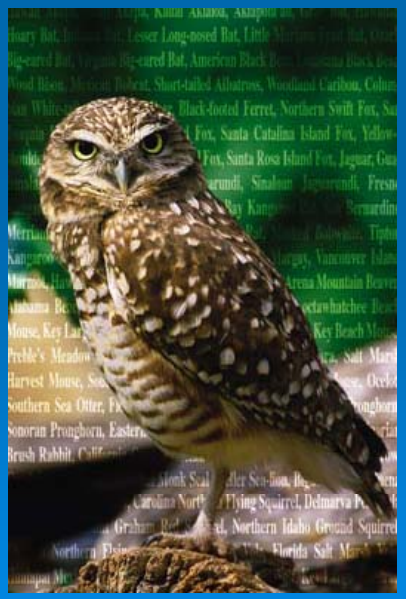
Lecture 8
Regulatory Processes



Primary Regulations that affect construction, modification and operation of Dams, Reservoirs and Hydropower Plants

- National Environmental Protectioin Act (NEPA)
- Clean Water Act
- Endangered Species Act
- Federal Energy Regulatory Commission licensing of hydropower plants.

National Environmental Policy Act of 1969

WHY…

NEPA is a statement of a national policy that values the "overall welfare and development of man" and endeavors to "… foster and promote the general welfare and create and maintain conditions in which man and nature can exist in productive harmony".

WHAT…

NEPA requires the federal government, in cooperation with state and local governments and other concerned public and private organizations, to use all practical means and measures to create and maintain conditions under which man and nature can exist in productive harmony and fulfill the social, economic, and other requirements of present and future generations of Americans. It establishes the protection of the environment as a national priority and mandates the consideration of environmental impacts before the Federal government undertakes—or supplies funding to—any action that is likely to significantly affect the environment. The Act also requires agencies to consider a wide range of alternatives to actions with significant impacts and to allow for broad participation in decisionmaking.

National Environmental Policy Act

HOW …

NEPA requires Federal agencies to "utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking" (Bartlett 1997). Through the requirement of a "detailed statement" [an Environmental Impact Statement (EIS)] that includes the consideration of all potential significant environmental impacts of a proposed action, NEPA establishes an umbrella process for coordinating compliance with myriad environmental, historic preservation, and civil rights laws.

When is a NEPA process required?

For any project that …

- has Federal jurisdiction and associated permits
- has Federal funding in whole or in part
- is on Federal land or affecting Federal facilities
- Is an ongoing (Federal-related) activity with negative effects on land or facilities
- involves new or revised Federal rules, regulations, plans or procedures

When is a NEPA process required?

For Dam related issues (from Reclamation) …

1. Feasibility Studies for new water resources projects; Plans ("definite plan reports" for new projects if the EIS was not done at the feasibility stage or if there have been major changes in the project plan which may cause significantly different or additional new impacts.
2. Proposed repayment contracts and water service contracts or amendments thereof or supplements thereto, for irrigation, municipal, domestic, or industrial water where NEPA compliance has not already been accomplished.
3. Proposed modifications to existing projects or proposed changes in the programmed operation of an existing project that may cause a significant new impact.
4. Proposed initiation of construction of a project or major unit thereof, if not already covered by an EIS, or if significant new impacts are anticipated.
5. Proposed major research projects where there may be significant impacts resulting from experimentation or other such research activities.

At the onset of any of the above, the Federal Decision-maker has to answer this key question:

Might this proposed action be "a major Federal action significantly affecting the quality of the human environment?"

NEPA Analysis and Documentation :

To answer the question, the agency chooses one of 3 possible methods of response:

1. prepare an EA (Environmental Assessment) that could result in a FONSI (Findings of no Significant Impact), or, if significant impact is identified, would be followed by an EIS.
2. prepare an EIS (Environmental Impact Statement) that results in a ROD (Record of Decision)
3. document a Categorical Exclusion (CE)

Environmental Assessments

- The primary purpose of an EA is to determine whether or not a proposed action could have significant impacts, thus requiring an EIS.
- Preparation of an EA should follow the same evaluation thought process as for an EIS.
- Including mitigation measures as part of the proposed action can reduce impacts below the agency determination of significance.

Environmental Impact Statement

Criteria for doing EIS:

- Most agencies in their NEPA procedures have a list of actions that merit an EIS. Such actions mean the agency initiates the EIS process as soon as a proposal is detailed enough to make NEPA analysis
- Questions occur, however, when an action does not clearly have significant impacts. Agency decision makers must decide if they are likely. This decision is essentially a risk management problem.

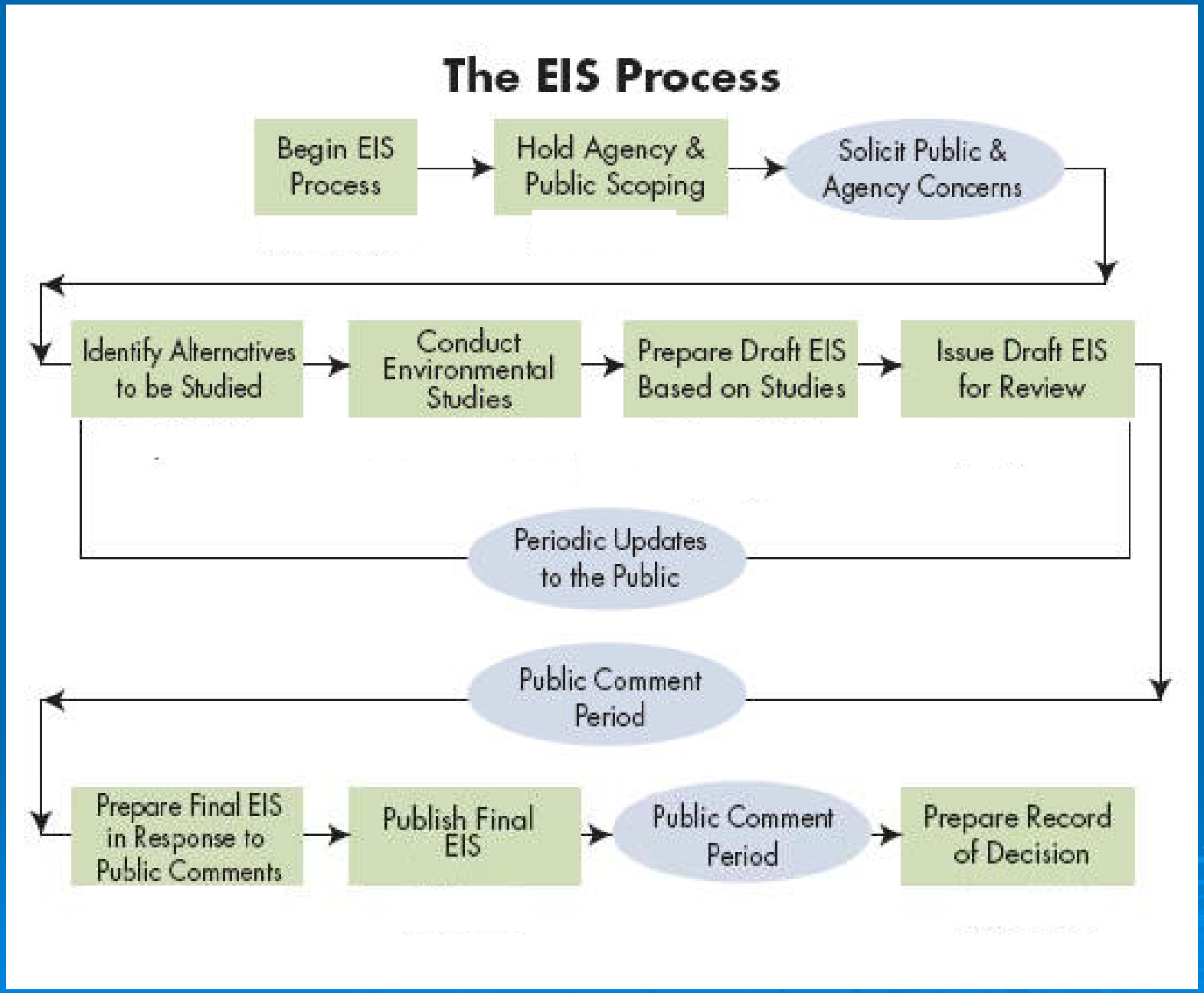
EIS Process

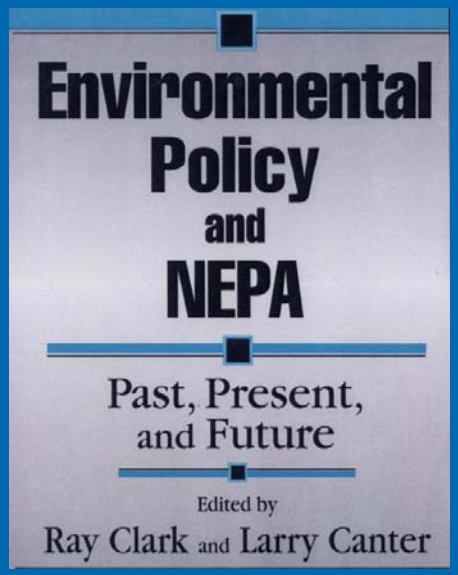
- Notice of intent in F*ederal Register* that the agency intends to prepare an EIS
- Scoping, both internal and external, including appropriate public involvement. Scoping begins early and continues until the final EIS is published. Initial scoping gathers concerns and issues from public and other agencies.
- Study alternatives: external input is considered in the formulation of the alternatives. The alternatives are defined and the studies carried out to determine the effects of the alternatives. Note: there are no regulations about what must be considered in the alternatives or analysis.

EIS Process (cont'd)

- The Draft EIS is published that includes alternatives. There is a mandated 45-day comment period. Often the comment period extends to 60 or 90 days
- A Final EIS that addresses all substantive comments and makes changes to the Draft EIS. Most agencies allow at least 30 days for the public to comment on the Final EIS before signing the record of decision
- A Record of Decision that addresses all comments and responses from other agencies and the public. The ROD also must identify the environmentally preferable alternative and discuss why it is or is not chosen for implementation

Grande Dixence Dam, Switzerland


The EIS Process
Begin EIS Process
Hold Agency & Public Scoping
Solicit Public & Agency Concerns
Identify Alternatives to be Studied
Conduct Environmental Studies
Prepare Draft EIS Based on Studies
Issue Draft EIS for Review
Periodic Updates to the Public
Public Comment Period
Prepare Final EIS in Response to Public Comments
Publish Final EIS
Public Comment Period
Prepare Record of Decision



R.V Bartlett

"The Rationality and Logic of NEPA revisited" p.53

CRC Press 1997

Sept 18, 2008

It is NEPA's requirement for environmental impact assessment, of course, that re-mains critics of discredited prescriptions for rational comprehensive decision making, in particular the investigations NEPA demands of consequences and alternatives prior to taking action and the mandate to use a systematic, interdisciplinary approach to planning and decision making (Fairfax, 1978). But this is hardly the stuff of optimal decision making or wholly science-based decision making. NEPA's EIS requirement does not insist on the identification or specification of objectives in decision making, nor does it specify or recommend the ultimate selection of the best alternative. The requirements that alternatives be considered and consequences investigated have always been inter-preted in common-sense ways by the courts and the Council on Environmental Quality (CEQ). Science and scientific concepts are pervasive in nearly every section of NEPA, but nowhere does NEPA preclude policy and decision making based on non-scientific information, ideas, or values. Indeed, several provisions require attention to non-scien-tific matters, such as historic and cultural aspects of national heritage, unquantified amenities and values, and a variety of individual choices.

The actual processes prescribed or implied by NEPA are, in fact, largely inconsistent with either scientific methods per se or rational comprehensive decision making. True, NEPA does require a systematic interdisciplinary approach, and it requires consideration of alternatives and environmental consequences among other things. It requires, in short, ecological reasoning from individuals and agencies. Also, it dictates that this process be documented in EISs, but then it specifies and implies that the resulting documentation and any ensuing decision be handled politically. Other agencies are to be consulted and the EIS is to be published and made available to state and local agencies, the president, the public, and, by implication, Congress and the courts. Since NEPA is silent about what is to happen next, the conclusion must be that decisions are expected to be made in political ways, by political persons, in political settings. The logic of NEPA is one of influencing that political process strategically, even to redirect it in significant ways, but not to replace it with scientific reasoning nor to require it to use rational comprehensive decision making.

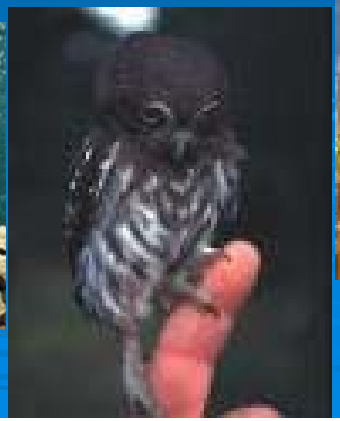
Clean Water Act, Sec 404

- **In 1972, Section 404 of the Clean Water Act established a program to regulate the discharge of dredged or fill material into waters of the United States.**
- **The program is jointly administered by the U.S. Army Corps of Engineers and the Environmental Protection Agency. The Corps is responsible for the day-to-day administration and permit review and EPA provides program oversight.**
- **The fundamental rationale of the program is that no discharge of dredged or fill material should be permitted if there is a practicable alternative that would be less damaging to our aquatic resources or if significant degradation would occur to the nation's waters.**
- **Permit review and issuance follows a sequence process that encourages avoidance of impacts, followed by minimizing impacts and, finally, requiring mitigation for unavoidable impacts to the aquatic environment. This sequence is described in the guidelines at Section 404(b)(1) of the Clean Water Act.**

Endangered Species Act (1973)

- Program for the conservation of threatened and endangered plants and animals and the habitats in which they are found.
- Why? (as written by the The House Merchant Marine and Fisheries Committee)
  "As we homogenize the habitats in which these plants and animals evolved, and as we increase the pressure for products that they are in a position to supply (usually unwillingly) we threaten their - and our own - genetic heritage. The value of this genetic heritage is, quite literally, incalculable. From the most narrow possible point of view, it is in the best interests of mankind to minimize the losses of genetic variations. The reason is simple: they are potential resources. They are keys to puzzles which we cannot solve, and may provide answers to questions which we have not yet learned to ask."



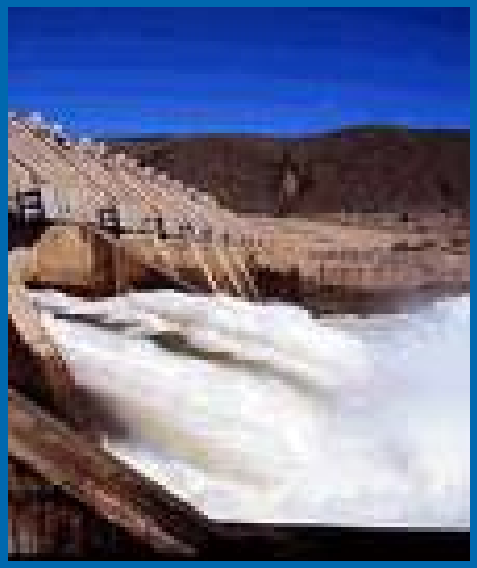
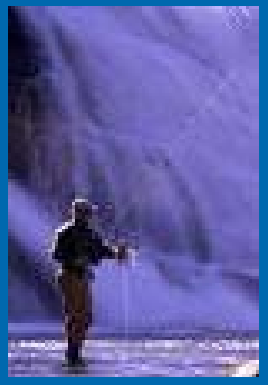

Endangered Species Act (1973)

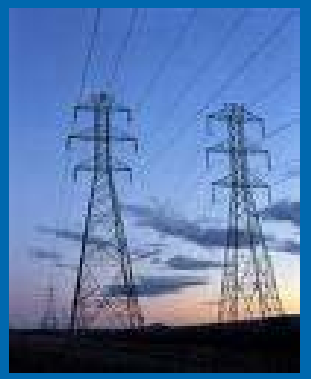
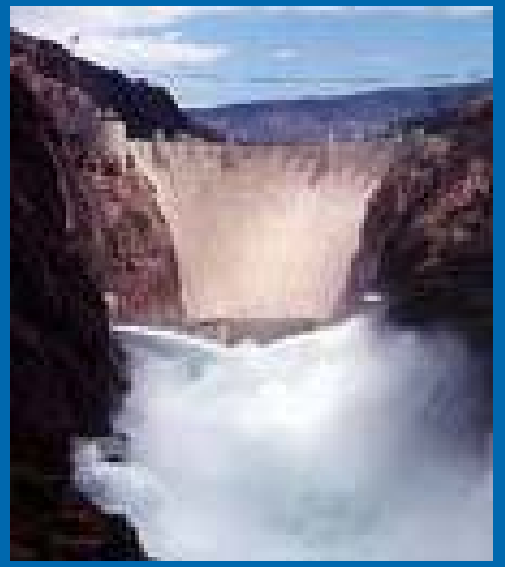
- An “endangered” species is one that is in danger of extinction throughout all or a significant portion of its range. A “threatened” species is one that is likely to become endangered in the foreseeable future.
- **Section 7 states that federal agencies: "must insure that all actions authorized, funded or carried out are not likely to jeopardize the continued existence of an endangered or threatened species or adversely modify habitat critical to it."**

FERC Relicensing

- Under the Federal Power Act (FPA), the Federal Energy Regulatory Commission (FERC) has exclusive authority to license the construction, operation and maintenance of nonfederal hydropower.
- Original licenses are typically issued for a 50-year license term. A "relicense"—is typically issued for a period of 30-40 years, depending on the extent of proposed new development or environmental mitigation and enhancement measures proposed by the licensee. The length of the license term is typically long enough for the owner to recover its economic investment..
- There are about 2,500 non-federal hydropower projects subject to relicensing in the United States today with an aggregate generating capacity of 53 million kilowatts.
- Between the years 2000 and 2010, the licenses of approximately 220 hydropower projects representing nearly one third of the hydropower capacity licensed by the Federal Energy Regulatory Commission (FERC) will expire. As a result, much attention is being given to the relicensing process.

FERC Relicensing

- Relicensing involves evaluating the project's benefits and its environmental and social effects.
- During the relicensing process, potential project and community benefits can be identified and assessed. Such potential benefits can include continued production of renewable energy, new generation, if feasible, flood control and water regulation, and the protection and enhancement of fish and wildlife, recreation, water quality, and cultural and aesthetic resources at the project.

FERC Relicensing – who is involved?

1. Licensee - owner of power plant
2. FERC
3. Resource Agencies – Federal or state agencies that have an interest (e.g., FWS, FS, BLM, NPS, BIA, BuRec, USACE, EPA, state regulatory agencies)
4. Stakeholders – NGOs and the public (environmental groups, property owners, recreational groups or companies, etc.)

FERC Relicensing – FERC's role

- provide public notice of the relicensing process
- manage that process and conduct an independent analysis of the licensee's proposal to determine whether to issue a "new" license and to establish the conditions that should be included in any such license.
- FERC must—in making its licensing decision—be satisfied that the project is "in the public interest" and is adapted as well as possible to a comprehensive plan for developing the waterway.
- responsible for conducting a NEPA analysis
- forward their recommendation to the FERC Commissioners for their decision.

FERC Relicensing – 3 stage process

1. Licensee files NOI, holds agency and public meetings, gets comments and Agreement on Study Plans.

2. Licensee conducts studies, prepares reports, holds meetings, issues draft application and gets comments and issues final application.

3. FERC reviews reports, conducts further analysis and NEPA process, gets comments, addresses comments, makes recommendation.

(New, alternate process allows EIS and other analysis to be contracted to Engineering Firms by Licensee)

Concluding Observations

1. NEPA structures environmental analysis and consideration of alternatives but does not provide guidance as to objectives, nor does it preclude selection of alternatives that are not the “best” for the environment.

2. FERC relicensing is a long, involved process. It is particularly challenging in view of the need of hydro plants to reduce cost to consumers and become more competitive in the power market.

3. The Endangered Species Act is clear and direct. It cannot be violated and is the basis for much litigation against water and power projects on the part of environmental organizations.