

## CHAPTER 1

### Introduction

1-1. Background. The U.S. Army Corps of Engineers is authorized to carry out Civil Works water resources projects for navigation, flood damage reduction and ecosystem restoration, as well as for storm damage prevention, hydroelectric power, recreation, and water supply. Planning for Federal water resources projects constructed by the Corps of Engineers, along with those of the Bureau of Reclamation, Natural Resource Conservation Service, and the Tennessee Valley Authority, is based on the [Principles and Guidelines](#) (P&G) adopted by the Water Resources Council. The P&G are comprised of two parts: The Economic and Environmental *Principles* for Water and Related Land Resources Implementation Studies and The Economic and Environmental *Guidelines* for Water and Related Land Resources Implementation Studies. The first part, commonly referred to as the principles, is reproduced in Figure 1-1. The second part, commonly referred to as the guidelines, expands on the concepts introduced in the principles and provides additional information and requirements to conduct water resources planning studies. Together both parts provide the framework for Corps of Engineers water resources planning studies. Within this framework, the Corps seeks to balance economic development and environmental needs as it addresses water resources problems. The planning process shall address the Nation's water resources needs in a systems context and explore a full range of alternatives in developing solutions. Innovative solutions and the application of the full range of the Corps programs and authorities are integral to the planning process.

1-2. Purpose. This regulation provides the overall direction by which Corps of Engineers Civil Works projects are formulated, evaluated and selected for implementation. It contains a description of the Corps of Engineers planning process, Corps of Engineers missions and programs, specific policies applicable to each mission and program, and analytical requirements. Its fundamental purpose is to describe the planning process in a straightforward, plain-language manner. While that is not always possible in a technical policy document, every effort will be made to make this process understandable not only to planners but to the entire project delivery team, project partners, and the general public. Just as the planning process must reflect reason and common sense; this regulation also shall reflect that same approach.

1-3. Applicability. This engineer regulation applies to all HQUSACE elements, and all USACE commands having Civil Works responsibilities.

1-4. Distribution Statement. Approved for public release, distribution is unlimited.

## **Economic and Environmental Principles for Water and Related Land Resources Implementation Studies**

These Principles are established pursuant to the Water Resources Planning Act of 1965 (Pub. L. 89-80), as amended (42 U.S.C. 1962a-2 and d-1). These Principles supersede the Principles established in connection with promulgation of principles, standards, and procedures at 18 CFR, Parts 711, 713, 714, and 716.

### **1. Purpose and Scope**

These principles are intended to ensure proper and consistent planning by Federal agencies in the formulation and evaluation of water and related land resources implementation studies.

Implementation studies of the following agency activities are covered by these principles:

- (a) Corps of Engineers (Civil Works) water resources project plans;
- (b) Bureau of Reclamation water resources project plans;
- (c) Tennessee Valley Authority water resources project plans;
- (d) Soil Conservation Service water resources project plans.

Implementation studies are pre- or postauthorization project formulation or evaluation studies undertaken by Federal agencies.

### **2. Federal Objective**

The Federal objective of water and related land resources project planning is to contribute to national economic development consistent with protecting the Nation's environment, pursuant to national environmental statutes, applicable executive orders, and other Federal planning requirements.

- (a) Water and related land resources project plans shall be formulated to alleviate problems and take advantage of opportunities in ways that contribute to this objective.
- (b) Contributions to national economic development (NED) are increases in the net value of the national output of goods and services, expressed in monetary units. Contributions to NED are the direct net benefits that accrue in the planning area and the rest of the Nation. Contributions to NED include increases in the net value of those goods and services that are marketed, and also of those that may not be

marketed.

### **3. State and Local Concerns**

Federal water resources planning is to be responsive to State and local concerns. Accordingly, State and local participation is to be encouraged in all aspects of water resources planning. Federal agencies are to contact Governors or designated State agencies for each affected State before initiating Studies, and to provide appropriate opportunities for State participation. It is recognized, however, that water projects which are local, regional, statewide, or even interstate in scope do not necessarily require a major role for the Federal Government; non-Federal, voluntary arrangements between affected jurisdictions may often be adequate. States and localities are free to initiate planning and implementation of water projects.

### **4. International Concerns**

Federal water resources planning is to take into account international implications, including treaty obligations. Timely consultations with the relevant foreign government should be undertaken when a Federal water project is likely to have a significant impact on any land or water resources within its territorial boundaries.

### **5. Alternative Plans**

Various alternative plans are to be formulated in a systematic manner to ensure that all reasonable alternatives are evaluated.

- (a) A plan that reasonably maximizes net national economic development benefits, consistent with the Federal objective, is to be formulated. This plan is to be identified as the NED plan.
- (b) Other plans which reduce net NED benefits in order to further address other Federal, State, local, and international concerns not fully addressed by the NED plan should also be formulated.
- (c) Plans may be formulated which require changes in existing statutes, administrative regulations, and established common law; such required changes are to be identified.
- (d) Each alternative plan is to be formulated in consideration of four criteria: completeness, effectiveness, efficiency, and acceptability. Appropriate mitigation of adverse effects is to be an integral part of each alternative plan.

(e) Existing water and related land resources plans, such as State water resources plans, are to be considered as alternative plans if within the scope of the planning effort.

## 6. Plan Selection

A plan recommending Federal action is to be the alternative plan with the greatest net economic benefit consistent with protecting the Nation's environment (the NED plan), unless the Secretary of the department or head of an independent agency grants an exception to this rule. Exceptions may be made when there are overriding reasons for recommending another plan, based on other Federal, State, local and international concerns.

## 7. Accounts

Four accounts are established to facilitate evaluation and display of effects of alternative plans. The national economic development account is required. Other information that is required by law or that will have a material bearing on the decision-making process should be included in the other accounts, or in some other appropriate format used to organize information on effects.

(a) The national economic development (NED) account displays changes in the economic value of the national output of goods and services.

(b) The environmental quality (EQ) account displays non-monetary effects on significant natural and cultural resources.

(c) The regional economic development (RED) account registers changes in the distribution of regional economic activity that result from each alternative plan. Evaluations of regional effects are to be carried out using nationally consistent projections of income, employment, output and population.

(d) The other social effects (OSE) account registers plan effects from perspectives that are relevant to the planning process, but are not reflected in the other three accounts.

## 8. Discount Rate

Discounting is to be used to convert future monetary values to present values.

## 9. Period of Analysis

The period of analysis to be the same for each alternative plan.

## 10. Risk and Uncertainty

Planners shall identify areas of risk and uncertainty in their analysis and describe them clearly, so that decisions can be made with knowledge of the degree of reliability of the estimated benefits and costs and of the effectiveness of alternative plans.

## 11. Cost Allocation

For allocating total project financial costs among the purposes served by a plan, separable costs will be assigned to their respective purposes, and all joint costs will be allocated to purposes for which the plan was formulated. (Cost sharing policies for water projects will be addressed separately.)

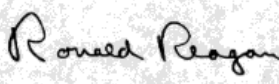
## 12. Planning Guidance

In order to ensure consistency of Federal agency planning necessary for purposes of budget and policy decisions and to aid States and the public in evaluation of project alternatives, the Water Resources Council (WRC), in cooperation with the Cabinet Council on Natural Resources and Environment, shall issue standards and procedures, in the form of guidelines, implementing these Principles. The head of each Federal agency subject to this order will be responsible for consistent application of the guidelines. An agency may propose agency guidelines which differ from the guidelines issued by WRC. Such agency guidelines and suggestions for improvements in the WRC guidelines are to be submitted to WRC for review and approval. The WRC will forward all agency proposed guidelines which represent changes in established policy in the Cabinet Council on Natural Resources and Environment for its consideration.

## 13. Effective Date

These Principles shall apply to implementation studies completed more than 120 days after issuance of the standards and procedures referenced in Section 12, and concomitant repeal of 18 CFR, Parts 711, 713, 714, and 716.

These economic and environmental Principles are hereby approved.



February 3, 1983

(Note: Text retyped for clarity. Signature scanned from original document.)

Figure 1-1 (continued)

1-5. References. Relevant published references indicated in the text of each chapter of this engineer regulation are listed in Appendix A.

1-6. Use of this Engineer Regulation. This engineer regulation provides the requirements for conducting planning studies within the U. S. Army Corps of Engineers Civil Works program. This engineer regulation will also be useful in orienting and familiarizing newly assigned personnel, military and civilian, study /project cost-sharing partners and other interested publics with essential requirements regarding the conduct of Corps of Engineers Civil Works activities.

1-7. Availability. This regulation is available at the following web site: <http://www.usace.army.mil/inet/usace-docs/er/er1105-2-100/toc.htm>. When this regulation is viewed on this site, active hyperlinks are provided to other sections and appendices within this document and to other related regulations and documents. If this document is printed, the hyperlinked references will have to be printed separately. The version of this regulation on the web site is the official and current version. Every effort will be made to notify users when this regulation is updated.

1-8. Organization. This regulation consists of a main regulation and eight appendices. Appendix B provides the requirements for public involvement, collaboration and coordination in Civil Works planning studies. Appendix C addresses the integration of environmental evaluation and compliance requirements into the planning of Civil Works projects. Appendix D covers economic and social considerations, other than procedures for estimating NED benefits, in water resources planning studies. Appendix E provides policy and planning guidance for each Civil Works mission of the Corps of Engineers. Appendix F provides general program principles, policies and planning guidance for the nine legislative authorities under the Continuing Authorities Program (CAP). Appendix G provides guidance and procedures for the management and conduct of planning studies, activities and programs. Appendix H provides review and approval procedures for decision documents.