4. SPECIAL PROJECTS AND REPORTS

A. Beneficial Use of Great Lakes Dredged Material (GLC)

The Great Lakes Commission (GLC) has published a report dated August 2001 and titled *Waste to Resource: Beneficial Use of Great Lakes Dredged Material*. Dredging involves the periodic removal of accumulated bottom sediments from waterways. In the Great Lakes, this is usually done to maintain adequate water depths for safe and efficient navigation of vessels. Dredging is also done to enlarge or deepen existing navigation channels and harbors. The U.S. Army Corps of Engineers (ACE) is authorized to maintain more than 130 navigation-related projects in the Great Lakes, nearly all of them commercial and recreational harbors and navigation channels.

Among the significant issues addressed in the report are the following:

1. Beneficial use is the use of dredged material as a resource instead of disposing of it as a waste. This involves placing or using dredged material for some productive purpose, such as beach and near-shore nourishment, habitat creation or restoration, landscaping, topsoil creation or enhancement, road construction, land creation or reclamation (e.g., strip mines, brownfields), and in the manufacture of aggregates for marketable products like ceramics or asphalt. The benefits may be derived from the dredged material itself or the design and location of a placement site.

2. The beneficial use of dredged material addresses the need for alternatives to conventional dredged material management. Currently, most dredged material from the Great Lakes is either discharged into open waters, deposited on or near shores for beach nourishment, or placed in confined disposal facilities (CDFs). For contaminated sediments, CDF placement has been the only option. However, open water placement has become increasingly unacceptable to the public, and Great Lakes CDF capacity is diminishing. Some Great Lakes CDFs have been filled to capacity and are no longer being used. Moreover, there is an emerging view that, where possible, reuse and recycling of dredged material should take priority over disposal. With proper testing and government guidelines that protect human health and the environment, beneficial use of dredged material allows the recycling of dredged material, offering a sustainable long-term management option for dredged material management in the Great Lakes basin.

3. Governments at the federal, state, and local levels, environmental/citizen groups, and port authorities are all important players in deciding whether, when, and how dredged material can be used beneficially. Local ports, city and county governments, private businesses, and citizens groups must play a key role in identifying opportunities for the beneficial use of dredged material. Once a potential beneficial use has been identified, government agencies at the federal and state levels can work with local agencies, ports, businesses, and citizen groups to decide if the beneficial use is appropriate.

4. Among federal agencies, the ACE has primary responsibility for maintaining federal navigation channels in the Great Lakes. Congress has given the ACE special authority to

engage in beneficial use projects that involve the protection and restoration of aquatic habitat and the nourishment of beaches. The U.S. Environmental Protection Agency (EPA) and state and local environmental agencies have responsibility for protecting human health and the environment. State environmental agencies have an important role in writing policies that regulate if, when, and how beneficial use can take place in their jurisdiction. Often this will involve issuing special permits for the storage, treatment, or placement of the dredged material. Environmental and citizen groups can develop beneficial use project ideas, as well as review and comment on dredged material management plans and other plans or project proposals to ensure that beneficial use projects meet a community's needs and are environmentally sound. Port authorities have a key role in working with the ACE in developing dredged material management plans, which are required for all areas that need dredging for deep-draft navigation but do not have sufficient long-term disposal capacity. Port authorities also provide and important link to local businesses that benefit from port activities.

5. Numerous projects have demonstrated that dredged material can be used and/or recycled in a manner that is beneficial from environmental and economic standpoints. Though there are many factors that affect whether, when, and how beneficial use of dredged material takes place, they can be placed into three general categories: (a) state and federal laws and regulations, (b) costs, and (c) physical and chemical properties of the material.

For further information, contact Ms. Victoria Pebbles or Mr. Steve Thorp, Great Lakes Commission, 400 Fourth Street, Argus II Building, Ann Arbor, MI 48103-4816, (telephone: (734) 665-9135), or visit the GLC Web Site at http://www.glc.org.

B. Chemical Human Health Hazards (API)

The American Petroleum Institute (API) has published a report (API Publication Number 4689) dated August 2001 and titled *Chemical Human Health Hazards Associated with Oil Spill Response*. This report provides an overview of potential human health hazards encountered by personnel involved with petroleum product spills and leaks. Widely distributed products are covered, including crude oil, gasolines, various middle distillates (e.g., kerosene, jet fuel, diesel fuel, and home heating oil), heavy fuel oil, and asphalt. The main objective is to define basic components and products of concern based on their toxicity and potential risks to oil spill workers. In addition, environmental factors that may affect the risk of exposure to the various components are discussed.

The main components of health concern include benzene, hydrogen sulfide, n-hexane, napththalene, toluene, trimethyl benzene, polycyclic aromatic hydrocarbons, and, in specific cases, organic lead compounds. Acute health hazards associated with many components of concern include depression of the central nervous system and irritation to the skin, eyes, and respiratory tract. Chronic exposure to some components, such as benzene and polycyclic aromatic hydrocarbons, has been associated with cancer risks.

Other than toxicological properties of the components and products of concern, other factors affect the nature of health hazards during spill response activities. These include environmental conditions, the physical characteristics of the products, and the type of spill or leak scenario and time factors. The environmental fate of a spilled material is determined by various mechanisms including evaporation, spreading, dissolution, drift, dispersion, and emulsification.

Many of the more toxic components evaporate rapidly, so risk of exposure to airborne contaminants diminishes greatly with time. This is especially true for one of the most inherently toxic components, hydrogen sulfide. Benzene and other very light hydrocarbons may evaporate within the first 6-8 hours after a spill. As the material continues to weather, physical contact becomes the main route of exposure. Chemical hazards relating to oil treating agents, such as dispersants or chemical cleaners are not evaluated in this report.

For further information, contact Tom Purcell, American Petroleum Institute, 1220 L Street, NW, Washington, DC 20005-4070, (telephone: (202) 682-8000).

C. Combating Terrorism (GAO)

On September 20, 2001, the U.S. General Accounting Office (GAO) released a report (GAO-01-822) titled *Combating Terrorism: Selected Challenges and Related Recommendations*. This report, which was scheduled for release in September before the tragic events of September 11, 2001, summarizes federal efforts to combat terrorism prior to these events. This report does not include recent efforts made in light of these recent attacks. While this report is a dispassionate and analytical discussion of the progress made and challenges faced by the federal government and the nation, GAO recognizes the terrible cost of terrorism in human terms.

Concerned that terrorists might use weapons of mass destruction – a chemical, biological, radiological, or nuclear agent or weapon – against civilian targets within the United States, or attack critical infrastructure through computer systems, the U.S. Congress and various federal agencies have undertaken numerous initiatives over the past few years designed to improve the nation's ability to combat terrorism. As mandated in section 1035 of Public Law 106-398, GAO reviewed the strategy, policies, and programs to combat domestic terrorism, particularly domestic terrorism involving weapons of mass destruction.

This report assesses: (1) the current framework for leadership and coordination of federal agencies' efforts to combat terrorism on U.S. soil, and proposals for change; (2) progress the federal government has made in developing and implementing a national strategy to combat terrorism domestically; (3) the federal government's capabilities to respond to a domestic terrorist incident; (4) progress the federal government has made in helping state and local emergency responders prepare for a terrorist incident; and (5) progress made in developing and implementing a federal strategy for combating cyber-based attacks. This report updates and summarizes GAO's extensive evaluations conducted in recent years of federal programs to combat domestic terrorism and protect critical infrastructure. Agency comments on a draft of this report were based on their efforts prior to the September 11, 2001, terrorist attacks.

GAO has made multiple recommendations, which are summarized below. Chief among these are three recommendations to the President as follows:

1. Designate a single focal point with responsibility and authority for all critical functions necessary to provide overall leadership and coordination of federal programs to combat terrorism.

2. Direct the focal point to develop a formal process to evaluate interagency lessons learned from major federal exercises to combat terrorism.

3. Consolidate selected Department of Justice and Federal Bureau of Investigation assistance programs to state and local governments into the Federal Emergency Management Agency (FEMA).

GAO also has made a number of recommendations for executive action to improve federal efforts to combat terrorism. They entail taking the following actions:

1. Complete a threat assessment on likely weapons of mass destruction and other weapons that might be used by terrorist.

2. Revise the Attorney General's Five-Year Interagency Counterterrorism and Technology Crime Plan to better serve as a national strategy.

3. Expand FEMA's role in managing federal exercises to combat terrorism.

4. Prepare agencies' after-action reports or similar evaluations of exercises and operations.

5. Complete a strategy to coordinate research and development to improve federal capabilities and to avoid duplication of effort.

6. Place a temporary moratorium on new National Guard teams until their roles and missions are fully coordinated in writing with the lead federal agency for crisis management.

7. Develop a strategy for combating computer-based attacks that more clearly defines specific roles and responsibilities of organizations involved, interim objectives and milestones for achieving goals, and related performance measures.

For further information, contact Mr. Henry L. Hinton, Managing Director of Defense Capabilities and Management, U.S. General Accounting Office, Washington, DC 20548, (telephone: (202) 512-4300, electronic mail: hintonh@gao.gov).

D. Environmental Performance of Tanker Designs (NRC)

Following the grounding of the *Exxon Valdez* in Prince William Sound in March 1989, which resulted in the loss of more than 11 million gallons of crude oil into Alaskan waters, the U.S.

Congress promulgated the Oil Pollution Act of 1990 (OPA 90). The intent of this law was to minimize oil spills through a variety of mechanisms, including improved tanker design, changes in operations, and other actions aimed at improving the capability to manage the cleanup of oil spills should they occur. Section 4115 of OPA 90 mandated changes in ship design and construction to prevent or minimize spillage in accidents, establishing the double-hull standard for tankers that transport oil in U.S. waters and call at U.S. ports. Following the passage of OPA 90, changes in the international regulatory regime, in the form of two additions to the 1973 International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978, as amended, mandated a worldwide transition to double-hull vessels or their equivalent.

Proponents of alternative tanker design have approached the U.S. Coast Guard and the U.S. Congress with proposals that they believe will offer equal or better performance relative to the double hull and have asked whether these designs would be accepted under U.S. law. Moreover, some have proposed that regulations be based on performance criteria for designs instead of prescriptive criteria. They believe that if a method of evaluating equivalence to double hulls can be developed, a better design can be invented, whereas technological innovation will be discouraged if only a single prescriptive design, such as the double hull, remains a fixed requirement. Some proponents also believe that U.S. regulations should be more consistent with international law, especially in an area that has so close a connection to international trade.

In this context, the U.S. Congress requested that a study be undertaken by a committee under the auspices of the Marine Board of the National Research Council's Transportation Research Board to determine whether a methodology could be established for measuring the equivalency of alternatives to double-hull designs with regard to environmental performance. Congress made this request through the Coast Guard's Authorization Act of 1998. In response to this request, the National Research Council (NRC) of the National Academy of Sciences, with Coast Guard sponsorship, conducted the study and published a report titled *Environmental Performance of Tanker Designs in Collision and Grounding: Method of Comparison*.

This NRC report presents a rationally based approach and method for assessing the performance of alternative tanker designs on the basis of their relative ability to prevent environmental damage from oil spills following collision or grounding accidents. This methodology can be used as a tool by regulatory authorities in determining whether to approve an alternative to the double-hull tanker design. First, however, a few other things need to be accomplished: (1) peer review of the methodology; (2) testing of the methodology; and (3) a comprehensive review of the methodology by stakeholders, including the tanker industry and environmental groups, as well as regulatory, oversight, and review organizations. The methodology is a significant improvement over existing methods; however, it needs further refinement to enhance its accuracy and reliability. The report contains several recommendations for the U.S. Coast Guard regarding the overall methodology, double-hull reference ships, the need for vessel design details, consideration of active systems for mitigating oil outflow, and components of the methodology.

For further information, contact Ms. Jennifer Wenger, Media Relations Associate, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, DC 20418, (telephone: (202) 334-2138).

E. U.S. Commission on Ocean Policy

The U.S. Commission on Ocean Policy held its second meeting on November 13-14, 2001, in Washington, DC, and started building the foundation for its recommendations on a coordinated and comprehensive national ocean policy as it met with members of Congress, national organizations, and federal agencies. This meeting represented the initial step in a series of dialogues with the public on such wide-ranging issues as management of living and nonliving marine resources, ocean science and technology, and marine law and governance. Established by the U.S. Congress in the Oceans Act of 2000, the 16-member Commission appointed by President George W. Bush is also charged with reviewing the cumulative effects of federal ocean-related laws and programs.

U.S. Senator Fritz Hollings (D-SC), a long-time proponent of ocean issues and leader in the passage of numerous ocean-related laws, addressed the Commission and highlighted fisheries management, ocean research, and public education among the many complex issues facing the Commission as it proceeds with its review. U.S. Representatives Curt Weldon (R-PA), Sam Farr (D-CA), Wayne Gilchrest (R-MD), and Robert Underwood (D-Guam), all heavily involved in oceans issues, also addressed the Commission, noting key topics to be considered and commending the Commission for involving Congress early in its deliberations. Representatives from federal agencies, trade associations, conservation organizations, the scientific community, and coastal states also testified before the Commission, specifying critical issues the Commission should review as it develops its recommendations and formulates its final report. Additional Commission business included review of the work of the Commission's three working groups and the key issues to be addressed by each working group.

The Commission took immediate action on one specific topic: the United Nations Convention on the Law of the Sea (UNCLOS). The Commission unanimously agreed to a resolution urging the United States to promptly and expeditiously move forward with ratification of UNCLOS.

The Commission will continue to gather information on ocean issues from a local/regional perspective through a series of nine regional meetings in 2002. During the course of its deliberations, the Commission will examine a broad scope of issues, including stewardship of fisheries and marine life; responsible use of offshore oil, gas, and nonliving resources; coastal storms and other natural hazards; ocean and coastal pollution; marine transportation; the role of oceans in climate change; oceanographic science and technologies; and international leadership and cooperation in marine affairs. The result of its investigation will be a report to the President and the Congress detailing the Commission's findings and recommendations for reducing duplication, improving efficiency, enhancing cooperation, and improving the structure of federal agencies involved in U.S. ocean policy. The Oceans Act requires the Commission to "give equal consideration to environmental, technical, feasibility, economic, and scientific factors." Within 120 days of delivery of the Commission's report, the Act requires the President to submit to Congress proposals and responses to the Commission's recommendations.

For further information, refer to the Commission's Web Site at: http://oceancommission.gov.