



FEMA



Summary: Application of TAW Runup Methodology to FEMA Needs

Audience

This guidance document is intended for use by all users of the current Appendix D of the *Guidelines and Specifications for Flood Hazard Mapping Partners*, Section D.3, Wave Elevation Determination and V Zone Mapping: Great Lakes, the *Guidance for Coastal Flood Hazard Analyses and Mapping in Sheltered Waters*, February 2008, *Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update, Final Draft*, February 2007, and *Final Draft Guidelines for Coastal Flood Hazard Analysis and Mapping for the Pacific Coast of the United States*, January 2005.

Purpose

The purpose of this guidance document is to discuss the application of the TAW runup methodology for calculating wave runup on barriers presented in Appendix D of the *Guidelines and Specifications for Flood Hazard Mapping Partners* (see, for example, Section D.2.8.1.5 of the *Atlantic Ocean and Gulf of Mexico Coastal Guidelines Update, Final Draft*, February 2007 and Section D.4.5.1.5.2 of the *Final Draft Guidelines for Coastal Flood Hazard Analysis and Mapping for the Pacific Coast of the United States*, January 2005).

Dr. Robert G. Dean was consulted to provide recommendations for the application of the TAW runup methodology to FEMA problems, specifically whether wave setup should be calculated separately and added to the runup results obtained from the TAW runup calculation procedure. The central issue in this study is related to the wave setup inherently present in the runup methodology recommended in the TAW manual and the most appropriate method of accounting for this setup in wave runup calculations.

The outcome of the guidance document is, for all new detailed coastal study starts in Fiscal Year 2010 using the TAW method for computing runup, it is recommended that the combined storm surge, astronomical tide and any wave setup at the Toe of Structure (TOS) be the water level to which the wave runup determined by the TAW methodology is added. Users of the TAW method should consult the technical report accompanying this document, in addition to the guidance presented in the *Guidelines*.

Risk MAP Guidance

This document is a component of Risk MAP Guidance. The Risk MAP program is managed by FEMA to develop flood risk information and work with communities to help them understand and act on the data to manage the risks. Risk MAP Guidance defines the product and process standards and best practices for the program:

- Standards are contained in the document “Guidelines and Standards for Flood Risk Analysis and Mapping” (G&S document) which primarily contain standards, but currently substantial best practice information are also included.
- Procedure Memos supersede portions of the G&S document or address new issues not currently covered. In most cases they will be integrated into the G&S document over time.
- Operating Guidance describes best practices that support the Risk MAP standards.

RiskMAP

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