Committee on Resources

Subcommittee on Fisheries Conservation, Wildlife and Oceans

Statement

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
COMPLETE STATEMENT
OF
DR. ROBERT M. ENGLER
SENIOR SCIENTIST
ENVIRONMENTAL LABORATORY
ENGINEERING RESEARCH AND DEVELOPMENT CENTER
BEFORE THE SUBCOMMITTEE ON
FISHERIES CONSERVATION, WILDLIFE AND OCEANS
COMMITTEE ON RESOURCES
UNITED STATES HOUSE OF REPRESENTATIVES
ON
EXAMINING THE EFFECTS ON LIVING MARINE RESOURCES FROM DREDGED MATERIAL DISPOSAL IN THE MID-ATLANTIC BIGHT, INCLUDING ACTIVITIES ASSOCIATED WITH THE HISTORIC AREA REMEDIATION SITE TOMS RIVER, NEW JERSEY

FEBRUARY 22, 2000

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

INTRODUCTION

I am Robert M. Engler, Senior Environmental Scientist for the Engineering Research and Development Center at the U.S. Army Corps of Engineers Waterways Experiment Station (WES), Vicksburg, Mississippi. I am pleased to appear today on behalf of the Honorable

Dr. Joseph W. Westphal, Assistant Secretary of the Army for Civil Works, to provide information as requested in your letter of invitation dated February 2, 2000. The Congressional interest in the Department of the Army's programs for regulating, testing and managing dredged material, which are carried out through the Corps, is very much appreciated.

IMPORTANCE OF THE DREDGING MISSION

The Corps has had a navigation mission since the Survey Act of 1824 and continues with a long tradition of fulfilling the vital navigation needs of the Nation with over a century of congressionally authorized water resources legislation including the recently signed Water Resources Development Act (WRDA) of 1999. We all recognize that the Nation's ports are a vital link to domestic and international trade. Foreign trade

now accounts for more than

25 percent of our Gross Domestic Product and is expected to make up an even greater share of our economy in the future. An essential element in our trade-dependent national economy is our Nation's harbors, many of which must be dredged to remain open for trade. We also recognize that our Nation's aquatic and other coastal resources are critical assets, which must be protected, conserved and restored. Balancing the need for viable ports and the need for environmental protection is a challenge. Factors contributing to the challenge include an increasing concern with the environmental problems affecting coastal areas and ocean waters, heavy population shifts to coastal areas, the increasing need for navigation project improvements to meet the needs of world trade, and increasingly tight Federal, State and local budgets. As a result, dredging and dredged material disposal is an important facet of this challenge and has encompassed all phases of harbor development and operation from planning new projects to maintaining existing ones.

Dredging and disposal of dredged material have been of public concern since the early 1970's. Based on that public concern, the Congress authorized national programs of research and development to address environmental issues associated with dredging, the suitability of dredged material for an array of disposal alternatives, and dredged material management. The Corps, the U.S. Environmental Protection Agency (EPA) and others have worked hard to resolve many of the technical issues and have had significant successes since that time. One of the most difficult issues with which we must contend is how to curtail the release of pollutants at their source, before such pollutants can contaminate channel sediments. When the Corps or the applicants for permits to dredge the non-Federal portions of their ports and harbors disturb or remove contaminated sediments, they bear the additional responsibility of disposal of the resulting contaminated sediment. We must all continue to work together to clean up our Nation's waters, and the polluters must be held accountable for the pollution they cause.

ANTICIPATED DREDGED MATERIAL DISPOSAL NEEDS

Maintenance and improvement of ports and navigation channels are achieved primarily through dredging. The Corps is responsible for dredging about 250 million cubic yards of material per year in coastal and inland harbors and channels. Of this total, one to five percent (3 to 12 million cubic yards) is considered contaminated to the extent it requires special handling. In addition to the Federal navigation dredging, we permit the dredging of roughly 50 million cubic yards of dredged material across the Nation each year. Many of the permitted activities are related to maintaining or improving the non-Federal elements of the commercial navigation system. While it is difficult to predict whether dredging needs over the next five to ten years will deviate significantly from the historic dredging rates and volumes, the Corps continues to plan for expected dredged material disposal volumes based on historic data.

The objective of the Federal navigation program is to provide for the construction and maintenance of a safe, reliable, and economically efficient navigation system within the United States. Ensuring the continued viability of the Federal navigation system and the related non-Federal facilities it supports usually requires maintenance dredging and associated disposal of sediments. Though Corps dredging and disposal activities on the Federal system are not specifically permitted under the Army's regulatory program, the same requirements to protect the Nation's environment and our natural resources apply.

Implementation of Corps programs requires compliance with over 20 other Federal environmental protection and conservation statutes, including the Fish and Wildlife Coordination Act (F&WCA) National Environmental Policy Act, the Endangered Species Act, the Coastal Zone Management Act (CZMA), the Marine Protection Research and Sanctuaries Act (MPRSA), Clean Water Act (CWA) and a number of

National Historic Preservation Acts. In addition, implementation almost always requires approvals under State environmental programs and regulations administered under the CWA, CZMA, and F&WCA.

The execution of our navigation responsibilities requires that we work closely with the EPA, the U.S. Fish and Wildlife Service and various elements of the National Oceanic and Atmospheric Administration, such as the National Marine Fisheries Service. The process is designed to provide full involvement of state and local agencies and the public at large. Pursuant to section 404 of the CWA and section 102 of the MPRSA, depending on whether disposal is proposed for inland waters or ocean waters, respectively, EPA, in consultation with Army, establishes criteria for the disposal of dredged material which are applied to Army dredged material disposal activities and permit applications of others. Under section 404 of the CWA, EPA has the authority to prohibit or restrict the use of any aquatic site for the disposal of dredged material. Further, under the MPRSA, EPA has responsibility for designating ocean disposal sites and, in conjunction with Army, is responsible for the development of site management and monitoring plans. In addition, EPA must concur on permits and authorizations for dredged material disposal issued under the MPRSA.

RESEARCH AND DEVELOPMENT

Because of the scope of the Federal navigation program and the regulatory program and their impact on the economy and the environment, the Corps has maintained a commitment to environmental research and development in support of these programs since 1973. This research provides the scientific base for our work with the EPA to classify sediments according to effects of contamination and to regulate dredged material disposal in both a cost-effective and environmentally responsible manner. We view our R&D activities as a critical part of making informed decisions affecting both the regulatory and the navigation programs and will continue this strong commitment to R&D. Currently, we are in the fourth year of the congressionally authorized Dredging Operations and Environmental Research Program (DOER). Developing scientifically defensible testing and management protocols for contaminated sediments are a major research focus area for the DOER program being conducted by our Center for Contaminated Sediments at WES. Emphasis is being placed on field validation and incorporation of new testing and assessment protocols (bioaccumulation assessments) into the decision making process. Importantly, over the past three years the Corps has launched into an important effort to consolidate all information regarding dredging and dredged material management research into a single worldwide web location. We are in the process of scouring world-wide databases for dredging technology and other dredging and dredged material management information and placing that information on a searchable database. All past and current research products are included as well as all the manuals referenced in this testimony.

However, research and responsible management of contaminated sediments can only carry us so far. The navigation dredging problem and management of contaminated sediments will require improved sediment management practices in upstream locations. Agricultural runoff, combined sewer overflows, and storm water runoff, coupled with the occasional lack of compliance with existing provisions of the CWA exacerbate existing water quality problems. Contaminants found in sediments that must be dredged to maintain navigation most often come from the upstream industrial sources or from agricultural runoff in the watershed.

REGULATING DREDGED MATERIAL

The Army regulatory program responsibility includes authority to regulate many activities affecting the Nation's waters. Dredging, the construction of structures, and other types of work in navigable waters of the U.S. are regulated pursuant to section 10 of the Rivers and Harbors Act (R&HA) of 1899. Navigable waters

of the U.S. are all tidal waters, plus all other waters previously, currently, or potentially capable of providing for transportation of interstate commerce. The Army regulatory program also includes the authority to regulate the discharge of dredged or fill material into waters of the U.S. pursuant to section 404 of the CWA, and the transportation of dredged material for the purpose of ocean disposal pursuant to section 103 of the MPRSA. While the ecological problems associated dredged material management are challenging, we are committed to the environmentally effective management of dredged material.

Additionally, any discharge of dredged material proposed for inland and near coastal waters and regulated by the Corps under the CWA must be certified by the appropriate State as complying with the applicable provisions of section 401 of the CWA. Most of the coastal States also administer coastal zone management programs under the Federal CZMA. Federally regulated discharges of dredged material that may affect a Federally approved coastal zone must also be determined by the appropriate State to be consistent, to the maximum extent practicable, with the CZM program prior to approval of the regulated activity by the Corps.

The Corps regulatory process includes pre-application consultation to discuss the project and regulatory requirements with the intent of avoiding application evaluation delays.

A public notice is prepared to describe the project and testing results and to solicit comments from Federal, State and local agencies and groups and the public. The Corps may also conduct a public hearing if it is requested and the Corps believes that additional information would be useful to evaluate the proposed project. After information, including any letters, meetings, and coordination with the applicant and Federal, State and local agencies, is collected, the project is evaluated to render final determinations regarding public interest and ocean dumping criteria compliance or Section 404(b)(1) guidelines compliance. Testing results are considered, in conjunction with other case-specific information, to effect decisions with regard to managing the dredged material. This may include alternative disposal sites, e.g., upland, inland and near coastal aquatic sites and the oceans, and alternative methods, e.g., treatment of the dredged material. The Corps subsequently makes a decision to issue, issue with conditions, or deny the subject application; completes the required NEPA documentation, i.e., environmental assessment or environmental impact statement; and prepares a final statement of compliance with the section 404(b)(1) guidelines and/or the ocean dumping criteria and a statement of findings. Monitoring is conducted as necessary and has repeatedly demonstrated no significant adverse effects at a wide array of aquatic placement sites.

In compliance with current permit and environmental protection regulations, the Corps must conclude that a proposed dredging and dredged material disposal project is not contrary to the public interest before a permit decision is made. Public interest factors considered with respect to dredged material contaminant-related impacts include ecological and human health factors, water quality, water supply, safety, fish and wildlife impacts, and economics, among others.

TESTING DREDGED MATERIAL

To comply with the ocean dumping criteria, the Corps must determine that disposal of dredged material will not unreasonably degrade or endanger human health, welfare, amenities, or the marine environment, ecological systems or economic potentialities. The MPRSA requires testing, using guidance provided in a manual entitled "Evaluation of Dredged Material Proposed for Ocean Disposal - Testing Manual", commonly known as the "Green Book." The Green Book uses biological testing to provide weight of evidence effects-based conclusions, i.e., the potential for contaminant-related water column, benthic toxicity and benthic bioaccumulation-related impacts, within a tiered framework. Under a tiered framework, more

sophisticated testing is used only when necessary for decision making. Several regional Green Book implementation manuals, which are an important component of this national process, have been completed.

To comply with the CWA section 404(b)(1) guidelines, the Corps must determine that disposal of dredged material at the proposed site is the least environmentally damaging, practicable alternative; complies with State and Federally established water quality and toxics standards; will not result in significant degradation of the aquatic environment; and will be conducted and conditioned so as to minimize potential adverse impacts to the aquatic ecosystem. The section 404(b)(1) guidelines also require chemical and biological testing when there is reason to believe that material proposed for disposal in inland and near coastal waters is contaminated. In recognition of the need for greater consistency in testing procedures between inland and near coastal waters and the oceans, as well as between regions of the country, the Corps and EPA have prepared a manual entitled "Evaluation of Dredged Material For Discharge in Inland and Near Coastal Waters - Testing Manual", or "Inland Testing Manual" (ITM). This manual is patterned after the Green Book. The Corps and EPA published the ITM as a final guidance document in February 1998. The Corps is currently in the process of developing an Upland Testing Manual as a companion guidance document when dredged material management decisions would cause consideration of the upland disposal alternative. That document is scheduled for release in mid-2000.

The Corps and EPA issued a comprehensive technical management strategy, entitled, "Evaluating Environmental Effects of Dredged Material Management Alternatives - A Technical Framework," designed to identify environmentally acceptable disposal options for all dredged sediments. This document serves as the overall umbrella guidance in managing contaminated sediments. Our approach is to develop and apply a consistent evaluation framework, not only for sediment contamination testing, but also for providing effective controls of contaminated sediments for the full array of management options**,** to include site monitoring. We believe that this document, in conjunction with the testing guidance noted, will be particularly helpful in any future Federal initiatives involving management of contaminated sediments.

INTERAGENCY AND EXTERNAL COORDINATION

Another key element in improved dredged material management is better interagency and external coordination. Successful dredged material management requires the cooperation of the ports, Federal and State regulatory and resource agencies, State governors, and other elected officials, as well as the support of the general public. We have several initiatives underway to build these kinds of partnerships at the national and regional level. For example, we held a series of regional meetings with ports throughout the country to build a stronger partnership and resolve issues of mutual concern.

The Corps is participating with other Federal, State and local agencies and groups in Regional Dredging Teams and Local Planning Groups to address dredging and disposal issues and examine future disposal. These successful local coordination mechanisms must be replicated in other regions. Improved coordination is also a major focus of the National Dredging Team, which has undertaken a number of activities to improve interagency and external coordination.

BENEFICIAL USE OF DREDGED MATERIAL

The Corps is committed to the concept of beneficial uses of dredged material within its navigation and dredging program. A 1989 Office of Technology Assessment study reported that about 95 percent of the sediments dredged from coastal waters each year (about 150 million cubic yards for both Federal projects and permitted activities) are considered suitable for a wide range of beneficial disposal options. Traditional

beneficial uses would include wetland and upland habitat development, beach nourishment, land creation, and construction aggregate and industrial use. More recent efforts have included the use of clean dredged material from a nearby Federal or permitted project to cap contaminated material outside the navigation channel.

The Corps authority for beneficial uses of dredged material was originally limited to projects incidental to maintenance or construction and where there was no increase in cost to the Federal project or where the local sponsor would pay the increment of increased cost. Section 145 of the WRDA of 1976, as amended, authorized beneficial placement of dredged material on beaches. This authority, justified primarily as hurricane and storm damage reduction, requires that the beach remains in public use and that a non-Federal sponsor provides 50 percent of incremental costs. Section 1135 of the 1986 WRDA, as amended, provides further opportunities for beneficial uses of dredged material. Finally, based on an initiative from Army, section 204 was included in the WRDA of 1992 to authorize the Corps to participate in projects to use dredged material for aquatic habitat and wetland creation, restoration and protection. We have been working with EPA, States and others to address issues associated with beneficial uses of dredged material and to improve the use of existing authorities. We are pleased that recent efforts in placement of dredged material in ocean and near-shore waters have resulted in reducing wave energy effects on adjacent beaches and coasts and improving ecological habitat in several locations.

TECHNOLOGY DEVELOPMENT

The Corps has developed a technological base over the last three decades that emphasizes the identification, assessment, and management of contaminated sediments. Because of its technology base and its active participation in the London Convention and other international efforts, the Corps is recognized as a world expert in dealing with contaminated sediments.

Technological research in the 1970's was broad in scope, including the basic understanding of ecological impacts associated with management of clean and contaminated dredged material; in the 1980's it focused on contaminated sediments. This work was done jointly with EPA to enhance the identification, assessment and management of contaminated materials. Technology in the 1990's and beyond emphasizes chronic/sublethal effects and genotoxicity evaluations. It continues efforts from the 1980's to enhance capability for cleanup and remediation of hot spots, risk analysis, endangerment assessments, and treatment technology. The Corps, in support of EPA's Assessment and Remediation of Contaminated Sediments program on the Great Lakes has considered and/or researched to varying degrees a number of treatment technologies. We do not view any single dredged material treatment technology or management alternative as a panacea. Rather, each dredging project and management option must be considered on a project specific basis applying environmental protection, engineering practicability, and economic criteria. Additionally, a 1997 study published by the National Academy of Sciences, "Contaminated Sediments in Ports and Waterways: Clean-up Strategies and Technologies," concluded that some in-situ controls can be an effective means of managing contaminated sediments. It also concluded that risk-based decision making could play a more active role in dredged material management decision making. The Corps DOER program initiated a Risk Assessment Focus Area as an integral part of the

on-going research. Two publications on the use of risk are already on the Internet and several more are slated for the coming years.

CONCLUSION

The Corps has used over 100 ocean dredged material disposal sites, including the Mud Dump site, now part of the Historic Area Remediation Site, in full compliance with applicable MPRSA regulations and International agreements for decades as an important component of maintaining vital navigation for International commerce and national defense.

The Corps will continue to execute its responsibilities to protect the environment, recognizing the critical national need to maintain a strong port, harbor and navigation system.

Mr. Chairman, this concludes my statement. I would be happy to answer any questions you or the other Subcommittee members may have.

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