

CHAPTER 6

MITIGATION DECISION ANALYSIS

6-1. Policy. Care must be taken to preserve and protect environmental resources, including unique and important ecological, aesthetic, and cultural values. Specific mitigation policy for significant fish and wildlife and historic and archeological resources is included in ER 1105-2-50, Chapters 2 and 3. Damage from Federal navigation work along the shorelines of the United States must be prevented or mitigated (ER 1105-2-20, 2-1.d; ER 1105-2-10, E-7).

6-2. Definition.

a. Mitigation. The Council on Environmental Quality (CEQ), in its Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Part 1508.20), published a definition of mitigation that has been adopted by the Corps (ER 1105-2-50) and includes: avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree of magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by presentation and maintenance operations during the life of the action; or compensating for the impact by replacing or providing substitute resources or environment.

b. Significant Resources and Effects. The criteria for determining the significance of resources and effects that are provided in the Principles and Guidelines (P&G) Section 1.7.3 (ER 1105-2-30, Appendix A) and Subsections 3.4.3 and 3.4.12 (ER 1105-2-50, Appendix A), and 40 CFR Part 1508.27 will be adopted for this manual.

6-3. Justification for Mitigation.

a. Justification of mitigation measures must be based on the significance of the resource losses due to a project, compared with the costs necessary to carry out the mitigation (ER 1105-2-10, 2-4c.1) The extent of justified mitigation will be determined through coordination with the US Fish and Wildlife Service and any other concerned agency or government. Endangered and threatened species and critical habitats will be given special consideration, with specific requirements for these resources covered in the Endangered Species Act of 1973, (ER 1105-2-50, 2-5g).

b. Impacts resulting from dredged material disposal and hydraulic changes are largely on bay bottoms, shorelines, wetlands, vegetated shallows, and riparian zones. These areas will usually be composed of our considered to be significant resources. Appendix C of ER 1105-2-50 (Subparts C-F) describes potential impacts on these resources.

6-4. Key Concepts for Mitigation.

a. Early Participation. To determine significant resource losses that will occur because of a project, environmental personnel must be involved in the project from the beginning. Once such potential losses are identified, the project can be modified to reduce or eliminate them. If modification is inadequate or infeasible, measures to offset the losses should be considered.

b. Long-Term Planning. Hershman and Ruotsals (1978) suggest building mitigation into a long-term estuary management plan, such that development and environmental protection proceed simultaneously. This approach allows cumulative impacts to be mitigated, decreases time and cost per project, and spreads the mitigation burden more equitably.

c. Habitat-Based Evaluation. The perspective of the Corps' environmental policy (ER 1105-2-50) is based on ecosystem structure and function. A habitat-based approach to quantifying resources is therefore in order, as opposed to methods relying on population data or use-days. Mitigation of habitat losses normally maintains ecosystem structure and function.

d. Mitigation Planning Goals. The options for mitigation efforts are (1) in-kind: resources physically, biologically, and functionally similar to those being altered; (2) out-of-kind: resources as above, dissimilar; (3) on-site: occurring on, adjacent to, or in the immediate proximity of the project site; and (4) off-site: occurring at a point away from the project site. (Option (4) is least acceptable to the Corps). The US Fish and Wildlife Service has prepared a guide selecting combinations of these options for mitigation (US Fish and Wildlife Service 1980). This reference also outlines resource categories and attendant mitigation goals and suggests measures for mitigation, tied to the definition of mitigation.