for vessels carrying ballast water into the waters of the United States after operating beyond the Exclusive Economic Zone (EEZ)?

(a) The master, owner, operator, person-in-charge of a vessel bound for the Great Lakes or Hudson River, which has operated beyond the EEZ during any part of its voyage, regardless of intermediate ports of calls within the waters of the United States or Canada, must comply with paragraphs (c) through (f) of this section, all of § 151.2045, and with the provisions of this part 151 subpart C.

(b) A vessel engaged in the foreign export of Alaskan North Slope Crude Oil must comply with paragraphs (c) through (f) of this section, all of § 151.2045, and with the provisions of 15 CFR 754.2(j)(1)(iii). That section (15 CFR 754.2(j)(iii)) requires a mandatory program of deep water ballast exchange (i.e., at least 2,000 meters water depth and recordkeeping), unless doing so would endanger the safety of the vessel or crew.

(c) The master, owner, operator, agent, or person-in-charge of a vessel carrying ballast water into the waters of the United States after operating beyond the EEZ, unless specifically exempted by § 151.2010 or § 151.2015, must provide the information required by § 151.2045 in electronic or written form to the Commandant, U.S. Coast Guard or the appropriate COTP as follows:

(1) *For a United States or Canadian Flag vessel bound for the Great Lakes.* You must fax the required information to the COTP Buffalo 315–764–3283 at least 24 hours before the vessel arrives in Montreal, Quebec.

(2) *For a foreign flagged vessel bound for the Great Lakes.* You must—

(i) Fax the required information to the COTP Buffalo 315–764–3283 at least 24 hours before the vessel arrives in Montreal, Quebec; or

(ii) Complete the ballast water information section of the St. Lawrence Seaway required "Pre-entry Information from Foreign Flagged Vessels Form" and submit it in accordance with the applicable Seaway notice.

(3) *For a vessel bound for the Hudson River north of the George Washington Bridge.* You must telefax the information to the COTP New York at 718–354–4249 before the vessel enters the waters of the United States (12 miles from the baseline).

(4) *For a vessel not addressed in paragraphs (c)(1), (c)(2), and (c)(3) of this section.* Before the vessel departs from the first port of call in the waters of the United States, you must—

(i) Mail the information to U.S. Coast Guard, c/o Smithsonian Environmental Research Center (SERC), P.O. Box 28, Edgewater, MD 21037–0028; or

(ii) Transmit the information electronically to the NBIC at www.serc.si.edu/invasions/ballast.htm; or

(iii) Fax the information to the Commandant, U.S. Coast Guard, c/o the NBIC at 301–261–4319.

(d) If the information submitted in accordance with paragraph (c) of this section changes, you must submit an amended form before the vessel departs the waters of the United States.

(e) This subpart does not authorize the discharge of oil or noxious liquid substances (NLS) in a manner prohibited by United States or international laws or regulations. Ballast water carried in any tank containing a residue of oil, NLS, or any other pollutant must be discharged in accordance with the applicable regulations.

(f) This subpart does not affect or supersede any requirement or prohibition pertaining to the discharge of ballast water into the waters of the United States under the Federal Water Pollution Control Act (33 U.S.C. 1251 to 1376).

§ 151.2045 What are the mandatory recordkeeping requirements?

(a) The master, owner, operator, or person in charge of a vessel carrying ballast water into the waters of the United States after operating beyond the EEZ, unless specifically exempted by § 151.2010 or § 151.2015 shall keep in written form, records that include the following information (Note: Ballast tank is any tank or hold that carries ballast water regardless of design):

(1) *Vessel information.* Include the—

(i) Name;

(ii) International Maritime Organization (IMO) Number (official number if IMO number not issued);

(iii) Vessel type;

(iv) Owner or operator;

(v) Gross tonnage;

(vi) Call sign; and

(vii) Port of Registry (Flag).

(2) *Voyage information.* Include the date and port of arrival, vessel agent, last port and country of call, and next port and country of call.

(3) *Total ballast water information.* Include the total ballast water capacity, total volume of ballast water on board, total number of ballast water tanks, and total number of ballast water tanks in ballast. Use units of measurements such as metric tons (MT), cubic meters (m3), long tons (LT), and short tons (ST).

(4) *Ballast Water Management.* Include the total number of ballast

tanks/holds that are to be discharged into the waters of the United States or to a reception facility. If an alternative ballast water management method is used, please note the number of tanks that were managed using an alternative method, as well as the type of method used. Indicate whether the vessel has a ballast water management plan and IMO guidelines on board, and whether the ballast water management plan is used.

(5) *Information on ballast water tanks that are to be discharged into the waters of the United States or to a reception facility.* Include the following:

(i) The origin of ballast water. This includes date(s), location(s), volume(s) and temperature(s) (If a tank has been exchanged, list the loading port of the ballast water that was discharged during the exchange.).

(ii) The date(s), location(s), volume(s), method, thoroughness (percentage exchanged if exchange conducted), sea height at time of exchange if exchange conducted, of any ballast water exchanged or otherwise managed.

(iii) The expected date, location, volume, and salinity of any ballast water to be discharged into the waters of the United States or a reception facility.

(6) *Discharge of sediment.* If sediment is to be discharged within the jurisdiction of the United States include the location of the facility where the disposal will take place.

(7) *Certification of accurate information.* Include the master, owner, operator, person in charge, or responsible officer's printed name, title, and signature attesting to the accuracy of the information provided and certifying compliance with the requirements of this subpart.

(8) *Change to previously submitted information.*

(i) Indicate whether the information is a change to information previously submitted for this voyage.

(ii) The master, owner, operator, or person in charge of a vessel subject to this section, must retain a signed copy of this information on board the vessel for 2 years.

(iii) The information required of this subpart may be used to satisfy the ballast water recordkeeping requirements for vessels subject to § 151.2040(a) and (b).

(iv) A sample form and the instructions for completing the form are in the appendix to this subpart. If you complete the "Ballast Water Reporting Form" contained in the IMO Guidelines or complete the ballast water information section of the St. Lawrence Seaway required "Pre-entry Information Flagged Vessels Form," then you have met the requirements of this section.

§ 151.2050 What methods are used to monitor compliance with this subpart?

(a) The COTP may take samples of ballast water and sediment, examine documents, and make other appropriate inquiries to assess the compliance of any vessel subject to this subpart.

(b) The master, owner, operator, or person in charge of a vessel subject to this section, shall make available to the COTP the records required by § 151.2045 upon request.

(c) The NBIC will compile the data obtained from submitted reports. This data will be used, in conjunction with existing databases on the number of vessel arrivals, to assess vessel reporting rates.

§ 151.2055 Where are the alternate exchange zones located? [Reserved]

§ 151.2060 What must each application for approval of an alternative compliance technology contain? [Reserved]

§ 151.2065 What is the standard of adequate compliance determined by the ANSTF for this subpart? [Reserved]

Appendix to Subpart D of Part 151—Ballast Water Reporting Form and Instructions for Ballast Water Reporting Form

BILLING CODE 4910-15-P

INSTRUCTIONS FOR BALLAST WATER REPORTING FORM

(Please write in English and PRINT legibly.)

Is this an Amended Ballast Reporting Form?: Check Yes or No. Amendments should be submitted if there are any differences between actual ballast discharges and discharge information reported in a prior form. Please mark "Yes" if this form amends a previously submitted ballast reporting form.

SECTION 1. VESSEL INFORMATION

Vessel Name: Print the name of the vessel clearly.

IMO Number: Fill in identification number of the vessel used by the International Maritime Organization.

Owner: Write in the name of the registered owner(s) of the vessel. If under charter, enter Operator name.

Type: List specific vessel type. Use the following abbreviations: **bulk (bc)**, roro **(rr)**, container **(cs)**, tanker **(ts)**, passenger **(pa)**, oil/bulk ore **(ob)**, general cargo **(gc)**, reefer **(rf)**. Write out any additional vessel types.

GT: What is the Gross Tonnage of the vessel?

Call Sign: Write in the official call sign.

Flag: Fill in the full name of the country under whose authority the ship is operating. No abbreviations please.

SECTION 2. VOYAGE INFORMATION

Arrival Port: Write in the name of your first port of call after entering the U.S. EEZ or St. Lawrence Seaway. No abbreviations.
Arrival Date: Fill in the arrival date to the above port. Please use European date format (DDMMYY).

Agent: List agent used for current port.

Last Port: Fill in the last port at which the vessel called immediately before entering the U.S. EEZ.
No abbreviations please.

Country of Last Port: Fill in the last country at which the vessel called immediately before entering the U.S. EEZ.
No abbreviations please.

Next Port: Fill in the port at which the vessel will call immediately after departing the current port ("Current Port"="Arrival Port" above). No abbreviations please.

Country of Next Port: Fill in the country of "Next Port" at which the vessel will call immediately after current port. No abbreviations please.

SECTION 3. BALLAST WATER

Total Ballast Water on Board:
Volume: What was the total volume of ballast water on board upon arrival into the waters of U.S. EEZ? Do not count potable water.

Units: Please include volume units (m^3, MT, LT, ST).
Number of Tanks in Ballast: Count the number of ballast tanks and holds with ballast as vessel enters waters inside the United States EEZ.

Total Ballast Water Capacity:
Volume: What is the maximum volume of ballast water used when no cargo is on board?
Units: Please include volume units (m^3, MT, LT, ST).
Total Number of Tanks on Ship: Count all tanks and holds that can carry ballast water (do not include tanks that carry potable water).

SECTION 4. BALLAST WATER MANAGEMENT

Total No. of tanks to be discharged: Count only tanks and holds with ballast to be discharged into waters inside the United States EEZ or into an approved reception facility. Count all tanks and holds separately (e.g., port and starboard tanks should be counted separately).

Of tanks to be discharged, how many Underwent Exchange: Count all tanks that are to be discharged into waters of the United States or into an approved reception facility.

Of tanks to be discharged, how many Underwent Alternative Management: Count all tanks that are to be discharged into waters of the United States or an approved reception facility.

Please specify alternative method(s) used, if any: Specifically, describe methods used for ballast management.

If no ballast treatment conducted, state reason why not: This applies to all tanks and holds being discharged into waters of the

United States or into an approved reception facility.

Ballast Management Plan on board?: Is there a written document on board, specific to your vessel, describing the procedure for ballast management? This should include safety and exchange procedures (usually provided by vessel's owner or operator). Check Yes or No.

Management Plan implemented?: Do you follow the above management plan? Check Yes or No.

IMO Ballast Water Guidelines on board?: Is there a copy of the International Maritime Organization (IMO) Ballast Water Guidelines on board this vessel (i.e. "Guidelines for the Control and Management of Ship's Ballast Water to Minimize the Transfer Aquatic Organisms and Pathogens", [Res. A.868(20)])? Check Yes or No.

SECTION 5. BALLAST WATER HISTORY

(Record all tanks to be deballasted in port state of arrival: If none, go to #6)

Tanks/Holds: Please list all tanks and holds that you have discharged or plan to discharge into waters of the United States or
into an approved reception facility (write out, or use codes listed below table). Follow each tank across the page listing all source(s), exchange events, and/or discharge events separately. List each tank on a separate line. Port and starboard tanks with identical ballast water histories may be included on same line. Please use an additional page if necessary, being careful to include ship name, date, and IMO number at the top of each. For tanks with multiple sources: list 3 largest sources from last 30 days on separate lines. If more than 3 sources, include a 4th line for the respective tank(s) that indicated "Multiple" in port column and list the remaining tank volume not included in the 3 largest sources (i.e., total tank volume minus volume of the 3 largest sources). See example #1 on sample ballast reporting form.

-BW SOURCES

Date: Record date of ballast water uptake. Use European format (DDMMYY).

Port or latitude/longitude: Record location of ballast water uptake, no abbreviations for ports.

Volume: Record total volume of ballast water uptake, with volume units.

Temp: Record water temperature at time of ballast water uptake, in degrees Celsius (include units).

-BW MANAGEMENT PRACTICES-

Date: Date of ballast water management practice. If exchanges occurred over multiple days, list the day when exchanges were completed. Use European format (DDMMYY).

Endpoint or latitude/longitude: Report location of ballast water management practice. If an exchange occurred over an extended distance, list the end point latitude and longitude.

Volume: Report total volume of ballast water moved (i.e., gravitated and pumped into tanks, discharged to reception facility) during management practice, with units.

% Exch.: (Note: for effective flow through exchange, this value should be at least 300%).

$$\%\ Exchange = \frac{\text{Total Volume added by Refill or Flow Through}}{\text{Capacity of Ballast Tank or Hold}} \times (100\%)$$

Method: Indicate management method using code (ER = empty/refill, FT = flow through, ALT = alternative method).

Sea Ht. (m): Estimate the sea height in meters at the time of the ballast water exchange if this method was used. (Note: this is the combined height of the wind-seas and swell, and does not refer to water depth).

-BW DISCHARGES-

Date: Date of ballast water discharge. Use European format (DDMMYY).

Port or latitude/longitude: Report location of ballast water discharge, no abbreviations for ports.

Volume: Report volume of ballast water discharged, with units.

Salinity: Document salinity of ballast water at the time of discharge, with units (i.e., specific gravity (sg) or parts per thousand (ppt)).

SECTION 6. TITLE AND SIGNATURE

Responsible officer's name and title (printed) and signature: Print name and title, include signature.

BALLAST WATER REPORTING FORM

IS THIS AN AMENDED BALLAST REPORTING FORM? YES ☐ NO ☐

1. VESSEL INFORMATION	2. VOYAGE INFORMATION		3. BALLAST WATER USAGE AND CAPACITY
Vessel Name:	Arrival Port:		*Specify Units Below (m^3, MT, LT, ST)*
IMO Number:	Arrival Date:		Total Ballast Water on Board: Volume / Units / No. of Tanks in Ballast
Owner:	Agent:		
Type:	Last Port:	Country of Last Port:	
GT:			Total Ballast Water Capacity: Volume / Units / Total No. of Tanks on Ship
Call Sign:	Next Port:	Country of Next Port:	
Flag:			

4. BALLAST WATER MANAGEMENT Total No. Ballast Water Tanks to be discharged: ☐

Of tanks to be discharged, how many: Underwent Exchange: ☐ Underwent Alternative Management: ☐

Please specify alternative method(s) used, if any: _____

If no ballast treatment conducted, state reason why not: _____

Ballast management plan on board? YES ☐ NO ☐ Management plan implemented? YES ☐ NO ☐

IMO ballast water guidelines on board [res. A.868(20)]? YES ☐ NO ☐

5. BALLAST WATER HISTORY: Record all tanks to be deballasted in port state of arrival; IF NONE, GO TO #6 *(Use additional sheets as needed)*

Tanks/ Holds List multiple sources/tanks separately	BW SOURCES				BW MANAGEMENT PRACTICES						BW DISCHARGES			
	DATE DD/MM/YY	PORT or LAT. LONG.	VOLUME (units)	TEMP (units)	DATE DD/MM/YY	ENDPOINT LAT. LONG.	VOLUME (units)	% Exch	METHOD (ER/FT/ ALT)	SEA HT. (m)	DATE DD/MM/YY	PORT or LAT. LONG.	VOLUME (units)	SALINITY (units)

Ballast Water Tank Codes: Forepeak = FP, Aftpeak = AP, Double Bottom = DB, Wing = WT, Topside = TS, Cargo Hold = CH, Other = O

6. RESPONSIBLE OFFICER'S NAME AND TITLE, PRINTED AND SIGNATURE:

Where to send this form.

Vessels bound for Great Lakes:

United States or Canadian Flag vessel bound for the Great Lakes

Fax the form to the COTP Buffalo **315-764-3283** at least 24 hours before the vessel arrives in Montreal, Quebec.

Any other Flag vessel bound for the Great Lakes

Fax the form to the COTP Buffalo **315-764-3283** at least 24 hours before the vessel arrives in Montreal, Quebec, or;

Complete the ballast water information section of the St. Lawrence Seaway required "Pre-entry Information from Foreign Flagged Vessels Form" and submit it in accordance with the applicable Seaway notice.

Vessels bound for the Hudson River North Of George Washington Bridge

Vessel bound for the Hudson River north of the George Washington Bridge

Fax the form to the COTP New York at **718-354-4249** before the vessel enters the waters of the United States (12 miles from the baseline).

Vessels bound for all other United States Ports

Vessel bound for all ports within the waters of the United States other than the Great Lakes or Hudson River north of the George Washington Bridge

Before the vessel departs from the first port of call in the waters of the United States send the form by one of the three following methods:

- Mail the form to the **U.S. Coast Guard, c/o Smithsonian Environmental Research Center (SERC), P.O. Box 28, Edgewater, MD 21037-0028;**
- Transmit the form electronically to the National Ballast Information Clearinghouse (NBIC) at **www.serc.si.edu\invasions\ballast.htm**); or
- Fax the form to the Commandant, U.S. Coast Guard, c/o the NBIC at **301-261-4319.**

If any information changes, send an amended form before the vessel departs the waters of the United States.

Dated: May 11, 1999.

R.C. North,

Assistant Commandant for Marine Safety and Environmental Protection.

[FR Doc. 99-12266 Filed 5-14-99; 8:45 am]

BILLING CODE 4910-15-C

FEDERAL EMERGENCY MANAGEMENT AGENCY

44 CFR Part 65

[Docket No. FEMA-7284]

Changes in Flood Elevation Determinations

AGENCY: Federal Emergency Management Agency (FEMA).

ACTION: Interim rule.

SUMMARY: This interim rule lists communities where modification of the base (1% annual chance) flood elevations is appropriate because of new scientific or technical data. New flood insurance premium rates will be calculated from the modified base flood elevations for new buildings and their contents.

DATES: These modified base flood elevations are currently in effect on the dates listed in the table and revise the Flood Insurance Rate Map(s) in effect prior to this determination for each listed community.

From the date of the second publication of these changes in a newspaper of local circulation, any person has ninety (90) days in which to request through the community that the Associate Director for Mitigation reconsider the changes. The modified elevations may be changed during the 90-day period.

ADDRESSES: The modified base flood elevations for each community are available for inspection at the office of the Chief Executive Officer of each community. The respective addresses are listed in the following table.

FOR FURTHER INFORMATION CONTACT: Matthew B. Miller, P.E., Chief, Hazards Study Branch, Mitigation Directorate, 500 C Street SW., Washington, DC 20472, (202) 646-3461, or (e-mail) matt.miller@fema.gov.

SUPPLEMENTARY INFORMATION: The modified base flood elevations are not listed for each community in this interim rule. However, the address of the Chief Executive Officer of the community where the modified base flood elevation determinations are available for inspection is provided.

Any request for reconsideration must be based upon knowledge of changed conditions, or upon new scientific or technical data.

The modifications are made pursuant to Section 201 of the Flood Disaster Protection Act of 1973, 42 U.S.C. 4105, and are in accordance with the National Flood Insurance Act of 1968, 42 U.S.C. 4001 *et seq.*, and with 44 CFR part 65.

For rating purposes, the currently effective community number is shown and must be used for all new policies and renewals.

The modified base flood elevations are the basis for the floodplain management measures that the community is required to either adopt or to show evidence of being already in effect in order to qualify or to remain qualified for participation in the National Flood Insurance Program (NFIP).

These modified elevations, together with the floodplain management criteria required by 44 CFR 60.3, are the minimum that are required. They should not be construed to mean that the community must change any existing ordinances that are more stringent in their floodplain management requirements. The community may at any time enact stricter requirements of its own, or pursuant to policies established by other Federal, State, or regional entities.

The changes in base flood elevations are in accordance with 44 CFR 65.4.

National Environmental Policy Act

This rule is categorically excluded from the requirements of 44 CFR Part 10, Environmental Consideration. No environmental impact assessment has been prepared.

Regulatory Flexibility Act

The Associate Director for Mitigation certifies that this rule is exempt from the requirements of the Regulatory Flexibility Act because modified base flood elevations are required by the Flood Disaster Protection Act of 1973, 42 U.S.C. 4105, and are required to maintain community eligibility in the NFIP. No regulatory flexibility analysis has been prepared.

Regulatory Classification

This interim rule is not a significant regulatory action under the criteria of Section 3(f) of Executive Order 12866 of September 30, 1993, Regulatory Planning and Review, 58 FR 51735.

Executive Order 12612, Federalism

This rule involves no policies that have federalism implications under Executive Order 12612, Federalism, dated October 26, 1987.

Executive Order 12778, Civil Justice Reform

This rule meets the applicable standards of Section 2(b)(2) of Executive Order 12778.

List of Subjects in 44 CFR Part 65

Flood insurance, Floodplains, Reporting and recordkeeping requirements. Accordingly, 44 CFR Part 65 is amended to read as follows:

PART 65—[AMENDED]

1. The authority citation for part 65 continues to read as follows:

Authority: 42 U.S.C. 4001 *et seq.*; Reorganization Plan No. 3 of 1978, 3 CFR, 1978 Comp., p. 329; E.O. 12127, 44 FR 19367, 3 CFR, 1979 Comp., p. 376.

§ 65.4 [Amended]

2. The tables published under the authority of § 65.4 are amended as follows:

State and county	Location	Date and name of newspaper where notice was published	Chief executive officer of community	Effective date of modification	Community No.
Alaska: Unorganized Borough.	Municipality of Anchorage.	March 24, 1999, March 31, 1999.	The Honorable Rick Mystrom, Mayor, Municipality of P.O. Box 196650, Anchorage, Alaska 99519-6650.	February 19, 1999	020005
California:.					
Placer	City of Rocklin	March 24, 1999, March 31, 1999, *The Placer Herald.*	The Honorable Connie Cullivan, Mayor, City of Rocklin, 3980 Rocklin Road, Rocklin, California 95677.	February 22, 1999	060242