

ENVIRONMENTAL IMPACT TRAINING

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Note: Each of the following courses is three days in length. They can be tailored to meet the specific needs of on-site course sponsors.

Environmental Impact Assessment: Focuses on the planning and conduction of environmental assessments (EAs) or environmental impact statements (EISs) for proposed projects, plans, programs, permits, or policies. The requirements of the National Environmental Policy Act and the Council on Environmental Quality (CEQ) Regulations are stressed. Systematic approaches for predicting and assessing impacts on the air, surface and ground water, noise, biological, cultural and socio-economic environments are presented, and techniques for multi-criteria decision-making relative to selecting a proposed action are also described.

Advanced Topics in Environmental Impact Assessment: Highlights emerging topics related to the principles and practice of EIA, including concepts, tools and methods, and related issues. Concepts addressed include EIA within the planning process, scoping as an analytical process for identifying key impact concerns, cumulative effects assessment, and mitigation banking. Newer tools and methods encompass geographic information systems (GIS), risk assessment, expert systems, and decision support systems. Market-based considerations in environmental management are addressed via topics on incremental cost analysis, emissions trading, and economic valuation of impacts. The use of environmental monitoring and auditing in responsible project management is also noted.

Cumulative Effects Assessment: Describes concepts and approaches for incorporating cumulative effects considerations within the EIA process. The substantive topics addressed include principles and procedures, determining spatial and temporal boundaries for cumulative effects, defining baseline conditions, delineation of reasonably foreseeable future actions, use of methods for identifying cumulative effects, incorporation of CEA considerations in the scoping process, examples of cumulative effects prediction methods, and mitigation and monitoring of cumulative effects. The CEQ's 11-step CEA process forms the basis for this course. Special attention is given to case studies as an approach for defining lessons learned.

Review of NEPA Documents: Describes principles and criteria for reviewing draft EAs and draft EISs from the perspective of internal reviews by the proponent agency, intra-agency and inter-agency reviews based on "jurisdiction by law" or "special expertise", or reviews by various publics or individuals. Substantive topics addressed include the legal/institutional context for review, single-person reviews versus coordination of multiple-person team reviews, criteria for review of NEPA documents, and review of technical issues such as hydrogeological impacts, impacts on threatened or endangered species, and impacts on wetlands. Attention is also given to the review of how EJ and CEA are addressed, as well as communicating the results of the review process to consulting firms preparing the documents, intra-agency groups, and inter-agency proponents. Workshops are included to provide experience on the actual review of NEPA documents or portions thereof..

Addressing Cultural Resources in the NEPA Process: Relates to the institutional requirements and procedures for addressing the impacts of proposed projects, plans, or programs on historic or prehistoric (archeological) resources. Particular attention is given to the National Historic Preservation Act and the 1999 modifications to the Section 106 process, the Archeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act. Interrelationships, as appropriate, between the proponent agency, State Historic Preservation Office, Tribal Historic Preservation Office, and the Advisory Council on Historic Preservation, are also stressed along with records searches and planning and conducting cultural resources surveys. Numerous examples of successful approaches for addressing and managing cultural resources provide useful illustrations for appropriate professional practice.

Strategic Environmental Assessment: Principles and Practices Related to Programmatic EAs and EISs: Highlights similarities and differences between project-level impact studies and the planning and preparation of programmatic EAs and EISs on agency policies, plans, and programs. Both U.S. and international experience in these types of strategic studies are described. Case studies of three main types of SEAs are presented. The types include policy-level studies, regional (or geographical area) studies, and sectoral (water, transportation, energy, and agriculture) studies. Substantive topics include SEA and sustainable development, SEA and CEA, scoping, environmental indicators, development of alternatives, methods, and generic mitigation measures. Workshops on topical issues are included.

NEPA and Adaptive Management: This course is focused on the theory and practices of adaptive management as an approach for natural resources management, and how these approaches can be effectively incorporated with the NEPA process. Adaptive management represents a concept that is being increasingly applied (and is sometimes required) during the preparation of EISs on large-scale projects or programs, plans, or policies. Reasons basic to such applications include the need to assess and manage cumulative effects,

numerous impact uncertainties related to large-scale actions, and the problems attendant to incomplete or unavailable information regarding resultant effects on complex environmental and social systems. When included in the NEPA process, adaptive management typically incorporates designed monitoring of resources and management actions and the periodic adaptation of such actions based upon the monitoring results. Such monitoring is typically accomplished in the post-EIS time period. Accordingly, adaptive management promotes flexible decision making that can be useful in evaluating planned mitigation measures and the effectiveness of ecological restoration projects, and in promoting the sustainability of resources, ecosystems, human communities and social systems that might be affected by large-scale infrastructure projects or resource-management plans and programs.

NEPA and Air Impacts: This course focuses on the criteria and practices for incorporating selected Clean Air Act program requirements in the preparation and review of NEPA documents. Specific attention will be given to applying effective review and commenting strategies during the Section 309 document review process. The objectives of the course include providing information on the basic requirements of key laws, regulations, and procedures governing air impact assessment; emphasizing critical air impact topics such as general/transportation conformity and air toxics; highlighting screening considerations related to determining the proper level of analysis in NEPA documents; distinguishing between air conformity requirements under the Clean Air Act and significance determinations of air quality impacts under NEPA; and summarizing the selection and use of air quality assessment tools (emission trends, forecasting techniques, etc.). Pertinent issues arising from NEPA case law will also be addressed.

E-Learning Course on Cumulative Effects Assessment: This e-learning training course is designed for practitioners who need information on “how-to-do” CEA. The course itself includes five interactive modules; each module can be viewed in about 1.5 hours. Reading the materials in the associated Course Manual will require about 2 hours per module, thus the total time for course completion will be from 18 to 20 hours. The topical themes of the modules are as follows: Principles, Processes, and Documentation; Addressing Past, Present, and Reasonably Foreseeable Future Actions; Special Considerations Related to Describing the Affected Environment; Connecting Actions with Consequences on Valued Environmental Components (VECs); and Mitigation, Monitoring, and Collaborative Management. The five modules are accompanied by a CEA References CD and a Student Manual. The Manual includes a variety of reading materials related to the modules, as well as three interactive sessions per module. Fundamental guidance documents and information on methods and tools are on the References CD; they can be studied, as appropriate, by individual students of this e-learning course.