



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

CECW-CE

MAY 18 2017

MEMORANDUM FOR THE RECORD

SUBJECT: Implementation Guidance for Section 1173 of the Water Resources Development Act (WRDA) of 2016, Study on Performance of Innovative Materials

1. Section 1173 of WRDA 2016 directs the Secretary, no later than 2 years after the date of this Act, to offer to enter into an agreement with the Transportation Research Board of the National Academy of Sciences to carry out a study on the use and performance of innovative materials in water resources development projects. Innovative materials include high performance concrete formulations, geosynthetic materials, advanced alloys and metals, reinforced polymer composites, including any coatings or other corrosion prevention methods used in conjunction with such materials, and any other study materials, as determined by the Secretary. Section 1173 is enclosed.
2. No study will be initiated pursuant to Section 1173 unless funds are specifically appropriated for such work. If and when funds are appropriated, the U.S. Army Corps of Engineers Headquarters will offer and coordinate to enter into a contract for a study by the Transportation Research Board of the National Academy of Sciences on the use and performance of innovative materials in water resources development projects carried out by the Corps of Engineers. The contract shall provide for preparation of proposal subject to public comment prior initiation of the study. The study will include the considerations identified in subparagraph (b)(2) and incorporate the consultation requirements in paragraph (d) of the section.
3. The Corps will submit a report describing the results of the study to the Assistant Secretary of the Army (Civil Works) for transmittal to Congress.
4. Questions regarding this implementation guidance should be directed Ada Benavides, Senior Policy Advisor, Planning and Policy Division, at (202) 761-0415, [Ada.Benavides@usace.army.mil](mailto:Ada.Benavides@usace.army.mil).

Encl

A handwritten signature in black ink, appearing to read "J. Dalton".

JAMES C. DALTON, P.E.  
Director of Civil Works

## SEC. 1173. STUDY ON PERFORMANCE OF INNOVATIVE MATERIALS.

(a) INNOVATIVE MATERIAL DEFINED.— In this section, the term “innovative material”, with respect to a water resources development project, includes high performance concrete formulations, geosynthetic materials, advanced alloys and metals, reinforced polymer composites, including any coatings or other corrosion prevention methods used in conjunction with such materials, and any other material, as determined by the Secretary.

(b) STUDY.—

(1) IN GENERAL.—The Secretary shall offer to enter into a contract with the Transportation Research Board of the National Academy of Sciences—  
(A) to develop a proposal to study the use and performance of innovative materials in water resources development projects carried out by the Corps of Engineers; and  
(B) after the opportunity for public comment provided in accordance with subsection (c), to carry out the study proposed under subparagraph (A).

(2) CONTENTS.—the study under paragraph (1) shall identify—  
(A) the conditions that result in degradation of water resources infrastructure;  
(B) the capabilities of innovative materials in reducing degradation;  
(C) any statutory, fiscal, regulatory, or other barriers to the expanded successful use of innovative materials;  
(D) recommendations on including performance-based requirements for the incorporation of innovative materials into the Unified Facilities Guide Specifications;  
(E) recommendations on how greater use of innovative materials could increase performance of an asset of the Corps of Engineers in relation to extended service life;  
(F) additional ways in which greater use of innovative materials could empower the Corps of Engineers to accomplish the goals of the Strategic Plan for Civil Works of the Corps of Engineers; and  
(G) recommendations on any further research needed to improve the capabilities of innovative materials in achieving extended service life and reduced maintenance costs in water resources development infrastructure.

(c) PUBLIC COMMENT.— After developing the study proposal under subsection (b)(1)(A) and before carrying out the study under subsection (b)(1)(B), the Secretary shall provide an opportunity for public comment on the study proposal.

(d) CONSULTATION.—In carrying out the study under subsection (b)(1), the Secretary, at a minimum, shall consult with relevant experts on engineering, environmental, and industry considerations.

(e) REPORT TO CONGRESS.—Not later than 2 years after the date of enactment of this Act, the Secretary shall submit to Congress report describing the results of the study under subsection (b)(1).