

**FINAL DRAFT – 28 November 05**

CECW-P/CECW-0

MEMORANDUM FOR COMMANDERS, MAJOR SUBORDINATE COMMANDS

SUBJECT: Assuring the Adequacy of Environmental Documentation for Construction and Maintenance Dredging of Federal Navigation Projects

**Suggested AAPA Title:** SUBJECT: Assuring the Adequacy of Environmental Documentation for Dredging **and Considerations for Construction and Maintenance Projects**

1. Purpose. This memorandum provides guidance to assure that environmental compliance activities and environmental documentation associated with U.S. Army Corps of Engineers new Federal navigation project dredging or maintenance dredging adequately considers overdepth dredging. The guidance also has considerations relative to environmental documentation for permitting associated with non-Federal dredging. This guidance contains no new policy and is meant to supplement ER 1130-2-520 and to insure the future compatibility of the dredging description and quantities in environmental compliance documentation with the dredging as actually implemented.

**Paragraph 1 changed as recommended by AAPA**

2. Background. Congress specifically authorizes Federal navigation channels by specific depth and width. These authorized channel dimensions are generally based on maximizing net transportation savings considering the characteristics of the vessels using the channel and include consideration of safety, physical conditions, and vessel operating characteristics. In addition, the reliability of the channel is considered and may result in the incorporation of advanced maintenance depths into the construction of the channel where such advanced maintenance is justified to assure operational reliability. Finally, the construction techniques for the channel are considered. There is inherent imprecision in dredging processes which vary with the physical conditions (tides, currents, and waves); the dredged material characteristics (silt, clay, sand, gravel, rock, etc.); the channel design (depths being dredged, side slopes, etc.); and the type of dredging equipment (mechanical, hydraulic, hopper, etc.). Due to these variables and the **resulting** imprecision associated with the dredging activity, Corps engineering design, cost estimating and construction contracting documents recognize that dredging below the congressionally authorized project dimensions will occur and is necessary to assure the required depth and width as well as cost effective operability. To balance project construction requirements against the need to limit dredging and disposal to the minimum required to achieve the designed dimensions, a paid or allowable overdepth (including side slopes) is incorporated into the project-dredging prism. Material removed from this

allowable overdepth is paid under the terms of the dredging contract. Material removed beyond the limits of the allowable overdepth is not paid. These dredging zones are illustrated on the enclosed figure and defined and discussed in more detail below.

Paragraph 2 changed as recommended by AAPA – word “resulting” added

**a. Authorized Dimensions.** The authorized dimensions are the depth and width of the channel authorized by Congress to be constructed and maintained by the Corps. These authorized channel dimensions are generally based on maximizing net transportation savings considering the characteristics of the vessels using the channel and include consideration of safety, physical conditions, and vessel operating characteristics. For entrance channels from the ocean into harbors, the authorized dimensions often include an additional allowance of safety for wave action for that portion of the channel crossing the ocean bar. For example, a 45- foot entrance channel may have an authorized 47- foot depth over the ocean bar.

Paragraph a changed as recommended by AAPA

**b. Advance Maintenance.** Advance maintenance is dredging to a specified depth and/or width beyond the authorized channel dimensions in critical and fast-shoaling areas to avoid frequent redredging and ensure the reliability and least overall cost of operating and maintaining the project authorized dimensions. Major Subordinate Commanders (MSC) (Division Commanders) are authorized to approve advance maintenance based on written justification.

Paragraph b changed as recommended by AAPA

**c. Paid Allowable Overdepth.** Paid allowable overdepth dredging (depth and/or width) is a construction design method for dredging that occurs outside the required authorized dimension and advance maintenance (as applicable) prism to compensate for physical conditions and inaccuracies in the dredging process and allow for efficient dredging practices. The term “allowable” must be understood in the contracting context of what dredging quantities are eligible for payment rather than in the regulatory context of what dredging quantities are reflected in environmental compliance documents or permits. As discussed in paragraph 4, environmental documentation must reflect the total quantities likely to be dredged, including authorized dimensions; advance maintenance, allowable overdepth, and non-pay dredging. The paid allowable overdepth should reflect a process that seeks to balance considerations of cost, minimizing environmental impact, and dredging capability considering physical conditions, equipment and the material to be excavated. ER 1130-2-520 provides that District commanders may dredge a maximum of two feet of allowable overdepth in coastal regions and in inland navigation channels. Paid allowable overdepth in excess of those allowances or the use of zero paid allowable

overdepth requires the approval of the MSC commander. The Corps recognizes that there may be circumstances where there is a need for increased precision in the dredging process, for example in environmental dredging of contaminated material, which dictate trading potential increased costs for reduction in paid allowable overdepth.

Paragraph c changed as recommended by AAPA. Phrase shown in green above has been added.

**d. Non-Pay Dredging.** Non-pay dredging is dredging outside the paid allowable overdepth that may and does occur due to such factors as unanticipated variations in the substrate, incidental removal of submerged obstructions, or wind or wave conditions. In environmental documentation non-pay dredging is normally not recognized as a depth or width allowance but recognized as a contingency allowance on dredging quantities and may and does occur in varying magnitude and locations during the construction and maintenance of a project.

Paragraph d changed generally as recommended by AAPA. Phrase shown in green above has been added. Phrase shown in red has been removed.

**e. Characterization Depth.** Regulatory compliance requires that material to be dredged be characterized and evaluated with regard to its suitability for the proposed placement of the material. Characterization and evaluation of dredged must consider the entire dredging prism, including paid allowable overdepth and non-pay dredging.

Paragraph e. is a new addition to the guidance

3. Problem Being Addressed. The U.S. Environmental Protection Agency has raised questions concerning the dredging of material from outside dimensions characterized and evaluated for dredging and disposal and the potentially unauthorized discharge of that material in the Federally regulated waters of the United States. In some cases, environmental documents and permits primarily associated with compliance with the National Environmental Policy Act, the Clean Water Act and the Marine Protection, Research and Sanctuaries Act may not have adequately described the dredging project and may not have adequately described the application of paid allowable overdepth and non-pay dredging. These documents may have conveyed an inaccurate impression about the precision of the dredging process and may, in some cases, understated dredging quantities or not provide for adequate characterization or testing of material in the paid allowable overdepth and particularly non-pay dredging areas. Environmental regulatory agencies may not have an adequate understanding of the inherent imprecision of the dredging process and variation from project to project based on project design and survey/measurement considerations, physical conditions, characteristics of the material being dredged, and type of dredging equipment. Regulatory compliance requires that the material to be dredged be characterized and evaluated with regard to its suitability for the proposed placement of the material. This characterization and evaluation may or may not

require testing depending on applicable requirements. All material likely to be dredged including material in the paid allowable overdepth and non-pay dredging areas must be characterized and evaluated. There is also a need for better communication with agencies and the public about the application of authorized project dimension, advance maintenance, paid allowable overdepth and non-pay dredging, as well as the inherent imprecision of the dredging process and variation from project to project based on project design and survey/measurement considerations, physical conditions, characteristics of the material being dredged, and type of dredging equipment.

Paragraph 3 changed as recommended by AAPA except as identified above. Phrases shown in green above have been added. Phrases shown in red have been removed. Phrases shown in blue have been moved to different locations in paragraph

#### 4. Guidance for Environmental Compliance Documentation Associated With Federal Navigation Project Dredging and Permitted Dredging Planning Engineering and Design, and Maintenance of Federal Navigation Projects Which Involve Dredging and the Environmental Compliance Documentation Associated With Non-Corps Permitted Dredging and Disposal Activities and the Depth and Width That Was Characterized and Evaluated for Dredging and Disposal.

Paragraph 4 title changes. Green has been added, red has been deleted

a. In the process of collaboration and coordination of environmental compliance actions with State and Federal resource and regulatory agencies, the Corps will assure that the cooperating agencies understand it explains the dredging project including the total dredging prism including authorized project dimensions, advance maintenance, and paid allowable overdepth and anticipated non- pay dredging. It is understood that the details of the dredging project become more precisely defined as a new construction or maintenance project moves from planning to the design and construction phases. Details should be coordinated with resource and regulatory agencies as they are developed.

Paragraph a. changed as recommended by AAPA except as identified above. Phrases shown in green above have been added. Phrases shown in red have been removed.

b. Characterization and evaluation of dredged material must consider the entire dredging prism including paid allowable overdepth and non-pay dredging. Characterization and evaluation of dredged material should err on the side of considering all material that might be dredged. Determining the depth and width that must be characterized and evaluated in the environmental documentation for a Federal navigation project or a permit should be a collaborative process that involves the Corps, the port, the dredging contractor community, and the Federal and state regulatory and resource agencies. Dredging below the depth and width characterized and evaluated in the environmental documentation for a Federal navigation project or permit may be subject to environmental compliance enforcement.

Paragraph b. changed as recommended by AAPA except as identified above. Phrases shown in green above have been added.

c. Environmental documentation must describe the dredging project appropriate to the level of detail available at the stage of the project development process and clearly present the dredging parameters including the advanced maintenance, paid allowable overdepth, and non-pay dredging quantities, and the maximum depth and width that was characterized and evaluated for dredging and placement. The dredging quantities reflected in environmental documentation and permits prescribe the quantities to be dredged and placed. The estimates must be adequate to assure the achievement of the full dimensions of the congressionally authorized project and advance maintenance needs including estimates of the quantity that may be excavated due to the inherent imprecision of the dredging process while limiting dredging quantities in the interest of environmental protection and preservation of disposal capacity. These estimates must be developed in a collaborative process that involves the Corps, the regulatory and resource agencies, and the dredging contractor community.

Paragraph c. changed as recommended by AAPA except as identified above. Phrases shown in green above have been added.

#### 5. Guidance for Contracting and Construction Management.

a. Construction contracts should contain appropriate incentives and disincentives to limit non-pay dredging to satisfy environmental and project design considerations. This is normally achieved by defining a paid allowable overdepth and not providing payment for dredging beyond this limiting depth and/or width. Sloughing or failing of side slopes, dredging in the vicinity of structures (berths, pipelines, bridges, etc.) must all be considered during the development of contract documents for construction. The method of measurement must be clearly described and quality assurance and quality control surveys should precisely depict the dredging and placement activities. Contracts should also clearly reflect the maximum depth and width that was characterized and evaluated in the environmental documentation for a permit or Federal project. Determining the depth and width that must be characterized and evaluated in the environmental documentation for a permit or Federal project should be a collaborative process that involves the Corps, the non-Federal sponsor, the regulatory and resource agencies, and the dredging contractor. Dredging below the depth and width characterized and evaluated in the environmental documentation for a Federal navigation project or permit may be subject to environmental compliance enforcement.

Paragraph c. changed as recommended by AAPA except as identified above. Phrases shown in red have been removed.

b. Environmental compliance documents and certifications also may describe limitations on the dredging and placement along with quantity limitations and must be clearly described in the contract documents. Appropriate references to the dredging process contained in environmental documentation should also be included.

Paragraph b changed as recommended by AAPA

c. Pre-bid conferences should address and pre-construction conferences must review the dredging processes to be utilized during construction in conjunction with the expectations and limitations contained in the environmental documentation.

Paragraph c changed as recommended by AAPA

FOR THE COMMANDER:

Encl

DON T. RILEY  
Major General, USA  
Director of Civil Works

