



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS  
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WASHINGTON, DC 20314-1000

OCT 04 2017

CECW-CO

MEMORANDUM FOR COMMANDERS, MAJOR SUBORDINATE COMMANDS

SUBJECT: Implementation Guidance for Section 1104 of the Water Resources Development Act of 2016 (WRDA 2016), Federal Breakwaters and Jetties

1. Section 1104 of WRDA 2016 states that the Secretary shall establish an inventory and conduct an assessment of the general structural condition of all Federal breakwaters and jetties protecting harbors and inland harbors within the United States. A copy of Section 1104 of WRDA 2016 is attached.

2. Background.

a. The U.S. Army Corps of Engineers (Corps) Asset Management program focuses on the reality that operations and maintenance requirements for managing aging infrastructure will continue to grow more than authorization of new capital investments. Smart, long-term planning strategies to extend the useful life of this infrastructure must be pursued with rigor so that limited funds are wisely invested. Critical to a successful, adaptive asset management strategy is the establishment of the asset's condition and functional performance and reliability along with the risks and consequences of poor performance or failure. Risk must be properly quantified and communicated to Congress and the public to ensure our nation's critical infrastructure does not fail. The Corps Asset Management program has developed a database for cataloging and tracking coastal navigation structures and their condition based on available information. Work continues to address additional Corps assets and to develop tools for risk assessment.

b. The Corps Asset Management program relies on Operation Condition Assessments (OCA). OCA is an assessment of a component's operational condition with the intention to identify deficiencies that affect the project's ability to meet its feature mission requirements. OCAs are conducted to support a formal risk-based Asset Management program. Utilizing existing documented sources, testimony, onsite observation, etc., these assessments identify deficiencies to assets and components but are not detailed inspections.

c. The Coastal Navigation Structures Operational Condition Assessment Level 1 (CNS OCA Level 1) Tool provides an inventory that includes federal breakwaters and jetties at Corps coastal harbors. There is currently no centralized inventory of federal breakwaters and jetties at Corps inland harbors. Condition ratings are based primarily on onsite observations and historic documentation. Frequency of onsite observation by Corps subject matter experts is based on funding, severity of structure exposure to

environmental forcing, functional condition, and potential for future degradation and failure. Districts are required to update the CNS OCA Level 1 Tool annually.

d. Given a significant portion of a breakwater or jetty structure is located below the water surface, accurately defining the extent of some failure mechanisms and/or development of an accurate cost estimate for repair or maintenance requires completion of hydrographic and topographic surveys. On a project by project basis, as funds are appropriated, districts conduct these surveys to provide a comparison point for assessing structural change since project construction or last major repair or rehabilitation. In some cases, underwater inspection by divers may also be necessary due to the difficulty of acquiring remote sensing data on some structures. Cost of data collection varies by structure size, condition, environment, and complexity of structure.

### 3. Guidance.

a. Districts shall continue to budget for inspection of Corps navigation breakwaters and jetties, on a project by project basis, on a schedule consistent with project requirements.

b. Districts shall budget for comprehensive above and below water structure condition surveys (topographic and bathymetric surveys as well as underwater dive inspections, if deemed necessary), on a project by project basis, when required to assess structural condition of a breakwater or jetty with significantly reduced functional performance and reliability, for life safety purposes, or where degradation could lead to catastrophic failure.

c. Districts will continue to review and update, by 15 February of each year, the CNS OCA Level 1 Tool with data for federal breakwaters and jetties at Corps coastal harbors. Pending the availability of funds, districts will begin updating the CNS OCA Level 1 Tool annually with data and ratings for all federal inland harbor breakwaters and jetties.

d. All data fields in the CNS OCA Level 1 Tool will continue to be updated annually, including the following data fields, which are required by Section 1104;

- Location information (Latitude and Longitude).
- Structural and Functional Condition Ratings including assessment of impacts on maintenance dredging.
- Rating of Consequence / Economic Impact of Condition including assessment of impacts on navigation safety.

e. Within 1 year of enactment, Headquarters Navigation Branch will prepare a report summarizing the available data in the CNS OCA Level 1 Tool. The report shall be provided to the Assistant Secretary of the Army for Civil Works for review, approval, and submittal to Congress.

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f. Following specific appropriation of funding to establish a Federal Breakwater and Jetty Program to holistically address the entire inventory of federal breakwaters and jetties protecting harbors and inland harbors within the United States, districts will:

- i. Conduct a comprehensive inventory and assessment of the general structural condition of all federal breakwaters and jetties,
- ii. Collect comprehensive above and below water structure condition surveys (topographic and bathymetric surveys as well as underwater dive inspections, if deemed necessary),
- iii. Perform detailed analyses of potential risks to navigational safety, and the impact on the periodic maintenance dredging,
- iv. Develop cost estimates for each federal breakwater and jetty to restore or maintain the breakwater or jetty to authorized levels,
- v. Provide a summary table and total of all such costs for each district will be provided to each Major Subordinate Command (MSC) for review and then submitted to the Headquarters Navigation Business Line Manager.

4. Questions regarding this implementation guidance may be directed to Jeffrey McKee, Chief, Navigation Branch at 202-761-8648 or [jeffrey.a.mckee@usace.army.mil](mailto:jeffrey.a.mckee@usace.army.mil).



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**SEC. 1104. FEDERAL BREAKWATERS AND JETTIES.**

(a) IN GENERAL. – The Secretary, at Federal expense, shall establish an inventory and conduct an assessment of the general structural condition of all Federal breakwaters and jetties protecting harbors and inland harbors within the United States.

(b) CONTENTS. – The inventory and assessment carried out under subsection (a) shall include –

- (1) compiling location information for all Federal breakwaters and jetties protecting harbors and inland harbors within the United States;
- (2) determining the general structural condition of each breakwater and jetty;
- (3) analyzing the potential risks to navigational safety, and the impact on the periodic maintenance dredging needs of protected harbors and inland harbors, resulting from the general structural condition of each breakwater and jetty; and
- (4) estimating the costs, for each breakwater and jetty, to restore or maintain the breakwater or jetty to authorized levels and the total of all such costs.

(c) REPORT TO CONGRESS. – Not later than 1 year after the date of enactment of this Act, the Secretary shall submit to Congress a report on the results of the inventory and assessment carried out under subsection (a).