

MARINE BOARD

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12 June 2002

Admiral James D. Watkins, USN (Ret.), Chairman
U.S. Commission on Ocean Policy
1120 – 20th Street, NW, Suite 200 North
Washington, D.C. 20036

Dear Admiral Watkins:

The Marine Board of the National Academies has considerable resources and expertise in many of the policy areas being examined by the Commission on Ocean Policy. Several Marine Board reports are among the items in the Commission's library. Given the volume of material the members and staff of the Commission must review, the Marine Board felt it would be useful to provide an overview of the critical needs and issues in the maritime sector, highlighting selected findings from Marine Board activities and studies.

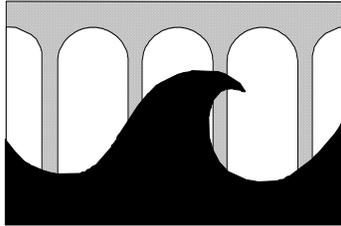
The attachment to this letter outlines eight (8) key issues the Marine Board hopes will be considered by the Commission. Marine Board members and staff would be happy to provide additional information or briefings upon request. The Marine Board continues to undertake activities and studies, as appropriate, to address these issues.

Sincerely,

Radoje Vulovic
Chairman, Marine Board

Enclosures

cc w/ enclosure: Thomas Kitsos, Executive Director



**MARINE BOARD
TRANSPORTATION RESEARCH BOARD**

***CRITICAL MARINE TRANSPORTATION ISSUES
SUGGESTED FOR CONSIDERATION BY THE
U.S. COMMISSION ON OCEAN POLICY***

June 2002

1. The Marine Transportation System- Infrastructure Needs

Recent studies and hearings have suggested that the infrastructure of the nation's Marine Transportation System (MTS) is not adequate to handle the projected doubling or tripling of waterborne commerce over the next twenty years. While other modes like aviation and highways have clear financial sources to meet growing demands, the maritime sector has a diffuse group of federal agencies with various jurisdictions and no clearly defined program of federal investment. The expectation that cities and states can rely on local sources to finance maritime infrastructure that is in the national interest is unrealistic. Recognizing that these investments provide tremendous dividends to the nation, the Marine Board plans to initiate a study of options for funding infrastructure needs through such mechanisms as maritime trust funds or other long-term approaches to public and private financing. The Marine Board is also moving forward on a study proposal to examine the capacity and demand for waterborne transportation of energy, which will encompass both marine infrastructure and pipeline infrastructure.

2. The Marine Transportation System- Research and Education Needs

In addition to lagging in physical infrastructure investment for the MTS, the U.S. maritime sector also faces a critical shortage in human resources, particularly the next generation work force in the traditional maritime industries. Marine Board studies have shown that maritime-related educational and research capabilities are dwindling. Research funding is the basis for keeping this nation at the forefront in the maritime field and without it, recruitment of new talent is problematic. Research funding is also vital to improving the security and safety of the nation's MTS. Recent Marine Board studies on coastal engineering and naval engineering research and education illustrate the need for cooperative efforts that leverage major research facilities and educational capabilities

with the needs of both the public and private sectors. It is hoped the Commission will consider the continued shortcomings in maritime-related research funding.

3. National Salvage Capacity

Within the maritime community, as well as government agencies, it is recognized that the nation's domestic salvage capacity is inadequate to meet basic and emergency needs. This inadequacy jeopardizes environmental, transportation and homeland security objectives. There is a need for a cohesive, federal national salvage policy and a designated lead government agency to implement that policy, particularly in relation to security and ongoing operation of the nation's MTS. The Marine Board has published two reports on this critical issue, in 1982 and 1984, along with specific recommendations that detail this need and the justification for it. This issue is one the Ocean Commission may want to consider in its deliberations.

4. Dredging

The deepening of navigation channels is a necessary part of the MTS. The Marine Board has been involved in many aspects of dredging, including the management and potential reuse of contaminated dredged material and the application of "environmental windows" that limit construction periods in an effort to minimize environmental impacts. A recent Marine Board/Ocean Studies Board report titled *A Process for Setting, Managing, and Monitoring Environmental Windows for Dredging Projects* provides valuable insights to these issues, as well as a template for resolving controversies involving multiple agency jurisdictions. Field-testing and application of this process could provide a starting point for resolving some of the more controversial projects. The Commission may want to consider this process in its evaluation of solutions to environmental controversies.

5. Environmental Aspects of Shipping

Pollution or environmental degradation as a result of waterborne shipping has been the subject of several Marine Board and Ocean Studies Board reports, on topics relating to oil spills, oil in the sea, vessel-generated waste disposal, and ballast water introduction of invasive species. More recently, air emissions from ships have become a subject of concern. All are topics that present opportunities for further refinement and collaboration between the Marine Board and other NRC units, using past study recommendations to highlight workable solutions that could be implemented if and when multi-agency jurisdictional issues could be resolved.

Related to both salvage and environmental topics is the port of refuge issue. There is a need for both legal and operational research in this area for it be addressed within a well-rounded national oceans policy. There does not appear to be any coordinated national response to a situation of a vessel in need of refuge as a result of breaking up and possibly posing a significant environmental hazard. Presently, the USCG captains of the port (COTPs) have some authority, but the individual states also have rights in their efforts to maintain a pristine environment. The question remains as to who can or should make the final determination on whether an environmental hazard can be brought into a port.

6. Beach Replenishment

The Marine Board conducted a multidisciplinary assessment of the engineering, environmental, economic and public policy aspects of beach nourishment. This effort provided an improved technical basis for judging the use of beach nourishment and protection technology in shoreline stabilization, erosion control, recreational beach creation, dredged material placement, construction of coastal storm barriers, and protection of natural resources. Among other findings, the study found that an up-to-date design methodology and certain technical improvements are needed to advance the state-of-the-art practices in design, construction and maintenance of shoreline improvement projects. The Commission may want to consider referencing the background and results of this work in its report.

7. Marine Recreation and Tourism

Tourism is the world's largest industry and much of that activity is concentrated in coastal and marine areas. Recognizing the importance of the industry and its dependence on maintaining a healthy coastal environment, the Marine Board recently sponsored a roundtable to explore relevant technical and policy issues and suggest areas in need of focused national attention. Participants pointed out that (a) existing policies at the federal level do not bring together the broad array of stakeholders in marine tourism and recreation and (b) there is a pressing need to address issues such as maintaining coastal resources, providing appropriate access to the coast and natural areas, developing processes for resolving conflicts among multiple users, protecting public safety and the natural environment, and a large range of other topics. The Marine Board plans to continue this dialogue at a regional level and encourages the Commission to include these issues on its agenda.

8. Shipbuilding

While fulfilling military needs, the U.S. shipbuilding sector and support industries face considerable uncertainty about their ability to meet commercial objectives. Although U.S. shipyards have been striving to improve efficiency and commercial shipyard annual revenues are in the billions of dollars, it is recognized that the yards continue to fall behind their international competitors in their ability to build large ships in a cost-effective and timely manner. These inefficiencies extend to both commercial and naval construction. A 1996 Marine Board report on shipbuilding technology identified a number of ways to enhance the technology base, and called for a comprehensive assessment of the shipbuilding industry. Shipbuilding is an important part of the maritime infrastructure, and the Commission may want to consider the capabilities and needs of this industry in its deliberations.

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