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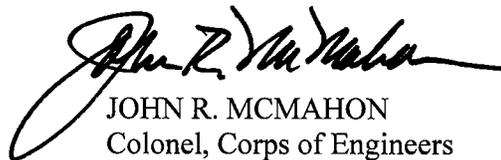
Manual
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Engineering and Design
STABILITY ANALYSIS OF CONCRETE STRUCTURES

- 1. Purpose.** This manual provides guidance for stability analysis of concrete gravity structures. Stability refers to resistance to sliding and floatation, limits on the eccentricity of the resultant of the applied loads, and limits on the bearing capacity of the foundation materials. This manual applies to all types of structures founded on rock or soil, such as: dams, outlet works, navigation locks, floodwalls, and pumping stations. This manual is not applicable to piles or caissons, or to structures founded on these elements.
- 2. Applicability.** This manual applies to all USACE commands having responsibilities for Civil Works projects.
- 3. Distribution.** This manual is approved for public release. Distribution is unlimited.
- 4. Discussion.** This manual is written to be compatible with risk-based planning and design methods currently being implemented within USACE. It consolidates and standardizes stability requirements, which were previously contained in several other publications. Changes contained in Chapters 3 and 4 will provide adequate safety factors for all types of structures and loading conditions, while reducing excess conservatism for infrequent loadings of short duration. This will result in project cost savings when compared to some structures designed using previous criteria. Stability criteria in other manuals is being revised to be consistent with this manual. In the interim, where there are conflicting stability criteria, the provisions of this manual shall govern.

FOR THE COMMANDER:



JOHN R. MCMAHON
Colonel, Corps of Engineers
Chief of Staff

This manual supersedes EC 1110-2-6058 dated 30 November 2003