

- 13. Environmental Data.** Implementation of design features should be consistent with environmental commitments listed in the National Environmental Policy Act (NEPA) compliance document and with agreements reached between the U.S. Department of the Interior bureaus, Federal agencies, and other governmental agencies.

Design data should include, as a minimum, a brief description of the environmental resources that could be affected by the proposed development. The emphasis should be on those areas within the range of alternatives open to the designers. Design teams should review the design data items to determine which ones should be included in their projects. Design data items which are not applicable to the project should be omitted. Design data items which would have a minor effect on a feasibility design or cost should be omitted. The following items should also be considered in preparing the design data request:

**A. General:**

- (1) The need for a field conference with other agencies to resolve critical environmental problems.
- (2) Review of designs by other agencies, including stage of design and level of review, and the findings of the Fish and Wildlife Coordination Act Report. The Fish and Wildlife Coordination Act requires that fish and wildlife resources receive equal consideration to other project features. Federal agencies that construct water resource development projects are required to first consult with the U.S. Fish and Wildlife Service and, in some cases, the National Marine Fisheries Service, and State fish and wildlife agencies regarding impacts on fish and wildlife resources and measures to mitigate these impacts.
- (3) Comments on ecological, aesthetic, or other environmental aspects that are peculiar to the location and would affect layout or design.
- (4) Published guidelines and regulations concerning air and water quality standards.
- (5) The environmental setting.
- (6) Environmental permit requirements (401, 404, Storm Water Runoff, etc.).
- (7) Environmental monitoring requirements.
- (8) List of endangered species.
- (9) Potential Indian Trust assets.
- (10) Potential environmental justice issues.

- (11) Areas of heavy public use should be clearly identified.
- (12) Existing or potential wetlands and wildlife refuge areas should be identified.
- (13) Identify cultural (historical, archeological, architectural, and paleontological) resources in the area of the facilities.
- (14) Photographs of the environmental setting.
- (15) Recommendations or commitments to maintain a specific hydrologic flow level to support biological or recreational resources.
- (16) Location, volume, and contamination levels of any solid waste or hazardous waste facilities within the construction area.
- (17) Unusual local pest (termites, borers, etc.) action and recommended preventive measures (including local practices for combating them).
- (18) For water intakes, debris type and loading anticipated.
- (19) Character of water to be conveyed with respect to probable sediment deposition and anticipated growth of algae in the channel and of other water-loving plants or weeds along banks.
- (20) If domestic flow is provided, State health department requirements for water-supply systems.
- (21) Water pollution control standards for design and construction.
- (22) Impact of water quality on the proposed area of water or the mixing with natural waters. For dam outlet works, include water temperature requirements.
- (23) Indicate the suitability and possibility of developing Government land adjacent to our facilities for use by the public for recreation, hobbies, sports, leisure, education, health, etc.
- (24) Problems with bank erosion.
- (25) Erosion and sediment control requirements.
- (26) Special environmental requirements for transmission lines (above ground and underground).
- (27) Potential invasive species which may damage project area.
- (28) Any required mitigation measures

**B. Noise and Light Control Requirements:**

- (1) Furnish data on allowable noise limits in the vicinity of the facility where fixed by law or local ordinance, or where otherwise considered necessary or advisable; measurements of existing daytime or nighttime ambient noise levels in the area; and distances to the nearest residential units.
  - (a) Noise and dust abatement requirements.
- (2) Location of closest residence for noise/dust/light control requirement.

**C. Need for Blending Structures, Roadways, etc., with Surroundings.** Include reasoning:

- (1) Aesthetic requirements should be considered in the benefit-cost studies and design of the facilities and related power lines.
- (2) Comments on any ecological, aesthetic, or other environmental aspects that are peculiar to this location and would affect layout or conceptual design.
- (3) Special considerations to provide structures that are compatible with surroundings.
- (4) Special environmental requirements for transmission lines or underground transmission systems.

**D. Fish and Wildlife Considerations:**

- (1) List of threatened, endangered, or otherwise protected animals that have migration routes, critical habitat, or outstanding habitat in the immediate area. Map of any species' migration patterns, critical habitat, and outstanding habitat that occurs on or adjacent to the project site. Discuss any known mitigation requirements.
- (2) List of species which may pose a danger to users or which may require special accommodations in site design (for example, bears or moose).
- (3) Any threatened and/or endangered critical habitat in or adjacent to the project.
- (4) The need for game/livestock protection, including crossings, fencing, etc.
- (5) Requirements and background, if any, for the need for fish facilities such as fishways and barriers.
- (6) Background on the need for fish protection and passage during construction at stream crossings.

**E. Construction (see also Section 18, “Construction Considerations”):**

- (1) Identify special environmental compliance requirements, including water quality standards such as suppression of nitrogen, adequate oxygen levels, and temperature control and control of turbidity during construction; preservation of existing growth adjacent to construction; obliteration of temporary roads and restoration to original appearance; dust abatement; etc. Give recommendations on steps to be taken to meet these requirements.
- (2) Limitations that may affect in-stream construction, foundation investigation work. Restrictions for encroaching onto the waterway for placing falsework, cofferdams, sheet piles, etc.
- (3) Impact of moving construction materials on existing road facilities, including consideration of such factors as traffic congestion, effect on road condition, air pollution, etc.
- (4) Give borrow area and temporary haul road restoration requirements such as stockpiling of topsoil, regrading of the area, general cleanup, etc.
- (5) Give consideration to using required excavated material in lieu of material from other borrow sources wherever possible.
- (6) Construction window, traffic restrictions, and detour requirements.
- (7) Water for construction purposes.

**F. Removal and Disposal of Materials:**

- (1) Comments on disposal of special excavation problem or hazardous materials such as lignite.
- (2) Vegetation to be cleared, including kind, size, and density of growth.
- (3) Comment on disposal of material from clearing operations. Consider State and local burning regulations, burying or chipping of materials, and maximum utilization of merchantable timber.
- (4) Provide data on the method(s) of brush and tree disposal permitted by local and State pollution regulatory agencies.
- (5) Specify requirements for clearing and disposal of timber.
- (6) Comment on disposal of debris from O&M operations:
  - (a) Debris, biomass, aquatic weeds, sediment, and sludge.

- (7) For water treatment plants:
  - (a) Suggested disposal sites should be able to meet requirements of either State or the U.S. Environmental Protection Agency (EPA) for discharge of pollutants.
  - (b) Plant reject flow.
  - (c) Spent chemicals from pretreatment and desalting, cleaning, and storage solutions.
- (8) Disposition of existing facilities such as pipelines, power and telephone lines, and fences.

**G. Landscaping, Seeding, and Erosion Control:**

- (1) Areas that will require landscaping, replacement of topsoil, seeding.
- (2) Landscaping and other special environmental requirements.
- (3) Recommendations for landscaping and source of irrigation water.
- (4) Note bank erosion and sediment control concerns:
  - (a) Specify seeding requirements, replanting requirements, or other requirements for erosion control or aesthetics in riverbanks, borrow areas, spoil banks, and excavated slopes.
- (5) A brief listing of the area's native and/or commonly used plant materials.
- (6) Furnish data on State or local restrictions on the use of soil herbicides or local factors limiting their use.
- (7) Revegetation and landscaping needs (see Reclamation's current *Recreation Facility Design Guidelines*, September 2002).

**H. Anticipated Public Use Around the Facilities:**

- (1) Indicate the suitability and possibility of present and future use of land adjacent to Reclamation facilities by the public for recreation, hobbies, sports, leisure, education, health, housing, etc. Provide data on zoning regulations and subdivision proposals.
- (2) Anticipated public use of Reclamation access roads.
- (3) Provide data on zoning regulations and subdivision proposals.

**I. Dams and Reservoirs:**

- (1) Requirements for multilevel intakes to protect the fisheries.
- (2) Reservoir clearing plan to consider fish and wildlife requirements and environmental constituents.
- (3) Location, volume, and contamination levels of any solid waste or hazardous waste facilities within the reservoir basin.
- (4) Location of any underground storage tanks within the reservoir basin.
- (5) Recommendations or commitments to maintain specific flow requirements for biological and/or recreational resources.

**J. Transmission Lines, Switchyards, and Substations:**

- (1) Refer to the specific requirements of the *Environmental Criteria for Electric Transmission Systems* by the U.S. Departments of the Interior and Agriculture.
- (2) Comments should be included on ecological, aesthetic, or other environmental aspects that affect the selection of the route. Emphasis should be on areas of raptor protection, threatened/endangered species habitat, high scenic or historical value, heavy public use, bird migration corridors, or fragile ecological areas.

**K. Wetlands:**

- (1) Biological information requirements:
  - (a) Disease vector control considerations. Diseases may be carried by several animals, most commonly mosquitoes.
  - (b) Discuss which disease vectors may be present and potential control measures such as:
    - Habitat control – prevention of stagnant water.
    - Use of insecticides.
    - Other control measures.