DAEN-CWP

16 APR 1986

MEMORANDUM FOR THE ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

SUBJECT: Incorporation of Risk Analysis into Water Resources Plan Formulation - INFORMATION MEMORANDUM

1. Purpose: This is in response to your memorandum of 28 January 1986, subject: "Incorporation of Risk Analysis into Water Resources Plan Formulation."

2. Discussion:

a. I propose a two pronged approach for making risk analysis part of the plan formulation process. It would consist of a program of formal guidance to be issued to the field and a program of methods development and training. Both will proceed simultaneously, although some of the detailed guidance would need to await development of implementable methods.

b. Specifically, our guidance program would employ our existing vehicles, that is, Engineer Circulars (EC's), Engineer Regulations (ER's) and Engineer Pamphlets (EP's). EC's can be published relatively quickly and will be used to transmit procedures for test periods. As EC's expire they will be incorporated into a more permanent form, as ER's or EP's, with revisions as appropriate. We envision one or two EC's of a general nature, explaining the role of risk analysis in plan formulation and evaluation. Problem or application specific guidance would follow as issues and methods develop. In these early, more general EC's, we will focus on the planners' attitude toward incomplete or uncertain information and knowledge. The potential benefits of new strategies toward dealing with risk situations will be emphasized. We will solicit from the field suggestions for areas in which additional guidance can be of most immediate use to them.

c. The methods development and training process will proceed in parallel with the guidance process. We will use the research capability of the labs, particularly IWR, to develop methods for implementing risk assessment techniques through our normal procedures. In October 1985, we initiated in the

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Planning Methodologies Research Program a work unit entitled, "Procedure for Estimating Uncertainty in Benefits," which will address some of your concerns. We expect to complete a review of ex post evaluations in March 1987 with a final guide on improving benefit estimates scheduled for September 1988.

d. Rather than developing a specific schedule and budget, we have persuaded the Research and Development Directorate to continue funding a risk assessment program. At the program review in April we will develop a new title and broaden the scope for the existing "Risk Assessment of Corps Dams" program. The tentative FY 87 funding for the expanded program is $350,000. Approximately $150,000 of this amount is ommitted to completion of the dam safety research and the other $200,000 will be divided among competing risk analysis work items that are being developed.

e. We have tasked IWR to develop a coordinated risk assessment training program which will begin to address the issues you have raised. I expect that we will hold the first session within a year, and as techniques are developed they will be incorporated into the training which will be included in our Prospect Program.

f. I ask that your technical staff participate in the research and training programs as they are developed. In this way, your views can be smoothly and quickly reflected in the guidance.

FOR THE CHIEF OF ENGINEERS:

SIGNED

H. J. HATCH
Major General, USA
Director of Civil Works

K. Fowler/272-8571
Typed by M. Phillips