U.S. NUCLEAR REGULATORY COMMISSION

ENVIRONMENTAL STANDARD REVIEW PLAN

4.1.2 TRANSMISSION CORRIDORS AND OFFSITE AREAS

REVIEW RESPONSIBILITIES

Primary— Organization responsible for the review of land use information

Secondary— None

I. AREAS OF REVIEW

This environmental standard review plan (ESRP) directs the staff's assessment of direct impacts of construction on land use within the transmission line and access corridors and other offsite areas. The scope of the review directed by this plan should include analysis and evaluation of construction activities in sufficient detail to determine the significance of potential land-use impacts and to recommend how these impacts should be treated in the licensing process. All corridors, including those within the site and vicinity, and all offsite areas should be considered. Where necessary and appropriate, the reviewer should recommend consideration of alternative routing, location, or construction practices that would mitigate adverse environmental impacts.

In some cases transmission lines may be constructed and operated by an entity other than the applicant. In such cases, impact information may be limited and the reviewer should proceed with the assessment using the information that can be obtained.

Review Interfaces

The reviewer for this ESRP should obtain input from or provide input to the reviewers for the following ESRPs, as indicated:

- ESRPs 2.2.2, 2.3, 2.4.1, 2.6, 2.8, and 4.2.2. Obtain information to aid the assessment of construction impacts on land use within the transmission line and access corridors and other offsite areas. Obtain any new and significant information, if applicable, related to ESRP 4.1.2.

- ESRP 4.1.3. Provide a list of construction impacts that could affect historic/archeological sites.

- ESRP 4.3.1. Provide a list of construction impacts that could affect terrestrial ecosystems.

- ESRP 4.3.2. Provide a list of construction impacts that could affect aquatic ecosystems.

- ESRP 4.4.1. Provide a list of construction impacts (e.g., noise and dust) having socioeconomic consequences that are physical in nature.

- ESRP 4.4.2. Provide information on land-use impacts within the transmission line and access corridors and other offsite areas that should be considered for potential social and economic impacts.

- ESRP 4.6. Provide a list of commitments and practices to limit adverse environmental impacts of construction.

- ESRP 5.1.2. Provide a summary of land-use impacts of construction.

- ESRP 6.5.1. Provide a list of any construction activities that should be part of the applicant's monitoring program.

- ESRP 6.7. Provide a discussion of any deficiencies in the construction monitoring program that should be corrected by additional monitoring provisions.

- ESRP 9.4.3. Provide the reviewer for ESRP 9.4.3 with information about the proposed land-use changes if those changes are determined to be adverse and should be avoided. This will enable the reviewer to consider alternative transmission corridors and/or offsite areas that would avoid the impacts.

- ESRP 10.1. Provide the unavoidable impacts that are predicted to occur as a result of changes in land use during construction.

- ESRP 10.2. Provide a brief summary of irreversible and irretrievable commitments of land-use resources that will occur during construction.

- Interface with Environmental Project Manager (EPM). Consult with the EPM to verify any proposed modifications to transmission corridors and offsite areas are practical and will lead to an improvement in the benefit-cost balance.

Data and Information Needs

The type of data and information needed will be affected by site- and station-specific factors, and the degree of detail should be modified according to the anticipated magnitude of the potential impacts. The following data or information should be obtained:

- proposed routes for corridors, including access roads, that will be used for construction of transmission lines from the station site to an interconnecting point or points on the existing high voltage transmission systems (from ESRP 2.2.2)

- proposed routes of access corridors (e.g., roads and railroads) to serve the proposed project (from ESRP 2.2.2)

- land-use restrictions, if any, contained in any easements (from ESRP 2.2.2)

- corridor lengths, widths, and areas (from ESRP 2.2.2)

- land use within the corridors. Descriptions should be provided in terms of corridor segments having predominantly similar land-use types (from ESRP 2.2.2).

- if specific corridors have not been established and only bands are given, a description of the land use within the corridor band. Descriptions should be provided in terms of corridor segments having predominantly similar land-use types (from ESRP 2.2.2).

- identification of offsite areas by land use, size, and location (from ESRP 2.2.2)

- Federal, State, regional, local, and affected Native American tribal land-use plans (from ESRP 2.2.2)

- highways, railroads, and utility rights-of-way that will be crossed by transmission lines and access corridors (from the environmental report [ER] and site visit)

- a description of construction techniques and the associated impact on land use (from the ER)

- the area and location of land within the corridors and offsite areas that will be disturbed by construction on either a long-term or short-term basis (from the ER)

- planned control actions during construction that will restrict land use in the corridors and offsite areas (from the ER)

- land-use impacts of any related Federal action that may have cumulatively significant impacts with the proposed activities in the corridors and offsite areas (from ESRP 2.8)

- in the case of a construction permit (CP), operating license (OL), early site permit (ESP), or combined license (COL) application withdrawal or termination request, a description of proposed restoration and management actions within the corridors and offsite areas should be addressed in the redress plan. Some examples are recontouring or grading, permanent landscaping, revegetation of disturbed areas, and establishment of recreational areas.

II. ACCEPTANCE CRITERIA

Acceptance criteria for the review of land-use impacts of transmission corridors and offsite areas are based on the relevant requirements of the following:

- 10 CFR 51.71(d) with respect to analysis requirements to be included in draft environmental impact statements (EISs) prepared by NRC

- 10 CFR 51, Appendix A(7), with respect to discussion in EISs prepared by NRC of possible conflicts between alternatives and the objectives of applicable land-use plans

- Guidance and requirements for particular land types shown in Table 4.1.2-1.

Regulatory positions and specific criteria to meet the regulations identified above are

- There are no conflicts between the proposed transmission corridors and offsite areas and the objectives of Federal, State, regional, and local (and in the case of proposed location on a reservation, Native American tribe) land-use plans and the Federal sources shown in Table 4.1.2-1 (plus comparable State sources).

- If there are or are likely to be conflicts, the extent of the conflicts, the possibilities of resolving the conflicts, and the seriousness of the impact of the proposal on land-use plans and policies and the effectiveness of land-use control mechanisms for the area can be adequately evaluated and discussed in the EIS or other environmental document.

Technical Rationale

The technical rationale for evaluating the potential impacts to the transmission corridors and offsite areas is discussed in the following paragraphs:

NRC's regulations implementing NEPA provide that NRC EISs are to include a section discussing the environmental consequences of alternatives (10 CFR 51, Appendix A(7)). The section is to include a discussion of "possible conflicts between the alternatives and the objectives of Federal, State, regional, and local (and in the case of a reservation, Native American tribe) land-use plans, policies, and controls for the area concerned." In addition, the regulations provide that due consideration is to be given in an EIS to compliance with applicable zoning and land-use regulations (10 CFR 51.71(d)).

Table 4.1.2-1. Federal Sources to be Consulted for Various Special Land Types

Land Type	Sources to be Consulted
Coastal Zones	1. Coastal Zone Management Act (16 USC 1451-1464) 2. National Oceanic and Atmospheric Administration regulations implementing the Coastal Zone Management Act (15 CFR 923)
Farmland	1. Farmland Protection Policy Act (7 USC 4201) 2. U.S. Department of Agriculture regulations on Prime and Unique Farmlands (7 CFR 657) 3. U.S. Department of Agriculture regulations implementing the Farmland Protection Policy Act (7 CFR 658) 4. CEQ memorandum on "Analysis of Impacts on Prime and Unique Agricultural Lands in Implementing the National Environmental Policy Act" (45 FR 59189) (CEQ 1980a)
Floodplains[(a)]	1. Executive Order 11988, "Floodplain Management" (42 FR 26951) 2. U.S. Water Resources Council, "Floodplain Management Guidelines" (40 FR 6030)
Wetlands[(b)]	1. Executive Order 11990, "Protection of Wetlands" (42 FR 26961) as amended by Executive Order 12608 (52 FR 34617)
Wild and Scenic Rivers	1. Wild and Scenic Rivers Act (16 USC 1271-1287) 2. CEQ memorandum on "Procedures for Interagency Consultation to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory" (45 FR 59191-59192) (CEQ 1980b)
(a) The term *floodplain* is defined in 10 CFR 72.3. (b) The term *wetland* is defined in Executive Order 11990.	

Guidance on (1) what constitutes a land-use plan or policy and (2) how an agency should handle potential conflicts between a proposal and the objectives of land-use plans is provided by the Council on Environmental Quality (CEQ) in Question 23 of "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations" (CEQ 1981). With regard to what constitutes a land-use plan or policy, CEQ states that

> the term "land-use plans" includes all types of formally adopted documents for land-use planning, zoning, and related regulatory requirements. Local general plans are included, even though they are subject to future change. Proposed plans should also be addressed if they have been formally proposed by the appropriate government body in a written form, and are being actively pursued by officials of the jurisdiction. Staged plans, which must go through phases of development ... should also be included even though they are incomplete.

With regard to how an agency should handle potential conflicts between a proposal and the objectives of land-use plans, CEQ states that

> the agency should first inquire of other agencies whether there are any potential conflicts. If there would be immediate conflicts, or if conflicts could arise in the future when the plans are finished ... the EIS must acknowledge and describe the extent of those conflicts. If there are any possibilities of resolving the conflicts, these should be explained as well. The EIS should also evaluate the seriousness of the impact of the proposal on the land-use plans and policies, and whether, or how much, the proposal will impair the effectiveness of land-use control mechanisms for the area. Comments from officials of the affected area should be solicited early and should be carefully acknowledged and answered in the EIS.

III. REVIEW PROCEDURES

Limited portions of land-use impacts are covered in ESRPs 4.1.3, 4.3.1, and 4.4; therefore, this ESRP is limited to direct physical changes and restriction on land use in the corridors and offsite areas due to construction. For each of these, the impact analysis should include consideration of the direct physical land-use impacts that occur in the corridors and offsite areas due to construction activities.

The reviewer should direct the analysis toward conclusions with respect to the following:

- long-term physical changes in land use of the corridors and offsite areas
- short-term changes in land use of the corridors and offsite areas and the applicant's plans for mitigation of adverse impacts
- construction impacts on the geologic environment.

The reviewer should take the following steps:

(1) Evaluating Long-Term Physical Changes in Land Use of the Corridors and Offsite Areas:

(a) Consider land-use changes in the context of the amount and quality of land affected after mitigating measures, if any, have been implemented.

Review restrictions imposed by the presence of transmission lines on use of farm land, recreational areas, housing areas, and other similar areas.

(b) If appropriate, analyze the degree of change and its acceptability by comparing changes in land use with existing standards, guides, regulations, or legislation or to Federal, State, regional, local, and affected Native American tribal land-use plans and zoning ordinances, consulting with these sources and ensuring consistency with them where required or desirable.

- Refer to the Federal sources listed in Table 4.1.2-1 (and comparable State sources applicable to the proposed transmission line corridors and offsite areas) for particular types of land.

- If there are no relevant standards, guides, regulations, legislation, or land-use plans, analyze the severity of the impact without them.

(c) Analyze the restrictions on use of land such as farm land or forests in the context of the amount and quality of the land generally available in the region as compared with that changed due to the corridors and offsite areas, recognizing that the use of some of the land of the corridors may not be changed from its current use. Modification of use for the amount of land usually used for transmission corridors and offsite areas generally has minor effects, if the land is not unique or otherwise distinguished.

(d) If the land to be changed due to the corridors and offsite areas (1) meets the statutory definition of prime or unique, or (2) has a relative value rating placing it within the top half in terms of agricultural production in the local government jurisdiction, or (3) has a land capability classification of I or II, (see "Land Capability Classifications" under "Review Procedures" in ESRP 4.1.1), assess the productivity of the land to determine the need for mitigation or avoidance of any predicted impact.

(2) Analyzing the Short Term Changes in Land Use of the Corridors and Offsite Areas and the Applicant's Plans for Mitigation of Adverse Impacts:

(a) Consider mitigation measures for adverse impacts. Matters to be reviewed include revegetation, landscaping, cleanup and disposal of debris, erosion control, land-management practices, and use of chemicals.

(3) Analyzing the Construction Impacts on the Geologic Environment:

(a) Consult with the safety evaluation reviewers for geology for an analysis of the potential impacts of corridor and offsite area construction on the geologic environment.

IV. EVALUATION FINDINGS

Evaluation of each identified impact should result in one of the following three possible determinations:

- *The impact is minor, and mitigation is not required*. When all impacts are of this nature, the reviewer should include a statement in the environmental impact statement of the following type:

  The staff reviewed the available information on the land-use impacts on transmission corridors and offsite areas from construction and refurbishment activities. Based on this review, the staff concludes that there are no significant environmental impacts. The staff concludes that the

appropriate characterization for the impacts reviewed under this ESRP is _____ [SMALL, MODERATE, or LARGE].

- *The impact is adverse, but can be mitigated by specific design or procedure modifications that the reviewer has identified and determined to be practical*. For these cases, the reviewer should consult with the EPM and the reviewer for ESRP 9.4.3 for verification that the reviewer's identified modifications are practical and would lead to an improvement in the benefit-cost balance. The reviewer should prepare a list of verified modifications and measures and controls to limit the corresponding impact. These lists should be provided to the reviewer for ESRP 4.6.

- *The impact is adverse, cannot be successfully mitigated, and is of such magnitude that it should be avoided*. When impacts of this nature are identified, the reviewer should inform the reviewer for ESRP 9.4.3 that an analysis and evaluation of alternative designs or procedures is required. The reviewer should participate in any such analysis and evaluation of alternatives that would avoid the impact and that could be considered practical. If no such alternatives can be identified, the reviewer should provide this information to the reviewer for ESRP 10.1.

The following general criteria be considered by the reviewer:

- If construction of the corridors or offsite areas will cause only small changes in the land use of publicly dedicated areas; urban development; land meeting the statutory definition of prime or unique, having a relative value rating placing it within the top half in terms of agricultural production in the local government jurisdiction, or having a land capability classification of I or II, (see Section III of ESRP 4.1.1); or other specially significant land uses, it may be concluded that the expected impacts on land use are not of major significance and that there are no land-use considerations that would influence the decision on issuance of a construction permit.

- If certain segments (each on the order of 2 km [1.2 miles] or less) of the corridors are proposed to pass through publicly dedicated areas, urban development, land meeting the statutory definition of prime or unique, having a relative value rating placing it within the top half in terms of agricultural production in the local government jurisdiction, or having a land capability classification of I or II (see "Review Procedures" in ESRP 4.1.1); or other specially significant areas, but the remainder of the corridor meets the specifications in the paragraph above, it may be concluded that these segments could have impacts that would suggest either actions to mitigate the impact or segment realignment to avoid the impact. If either of these conclusions is reached, the reviewer should prepare a full description of the problem areas and mitigating actions or alternative alignments that should be considered.

- If construction of a corridor as proposed would (1) require realignment (as in the paragraph above) in numerous locations (on the order of five or more), (2) traverse more than several kilometers of dedicated public lands or housing areas, or (3) cause more than a small change to land meeting the statutory definition of prime or unique, having a relative value rating

placing it within the top half in terms of agricultural production in the local government jurisdiction, or having a land capability classification of I or II (see "Review Procedures" in ESRP 4.1.1); the expected impacts of construction of this corridor warrants consideration of an alternative corridor to avoid the impacts. This finding should be reported together with supporting technical information concerning the selection of alternative routes.

The review performed under this ESRP should also achieve the following objectives: (1) public disclosure of major direct land-use consequences of the proposed construction project, (2) presentation of the basis of staff analysis of the project, and (3) presentation of staff conclusions and conditions regarding land use.

Public disclosures may be accomplished by presenting a brief description of the proposed construction activities within transmission lines and access corridors and other offsite areas and a discussion of the land-use changes resulting from these activities. This section should be understandable to a nontechnical reader. Extensive descriptive material may be incorporated by reference and need not be duplicated in the EIS.

The staff's analysis may be presented in a narrative summary by highlighting important aspects of the impacts resulting from potential land-use changes. The discussion should include identification of important effects and mitigating actions. The relative importance of impacts is conveyed to the reader through the degree of emphasis chosen. Minor issues should receive minor treatment. Important or disputed issues should be discussed in detail.

The safety evaluation reviewer for geology should provide any necessary input to the EIS with regard to the impact of construction on the geologic environment.

V. IMPLEMENTATION

The method described in this ESRP should be used by the staff in evaluating conformance with NRC requirements, except in those cases in which the applicant proposes an acceptable alternative for complying with specified portions of the requirements .

VI. REFERENCES

7 CFR 657, "Prime and Unique Farmlands."

7 CFR 658, "Farmland Protection Policy Act."

10 CFR 51, Appendix A to Subpart A, Item 7, "Environmental consequences and mitigating actions."

10 CFR 51.71, "Draft environmental impact statement—contents."

10 CFR 72.3, "Definitions."

15 CFR 923, "National Oceanic and Atmospheric Administration Regulations Implementing the Coastal Zone Management Act."

Atomic Safety and Licensing Board. 1986. "In the Matter of Consumers Power Co. (Midland Plant, Units 1 and 2)," 24 NRC 834.

Coastal Zone Management Act, as amended, 16 USC 1451 et seq.

Council on Environmental Quality (CEQ) memorandum on "Analysis of Impacts on Prime and Unique Agricultural Lands in Implementing the National Environmental Policy Act," 45 *Federal Register* 59189 (1980a).

Council on Environmental Quality (CEQ) memorandum on "Procedures for Interagency Consultation to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory," 45 *Federal Register* 59191-59192 (1980b).

Council on Environmental Quality (CEQ). 1981. "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," 46 *Federal Register* 18026-18037.

Executive Order 11988, "Floodplain Management" 42 *Federal Register* 26951.

Executive Order 11990, "Protection of Wetlands" 42 *Federal Register* 26961.

Farmland Protection Policy Act, as amended, 7 USC 4201 et seq.

U.S. Water Resources Council. "Floodplain Management Guidelines for Implementing E.O. 11988," 40 *Federal Register* 6030 (1978).

Wild and Scenic Rivers Act, 16 USC 1271 et seq.

PAPERWORK REDUCTION ACT STATEMENT

The information collections contained in the Environmental Standard Review Plan are covered by the requirements of 10 CFR Part 51, and were approved by the Office of Management and Budget, approval number 3150-0021.

PUBLIC PROTECTION NOTIFICATION

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.
