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COAST GUARD

Abandoned Vessels Pollute Waterways and Cost Millions to Clean Up and Remove



**Resources, Community, and
Economic Development Division**

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July 21, 1992

The Honorable Walter B. Jones
Chairman
The Honorable Robert W. Davis
Ranking Minority Member
Committee on Merchant Marine
and Fisheries
House of Representatives

The Honorable W.J. (Billy) Tauzin
Chairman
The Honorable Jack Fields
Ranking Minority Member
Subcommittee on Coast Guard
and Navigation
Committee on Merchant Marine
and Fisheries
House of Representatives

Vessels abandoned in U.S. coastal and inland waterways often threaten to pollute the marine environment. These abandoned vessels can contain significant amounts of pollutants—including illegally dumped hazardous materials, such as herbicides—that will eventually leak into the water as the vessels deteriorate or are damaged by storms and floods.

On June 10, 1992, we testified before the Subcommittee on Coast Guard and Navigation, House Committee on Merchant Marine and Fisheries, about problems with abandoned vessels.¹ Our testimony was based on preliminary information obtained from the U.S. Coast Guard. This report updates the Coast Guard's information and includes information not previously available from the U.S. Army Corps of Engineers (the Corps). More specifically, this report addresses (1) the number of vessels that have been abandoned nationwide, (2) the extent of environmental problems caused by abandoned vessels and the associated costs, and (3) the adequacy of federal laws and regulations dealing with abandoned vessels.

Results in Brief

The Coast Guard and Corps have respectively estimated that 1,300 and 4,000 vessels lie abandoned in the nation's waterways, predominantly along the East and Gulf coasts and the eastern inland waterways. The

¹Coast Guard: Abandoned Vessels Are Polluting the Waterways (GAO/T-RCED-92-54, June 10, 1992).

lower Coast Guard estimate, according to a Coast Guard headquarters official, could be due to field officials' focusing on only those vessels considered a pollution threat to which the Coast Guard must respond. The majority of abandoned vessels are barges and other types of commercial vessels—the remainder are recreational vessels. Between January 1, 1988, and September 30, 1991, the Corps removed an additional 282 abandoned vessels that posed a navigation safety threat in certain waterways. The cost of removing the vessels was \$5.2 million.

During the same 3-3/4-year period, abandoned vessels caused, according to the Coast Guard, 82 incidents of water pollution nationwide, threatening marine animal and plant life. In 14 additional incidents, the Coast Guard was able to prevent spills. Of these 96 incidents—involving almost 2 million gallons of pollutants—15 involved hazardous materials that had been illegally dumped into abandoned vessels. Furthermore, \$5.7 million has been spent, mostly by the federal government, since 1988 to clean up the pollutants from these abandoned vessels.

Federal laws do not presently prohibit owners from abandoning vessels or penalize owners for doing so. Nor do the laws require that some barges—which constitute either 46 percent or 30 percent of the currently abandoned vessels, depending upon whether Coast Guard or Corps estimates are used—be registered with the Coast Guard. Registration would allow owners of abandoned barges to be identified and held accountable for their vessels. Without laws that penalize vessel abandonment and require registration of barges, there are no disincentives to future abandonments. Furthermore, the federal government will likely continue to incur costs to remove the vessels and clean up pollution.

Background

Even though federal laws do not prohibit abandonment, the federal government does have the authority to deal with abandoned vessels (1) causing or threatening to cause water pollution or (2) obstructing or threatening the safety of navigation. Federal laws hold the vessel owner responsible for taking necessary action to avert or mitigate pollution or navigation safety problems. If the vessel owner does not take timely action, even after being directed to do so by the cognizant federal agency, the agency can take the necessary action and charge the owner for its costs. In addition to paying the cleanup costs, the owner may be administratively fined or possibly criminally prosecuted under various statutes. Appendix I discusses four laws covering pollution from abandoned vessels and obstruction of waterways. In general, the Coast

Guard is responsible for preventing pollution from abandoned vessels, while the Corps is responsible for removing abandoned vessels that are a hazard to navigation.

Vessels Are Abandoned in Waterways Throughout the Nation

Estimates of the number of abandoned vessels nationwide range from almost 1,300 to almost 4,000. A significant number of these abandoned vessels are barges,² which are sometimes used as illegal disposal sites for hazardous materials. In most cases, the Coast Guard has not investigated the condition or contents of these vessels to determine if the vessels pose a pollution threat.

We asked field officials of the Coast Guard and the Corps to estimate the number of abandoned vessels on the basis of their best professional judgment. Coast Guard and Corps field officials estimated that there are 1,276 and 3,957 abandoned vessels, respectively. Coast Guard and Corps estimates of the number and types of abandoned vessels are presented in table 1. A Coast Guard headquarters official said that the lower Coast Guard estimates could be due to the Coast Guard's focus on (1) the coastal zone, where the Coast Guard has pollution response responsibility, and (2) abandoned vessels that could contain pollutants and pose a threat to the environment. Corps officials said that their estimates are higher than the Coast Guard's because the Corps has been collecting data longer and thus has better data.

Table 1: Estimates of the Number and Types of Abandoned Vessels

	Coast Guard	Corps of Engineers
Commercial vessels		
Barges	593	1,201
Fishing	258	752
Other	70	220
Subtotal	921	2,173
Recreational vessels	355	1,784
Total	1,276	3,957

Maps in appendixes II and III show Coast Guard and Corps estimates of the number of abandoned vessels by state. Officials of both agencies reported that abandoned vessels are predominantly located along the East and Gulf coasts and eastern inland waterways.

²A barge is a flat-bottomed vessel used for transporting freight, including bulk liquids, or passengers. It usually has no propulsion system and is pushed or towed.

Abandoned Vessels Pollute the Marine Environment and Cost Millions to Clean Up and Remove

Since January 1, 1988, the Coast Guard has investigated 96 incidents of potential water pollution from abandoned vessels and found that these vessels contained almost 2 million gallons of pollutants. The Coast Guard estimated that \$5.7 million was expended to clean up these vessels and the pollution from them. In addition, the Corps estimated that it spent \$5.2 million to remove 282 abandoned vessels from waterways because they posed a threat to navigational safety.

Abandoned Vessels Pose a Pollution Threat

From January 1, 1988, through September 30, 1991, the Coast Guard investigated 96 incidents in which abandoned vessels could have spilled almost 2 million gallons of pollutants. Although 82 of these incidents involved an actual spill, the Coast Guard was able to prevent all but about 7,300 gallons of pollutants from entering the water.

We asked 45 Coast Guard field offices about pollution caused by abandoned vessels within their areas of jurisdiction. Over 40 percent of the offices reported at least one spill from an abandoned vessel. Such incidents generally occur when pollutants such as fuel oil—left on board when the vessels are abandoned—leak into the water. For example, in August 1989 an anonymous caller reported oil in the Elizabeth River to the Coast Guard field office in Hampton Roads, Virginia. Coast Guard investigators determined that 2,500 gallons of diesel and waste oil had leaked from a partially sunk, abandoned commercial fishing vessel. (App. IV contains a photograph of this abandoned fishing vessel.)

Although owners are responsible under the Clean Water Act³ for cleaning up spills, two parties disputed ownership of the vessel and took responsibility neither for reporting nor for cleaning up the spill. Consequently, the Coast Guard hired a contractor to clean up the spill and remove the pollutants from the vessel at a cost of about \$33,000 to the federal government. The abandoned vessel was not removed from the waterway. The Clean Water Act, before it was amended by the Oil Pollution Act of 1990, did not authorize the removal and destruction of vessels except in cases of marine disaster. The Coast Guard has initiated legal action to recover the cost.

The Coast Guard also reported that 15 of the incidents associated with abandoned vessels since 1988 have involved illegally dumped hazardous materials, such as herbicides banned by the Environmental Protection Agency. For example, in 1989 Coast Guard officials in New Orleans found that two abandoned barges in Empire, Louisiana, had leaked 1,000 gallons

³The Federal Water Pollution Control Act, as amended, is referred to as the Clean Water Act.

of illegally dumped waste petroleum products into a waterway. Because one owner was deceased and the other was bankrupt, the Coast Guard contracted for the removal and disposal of 210,000 gallons of waste material at a cost of approximately \$835,600 to the federal government. To prevent further illegal dumping, all openings on the barges were secured with chains and locks. (App. V contains a photograph of one of these abandoned barges.)

When we visited the Empire site with local Coast Guard officials in August 1991, we found that the chains and locks had been broken, illegal dumping had resumed, and hazardous material was again leaking into the water. The Coast Guard determined that about 300 gallons of waste chemicals and petroleum products had leaked from one of the barges, damaging local oyster beds, crustaceans, plants, and marine animals. Using authority under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), Coast Guard contractors removed an estimated 571,200 gallons (285,600 gallons from each barge) of hazardous materials. The Commandant of the Coast Guard authorized the removal and destruction of the two barges because of the continuing problem with illegal dumping into these vessels and the resulting pollution threat. Cleanup and barge removal cost about \$1.7 million. No legal action has been taken because the Coast Guard has not been able to identify the dumper.

Abandoned Vessels Cost Millions to Clean Up and Remove

The Coast Guard estimated that \$4.4 million was spent from January 1, 1988, through September 30, 1991, to clean up pollutants from abandoned vessels.⁴ Half of the cleanup efforts cost less than \$10,000 each, and another 41 percent cost between \$10,000 and \$100,000 each. An additional \$1.3 million was spent for cleanup between September 30, 1991, and April 30, 1992. Future costs, however, could be much higher, particularly if the Coast Guard identifies a significant number of abandoned vessels that contain large amounts of pollutants. At the Empire, Louisiana, site alone, for example, cleaning up the two barges, disposing of the hazardous materials, and removing the vessels cost about \$1.7 million. Of the 96 total pollution incidents resulting from abandoned vessels since 1988, 51 cases required expenditures to clean up pollutants. Owners paid all costs in 6 of these 51 cases and partial costs in 5 cases. The federal government paid the remaining unpaid costs, most of the \$5.7 million.

⁴The Coast Guard spent money from funds established by the Clean Water Act or CERCLA, depending upon whether the polluting material was petroleum or chemicals, to clean up spills from abandoned vessels.

Over the 3-3/4-year period ending September 30, 1991, the Corps spent \$5.2 million to remove 282 vessels that were obstructing navigation. The Corps tries to persuade owners to remove such vessels, but, if unsuccessful, will undertake the removal itself after the Corps and the Coast Guard agree that the vessel is a hazard. The Corps then tries to recover its costs from the owners.

Federal Laws Do Not Discourage Future Abandonments or Ensure That Owners Are Held Accountable for Damages

Even though abandoned vessels are currently causing and threatening additional pollution damage nationwide, no federal laws specifically prohibit abandonments of any vessels or require that barges be registered so that owners can be identified and held accountable. Without disincentives and the ability to identify responsible parties, abandonments and pollution incidents will likely continue to occur, and the Coast Guard may have to clean up or remove additional vessels.

Abandonments Are Not Currently Illegal

The Rivers and Harbors Act of 1899, as amended, makes it unlawful for vessels to obstruct, impede, or endanger navigation and empowers the Corps to remove and destroy vessels that are obstructing navigation. However, neither this nor any other federal law specifically prohibits owners from abandoning vessels in waterways. In addition, economic incentives do not act to discourage owners from abandoning vessels. First, an owner cannot be fined unless the vessel obstructs a channel or causes water pollution. Second, according to Coast Guard and Corps officials, owners abandon derelict vessels instead of selling them as scrap metal because the cost of scrapping the vessels is usually greater than their scrap value. For example, two barges in New Orleans yielded about 260 tons of scrap steel, which had a value of \$2,900. But the cost to clean up the vessels was \$1.3 million, and over \$300,000 was spent to remove and dispose of them.

Owners Are Not Being Held Accountable for Damages

While it is not illegal to abandon a vessel, the Clean Water Act holds owners financially responsible for water pollution caused by the vessel. However, in the pollution cases investigated by the Coast Guard, the owners of abandoned vessels were not held financially accountable for cleaning up spills in over three-quarters of the incidents, 40 of 51, that required cleanup expenditures. In these cases, the costs of cleaning up pollution or removing the vessel came from either the Oil Spill Liability

Trust Fund or the CERCLA Hazardous Substance Superfund, depending on whether the pollutants were petroleum products or chemicals.

In those cases in which owners were not held accountable, two major reasons were bankruptcy (24 percent) and the Coast Guard's inability to identify the owner (24 percent). The ability to identify the owner of an abandoned vessel, according to the Coast Guard, is contingent on the vessel's being registered and being assigned a unique identification number and on the assigned registration number's being marked legibly on the vessel. Vessels can be registered, or documented, in either the Coast Guard system or a complementary numbering system operated by states under Coast Guard regulation. In addition, the Corps administers a reporting system for commercial vessels and publishes an inventory, including a physical description of the vessel and the name of the current owner. The Corps does not register vessels but does include the Coast Guard-assigned number, if any, in its published inventory.

Coast Guard documentation requires registration of U.S. commercial vessels over 5 tons. Barges that use inland waterways are exempt from documentation laws;⁵ however, owners may choose to document barges for various reasons, such as to obtain a loan to buy the vessel. About 27,000 barges are currently documented, but the Coast Guard estimates that 14,000 barges are not. According to Coast Guard regulations, owners must mark the documentation number on the vessel, in a way that the number cannot be obliterated, on a clearly visible "interior" structural part of the hull. According to the Coast Guard, documentation numbers are difficult, but not impossible, to remove.

The Coast Guard has responsibility for overseeing the complementary numbering system for undocumented vessels, which is administered by the states under Coast Guard regulations and supervision.⁶ Although designed for recreational boats operating primarily within a single state, the system also applies to commercial vessels weighing less than 5 tons. As with documentation, federal statutes exempt barges from this numbering system. Federal law requires that the assigned number be

⁵Barges were exempted from documentation laws as early as 1793 because (1) barges had a short useful economic life and (2) unpowered barges could not be easily transported, as required, to one of a few ports where documentation was done. These original justifications for exemption from documentation are no longer relevant because barges now have a useful economic life of about 40 years and documentation is done by mail.

⁶All states, except Alaska, operate an approved vessel numbering system. As prescribed by federal regulation, the Coast Guard currently operates a numbering system for Alaska, but, according to a Coast Guard official, the Coast Guard is trying to persuade Alaska to set up a numbering system.

painted on the bow of the vessel. According to the Coast Guard, this kind of marking is easily obliterated either intentionally by owners or through normal operations.

Potential Impact of Proposed Legislation

The Chairman of the House Committee on Merchant Marine and Fisheries and the Chairman and Ranking Minority Member of the Subcommittee on Coast Guard and Navigation introduced the Abandoned Barge Act of 1992 (H.R. 5397) on June 15, 1992, which would make it illegal to abandon barges and would require barge registration. We evaluated the proposed legislation by examining the Coast Guard's experience with abandoned vessels and the resulting pollution for the 3-3/4-year period ending September 30, 1991. We found that the proposed legislation would have addressed more than 90 percent of the incidents of illegal dumping (14 of the 15 cases of illegal dumping involved barges). In addition, the legislation would have addressed about 30 percent of pollution incidents from abandoned vessels that required the expenditure of funds for cleanup (other types of commercial vessels and recreational vessels were responsible for 56 and 14 percent, respectively, of such expenditures). As noted earlier, no law prohibits the abandonment of these vessels.

The proposed legislation would require barges not registered under the Coast Guard system to be numbered using one of the complementary state-administered systems that operate under Coast Guard regulation. Our only significant concern with these systems is the temporary nature of the marking required by them. A Coast Guard official told us that vessel owners can easily obliterate the painted registration number. Numbers marked under documentation regulations, which require a permanent marking, are more difficult to obliterate because they are generally welded onto the hull.

During the June 10, 1992, hearing, the Coast Guard and the American Waterways Operators, an industry association representing barge owners and operators, testified that they favored extending the prohibition on vessel abandonment to all vessels. The Coast Guard further said that registering barges under the Coast Guard documentation system was preferred because numbering would be uniform. The industry representative testified in favor of vessel registration but felt that the decision about which system to use should be left to the Coast Guard.

Conclusions

Although the precise number of abandonments is uncertain because Corps and Coast Guard estimates differ, a large number of vessels are abandoned in the nation's waterways. Abandoned vessels have been and are likely to continue to be (1) sources of pollution and (2) illegal dump sites for hazardous materials and, as a result, costly to the federal government. Spills from abandoned vessels have damaged the environment, and additional releases of pollutants from these vessels pose a constant threat. Abandonments are likely to continue unless some legal or economic disincentives are created. Currently, however, no federal law makes abandonment of any vessel illegal or establishes penalties to deter it. In addition, no law requires barge owners to register their vessels with the Coast Guard.

The proposed legislation (Abandoned Barge Act of 1992, H.R. 5397) to prohibit barge abandonment and require registration of all barges addresses virtually all of the illegal dumpings that have occurred to date. In addition, the proposed legislation addresses about one-third of pollution incidents caused by abandoned vessels. The remaining incidents are caused by vessels other than barges. Furthermore, although the proposed Abandoned Barge Act provides the means to identify barge owners through state-administered vessel registration, we remain concerned about the temporary nature of the vessel marking now required under the state numbering system.

Matters for Congressional Consideration

Because abandoned vessels threaten the marine environment with spills of onboard petroleum products and illegally dumped hazardous material, the Congress may wish to consider enacting the proposed legislation to (1) make it illegal to abandon barges in the nation's waterways and provide appropriate administrative fines and penalties as a deterrent and (2) require registration and permanent marking of all barges. In addition, the Congress may wish to consider enacting additional legislation making the abandonment of other types of vessels illegal.

Recommendation to the Secretary of Transportation

We recommend that the Secretary of Transportation direct the Commandant of the Coast Guard to work with the Army Corps of Engineers to develop an accurate inventory of abandoned vessels and their locations to facilitate the capability of both agencies to address the problems posed by such vessels.

Scope and Methodology

We conducted our work from July 1991 through May 1992 in accordance with generally accepted government auditing standards. We interviewed officials and obtained documents from (1) Coast Guard headquarters in Washington, D.C., and field offices in Louisville, Kentucky; Miami, Florida; New Orleans, Louisiana; Norfolk, Virginia; and Philadelphia and Pittsburgh, Pennsylvania; and (2) Corps headquarters in Washington, D.C., and district offices in Cincinnati, Ohio; Louisville, Kentucky; New Orleans, Louisiana; Norfolk, Virginia; and Pittsburgh, Pennsylvania. While working in several locations (New Orleans, Miami, Norfolk, and Pittsburgh), we accompanied Coast Guard personnel to see abandoned vessels and resulting water pollution firsthand. Information about the number of abandoned vessels and their effect on the marine environment was obtained from a questionnaire and follow-up inquiries to 45 Coast Guard marine safety offices and 35 Corps district offices.

We evaluated the provisions of the proposed legislation by comparing it with the Coast Guard's experience with abandoned vessels and the resulting marine pollution for the 3-3/4-year period ending September 30, 1991.

Agency Comments

As requested, we did not obtain written agency comments on a draft of this report. We did, however, discuss our report with the Coast Guard's Chief, Marine Environmental Protection Division, and other Coast Guard headquarters officials and with the Corps' Deputy Director, Directorate of Civil Works, and other Corps headquarters officials, who generally agreed with our findings and conclusions.

We are providing copies of this report today to the Secretaries of Defense and the Army; the Secretary of Transportation; the Commandant of the Coast Guard; the Chief, U.S. Army Corps of Engineers; and other interested parties. We will make copies available to others on request.

This work was performed under the direction of Kenneth M. Mead, Director, Transportation Issues, who can be reached at (202) 275-1000. Appendix VI lists the major contributors to this report.

A handwritten signature in black ink, appearing to read "J. Dexter Peach". The signature is written in a cursive style with a large initial "J" and a long, sweeping underline.

J. Dexter Peach
Assistant Comptroller General

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Federal Laws Providing Authority Over Abandoned Vessels

Four statutes currently provide federal authority over (1) pollution from abandoned vessels, (2) dumping of hazardous materials into abandoned vessels, and (3) waterways obstructed by abandoned vessels. A brief discussion of the four statutes follows.

The Clean Water Act¹ prohibits water pollution from oil and provides penalties ranging from up to \$10,000 per day in administrative fines to at least \$100,000 in civil penalties in the event of gross negligence or willful misconduct. Under the act, the Coast Guard was delegated the responsibility to prevent spills from vessels and to respond to spills in its area of responsibility, which is generally the coastal zone (spills in the inland zone are generally the responsibility of the Environmental Protection Agency). The Coast Guard could remove and destroy a vessel only in certain limited circumstances, such as a marine disaster. The act was recently amended by the Oil Pollution Act of 1990, which provided broader discretionary authority to the Coast Guard to remove and destroy vessels that are discharging pollutants or that are judged to pose a substantial threat of a discharge. Vessel removals are no longer contingent on a marine disaster. The Oil Spill Liability Trust Fund, funded up to \$1 billion by a tax on domestically produced oil or imported oil refined in the United States, was created to pay for preventing and cleaning up oil spills.

CERCLA² imposes liability for the cost of clean up of hazardous substances released into the environment. The Coast Guard can remove and destroy vessels under the broad authorities of this act. Penalties to polluters range from up to \$25,000 in administrative fines to a \$75,000 maximum fine per day for subsequent violations. The Hazardous Substance Superfund was created to pay for preventing and cleaning up chemical spills.

The Resource Conservation and Recovery Act of 1976 prohibits the illegal dumping of hazardous wastes into abandoned vessels and provides from up to \$25,000 per day in civil penalties to \$250,000 and 15 years of imprisonment in criminal penalties. This statute can be used to prosecute illegal dumpers of both petroleum and chemical materials.

The Rivers and Harbors Act of 1899, as amended, makes it unlawful for any vessel, abandoned or otherwise, to obstruct, impede, or endanger navigation. Under the act, the Corps can (1) order owners to remove a vessel that violates the law or (2) remove the vessel itself in an emergency

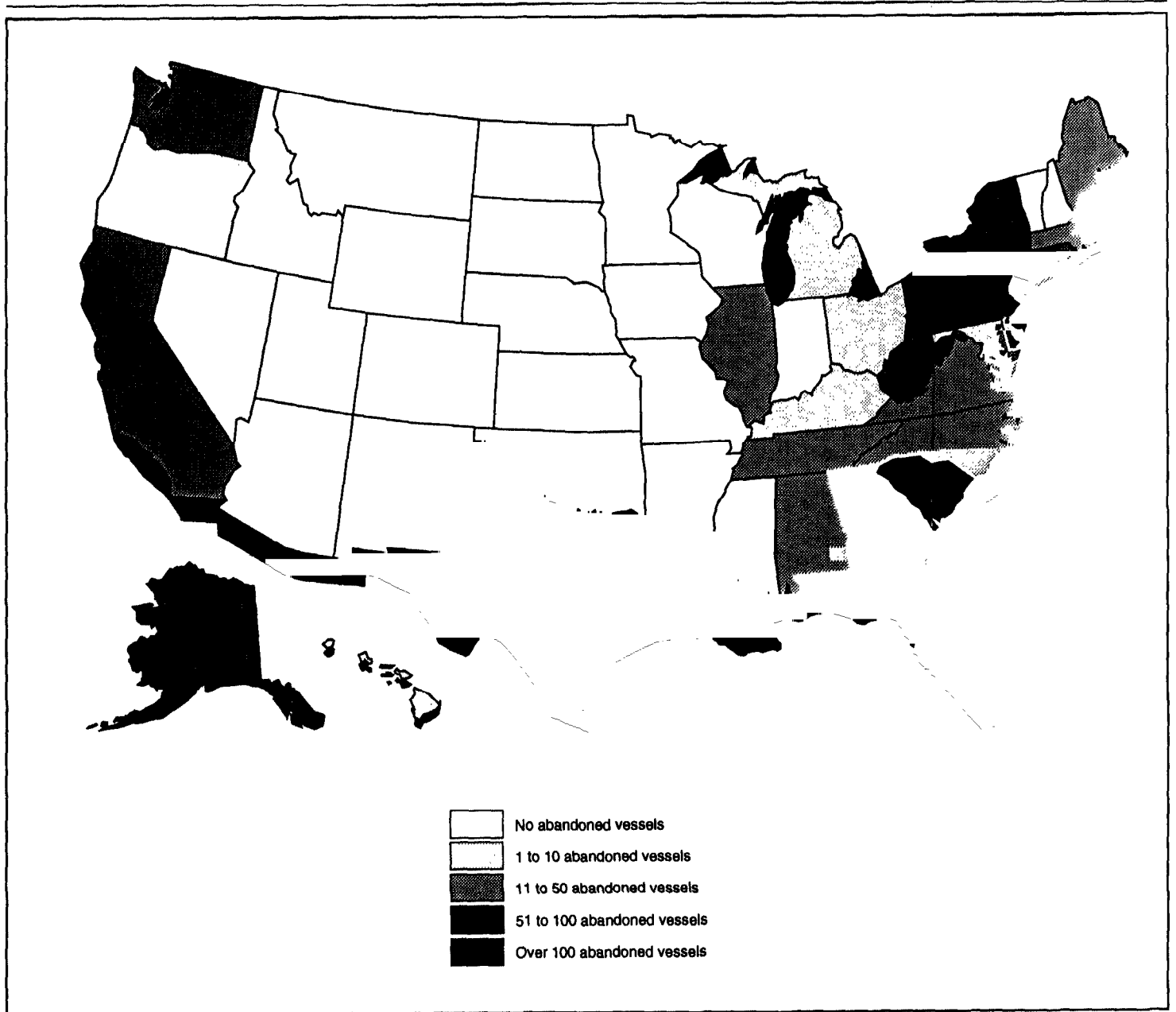
¹The Federal Water Pollution Control Act, as amended, is referred to as the Clean Water Act.

²The Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, is referred to as CERCLA.

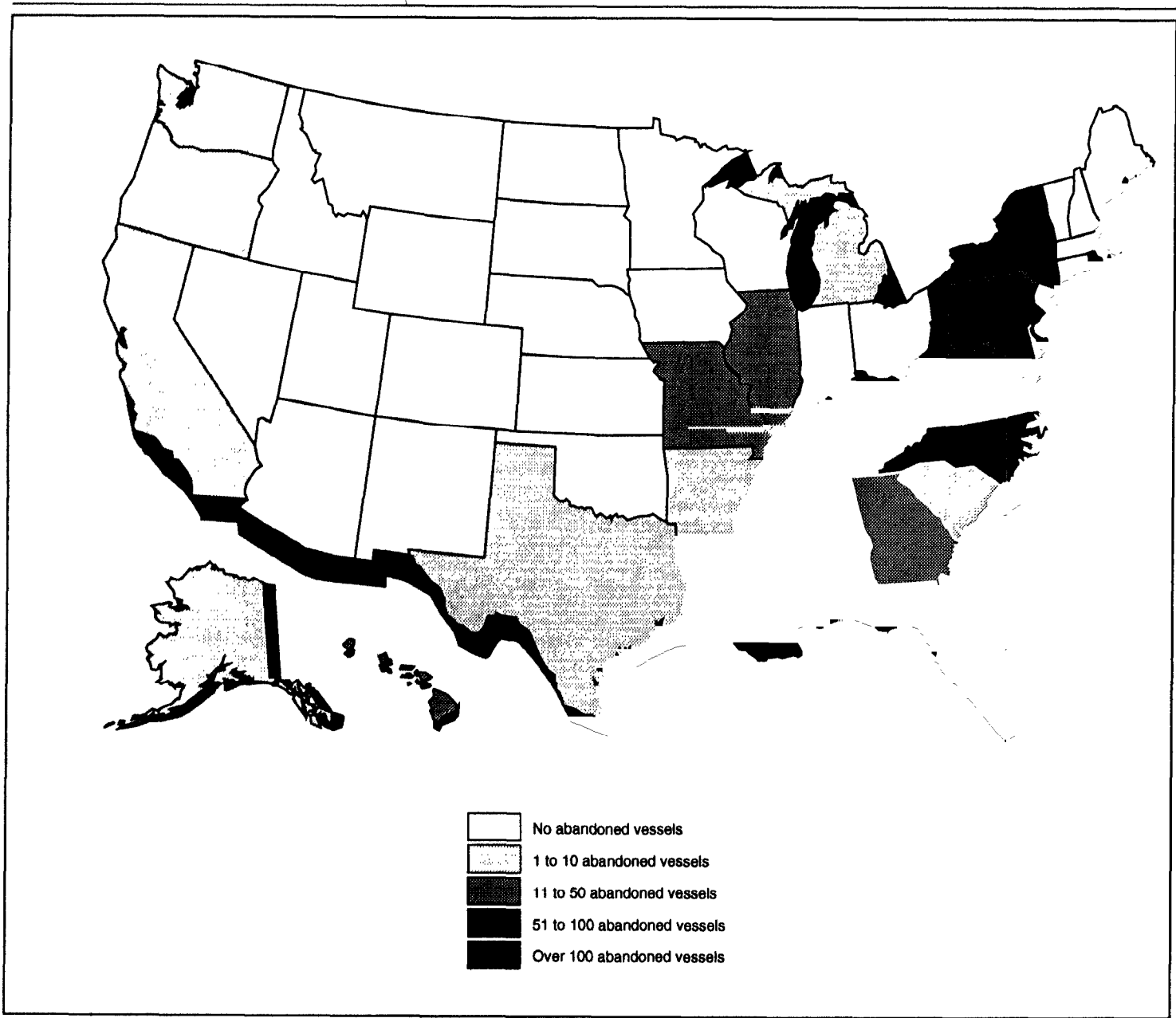
**Appendix I
Federal Laws Providing Authority Over
Abandoned Vessels**

or if owners do not act responsibly. Legal action can be initiated to recover removal costs from vessel owners. Also, owners can be found guilty of a misdemeanor and fined not less than \$500 nor more than \$2,500 and imprisoned for up to 1 year.

Number of Abandoned Vessels Estimated by Coast Guard Field Offices



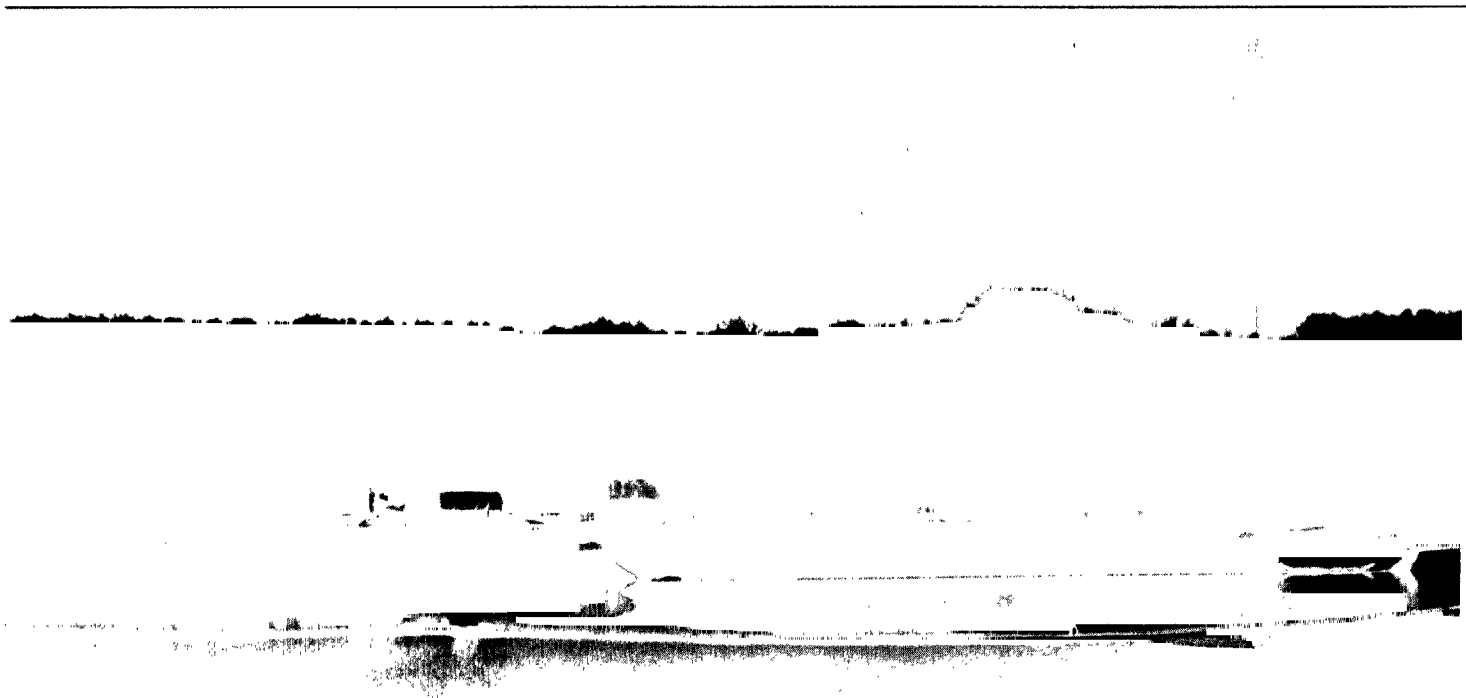
Number of Abandoned Vessels Estimated by Corps of Engineers District Offices



Abandoned Fishing Vessel in Virginia



Abandoned Barge in Louisiana



Major Contributors to This Report

**Resources,
Community, and
Economic
Development Division
Washington, D.C.**

**Emi Nakamura, Assistant Director
Steven R. Gazda, Assignment Manager
Jonathan T. Bachman, Technical Advisor**

**Philadelphia Regional
Office**

**Joseph A. Kredatus, Regional Management Representative
William S. Justice, Evaluator-in-Charge
Jennifer Su Kim, Staff Evaluator**

**Office of the General
Counsel**

David K. Hooper, Staff Attorney

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