OBSTACLES TO PORT OPERATION AND DEVELOPMENT: DREDGING AND OTHER ENVIRONMENTAL CONSTRAINTS

Edward J. Sheppard
Garvey, Schubert and Barer

OVERVIEW

During the past year the pleas of the ports and other elements of the maritime industry began to be heard in Washington. A consensus is growing among senior administration officials and legislators that despite a national commitment to environmental protection, steps must be taken to prevent environmental protection laws from choking U.S. ports and crippling the nation's capacity to engage in maritime commerce. With the ratification of the Uruguay Round of the General Agreement on Trade and Tariffs, the international economic system is poised to enter a new era of global trade and integration. It would be catastrophic if the United States were unable to capitalize on the liberalization of international trade because of well-intentioned environmental regulations that not only are allowing the nation's navigatible channels to be filled with silt but also are draining limited development funds.

Legislative action is urgently required to ensure a balanced administration of U.S. environmental laws, as envisioned by past legislators and supported by the American public. During the 1970s and 1980s Congress enacted environmental protection measures to prevent further degradation of the nation's marine environment. Unfortunately, this statutory scheme sometimes has created more headaches for the shipping industry than has benefited the environment.

The severity of the crisis facing U.S. ports is familiar to anyone involved in any aspect of the industry, from port administrators and dock workers to shipping line managers. A poll conducted by the American Association of Port Authorities (AAPA) indicates that as port planners and administrators look to the next century, they are most concerned with "coming up with the money to pay for facility development, dealing with environmental regulations and getting timely dredging approvals" (*Journal of Commerce,* "Funding, Environment, Dredging are Key Port Issues, Survey, June 6, 1994, p. 7B). These concerns are interrelated, with the costs of meeting environmental regulations placing increasing demands on port budgets. This paper will examine a number of the most severe regulatory constraints in practice, discuss the status of recent reform proposals, and suggest some reforms in existing practice and law.

Dredging

The regulatory regime by that the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers administer dredging permits is a source of uncertainty to all port operators and an obstacle to port operation and development. Both routine maintenance dredging and long-term strategic dredging for port development are severely hampered by delays associated with overlapping and conflicting environmental laws and regulations. The permitting process lacks action-forcing mechanisms and triggers. The result is that a process intended to balance environmental and economic concerns is tilted heavily toward inaction. For example, a dredging permit for the Port of Oakland was stymied for more than 2 decades because of controversy over the disposal of contaminated sediments. Oakland authorities believe that the delays cut the Bay Area's share of West Coast containerized cargo by nearly 40 percent during the past 2 decades. In human terms this drop has cost the region about 4,500 additional jobs and $150 million in wages (Testimony of Charles R. Roberts, Executive Director, Port of Oakland, before the House Merchant Marine and Fisheries Committee, Subcommittee on Merchant Marine, June 16, 1994, p. 3).

Other Regulations

In addition to dredging delays, port planners must contend with an array of other environmental statutes, including the Coastal Zone Management Act, state water criteria, and federal and state clean air requirements and wetlands policy.

The same regulatory framework that governs dredging permits is also applied to port projects that disturb wetlands resources. As a result of this application, EPA and the Corps of Engineers are requiring ports to engage in expensive compensatory wetlands mitigation or wetlands mitigation banking. The environmental efforts associated with development

projects such as pier and storage expansion are assuming a greater percentage of port's limited resources.

In addition, EPA indicated recently that it will impose severe operating restrictions in the form of user fees on ships that contribute to air pollution, as part of a Federal Implementation Plan to combat air pollution in the Los Angeles basin. This scenario could be revisited in other severely polluted metropolitan areas that are unable to meet federally mandated air-quality goals.

It is clear that the crisis facing the port industry reflects a wider national debate over the balance between environment and economic growth. In numerous circumstances, most notably the controversy over the President's forest resources usage plan to protect the Spotted Owl in the Pacific Northwest, the constraints on development are the same. Environmental groups and industry are routinely squaring off over a regulating agency's interpretation of a federal or state law. The process is slowed considerably because regulators recognize that they are vulnerable to legal challenge and choose to delay action rather than make the hard choices they may have to defend in court. When action is finally taken, court challenges and appeals can drag on for years or decades.

As recognition of the port crisis grows in Washington, a variety of proposals that seek to strike a balance between environmental concerns and the requirements of commerce and port development have emerged. AAPA has advanced a comprehensive package of reforms calling most notably for a national dredging policy by amending the Clean Water Act and the Water Resources Development Act. A number of these reforms were included in an unreleased dredging reform package of Clean Water Act amendments prepared by key House committee staff in July 1994. The package, that had the tentative support of congressional, administration, environmental, and industry leaders, appears to have been set aside because the House did not act to authorize the Clean Water Act in 1994.

In response to these efforts, the Clinton Administration created an Interagency Working Group on the Dredging Process, tasked with undertaking a comprehensive review of the regulatory framework and issuing a variety of administrative reforms aimed at ending the logjam.

Unfortunately, administrative reforms and streamlining contemplated recently by the Interagency Working Group will not meet the concerns of the port industry. There is little question that clear and thorough statutory reforms are needed to provide tangible relief to the ports. Only legislative reform can force the Corps of Engineers and EPA to adhere to a strict timetable for issuing dredging permits and authorize increased funding for environmental technologies. AAPA's legislative proposals recognize the need for more than just a "tweaking" of the process and instead call for a rationalization of the permit process so that it satisfies the dual imperatives of economic growth and environmental protection. Port advocates must be prepared to press for legislation to ensure that critical economic issues are not sacrificed when bureaucratic inertia is mistakenly construed as evidence of legitimate environmental concerns.

DREDGING CRISIS

Recognition of the dredging crisis extends to the highest levels of government. On March 25, 1994, President Clinton wrote AAPA to express his support for the port industry. The President wrote, "Too often, dredging projects are caught up in a regulatory tangle," and he noted, "Ports can only realize their full potential as magnets for shipping and commerce if our nation's harbors are dredged and open for trade" (Letter from President Clinton to Erik Stromberg, President, American Association of Port Authorities, March 25, 1994).

The dredging crisis is driven by the question of when, how, and where to dispose of dredged "spoil." Under U.S. law, the disposal of dredged material is regulated under two principle legislative authorities: Section 404 of the Federal Water Pollution Control Act Amendments of 1972 (Clean Water Act) and Sections 102 and 103 of the Marine Protection, Research, and Sanctuaries Act (MPRSA). The Clean Water Act requires EPA to establish and promulgate discharge guidelines that will protect the nation's water resources up to 3 mi off shore. The Act also authorizes the Corps of Engineers to issue dredging permits that comply with these guidelines and other relevant statutes. Similarly, MPRSA requires that EPA develop criteria in consultation with the Corps of Engineers to regulate ocean dumping of all materials and assign the Corps responsibility for issuing permits for ocean dumping. The two statutes overlap when dredging disposal is under consideration in U.S. coastal waters (Davis, David G., Regulator's Perspective—EPA, in *Transportation Research Circular,* No. 427: Environmental Regulatory Process: Does It Work? Dredging U.S. Ports, TRB, National Research Council, Washington, D.C., June 1994, pp. 26-27). Furthermore, the regulations that have been used to administer the statutes have exacerbated the problem.

Process

The permitting process followed by the Corps of Engineers is designed to provide a high degree of public involvement and comment and facilitate consultation

between various federal and state agencies. The procedures followed by the U.S. Army Corps of Engineers are established in the *Code of Federal Regulations,* 33, Part 336.

First, the Corps of Engineers must issue a public notice and weigh various disposal options in relation to nine established criteria: navigation value, water-quality criteria, Coastal Zone Management Act consistency, endangered species protection, protection of historic resources, recreational values, fish and wildlife protection, and marine sanctuary protection. Based on this analysis the Corps will propose a disposal option and consult on this option with EPA. In considering the Corps proposal, EPA has the broad authority to:

> prohibit or restrict the use of any defined area as a discharge site under 404(c) whenever he determines that...the discharge...will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas, wildlife, or recreation areas (33 CFR 336.1(b) 5).

In making this determination, in accordance with Section 404(b)(1) of the Clean Air Water Act, EPA consults with other relevant state and federal regulatory agencies. In practice, a negative finding by one of these organizations will cause EPA to veto the Corps of Engineers proposal. The regulatory agencies typically consulted by EPA include the following:

1. U.S. Fish and Wildlife Service. This agency is authorized to protect migratory birds, marine mammals, threatened and endangered species, and wildlife. If the agency believes a disposal will threaten its jurisdictional duties, it may ask EPA to deny authorization for the project.
2. National Marine Fisheries Service. NMFS is required to protect the commercial and recreational fishing interests of the United states.
3. State Department of Fish and Game. This agency protects state regulatory standards.
4. State water-quality control agencies. According to Section 401 of the Clean Water Act, these agencies must certify that projects will not violate state laws protecting water quality.
5. State coastal zone management agencies. Under the authority of these agencies, state authorities can prevent disposal if it is determined that a particular plan violates a state's coastal development plans.

After consulting with these additional regulators, EPA must approve or disapprove of the Corps of Engineers plan. If approved, the plan is implemented, barring a legal challenge by affected parties. If EPA declines to approve the plan, compromise options that attempt to meet the criteria established by Congress for each regulatory agency are considered.

This procedure is established to ensure that disposal options are carefully reviewed by the public as well as experts in each regulatory agency. However, a number of examples demonstrate the practical constraints this environmental regime places on port development.

Oakland Case: Regulatory Gridlock

The dredging crisis described by the President is generated by a regulatory regime that fails to protect the public interest in an efficient and modern port system. Reflecting the evolutionary nature of U.S. environmental laws, the process of obtaining a permit to engage in dredging is governed by a confusing blanket of overlapping regulatory authorities that give the Corps of Engineers and other agencies little latitude and incentive to compromise. The case of the long-delayed Oakland dredging project is the most disastrous case in that the regulatory regime generated a high degree of uncertainty and stalled progress for nearly 2 decades.

In 1992, the Port of Oakland completed a minor part of a two-phase channel deepening project. At the time of this writing, the major portion of the project, to dredge to 42 ft of depth, was scheduled to begin in December 1994. The project eventually went forward after passing environmental muster: But why did it take 2 decades?

What Went Wrong at Oakland

The dredging project at Oakland was first proposed to Congress in 1972. During the subsequent decade the process of authorizing and appropriating funds for feasibility studies, preconstruction planning and construction costs was slowed considerably by unique political and economic factors. In addition, debate over disposal of dredged material caused interagency conflict, legal confrontations, and inaction that held up the project through 1994.

This interagency conflict and inaction reached a critical point by January 1988; therefore, port officials arranged a meeting that included representatives from all relevant government agencies, and seven environmental and fishing organizations. The port officials were attempting to force the disparate interests to reach a compromise on disposal options so that the port could begin its much needed project.

The Corps of Engineers at that time was advocating a disposal method in that the 7 million yd^3 of dredged material would be disposed of at a site near Alcatraz Island, after room had been made there by transferring

2.7 million yd^3 of sediment to an open-ocean site 15.6 mi from the Golden Gate Bridge. This decision was reached by high-level Corps officials who were obligated by their regulatory framework to "assure that dredged material disposal occurs in the least costly, environmentally acceptable manner" (33 CFR 336.1(c)1). The Corps proposal was estimated to cost $28 million, compared with other deep ocean-disposal options favored by other agencies and groups that were estimated to cost at least $54 million or more (Kagan, The Dilemma, p. 320).

EPA, Fish and Wildlife Service, and other regulatory agencies that attended the meeting found the Corps of Engineers' disposal plan unacceptable. They were joined by environmental advocates as well as fishing interests. Under the regulatory regime governing dredging, numerous federal and state agencies must be consulted. Through EPA's broad authority, each agency retains a de facto veto power over the Corps' permitting decisions. These government agencies found that in pursuing their statutory duties they could not support the solution advocated by the Corps of Engineers.

State and federal wildlife agencies agreed with environmental interests that argued that the Alcatraz plan would muddy the bay waters and harm bay fisheries. In addition, EPA challenged the Corps' testing methods and claimed that the Corps was ignoring its own conclusion that toxicity levels in the Oakland sediments had led to higher mortality rates in organisms tested. Finally, federal agencies rejected the Corps' assertion that sites beyond the continental shelf should be discarded because of expense (Kagan, The Dilemma, p. 321).

Complicating matters was the threat that any permit approval could provoke a lawsuit by San Francisco environmental groups. Looking over the agencies' shoulders were numerous private environmental organizations, that could initiate court actions protesting governmental failure to conduct scientifically and legally adequate studies and review. In this case, environmental groups threatened to defeat the compromise plan.

The relevant regulators met for a second time in March 1988 to attempt to untangle the regulatory confusion. They recommended that the Corps of Engineers permit disposal of just 500,000 yd^3 of the proposed dredged material at an expensive off-continental shelf site. The rest of the project would be delayed indefinitely, pending further study and testing. This proposed solution provided the greatest security against legal action by environmental groups, and did at least avert a maritime crisis by allowing the channel to be dredged to 38 ft.

However, even this limited project ran aground in mid-April when the Half Moon Bay Fishermen's Marketing Association filed a lawsuit alleging that the plan violated numerous regulatory provisions and failed to adequately protect fisheries. After both a U.S. district court judge and a federal court of appeals found that the dredging did not violate national environmental laws, the association took its case to a state court. On May 16 the dredging was halted by a state judge after fishermen protested by dumping a ton of fish heads at a Port of Oakland terminal and press reports surfaced that the dredging team had accidently disposed of highly contaminated material at the disposal site (Kagan, Robert A., The Political Roots of the Environmental Permitting Process, AAPA Planning and Research Seminar, Seattle, Washington, June 2, 1994, Appendix A, p. 20).

As evidence built that shipping was being severely disrupted, Oakland port officials proposed a third plan in spring 1992 to dispose of the first 500,000 yd^3 of dredged material at the Sacramento River delta instead. This plan was dropped, however, when court challenges by Contra Costa County water authorities required safeguards that drove the estimated cost of disposal at the site as high as $21 per yd^3 as opposed to an estimated $4 per yd^3 under the proposal originally advocated by the Corps of Engineers (Kagan, Robert A., p. 21).

In 1992 the Corps of Engineers concluded additional sampling and reported that it would seek to permit disposal of 500,000 yd^3 of dredged material at the Alcatraz site. The report noted that because EPA had halted open-ocean disposal through 1994 and local regulatory agents and cost precluded land disposal, this limited project was the best available choice remaining. Under considerable political and business pressure, the relevant regulatory agencies agreed to this limited proposal despite a preference for upland disposal. The limited project to dredge to 38 ft finally began in October 1992, but no provision was made for the major project to dredge to 42 ft, the depth necessary to accommodate modern cargo vessels at the Port of Oakland.

In the end, presidential intervention was required to allow the Corps of Engineers to move forward with the remainder of the project to dredge the channel to 42 ft. In August 1993 President Clinton arrived in Oakland and declared that federal agencies should "get on with it" (Stromberg, Erik, Get on With Dredging U.S. Ports, *Journal of Commerce,* Nov. 2, 1993, p. 8A). A compromise solution was quickly reached in that sediment disposal would be divided among a deep

ocean-side, wetland creation in the delta, and land disposal at the edge of the bay in Oakland. The plan was approved in March 1994 by the Corps, with the support of EPA. Phase II dredging is scheduled to begin in late 1994.

The economic dislocation generated by the delays was severe. Oakland authorities point to the dredging process to explain the Bay Area's dropping share of West Coast containerized tonnage, from 28 percent in 1980 to 17 percent in 1994. They estimate that if this drop had not occurred there would be 4,500 additional jobs in the Bay Area and additional payroll of $150 million (Roberts, Charles R., p. 3).

Reflections on Gridlock

Behind the regulatory problems experienced at Oakland and other U.S. ports is the piecemeal manner in which regulatory authority has been parceled among various federal and state authorities. Each time Congress passes an environmental law, it provides for administration through one of a number of agencies from the National Oceanic and Atmospheric Administration, to EPA, to the Fish and Wildlife Service. The implication is that through the interaction of these diverse and overlapping authorities, a balanced policy meeting all criteria will emerge.

In practice, however, there is no incentive for the diverse interests to reach a compromise. As evidenced at Oakland, plan after plan can be discarded because of interagency conflict and fear of lawsuits. Conclusion is delayed because of the U.S. Army Corpso of Engineers, EPA, National Marine Fisheries Service, and the Fish and Wildlife Service rely on a set of complex memorandums of agreement to address their concerns. They find it convenient to address the issues one at a time. This linear process is drawn out (Testimony of Lillian Liburdi, Director, Port Department, Port Authority of New York and New Jersey, before the House Merchant Marine and Fisheries Committee, Subcommittee on Oceanography, March 30, 1993, p. 5).

If a compromise is reached, it is likely to be challenged in court by an environmental watchdog, that can allege that a regulatory agency did not satisfy its regulatory mandate. The net result is inaction.

Regulatory agencies appear to place a high priority on avoiding lawsuits by taking the most protective interpretation of the statutes under that they operate. The spirit of the laws passed by Congress becomes lost in the minutiae, and little is accomplished as regulators become defensive and consensus is forgotten. This dynamic has been called "adversarial legalism" by Robert Kagan of the University of California:

> The existing American system for balancing economic and environmental arguments concerning seaport expansion plans is cumbersome, fragmented, adversarial, legalistic, time-consuming, and costly. *It tilts...toward environmentalism...because the legal structure provides few incentives to negotiate balanced compromises between economic and environmental values* (Emphasis added) (Kagan, Robert A., The Dilemma, p. 333).

The Port of Oakland has been a rallying cry for maritime interests that want to convey the urgency of the current dredging crisis. Yet, as Charles Roberts, Executive Director of the Port of Oakland, noted in congressional testimony June 14, 1994, "The problems exposed in Oakland are symptomatic of a national dilemma." Roberts noted that "Ports such as New York, Boston, Baltimore, Savannah and the Port of Miami River on the East Coast; Los Angeles, Long Beach, Oakland, Tacoma and Seattle on the West Coast; New Orleans and Houston in the Gulf; and Toledo and Duluth in the Great Lakes all have experienced delays in beginning either deepening or maintenance dredging projects" (Testimony of Charles R. Roberts before the House Merchant Marine and Fisheries Committee, Subcommittee on Merchant Marine, June 16, 1994, p. 2).

The reform efforts described in "Part B: Recent Regulatory Reform Proposals" succeed to varying degrees in removing overlapping authorities in the regulatory system and establishing accountability for delays in decision making.

New York/New Jersey: How Clean is Clean?

In relation to Oakland officials, officials at the Port Authority of New York and New Jersey might consider themselves comparatively lucky. It recently took a mere 3 years to obtain a routine permit to dredge the berths at the Port Elizabeth facility. Compliance with shifting regulations sent costs from $1 million to $17 million and turned a 35-day project into a 3-year crisis. Jobs were lost, freight rerouted, and longshoremen at the harbor lost 300,000 labor hrs, or nearly $6 million in wages (Testimony of James A. Capo, President, New York Shipping Association, Inc., before the House Merchant Marine and Fisheries Committee, Subcommittee on Merchant Marine, June 16, 1994, p. 8). As noted by Roberts, the regulatory procedural problems illustrated

in Oakland have found expression in New York/New Jersey as well. However, a number of different but equally disturbing issues are illustrated by the delays experienced there during one of many recent permitting struggles.

How Clean is Clean?

The Port Authority of New York and New Jersey fully expected routine approval by the Corps of Engineers for its April 1990 permits to dredge the berths at the Port Elizabeth facility. Instead, the permit application process was stalled while EPA used the port as a test case for dioxin contamination. EPA subsequently issued new regulations for dioxin, which required additional dioxin toxicity and bio-accumulation testing and established stringent disposal standards. These regulations nearly prevented necessary maintenance dredging from occurring.

The Port Elizabeth permit was first held up for nearly 2 years, until March 11, 1992, while EPA worked on and then issued interim guidelines for the dumping of dioxin-tainted sediments at 25 parts per trillion (ppt). EPA issued this regulation under the authority of the Ocean Dumping Act of 1988 (ODA), which prohibits the dumping of materials with "other than trace contaminants."

The Port Authority complied when the Corps of Engineers mandated a battery of time-consuming bioaccumulation and toxicity tests and even helped fund a new dioxin lab to undertake the complicated testing. Based on the results, which met the 25 ppt standard, the permit was supported by EPA and issued by the Corps on January 6, 1993. However, the Environmental Defense Fund subsequently wrote the EPA to criticize its dioxin standard; the permit was suspended 8 days later (Liburdi, Lillian, p. 2). EPA eventually reversed its decision on the 25-ppt agreement, dropping the standard to 10 ppt and requiring the port to fund a new round of identical dioxin tests. On the basis of the new round of testing, EPA eventually approved ocean disposal at the monitored "mud dump" site. However, EPA conditioned its approval on use of an expensive capping procedure after the Fish and Wildlife Service decided that the dioxin would threaten the ecosystem.

As the science of detection improves, EPA can continue to tighten dioxin standards under ODA, and thus can find an increasing percentage of sediments unacceptable for disposal. As Congressman Menendez noted in June 1994, "Since the ODA was passed in 1988, the technology to detect trace contamination has gone from parts per billion to parts per trillion or quadrillion. Loose regulatory practices coupled with an increase in technology have resulted in regulatory 'bracket creep'" (Testimony of Congressman Robert Menendez (D-New York), before the House Committee on Merchant Marine and Fisheries, Subcommittee on Merchant Marine, June 16, p. 1). As detection technology becomes more sensitive, lower quantities of dioxin will no longer qualify as "trace contaminants" and will thus be subject to ODA.

Ports and politicians want EPA to justify this "bracket creep" in terms of real effects on human health and environmental safety, especially because the new standards for ocean dumping are already higher than those enforced by EPA for drinking water, air, food, medicine, and Superfund cleanups. Lillian Liburdi, Director of the Port Department, Port Authority os New York and New Jersey, laments that the question has become, *how* clean is clean? The federal regulatory system, when dealing with sediments proposed for ocean disposal, uses criteria and standards that are order of magnitudes more stringent than land-based criteria" (Liburdi, Lillian, p. 2).

There is even some evidence indicating that current dioxin levels in healthy humans are comparable to levels regulated as unsafe for ocean dumping of sediments (Testimony of Congressman Robert Menendez, before the House Merchant Marine and Fisheries Committee, Subcommittee on Oceanography, June 16, p. 1). According to Liburdi, the Port commissioned an independent risk assessment of the dioxin-tainted sediments, which the dioxin levels present engendered a risk much lower than EPA guidelines and that open ocean disposal could safely be completed without the expensive capping stipulated by EPA (Liburdi, Lillian, p. 2)

Running Out of Options

As the percentage of dredged material unsatisfactory for ocean disposal grows, ports are running out of disposal options. However, according to Congressman Menendez, disposal options must be preserved because "at the current rate of development, the option of decontamination of dredged material is not feasible for the next 10 to 20 years at the scales required for major ports" (Menendez, Robert, pg. 1). Although the technology of detection is pushing forward rapidly and raising standards with it, the science of remediation is lagging. Despite efforts to increase spending on environmental technologies and dual-use military research and development, decontamination as a viable option remains years in the future.

Even though port agencies share the environmental concerns of some advocacy groups, they are also faced with the daily economic realities that result when channels are not dredged. Given the economic dislocation that could result, failing to dredge is simply not a solution. The Maritime Administration estimates that in 1991 alone, public ports contributed $70 billion toward the gross national product and $20 billion in tax revenues, accounting for 1.5 million jobs (Torres, Robert, House to Take Up AAPA Plea for National Dredging Policy, March 29, 1993, p. 6). At issue are billions of dollars in future tax revenues—money that potentially could be spent to clean up the environment. Technology must move forward, but in the short term, the economic benefits of port operation must be considered in cases such as New York where the real impact of disposing tainted materials is uncertain at best.

Responsibility

The irony is that ports often are not the source of the pollution that hamstrings their operations. In the case of New York/New Jersey, the dioxin detected in the port sediments has been traced to a Diamond Shamrock plant, which produced a chemical defoliant 2 decades ago. The plant is upriver in Newark, and the contamination flows downstream to contaminate the sediments. Given this situation, port officials point to a bitter dilemma:

> Even though the government is holding the port community to strict standards over dioxin and other issues, it has yet to clean up a Superfund site that is believed to be the major source of dioxin pollution [in the port]—an Agent Orange plant that was shut down some 20 years ago (Testimony of James A. Capo, President, p. 6).

However, given the discrepancy between land dioxin standards and the more stringent dredging material standards, even a clean Superfund site could still threaten dredging permits downstream. And as the director of the Port Authority of New York and New Jersey points out, "*does* that mean that a Superfund site could contribute to a sediment contamination problem long after it has been made clean?" (Testimony of Stanley Brezenov, Executive Director, Port Authority of New York and New Jersey, before the House Merchant Marine and Fisheries Committee, Subcommittee on Oceanography, June 14, 1994, p. 5). Such scenarios are not merely hypothetical, but could be crippling to the port industry if EPA insists on unequal standards for dededg material. EPA must act to coordinate risk-assessment standards for the various programs under its jurisdiction to prevent such inconsistencies.

Recent Proposals to Reform Dredging

American Association of Port Authorities

All analyses of the AAPA proposal were taken from the AAPA Proposed Amendments to Clean Water Act and Water Resources Development Act, April 4, 1994.

In late 1993, AAPA issued its proposal "Open Channels to Trade: A Proposal for a National Dredging Policy." The proposal has provided a standard against that port agencies can review administration and congressional initiatives. The proposal focuses on legislative changes to clear up discrepancies in the law and to institute a measure of accountability to the process.

- Clean Water Amendments. The most important changes proposed are incorporated in a new Clean Water Act Section 406, to be titled "Disposal of Dredged Material from Navigational Dredging," in that Section 404 of the Act and Section 103 of the MPRSA would be consolidated. First, the legislation would unify legislative authority governing dredging and require EPA to promulgate a uniform set of regulations to cover both ocean and inland waters. A new uniform standard, based equally on "environmental acceptability, economic practicability, and technological feasibility" would be used to analyze disposal alternatives.

Second, Section 406 would require EPA to establish three categories of sediment based on the potential to cause environmental damage. Based on these categories, the regulation would allow the issuance of category-based permits, regional permits and other general permits when the environmental impact of disposal is considered insignificant.

Third, and most significant, under the proposed law, a stringent timetable for permit processing would be established. Although extensions to carry out necessary environmental impact statement analysis and to study Endangered Species Act issues would be approved, permit decisions would have to be made within 165 days after the Corps of Engineers receives a completed application. After 165 days, Type I and Type II permits would be presumed approved, whereas Type III permits (used for the most seriously contaminated areas) are considered denied. In addition, the multistep EPA consultations and veto power would be replaced with a 45-day deadline for EPA to concur or decline to concur with the Corps' determination.

• Water Resources Development Act. The most significant proposed amendment to WRDA would affect the funding agreement between private and public sponsors of a project. Funding for disposal at contained disposal facilities and upland disposal sites would be subject to the same cost-sharing requirements as other general navigation projects. In determining the share of the cost of a dredging project to be paid by a nonfederal sponsor, the sponsor would receive monetary credit for the beneficial uses that derive from the project. Wetlands mitigation is an example of such a benefit.

The AAPA legislative proposal represents a best-case scenario for the maritime industry. However, there is considerable opposition to many aspects of the AAPA proposal, and it is likely to turn into the opening shot in a long battle to achieve meaningful reform.

Executive Branch Activity: Interagency Working Group

All discussion of the Interagency Working Group's proposal is based on The Interagency Working Group on the Dredging Process: Options Paper, May 1994, Department of Transportation, Maritime Administration. As noted, the Options Paper is not a final recommendation to the President but provides a range of options under consideration by the Group after its first round of outreach sessions. Final analysis of the Group's work depends on the results of its final report to the President, released in December 1994.

The focus of the administration's port policy has been the establishment of the Interagency Working Group on the Dredging Process. The group was authorized in 1993 by the Transportation Secretary Federico Peña, to examine the existing process and propose ways to improve it. Secretary Peña has admitted that "Dredging is submerged in conflicting missions and mandates among a number of federal agencies and a pyramid of federal rules and regulations, plus state and local government laws, that make it a miracle every time a port dredging project is brought to fruition" (Stromberg, Erik, Get on with Dredging US Ports, *Journal of Commerce,* Nov. 2, 1993, p. 8A).

The group issued its interim report in May 1994. Based on a number of outreach meetings, the report presents a number of options to meet concerns in five major areas:

• Federal interagency and external coordination. The group stressed evaluation, utilization, and education regarding existing interagency mechanisms. In addition, the group proposed creation of a national and regional dredging process review team to review individual cases and arbitrate disputes among various federal and state agencies.

• Proactive local planning and coordination. The group proposed expanding the authority of various federal and state agencies to coordinate dredging programs on a regional basis.

• Dredged material disposal. The group's options for improving disposal of dredged materials include provisions to fund increased research for decontamination technologies and to stimulate efforts to control the release of pollutants that end up in the nation's harbors.

• Dredging policy. Responding to widespread calls for a national dredging policy, the group offered numerous options to centralize decision-making authority about where, when, and how to dredge. These options range from strengthening the current process to allocating decision-making authority to regional or local bodies funded by the federal government.

• Funding and project development. The group offered a number of options for clarifying the method to distribute federal assistance to dredging projects. Two important options under consideration are to establish consistent cost-sharing formulas in cases of upland, confined, and open-water disposal and to transfer lead responsibility for the planning, design, and construction of projects from the Corps of Engineers to private authorities, with funding in the form of grants.

One additional option that could generate considerable controversy would establish a new system to rank the priority of dredging projects. Ranking could be established either by market forces or through government application of environmental, commercial and defense criteria. In either case, federal funding for dredging and development projects at the nation's smaller ports could be in jeopardy.

The existence of the Interagency Working Group represents a modest victory for the beleaguered maritime industry in terms of overdue recognition by the administration. Many options presented in its interim report are clearly steps in the right direction. However, the group falls short in a number of crucial areas. For example, it does not propose the Clean Water Act legislative changes the port industry needs to eliminate the statutory and regulatory overlap among various agencies. Nor does it recognize the primary role of ocean dumping by requiring EPA to move quickly to establish more dump sites or set time limits on the permitting process. Furthermore, those hoping for a break in the bureaucratic logjam should be wary of the new layers of bureaucratic standards and guidance it contemplates.

Congressional Action: Clean Water Act

As of August 1994, the prospects for legislative action on the dredging issues are uncertain. During the first half of 1994, pressure by maritime interests appeared to have succeeded in creating a consensus among important committee members in support of reform. During June, both the Merchant Marine and the Oceanography subcommittees of the House Merchant Marine and Fisheries Committee held hearings on the crisis to hear perspectives from port agencies and regulators alike. At these hearings, various committee members assured port authorities that their concerns are not being ignored.

Current legislative proposals in Congress have been discussed in the context of the Clean Water Act reauthorization process. However, a historically crowded legislative schedule and conflicts over other provisions in the Clean Water Act appear to have killed the measure for the remainder of 1994. As a result, all proposals are likely to be delayed for reconsideration until 1995. However, it is important to review the signs of progress made during the 103rd Congress.

On April 21, 1994, the House Public Works and Transportation Committee, chaired by Norman Mineta (D-California), published a committee print titled "Amendment in the Nature of a Substitute to H.R. 3948, Water Quality Act of 1994." Title IV, Section 405, of the committee print includes a number of reforms directed to speed the permitting approval process established in Section 404.

- First, the legislation would permit the Secretary of Transportation to issue general permits for dredging discharge on a state, regional, or nationwide basis for any category of activity, provided that the activities will "cause only minimal adverse environmental effects when performed separately; and will have only a minimal cumulative adverse effect on the environment."
- Second, Section 404(q) had been amended to set a more urgent timetable for permitting decisions. A permit would have to be issued within 90 days of an application unless an extension is requested by an appropriate agency to satisfy the requirements of the National Environmental Policy of 1969 (NEP), ESA, wetlands management, or other relevant statutes. In cases in which ESA or NEPA are invoked, a decision would have to be made within 30 days after the requirements of the regulations are met. When other agencies request a delay, action would have to be taken on the permit within 150 days of application.
- Third, the legislation would allow nonfederal sponsors to apply credit from wetland mitigation banks when discharge from dredged material at disposal sites creates wetland losses.

Although the legislative reforms in the Congressman Mineta's amendment are a step in the right direction, they represent a compromise from the AAPA proposal. However, reports indicate that in July 1994, congressional staffers, administration representatives, environmental advocates, and representatives of the maritime industry had begun to arrive at a compromise package of dredging reform measures. The package included substantial changes in such critical areas as the sequencing of the review process and consolidation of various legal authorities, which make administration of Section 404 so difficult. Clearly, a narrowing of differences occurred during the 103rd Congress, which may allow a compromise to emerge in 1995 when Congress is again likely to consider the Clean Water Act.

ADDITIONAL CONSTRAINTS TO DEVELOPMENT: WETLANDS AND AIR QUALITY

Although AAPA reports that U.S. ports consider dredging permits one of the biggest hurdles they face, a number of other environmental concerns place practical and monetary constraints on the U.S. port industry. Two prominent issues are the regulations governing wetlands preservation and a recently released plan to reduce nitrogen oxide emissions at California's south coast (All analyses of the FIP were taken from the EPA document, Federal Implementation Plan Proposed Regulations: Air Emissions From Marine Vessels, March 23, 1994).

Wetlands Mitigation

The imperatives of development and expansion have often placed U.S. port officials at odds with EPA and Corps of Engineers wetland permitting policies. To accommodate the expanding container trade entering and leaving the United States, ports require periodic expansion of pier and storage facilities. Wedged between the open ocean and crowded metropolitan areas, ports are often forced to fill in nearby coastal wetlands areas and construct facilities on the newly created land area.

As a result of judicial interpretation and legislative amendment, the Section 404(b)(1) guidelines that govern discharge of dredged or fill materials have been extended to protect the nation's wetlands (Although the Corps of Engineers did not initially interpret Section 404 as applying to wetlands protection, in 1975 a U.S. court held, in *Natural Resources Defense Council v. Callaway*, that Section 404 applied broadly to all water resources

of the United States and ordered the Corps to promulgate new regulations to cover wetlands. In 1977 Congress provided statutory support to this interpretation though an amendment to the Clean Water Act). To comply with these regulations, ports are now required to engage in wetlands mitigation as a penalty for disturbing existing wetlands resources (For further analysis of the mitigation policy, see "Memorandum of Agreement Between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation Under the Clean Water Act Section 404 (b)(1) Guidelines," Feb. 6, 1990). Specifically, an agreement has been reached between the Corps and EPA whereby:

> All appropriate and practicable steps must be undertaken by the applicant to first avoid and then minimize adverse impacts to the aquatic ecosystem. Remaining unavoidable impacts must them be offset through compensatory mitigation to the extent appropriate and practicable (EPA and Department of the Army, Memorandum to the Field, Subject: Appropriate Level of Analysis Required for Evaluating Compliance with the Section 404(b)(1) Guidelines Alternatives Requirements. Aug. 23, 1993, p. 2).

Offsetting these "unavoidable impacts" can be accomplished through restoring nearby wetlands habitats (compensatory mitigation) or through more distant wetlands creation or restoration projects that can be applied as credit against one or more projects (mitigation banking) (For further discussion of the benefits of mitigation banking, please see Austin, Jay, et. al, *Wetlands Mitigation Banking,* Environmental Law Institute, Washington, D.C., 1993).

Meeting these guidelines has proved costly for ports. For example, when the Port of Los Angeles applied for a permit to "landfill" a portion of its harbor to expand its physical facilities, EPA and the Corps of Engineers required the port to fund a $30-million wetlands restoration project at Batiquitos Lagoon, 90 mi to the south. In another case, the Port of Tacoma spent $.28 million on wetlands mitigation, in exchange for permission to build a small landfill for a Sea-Land Service, Inc., terminal (Mongelluzzo, Bill, Ports Find Environmental Projects are Price of Growth, *Journal of Commerce,* p. 1A).

The cost of such projects is expected to continue rising. As government agencies learn more about wetlands habitats, they are requiring ports to complete additional measures such as accepting responsibility for the long-term maintenance of restored wetlands. In 1983, at the first California mitigation site, the Port of Long Beach, spent approximately $28,000 per acre to meet its wetlands mitigation requirements. By 1989 this had reached an estimated $65,000 per acre at another site, and the port now estimates a cost of $100,000 per acre (Mongelluzzo, Bill, p. 12A).

The rational behind protecting the nation's wetlands is widely accepted. Through the mid-1980s America's wetlands resources were being lost at a rate of 290,000 acres per year (Dahl and Johnson, Status and Trends of Wetlands in the Conterminous United States, Mid-1970s to Mid-1980s; USFWS, 1991). These rapidly disappearing resources are essential as a habitat for up to 43 percent of the species listed as threatened and endangered species by the Fish and Wildlife Service (EPA, Wetlands Fact Sheet #5: Facts About Wetlands, Office of Water, EPA, A843-F-93-001e, March, 1993). The wetlands also serve as valuable economic resources by nurturing many species of fish and by serving as a buffer to flooding.

It is unlikely that ports will be able to avoid spending an increasing portion operating and development funds on environmental mitigation. In some cases, meeting environmental costs already comprise nearly 10 percent of project expenditures (Mongelluzzo, Bill, p. 12A). However, active planning and the increased usage of mitigation banking can substantially reduce costs.

Air-Quality Regulations

The Los Angeles Basin is now facing a federally imposed clean-air plan because state efforts have failed to meet requirements in the Clean Air Act. As part of the Federal Implementation Plan (FIP) for the Los Angeles Basin, EPA plans to impose stringent new requirements and penalties on the shipping industry.

EPA's FIP states, "Beginning January 1, 2001, each marine vessel that enters the confines of the Port of Long Beach and/or the Port of Los Angeles shall pay, in addition to the usual port fees collected by those ports, an additional port fee." The emissions fee will be based on $10,000 per ton of nitrogen oxide emitted by the ship into the atmosphere even though it is operating within the port area. The emissions will be calculated based on "engine work specific emission rate, engine power, mode of operation, and usage time." In addition, discounts from the fee will be available for ships that implement emissions control equipment, utilize land-based electric sources even though docked, and stay at least 70 mi from the coast on its approach to the port area (EPA, Proposed Regulations for Marine Vessels/Ports Section of Proposed California FIPs, June 29, 1994, filed in Public Docket No. A-91-24).

A state plan, that is running a few months behind the federal proposal, will take precedence if approved. It incorporates much of the federal plan but also mandates additional regulations on the sulfur content of bunker fuel. Currently, most ships use a bunker fuel with a

sulfur content of 1.4 percent to 3.5 percent. The state plan requires that the bunker fuel sulfur content be no higher than 0.5 percent. But the maritime industry questions whether the cleaner fuel will be available if Southern California is the only area requiring it. Such requirements could drive away further business from the port and the Los Angeles area, if the cleaner fuel more expensive or difficult to obtain.

EPA estimates that the federal fee will increase the estimated cost of docking at the port by $16,000 per vessel and increase the average per ton charge on cargo by 26 percent. In contrast, the Port of Long Beach estimates that if this plan been in place in 1993, the average cost of a port call would have jumped between $31,000 and $104,000 or between 50 percent and 170 percent (Knatz, Geraldine, Draft Comments on EPA's Federal Implementation Plan for the South Coast Air Basin, July 18, 1994, p. 2).

Given these costs, port officials are understandably concerned that implementation of the EPA plan, or the even more stringent state-authored plan, could have serious implications for the area's economy. The logic behind the FIP is to encourage ship operators to install emissions control equipment. However, the process of retrofitting ship engines with emissions controls technology is generally considered extremely expensive and impractical in many cases.

Engaging in such expensive technical improvements or paying a heavy fine would clearly drive many international shipping lines toward other Pacific coast ports in the United States, Canada, and Mexico. The ports of Long Beach and Los Angeles are the nation's biggest ports by volume, handling almost 30 percent of all container trade in the United States and nearly half of all trade with Asia. However, much of the cargo they handle is discretionary and could be diverted to other Pacific ports. Especially likely to be diverted would be ships that make only one or two calls per year at southern Pacific coast ports. It is estimated that 60 percent of the ships that call at these ports fall into this category (Background materials for Environmental Protection Agency Clean Air Public Workshop for South Coast Federal Implementation Plans, Ports and Ships Key Facts/Assumptions, Ports and Ships Section, p. 2). Based on all these factors, port authorities estimate that in a worst-case scenario this diversion to other ports could cost the region up to 34,000 jobs, $1.4 billion in wages, and $3.2 billion in sales in 2001 (Knatz, Geraldine, p. 34).

Faced with this crisis, in July 1994 Geraldine Knatz, Director of Planning for the Port of Long Beach, proposed a two-phase substitute that will significantly reduce nitrogen oxide emissions. In Phase I, which will be implemented immediately, shipping lanes will be moved further offshore, speed limits will be set in or near ports, ship owners will be permitted to trade emissions credits for emission penalty reductions, and operational efficiencies, such as on-dock rail, can be implemented to cut down on emissions during docking periods. In Phase II, the maritime industry will support efforts to create "international maritime organization standards for new and rebuilt marine engines to reduce nitrogen oxide emissions" (Knatz, Geraldine, pg. 3). Such an alternative will address environmental concerns but preserve the competitive potential and economic strength of the California southern coast region.

Although the FIP currently effects Southern California ports only, some observers believe this crisis may face other ports across the country. According to one journal, "California, because of its size and level of economic activity, is often the proving ground for new government regulatory initiatives that are sometimes adopted elsewhere, especially on the state level" (Mongelluzzo, Bill, LA-Long Beach, EPA Differ on Ship Rule Compliance Cost, *Journal of Commerce,* July 1994, p. 1A).

CONCLUSIONS

As the link between the oceans and our nation's waterways and land, ports by definition inhabit a sensitive environment. Port planners have recognized this for at least the past decade and most have attempted to moderate their development efforts accordingly. However, the rigid and confrontational nature of environmental law has turned dredging and other projects into a zero-sum game, the results of that are unlikely to benefit either the environment or the economy.

During the next decade and into the next century, the ability of the port industry to thrive in the midst of tight environmental regulations will depend on meeting two significant challenges. First, a national consensus that recognizes the importance of balancing environmental and economic concerns must be pursued. Second, the momentum generated by this effort must be translated into concrete legislative and administrative changes that will protect the economic viability of the port system.

Generating Political Support

In Oakland and other ports across the country, regulators have been moved to action through political pressure. To reinforce this trend, industry must educate Americans about the crucial role that ports play in the economic health of the nation. Unfortunately, although the need to protect our environment is clear, the case for dredging is more difficult to illustrate. This dilemma is described by in a recent opinion piece a trade publication:

> Dredging is about as low on the glamour scale as its possible to get. Even though the necessity for basic highway maintenance is a given—users and politicians take quick notice of potholes and worn road surfaces—the quality essential maintenance of water channels captures few headlines. And the headlines it does grab are generally the negative kind, focusing on the real or potential contamination of dredged material (Murphy, Jean, Dredging Policy, *Traffic World,* Feb. 21, 1994, p. 4).

The pivotal role of the nation's port system is irrefutable. If the nation's ports are allowed to fill with silt, U.S. industry will experience a competitive disadvantage, transportation costs will increase, and thousands of export- and import-related jobs will be jeopardized. Similarly, if ships calling at certain U.S. ports are singled out for clean-air penalties or face inflexible wetlands regulations, business will be driven, to other domestic or foreign ports and the economic vitality of entire regions will be threatened.

It is important to generate awareness that ports traditionally have played a minor role in generating the pollution by which they are constrained. As illustrated by the New York/New Jersey example, pollutants that contaminate ports often flow down from sources miles upstream. Despite the fact that ports are publicly administered, they should not be jeopardized by bearing the burdens of society's failure to prevent or remediate distant pollution sources.

If Americans recognize their stake in a healthy port system, political pressure will force regulators to reach a consensus by balancing environmental and economic concerns. Such a consensus ideally will have to be grounded in a belief that port development must be pursued in the most environmentally sensitive manner possible. But above all, port development must be pursued.

Toward a National Dredging Policy

Despite the shipping industry's best efforts, a sustained national consensus on the need to engage in port development is unlikely. Therefore, it is imperative that the industry quickly build on recent evidence of public, congressional, and administrative sympathy to achieve a lasting legislative solution.

The recent experiences of the maritime industry and other natural resource industries indicate that the adversarial relationship between industry and environmental advocates is likely to continue. Administrative reforms, such as those advocated by the Interagency Working Group, are a step in the right direction, but they must be complemented by legislative reforms to bring regulatory practice in line with congressional intent to pursue an environmentally sound, yet economically strong, port policy. As illustrated by developments in Oakland and New York/New Jersey, a number of legislative reforms should be pursued persistently:

- A stringent timetable for permit consideration and a mechanism to provide for automatic approval if regulators fail to act;
- Authority for the Corps of Engineers to classify sediments and to provide automatic approval for certain uncontaminated classes of materials;
- Latitude to allow regulators to weigh the economic and environmental costs of inaction when determining the best way to protect the environment;
- Funding for rapid development of remediation technologies and identification of approved open-ocean dump sites;
- New cost-sharing arrangements that do not penalize ports seeking to make positive use of dredged material, such as in wetlands creation;
- Increased efforts to control pollution at its upstream sources;
- Statutory support of ports to give them flexibility in meeting wetlands mitigation requirements through mitigation banking; and
- Empowerment of relevant federal agencies to negotiate an international agreement on clean-air standards for the maritime industry.

Failure to achieve legislative relief in at least some of these areas threatens the United States' dominance of world trade. In the future, ports must be prepared to face growing pressure stemming from legitimate environmental constraints. Rational legislative reforms will ensure that the equally legitimate interests of U.S. ports will not be sacrificed to bureaucratic inertia and interagency conflict.

Today consensus is growing in Washington and around the country that environmental and economic needs can be reconciled. The maritime industry must actively contribute to this consensus and use it to justify the laws and regulations that govern port development and operating projects that are crucial to the long-term health of the U.S. economy.