

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

City of Batesville, Arkansas
Independence County, Arkansas

Project No. 4204-024
Project No. 4660-028
Project No. 4659-026
Arkansas

NOTICE OF AVAILABILITY OF MULTI-PROJECT ENVIRONMENTAL
ASSESSMENT

(July 22, 2002)

In accordance with the National Environmental Policy Act of 1969 and the Federal Energy Regulatory Commission's (Commission) regulations, 18 CFR Part 380 (Order No. 486, 52 F.R. 47897), the Office of Energy Projects has reviewed the applications for license amendments for the White River Lock and Dam No. 1 Project (P-4204-024), White River Lock and Dam No. 2 Project (P-4660-028), and White River Lock and Dam No. 3 Project (P-6059-006), located on the White River in Independence County, Arkansas, and has prepared a multi-project Environmental Assessment (EA) for the projects. There are no Federal lands or Indian reservations occupied by projects' works or located within the projects' boundaries.

The EA contains the staff's analysis of the potential environmental impacts of the amendments and concludes that issuing the amendments, with appropriate environmental protective measures, would not constitute a major federal action that would significantly affect the quality of the human environment.

A copy of the EA is on file with the Commission and is available for public inspection. The EA may also be viewed on the web at <http://www.ferc.gov> using the "RIMS" link--select "Docket #" and follow the instructions (call 202-208-2222 for assistance).

Any comments should be filed within 30 days from the date of this notice and should be addressed to Magalie R. Salas, Secretary, Federal Energy Regulatory Commission, 888 First Street, NE, Washington, D.C. 20426. Please affix Project No.

Project Nos. 4204-024, 4660-028 - 2 -
and 4659-026

4204-024, 4660-028 and 4659-026 to all comments. Comments may be filed electronically via the Internet in lieu of paper. See 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's web site under the "e-Filing" link.

For further information, contact Janet Hutzal at (202) 208-2271.

Magalie R. Salas
Secretary

**MULTIPLE PROJECT ENVIRONMENTAL ASSESSMENT
APPLICATION FOR HYDROPOWER LICENSE AMENDMENTS**

WHITE RIVER PROJECTS

White River Lock and Dam No. 1 Project
City of Batesville, Arkansas
FERC Project No. 4204-024

White River Lock and Dam No. 2 Project
Independence County, Arkansas
FERC Project No. 4660-028

White River Lock and Dam No. 3 Project
Independence County, Arkansas
FERC Project No. 4659-026

Arkansas

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Environmental and Engineering Review
888 First Street, NE
Washington, D.C. 20426

July 2002

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Alterations	(1) change the route for the unconstructed transmission lines, (2) build a substation on an existing Southwestern right-of-way, and (3) improve an existing road to permit access to the substation area of potential effect
APE	area of potential effect
ADEQ	Arkansas Department of Environmental Quality
Batesville Water Commission	Batesville Water Utilities Federal Energy Regulatory Commission
Crommett/Musser	Barbara Musser, Patrick Crommett, Daniel Crommett, and Mike Crommett Credit Shelter Trust
DES	Duke Engineering & Services, Inc.
DOE	Department of Energy
EA	Environmental Assessment
EMF	Electric and Magnetic Fields
ESA	Endangered Species Act
FPA	Federal Power Act
IC & DES	Independence County and Duke Engineering & Services, Inc.
kV	kilovolt
MOA	Memorandum of Agreement
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NIEHS	National Institute of Environmental Health Sciences
NHPA	National Historic Preservation Act
PA	Programmatic Agreement
SHPO	State Historic Preservation Officer
Southwestern	Southwestern Power Administration
USFWS	U.S. Fish and Wildlife Service
WQC	Water Quality Certification

SUMMARY

On August 8, 2001, the city of Batesville, Arkansas and Independence County, Arkansas (licensees) applied for non-capacity license amendments for the White River Lock and Dam No. 1 (Project No. 4204-024), White River Lock and Dam No. 2 (Project No. 4660-028), and White River Lock and Dam No. 3 (Project No. 4659-026). White River Lock and Dam Nos. 1, 2, and 3 Projects (White River Projects or by name when referring to them individually) are located on the White River in Independence County, Arkansas. Southwestern Power Administration (Southwestern), an agency of the Department of Energy, is a cooperating agency in the processing of the license amendments and the development of the multiple project environmental assessment. Southwestern is involved because the licensees want to interconnect with its transmission system. No federal lands would be affected.

The licensees have requested license amendments to change the route of three unconstructed transmission lines¹ into one transmission line route that would follow the White River and interconnect with Southwestern's existing transmission line. To do so, the licensees have proposed to (1) construct transmission lines between each project and the proposed substation; (2) build a substation on an existing Southwestern right-of-way; and (3) improve an existing road to permit access to the substation (Alterations). In addition to licensees' proposals, the staff considered the no-action alternative, and licensees' proposals with additional staff-recommended measures.

The proposed 25-kilovolt transmission line would extend along the north and east side of the White River between Lock and Dam No. 1 and Lock and Dam No. 3 for approximately 20.6 miles. An underground transmission line is proposed for the first 0.75 miles from Lock and Dam No. 1 to avoid crossing the Riverside City Park aboveground. Single pole structures would constitute 75 percent of all the transmission line structures, and would have a typical height of 65-80 feet. Special river crossings would have a height of approximately 100 feet.

¹ Each license issued for White River Lock and Dam Nos. 1, 2, and 3 Hydroelectric Projects authorized the licensees to construct a transmission line that would interconnect with Arkansas Power and Light (now Entergy).

The licensees propose an 80-foot right-of-way width for the transmission line. For 20 feet on each side of the centerline, the area would be cleared, while the bordering 40 feet (20 feet from each side) would be cleared of all danger trees (i.e., trees that could fall on the transmission line) and maintained in a scrub or herbaceous cover type. Most of the proposed right-of-way is situated along an existing railroad corridor and within existing pasture land. Approximately two miles of the proposed transmission line right-of-way would involve woodland clearing.

The proposed 200-foot by 250-foot substation would be located adjacent to and partially within the existing 90 feet of Southwestern's transmission right-of-way. The area is approximately two miles east of White River Lock and Dam No. 2, on the north side of the White River. The substation would step-up the voltage from 25 kV to 161 kV, and have a transformer rating of 17.5 kV. The proposed substation access road would consist of an existing access road that is approximately 3,800 feet long and an existing 300-foot-long farm road. The licensees may also make minor improvements to the existing access road, including regrading and additional crushed rock surfacing. The improvements to the existing farm road would include grading, drainage improvements, and crushed rock surfacing.

The current licenses for the White River Projects were issued in 1985 and 1986.² In 1987, the Federal Energy Regulatory Commission (Commission), extended the construction commencement date for each project by two years. Pursuant to legislation enacted in 1989 and 1996,³ the construction commencement dates were extended to November 7, 2001, for White River Lock and Dam No. 2 and February 27, 2002 for White River Lock and Dam Nos. 1 and 3. On October 26, 2001, the Commission issued an order granting a stay for the White River Projects, until the Commission acts on the applications to amend the transmission line routes.⁴ No project facilities have been constructed to date.

The staff conclude, from our independent analysis, that issuing license amendments for the projects, as proposed by the licensees, with our additional

² 33 FERC ¶ 62, 182 (Nov. 8, 1985; Project No. 4660), 34 FERC ¶ 62, 437 (Feb. 28, 1986; Project No. 4204), and 34 FERC ¶ 62, 430 (Feb. 28, 1986; Project No. 4659).

³ Pub. L. No. 101-155, 103 Stat. 935 (1989); Pub. L. No. 104-241, 110 Stat. 3141 (1996).

⁴ 97 FERC ¶ 61, 114.

recommendations, would not be a major federal action significantly affecting the quality of the human environment.

MULTIPLE ENVIRONMENTAL ASSESSMENT

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Environmental and Engineering Review
Washington, DC

White River Lock and Dam No. 1 Project
City of Batesville, Arkansas
(FERC Project No. 4204-024 – Arkansas)

White River Lock and Dam No. 2 Project
Independence County, Arkansas
(FERC Project No. 4660-028 – Arkansas)

White River Lock and Dam No. 3 Project
Independence County, Arkansas
(FERC Project No. 4659-026 – Arkansas)

I. APPLICATION

On August 8, 2001, the city of Batesville, Arkansas and Independence County, Arkansas (licensees) filed applications for non-capacity license amendments for the White River Lock and Dam Nos. 1, 2, and 3 Projects (White River Projects or by name when referring to them individually) located on the White River in Independence County, Arkansas. The current licenses for the White River Projects were issued in 1985 and 1986.⁵ None of the White River Projects occupy any lands of the United States.

⁵ 33 FERC ¶ 62, 182 (Nov. 8, 1985; White River Lock and Dam No. 2, Project No. 4660), 34 FERC ¶ 62, 437 (Feb. 28, 1986; White River Lock and Dam No. 1, Project No. 4204), and 34 FERC ¶ 62, 430 (Feb. 28, 1986; White River Lock and Dam No. 3, Project No. 4659).

The licensees have requested license amendments to change the route of three unconstructed transmission lines into one transmission line route that would follow the White River and interconnect with Southwestern's existing transmission line. The construction of a substation and access road was proposed for White River Lock and Dam No. 2. All three of the licensed hydroelectric projects would be served by the substation. The location of the proposed transmission line, substation, and access road is shown in figure 1. No project facilities have been constructed to date.

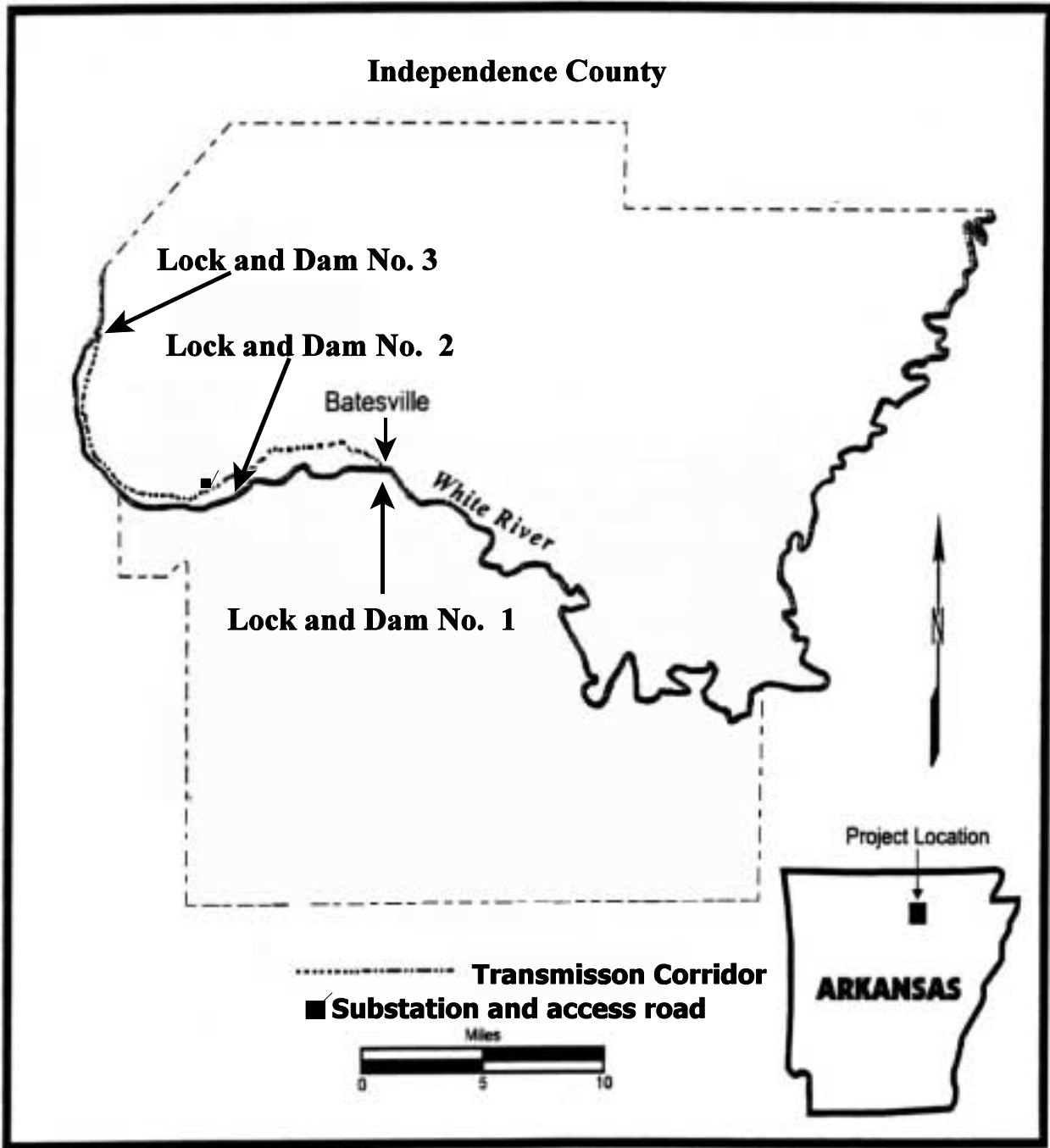


Figure 1 Proposed facilities for the White River Projects (Source: Morrow and Chancellor, 2001 as modified by staff)

II. PURPOSE OF ACTION

The Commission must decide whether to issue license amendments for the White River Projects, and what, if any, conditions should be placed on any license amendment issued. When the original licenses were issued for the White River Projects, the licensees had anticipated that the energy would be sold to Arkansas Power and Light (now Entergy) or one of its customers. The original licenses reflected this and authorized the licensees to construct three transmission lines⁶ that would interconnect with Entergy's transmission line. However, the current proposed power purchasers are directly or indirectly connected with Southwestern, and not customers of or connected to the Entergy System. If the White River Projects had transmission lines connected to Entergy instead of Southwestern, the transmission rates might be higher. Issuing the license amendments would allow interconnection with Southwestern's transmission line and avoid potentially higher transmission rates.

In this environmental assessment (EA), we assess the environmental effects associated with modifying the White River Projects as proposed by the licensees, (2) modifying the White River Projects as proposed by the licensees with additional staff-recommended measures; and (3) no action.

A. Proposed Action

1. Project Descriptions

The White River Projects are licensed to be operated in a run-of-river mode. However, the construction of project facilities has not commenced. A description of each project follows:

White River Lock and Dam No. 1

The White River Lock and Dam No. 1 consists of the existing lock and dam and the following unconstructed facilities: (1) a powerhouse containing a generating unit with a rated capacity of 3.9 MW; (2) a 280-foot-long open flume tailrace; (3) a 1.9-mile-long, 13.8-kV transmission line; and (4) appurtenant facilities.

⁶ The authorized transmission lines would not interconnect with each other, and three existing substations would be used to interconnect with Entergy's transmission lines.

White River Lock and Dam No. 2

The White River Lock and Dam No. 2 consists of the existing lock and dam and the following unconstructed facilities: (1) a powerhouse containing a generating unit with a rated capacity of 3.5 MW; (2) a multi-level intake flume; (3) a 120-foot-long open flume tailrace; (4) a 6.5-mile-long, 13.8-kV transmission line; and (5) appurtenant facilities.

White River Lock and Dam No. 3

The White River Lock and Dam No. 3 consists of the existing lock and dam and the following unconstructed facilities: (1) a powerhouse containing a generating unit with a rated capacity of 3.9 MW; (2) steel sheeting along the face of the dam; (3) intake structure; (4) 300-foot-long tailrace; (5) a 7-mile-long, 13.8-kV transmission line; and (6) appurtenant facilities.

2. Proposed Project Facilities

The licensees propose to change the route of three unconstructed transmission lines into one transmission line route for the White River Projects. To do so, the licensees have proposed to (1) construct transmission lines between each project and the proposed substation; (2) build one substation that links to Southwestern's transmission system; and (3) improve an existing road to permit access to the substation (Alterations). The licensees also propose to increase the transmission line voltage from 13.8-kV to 25-kV.

Proposed Features of the Transmission Line for the White River Projects

The proposed 25-kilovolt transmission line would extend along the north and east sides of the White River for approximately 20.6 miles. Single pole structures would constitute 75 percent of all the transmission line structures, and would have a typical height of 65-80 feet. Special river crossings would have a height of approximately 100 feet. Typically, the span for the proposed transmission line would be 450 feet to 600 feet in length. The typical span may be increased to avoid archeological sites.

The licensees propose an 80-foot right-of-way width for the transmission line. For 20 feet on each side of the centerline, the area would be cleared, while the bordering 40 feet (20 feet from each side) would be cleared of all danger trees and maintained in a scrub or herbaceous cover type.

White River Lock and Dam No. 1

The section of the proposed transmission line from Lock and Dam No. 1 to the proposed substation is approximately 9.6 miles long. The first 0.75 miles of this line would be buried underground.

White River Lock and Dam No. 2

The section of the proposed transmission line from Lock and Dam No. 2 to the proposed substation is approximately 2 miles long. The proposed 200-foot by 250-foot substation would be located adjacent to and partially within the existing 90 feet of Southwestern's right-of-way. The area is approximately two miles east of White River Lock and Dam No. 2, on the north side of the White River. The substation would step-up the voltage from 25 kV to 161 kV, and have a transformer rating of 17.5 kV.

The proposed substation access road would consist of an existing access road that is approximately 3,800 feet long and an existing 300 foot-long farm road. Minor improvements may be made to the existing access road, including regrading and additional crushed rock surfacing. The improvements to the existing farm road would include grading, drainage improvements, and crushed rock surfacing.

White River Lock and Dam No. 3

The section of the proposed transmission line from Lock and Dam No. 3 to the proposed substation is approximately 9 miles long. Independence County, Arkansas has also proposed a deviation from the transmission route to avoid archeological sites. For approximately 1.25 miles, the transmission right-of-way would be moved 900 feet east of the proposed route.

3. Proposed Environmental Measures

The licensees propose the following environmental measures:

- \$ Develop a transmission right-of-way that minimizes forest land clearing, and avoids riparian buffers along the White River.
- \$ Minimize disturbance to wetlands areas through avoidance or by spanning unavoidable wetland areas. For wetlands that must be spanned, disturbance

- would be limited to hand clearing of danger trees. Mechanized clearing and the construction of access roads in wetlands would not occur.
- \$ Avoid archeological sites that are eligible or potentially eligible for listing on the National Register of Historic Places. Transmission line poles would be erected away from the sites, and the sites would be spanned.
 - \$ Clearly mark and protect any archaeological resources during construction, and develop a management plan to avoid, minimize, or mitigate any adverse effects to any cultural resources.
 - \$ Limit impacts to prime farmland by siting the transmission right-of-way along existing access roads, a railroad corridor, and existing fence lines.
 - \$ Use clearing, seeding, and erosion control measures that meet or exceed the standards set forth in local, state, and federal requirements and comply with agency recommendations regarding protection of surface waters.
 - \$ Use erosion control measures and Best Management Practices during construction to prevent sediment, trash, debris, and other manmade pollutants from entering sensitive areas such as the river and adjacent wetlands.
 - \$ Install filter fabric fence downhill from the substation and access road construction site to control any erosion, and spray water to control any construction dust.
 - \$ Comply with requirements of the Arkansas Department of Environmental Quality during all substation and access road grading and earthwork activities.
 - \$ Revegetate areas temporarily disturbed with suitable seed mixtures.
 - Use single wood and/or metal poles and careful placement of guyed angle structures to minimize impacts to farmland and existing agricultural access roads.
 - Design project structures to be "raptor safe" and to meet the guidelines recommended in *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996*.

B. Alternatives to the Proposed Actions

1. Proposed Actions with Additional Staff-recommended Measures

An alternative to licensing the projects proposed by the licensees is to license them with additional staff-recommended measures for resource protection and enhancement. In addition to the licensees' environmental measures, we recommend the following:

- Consult with the appropriate resource agencies in preparing final drawings and specifications for controlling erosion and sedimentation during transmission line, substation, and access road construction.
- Develop a visual resource mitigation plan to minimize adverse visual affects.
- Conduct a Phase 1 Cultural Survey for the 1.5 miles of the transmission right-of-way not initially surveyed, submit the results of the survey to the Arkansas SHPO, the Osage Tribe, and the Quapaw Tribe for review and comments, and file for approval the survey results and any comments received at least 90 days before the start of any construction to the Commission.
- Consult with the Batesville Water Utilities during the planning and construction of the underground portion of the transmission line.

2. No-Action Alternative

The staff use the no-action alternative to establish baseline environmental conditions for comparison with other alternatives. Under the no-action alternative, the White River Projects would be constructed as prescribed in the current license orders, and no new environmental protection, mitigation, or enhancement measures would be implemented.

3. Alternative Considered But Eliminated from Detailed Study

The licensees also proposed and analyzed the potential effects of an alternative transmission right-of-way and substation situated along the south and west side of the White River. The environmental analysis is provided in the Draft Environmental

Assessment for White River Lock and Dam Nos. 1, 2, and 3, which the licensees submitted in lieu of the revised Exhibit E (Independence County, 2001A). Commission staff reviewed the alternative transmission right-of-way and substation and concur in rejecting it as an alternative because of the adverse affects to many environmental resources.

The alternative transmission route would involve clearing 121 acres of mature forests, a major loss of habitat for forest interior species, and would involve the spanning of 14 wetlands. One wetland would require extensive tree clearing and pole placement within it. River crossings at Lock and Dam No. 1 and No. 3 would also be necessary.

Since the alternative transmission right-of-way would be situated at a higher elevation, it would be more visible from State Highway 14 and residences around Round and Dean Mountains. The transmission line would also be easily viewed by recreationists along the White River, and those using the Kennedy and Riverside City Parks. In addition, the transmission line would be visible from the Highway 167 bridge.

III. CONSULTATION AND COMPLIANCE

A. Agency Consultation

The Commission's regulations require that applicants consult with appropriate state and federal resource agencies and the public before filing a license amendment application. This consultation is required to comply with the Fish and Wildlife Coordination Act, the Endangered Species Act, the National Historic Preservation Act, and other federal statutes. Pre-filing consultation must be complete and documented in accordance with the Commission's regulations. On March 21, 2001, consultation letters were sent to the appropriate agencies. Landowners whose property would be affected by the proposed Alterations were notified by mail on June 27, 2001.

B. Interventions

On March 3, 2002, the Commission issued public notices that the city of Batesville, Arkansas had filed an application for an amendment of the White River Lock and Dam No. 1's Project license, and that Independence County, Arkansas had filed applications for amendments of the White River Lock and Dam Nos. 2 and 3 Projects

licenses. In response to these public notices, the following entities filed comments, protests, and motions to intervene⁷:

Protesting Entities

Date of Letter

Barbara Musser, Patrick Crommett, Daniel Crommett,
and Mark Crommett Credit Shelter Trust
2)

February 26, 2001
(Lock and Dam No.

Interveners

Date of Letter

U.S. Department of the Interior

February 28, 2002
(all three projects)

Southwestern Power Administration⁸

March 20, 2002
(all three projects)

Commenting Entities

Date of Letter

Don Szczur

March 25, 2002
(Lock and Dam No. 3)

Batesville Water Utilities

April 5, 2002
(Lock and Dam No. 1)

C. Water Quality Certification

The Arkansas Department of Environmental Quality (ADEQ) is charged with the compliance responsibility of the Federal Water Pollution Control Act. The licensees requested a Water Quality Certification (WQC) for the White River Projects on March 21, 2001. On April 9, 2001, the ADEQ issued a single WQC without any terms and conditions for the White River Projects. ADEQ determined that the proposed construction of the transmission line would not physically alter a significant segment of a water body, and would not violate the water quality criteria.

⁷ None of the interveners opposed the licensees's proposals.

⁸ Southwestern Power Administration withdrew their Motion to Intervene on April 24, 2002

On February 1, 2002, an email from the licensees' contractor was sent to Steve Drown, of ADEQ, asking if an additional WQC was needed for the construction of the proposed substation and access road. In an email reply on February 1, 2002, Mr. Drown stated that the original WQC issued on April 9, 2001 is all that is necessary for the proposed license amendments.

D. Coastal Zone Management Act

Arkansas, being a landlocked state, does not have a coastal zone management plan. Therefore, coastal zone consistency certifications are not required for the proposed amendments to the White River Projects. States with approved coastal zone management plans may be found on the National Oceanic & Atmospheric Administration's Coastal Zone Management Program website at <http://www.ocrm.nos.noaa.gov/czm/>.

E. Section 7 Endangered Species Act

Section 7 of the Endangered Species Act (ESA) requires agencies to ensure that their actions do not jeopardize the existence of federally listed endangered or threatened species or result in the destruction of critical habitat of those species. Both the U.S. Fish and Wildlife Service (USFWS) and the Arkansas Natural Heritage Commission were contacted about the White River Projects. There are several federally listed species known to occur in the project area; however, no impacts to these species are anticipated by approval and implementation of the proposed license amendments. The analysis associated with these resources is presented in Section 3 of this EA.

F. Floodplain/Wetland Impacts

Southwestern, an agency of the Department of Energy, is a cooperating agency for the EA because the licensees want to interconnect their transmission line with Southwestern's transmission system. The licensees' transmission right-of-way would be located on 100-year floodplains and cross wetlands.

The Department of Energy (DOE) must comply with Executive Order 11988 and Executive Order 11990. Executive Order 11988-Floodplain Management (May 24, 1977), requires each Federal agency to issue or amend existing regulations and procedures to ensure that the potential effects of any action it may take in a floodplain are evaluated and that its planning programs and budget requests reflect consideration of flood hazards and floodplain management. Guidance for implementation of the Order is provided in the Floodplain Management Guidelines of the U.S. Water Resources Council (40 FR 6030, Feb. 10, 1978). Executive Order 11990-Protection of Wetlands (May 24,

1977), requires all Federal agencies to issue or amend existing procedures to ensure consideration of wetlands protection in decision-making. It is the intent of both Executive orders that Federal agencies implement the floodplain/wetlands requirements through existing procedures such as those established to implement the National Environmental Policy Act (NEPA) of 1969. In those instances where the impacts of actions in floodplains and/or wetlands are not significant enough to require the preparation of an environmental impact statement under section 102(2)(C) of NEPA, alternative floodplain/wetlands evaluation procedures are to be established.

10 CFR 1022 delineates the Department of Energy's responsibilities with respect to compliance with Executive Order 11988 and Executive Order 11990. This part establishes policy and procedures for discharging DOE's responsibilities for Floodplain/Wetland Review, which includes: (1) DOE policy regarding the consideration of floodplain/wetlands factors in DOE planning and decision making; and (2) DOE procedures for identifying proposed actions located in floodplain/wetlands, providing opportunity for early public review of such proposed actions, preparing floodplain/wetlands assessments, and issuing statements of findings for actions in a floodplain.

In accordance with the DOE's Floodplain/Wetland Review Requirements, Southwestern Power Administration prepared a Notice of Floodplain/Wetland Involvement and published it in the Federal Register on March 6, 2002. Consistent with 10 CFR 1022, a floodplain/wetland impacts assessment has been incorporated into this Environmental Assessment addressing the proposed actions in a manner so as to avoid or minimize potential harm to or within any affected floodplain/wetland. The analysis associated with these resources is presented in Section 2b and 2c of this EA. Southwestern's Statement of Finding is incorporated in the Commission's finding of no significant impact.

IV. ENVIRONMENTAL ANALYSIS

A. General Description of the Locale

The White River flows nearly 720 miles from the Ozarks of Arkansas to the Mississippi and has a drainage basin of 27,765 square miles. The proposed Alterations for the White River Projects would parallel the White River between River Mile 316 and River Mile 294, and would be located within the Middle White River Basin (basin). The basin extends over portions of Independence, Jackson, Marion, Searcy, Stone, Baxter, Cleburne, Fulton, Sharp, and IZard counties and has a drainage area of approximately 10,000 square miles.

The topography of the basin is characterized by narrow ridges and broad valleys. The proposed Alterations would be located along the valleys on lands with slopes generally less than three percent. Annual precipitation for the project area is approximately 50 inches, and the area averages 7.1 inches of snowfall. The average daily maximum and minimum temperature for July is 93.2 degrees F and 67.2 degrees F, while it is 49.1 degrees F and 26.3 degrees F for January.

The city of Batesville is the main commerce and industrial center of the area, and has a population of 10,000. The surrounding areas are overwhelmingly rural, with most of the region being used for agricultural purposes. Forestlands are predominate north of the projects.

B. Cumulative Effects

According to the Council on Environmental Quality's regulations for implementing NEPA (§1508.7), an action may cause cumulative impacts on the environment if its impacts overlap in time and/or space with the impacts of other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time. Through our independent analysis, we've identified no resources that would be cumulatively affected by the proposed modifications to the White River Projects. The projects are located in a watershed where very little past development has occurred and very little future development is anticipated.

C. Proposed Action and Action Alternatives

In this section, the staff discuss the effects of the proposal on environmental resources. For each resource, we first describe the affected environment, which is the existing condition and the baseline against which we measure effects. We then discuss and analyze the specific environmental issues. The area of potential effects (APE) is limited to the 80-foot right-of-way width for the transmission line; the construction area for the proposed transmission line and proposed substation; and the construction area need to improve and expand the proposed substation access road.

As part of our environmental analysis, we examined all resource areas--geological resources, fish and wildlife, water resources, cultural, recreation, land use, aesthetics, and human health--in regard to how the projects would affect them. We do not discuss water

resources, fish resources, and recreation because those resources would be largely unaffected by the proposed Alterations for the White River Projects.

1. Geological Resources

Most of the proposed new right-of-way is on the relatively level or gently sloping floodplain of the White River where sandy, silty alluvial floodplain soils have developed from sand, silt, and clay sediment deposited during flooding by the river.

The proposed 0.75-mile long buried segment of the transmission line would also be on the river floodplain, and would follow existing pipeline and road rights-of-way. Most of the buried section would follow city roads through commercial and industrial areas, with a short segment passing through Riverside City Park.

The proposed substation and access road would be located on stony and gravelly sandy loam soils that developed on weathered sand bedrock on the hillside slopes up away from the floodplain, and uphill of the railroad.

Staff Analysis

Increased potential for erosion and sediment runoff would occur during trench excavation and temporary stockpiling during construction of the buried segment, excavation of transmission pole foundations and associated disposal of the excavated materials, excavations necessary for installation of transmission pole guy wires, and grading and excavation activities during construction of the substation and substation access road.

Erosion and sediment runoff that would result from construction of the Alterations would be kept to minimal levels by implementation of the licensees' proposed mitigative measures.

The staff concludes that while the control measures proposed by the licensees would generally ensure that only minor localized erosion and sediment impacts would be caused by project construction, the final design of the control measures to be used at the construction sites would need to be based on the final transmission line, substation, and access road design, which hasn't been completed. Therefore, the staff recommends that, before starting project construction, the licensee should consult with the appropriate resource agencies in preparing final drawings and specifications for controlling erosion

and sedimentation during transmission line, substation, and access road construction.

Unavoidable Adverse Effects

Some minor, short-term erosion and sedimentation would be unavoidable.

2. Terrestrial Resources

The major cover types in the project area include agricultural grassland, oak-hickory forest, and agricultural cropland.

Approximately 17.0 miles (165 acres) of the proposed 80-foot-wide transmission line right-of-way is located within agricultural grassland. The most common is cattle pasture. These pastures, which are found throughout the proposed right-of-way, are fenced and typically well grazed. Several hundred head of cattle can be found in these pasture areas. Other grassland areas within the project corridor are used for hay production.

Approximately 2.0 miles (19 acres) of the proposed transmission line route would require unavoidable forest clearing along several of the ridgelines adjacent to the river. The forest land within the corridor is a relatively undisturbed oak-hickory forest. Dominate species include white oak, northern red oak, bitternut hickory and shagbark hickory. Chestnut oak is more common on the dry, rocky ridgelines. Red cedar can be found in the forest openings and along logging roads.

Agricultural croplands of corn and sorghum occur in small areas within the right-of-way and only in the area near the city of Batesville.

The substation location is in and adjacent to an existing right-of-way that is managed using herbicide treatments to keep vegetation in an early successional stage. Typical species include oatgrass, small sweetgum and blackberry. The access road is barren of vegetation.

Land use and cover type strongly influence the wildlife of the area. The oak-hickory hardwood forest and the interspersion of pasture and fallow fields provides suitable habitat for quite a number of wildlife species. Due to the lack of food and cover, the grazed land is less suitable for wildlife; but wildlife is represented by species such as the coyote, red fox, killdeer, and eastern garter snake. The open areas and early successional areas provide feeding areas for birds such as the eastern meadowlark, field sparrow, barn swallow, and eastern bluebird.

The oak-hickory hardwood offer habitat for species such as the gray squirrels, common flicker, Carolina wren, eastern wood pewee (*Contopus virens*), and indigo bunting.

The majority of wetlands in the project area would be avoided. The transmission would cross four wetlands. From Lock and Dam Number 3 downstream these areas are at Spout Springs (0.1 acre), tributary to Betsey Bill Creek (0.1 acre), a second tributary to Betsey Creek (0.1 acre) and a tributary to Spring Creek (0.05 acre). There are no wetlands in the substation area.

Wetland areas provide habitat for species such as beaver, raccoon, mallard, and wood ducks.

The majority of the proposed transmission route would cross broad and level 100-year designated floodplains associated with the White River and several major tributaries such as O'Neil Creek, Betsey Gill Creek, Blue Spring, and Poke Miller Creek. The proposed substation and access road improvements are not located within any designated 100-year floodplain area.

Staff's Analysis

a. Wildlife and vegetation

Environmental impact in grassland areas would be relatively minor due to the lack of clearing and the use of existing agricultural roads for access. The placement of the 25-kV single-pole structures would have little adverse impact to these grassland areas.

Impacts due to construction and long term maintenance of the transmission right-of-way include the conversion of forest habitat to early successional habitats. Impacts to wildlife would be minimized to the extent practicable through the use of existing transportation corridors (e.g., agricultural access roads, railroad corridor) and non-forested areas such as cattle pastures.

The conversion of intact forested habitats to early successional stages such as the two miles south of Lock and Dam No. 3 and the increase in forest edge that results, would adversely affect forest interior species by causing: 1) increased rates of nest predation from species such as crows, raccoons, and skunks; 2) increased rates in nest parasitism from brown-headed cowbirds ; 3) reductions in pairing success; and 4) reductions in nesting area.

Temporary wildlife impacts are those associated with the disturbance to habitats during construction (e.g. noise and clearing).

Once the transmission right-of-way construction has been completed, the maintained corridor would provide habitat for early successional species such as the indigo bunting and song sparrow. Other species such as the red-tailed hawk, wild turkey, coyote, red fox, and white-tailed deer would also use the right-of-way for foraging and travel corridors. The white-tailed deer and the turkey are important game animals in the region.

The right-of-way would be cleared at ground level for approximately 40 feet from center line. The remaining 40 feet would be maintained in a scrub or herbaceous cover type. The clearing of woodland would be minimized by the siting of the corridor in existing agricultural areas and along existing transportation corridors.

Approximately 0.75-miles (3.6 acres) of the transmission line near the city of Batesville would be buried in an existing pipeline and road rights-of-way. The construction activity would cause temporary soil disturbance.

All disturbed areas would be restored and seeded, and all areas not used for the permanent right-of-way (e.g., temporary work space) would be allowed to naturally revert back to pre-construction conditions. The permanent right-of-way would be maintained in herbaceous cover. Vegetative maintenance across the entire 80 feet would be done a minimum of once every three years in upland areas. No herbicides would be utilized in the vegetation management. Staff recommends that these measures be required by the inclusion of a license article in any amendment issued.

Unavoidable Adverse Effects

Of the 80-foot right-of-way, 40 feet on centerline would be cleared at ground level. The remaining 40 feet would be cleared of all danger trees and maintained in a scrub or herbaceous cover type. Permanent conversion of intact forested habitats to early successional stages such as the two miles south of Lock and Dam No. 3 and the increase in forest edge that results, would adversely affect forest interior species. The crossing of these forested areas just south of Lock and Dam No. 3 is unavoidable due to the proximity of the ridge to the White River and the existence of the railroad corridor.

b. Wetlands

The four wetland crossings would be spanned by the proposed transmission line. No wetlands are associated with the proposed substation within Southwestern's transmission right-of-way. The licensees propose to use selective clearing measures in any forested wetlands, leaving the root zone and as much low growing vegetation as possible in the buffer zones to prevent erosion. Only those trees that pose a current or potential safety problem would be removed. No mechanized equipment would be allowed off the access roads. All vegetation in the affected wetland area would be hand cleared. Minimal cutting at the emergent and scrub-shrub wetlands would be required. Overall, the biological productivity, habitat diversity, and flood storage capacity of the wetlands and floodplain would not be affected by the project.

Plan-and-profile drawings for the project would be supplied to the construction supervisors before any clearing and earthwork begins. These drawings would provide locations of the structures and specific locations and requirements of any sensitive areas such as wetlands and floodplains. Staff recommends the implementation of these measures in a wetland/floodplain management license article.

Unavoidable Adverse Effects

Minimal cutting at the emergent and scrub-shrub wetlands would be required.

c. Floodplains

The placement of the single pole steel structures in the 100-year floodplain would not have any adverse effect on lives, property or any natural and beneficial values. Single-pole transmission line structures that are directly drilled do not significantly impede floodwaters and floating debris. Directly drilled involves placing the poles directly into the ground, poles would not be placed on any pad or support that is above the original ground elevation. Moreover, existing and at grade access roads would be used for construction and maintenance of this project. No new access roads are planned.

The Independence County Office of Emergency Services (Floodplain Enforcement Officer) was contacted in association with this proposed project. This office has determined that the proposed transmission line structures would not have any impact to the floodplains.

Unavoidable Adverse Effects

The proposed project would not have any negative, direct and indirect, or long-term and short-term effects on the floodplains and the associated resources.

3. Threatened and Endangered Species

The following federally listed endangered and threatened species are known to occur in Independence County:

- Running Buffalo Clover (*Trifolium stoloniferum*). This federally endangered clover is a perennial that forms long stolons, horizontal branches at the base of the plant that root at the nodes and produces new plants. This clover usually attains a height of three to six inches, and flowers from mid-April to June. Historically, this species occurred in Arkansas, Illinois, Indiana, Kentucky, Missouri, Nebraska, Ohio, and West Virginia. However, there are currently no known populations in Arkansas, Illinois, or Nebraska. Since the species is not known to occur along the proposed transmission line, the construction and maintenance of the line would have no effect on the Running Buffalo clover.
- Pink Mucket (*Lampsilis abrupta*). This federally endangered mussel is a round to elliptical shaped mussel with a smooth, yellow or yellowish green shell. The shell is usually rayless and can reach four inches in length. These mussels occur over a wide geographic area including Mississippi, Tennessee, Ohio, and the Cumberland River systems. The largest Arkansas populations are in the Spring and White Rivers, with smaller numbers in the Ouachita and Little River systems. This declining mussel prefers to live in the sediment (i.e., sand/gravel) of large, free-flowing, well oxygenated rivers. In a recent survey no live pink mucket mussels were found in the project area. The proposed project would span the White River with one crossing at Lock and Dam No. 2. No structures would be placed in the waterway or riparian buffer. Therefore there would be no effect to on the Pink Mucket mussel or its habitat.
- Scaleshell (*Leptodea leptodon*). The Scaleshell is endangered and has a relatively small thin, elongate compressed shell. The scaleshell occurs in medium to large rivers with low to moderate gradients in a variety of stream habitats. Within the last 50 years the scaleshell has become increasingly rare and its range greatly restricted. Historically, the scaleshell occurred in 55 rivers, today the species is know from 14 rivers, including the White River in Arkansas. In 1999, a single live specimen was collected from the White River near Newport Arkansas, approximately 30 miles downstream of Batesville. Recent surveys did not find scaleshell mussels in the project area. The proposed project would span the White

- River with one crossing at Lock and Dam No. 2. No structures would be placed in the waterway or riparian buffer. Therefore there would be no effect on the scaleshell mussel or its habitat.
- Indiana Bat (*Myotis sodalis*). The Indiana bat is an endangered, medium-sized myotis closely resembling the little brown bat (*Myotis lucifugus*). The USFWS has stated that this rare bat occurs in the Independence County area. Review of existing data has revealed no documented occurrences of this species within or in the vicinity of any proposed project facilities. This bat feeds on insects and usually forages around riparian and floodplain trees. Water bodies lacking riparian vegetation are not used for foraging. The foraging habitat averages about 11.2 acres per bat in mid-summer. This bat ranges from the Midwest and eastern United States to the Ozark region of Oklahoma, southern Wisconsin, and up through Vermont. Approximately 500,000 individuals of this species still exist. Limestone caves are used for winter hibernation. The preferred caves have a temperature averaging 3-6 °C in midwinter. The limited clearing of suitable summer roosting and maternity trees (i.e., hardwoods with loose bark) could have detrimental effects on this species. The Indiana Bat has specific habitat requirements that do not occur in project area; therefore, the proposed transmission line and substation would not affect the Indiana Bat.
 - Gray Bat (*Myotis grisescens*). This federally endangered bat is the largest member of its genus in eastern United States. It is listed to occur in Independence County. All these occurrence are associated with specific features such as caves. Little is known about the feeding habits of this bat. However, limited observations indicate that the majority of insects eaten are aquatic insects such as mayflies and caddisflies. Populations are found mainly in Alabama, northern Arkansas, Kentucky, Missouri, and Tennessee. They are also found in northwestern Florida, western Georgia, Kansas, south Indiana, Illinois, Oklahoma, western Virginia, and possibly western North Carolina. Fragmentation and isolation have been a problem for this species the last three decades. The gray bat colonies are restricted entirely to caves or cave-like habitats. During the summer the bats are highly selective for caves providing specific temperature and roost conditions. Usually, the caves are located within 0.5 miles of a river, lake, or reservoir. Due to the specific habitat requirements of the Gray Bat and the lack of this habitat in the project area, the proposed Alterations would not affect this species.
 - Bald Eagle (*Haliaeetus leucocephalus*). This federally threatened species has been documented as breeding and wintering along the White River. Wintering eagles are commonly observed below Lock and Dam No. 2 and 3 foraging below the dams. The eagle is primarily a riparian inhabitant, frequenting rivers, lakes,

and reservoirs. Nests are usually constructed in large living pines near the water body. The preferred nest site is typically within one-half mile of the water body, within the largest pine of the area, and has an open view of the surrounding area. The bald eagle feeds primarily on fish, but would take a variety of other prey such as waterfowl and carrion if the situation arises. No bald eagles or nests were observed along or near the project corridor during the April field survey.

To insure protection of the Bald Eagle all the project structures would be designed to be “raptor safe” and meet the guidelines recommended in *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996*. The proposed structures are designed to provide adequate spacing between the phases and allow for safe perching on the pole top and any structure arms, and spacing between the phases and ground-wires at the recommended 60 inches or greater. The shield wire associated with the crossing of the White River at Lock and Dam No. 2 would be equipped with orange aviation balls. These measures have been found to reduce raptor and waterfowl collisions by 53 percent on transmission lines over water bodies. Staff recommends that a raptor protection license article be included in any amendment issued. Construction and maintenance of the transmission line with the above proposed "raptor safe" lines is not likely to adversely affect the bald eagle.

- The Interior least tern (*Sterna antillarum*), listed as Federally endangered was observed foraging below the Lock and Dam No. 2 spillway during the April field survey. According to the existing records, this species does not nest in Independence County but does in the counties bordering the Mississippi River such as Phillips, Chicot, Crittenden, and Mississippi. The sandbars adjacent to Lock and Dam No. 2 were searched for possible nests and none were found. The birds were not seen on subsequent visits and were presumed to be migrating through the project area. The identified Interior least tern appears to be a transient sighting, therefore the proposed transmission line would not affect the Interior least tern.

Staff's Analysis

The existing records do not indicate the occurrence of any species listed by the USFWS as Endangered or Threatened within a quarter mile of the proposed transmission line route. No aquatic species would be affected by the proposed project due to spanning of the White River at Lock and Dam No. 2.

The USFWS, by letter dated January 23, 2002, concludes that no federally listed or proposed threatened or endangered species occur in the impact area of the project. Therefore, the requirements of Section 7 of the Endangered Species Act have been fulfilled.

On April 5, 2002, the U.S. Department of Interior filed a letter requesting that the Commission or licensee work with the Service to update the status of the listed scaleshell mussel and the pink mucket mussel. By letter dated April 15, 2002, the Commission requested that the city of Batesville act as our non-Federal representative to initiate consultation under the Endangered Species Act. The letter referenced the USFWS letter requesting additional information for the two mussel species and that the information gathered would help determine if further consultation is needed with the USFWS. On April 25, Independence County filed a letter stating that they, on behalf of themselves and the city of Batesville, would act as the non-Federal representative. On June 6, 2002, the licensee filed a Progress Report on informal consultation under the Endangered Species Act. The USFWS helped to determine the areas to be surveyed. The report concludes that no living scaleshell mussels or mucket mussels were found in the surveyed area. Given that no mussels were found in the project area, the construction and maintenance of the transmission line would not affect either listed species.

4. Land Use and Aesthetics

The proposed transmission right-of-way would be placed along existing access roads, the Missouri and Pacific Railroad corridor, and existing fence lines to minimize disturbance to agricultural grasslands and wetlands. Along the majority of the proposed transmission line there is a hardwood riparian corridor approximately 30 to 80 feet wide that forms a buffer between the White River and the agricultural grasslands. Very few residences would overlook the proposed transmission right-of-way, and those that do are 0.5 to 1.0 miles away from the proposed right-of-way (IC & DES, 2001).

Most of the proposed transmission line would be located in a rural agricultural setting. The proposed transmission line would also be routed along a forested ridge for two miles, requiring the clearing of trees. Approximately two miles of the proposed transmission right-of-way would be located within the city of Batesville.

The proposed substation and access road would be located in a rural setting bordered by Southwestern's existing transmission right-of-way and the existing railroad tracks, with woodlands nearby. Since the White River is nearly 0.2 miles away from the proposed substation and public roads are not in the vicinity of the area, visibility of the proposed substation will be limited.

Staff Analysis

a. Visual Impacts

The licensees conclude that the existing riparian buffer would help screen most of the proposed transmission line and its visibility would be limited by specific design measures (e.g., use of single wooden and metal poles). To mitigate for the visual impacts along the forested ridge, the licensees propose a set back from the west side of the ridge. An existing hardwood buffer of at least 30 feet would remain intact along the ridge drop-off, and mature oak trees at least 60 feet in height would help shield the transmission line. The licensees also propose to span the transmission line across the White River at Lock and Dam No. 2. The spanning would require a bundled conductor and orange aviation balls.

Don Szczur, a private citizen, commented that he intends to build a house on his property, and that the proposed transmission line would be in proximity of the unbuilt house. He believes this would adversely affect the aesthetics of his property, and he suggested that the transmission line be built several miles away.

Staff has concluded that the construction of the proposed transmission line would adversely affect the aesthetics of the area. Overhead transmission lines are not currently present in the area of the proposed transmission right-of-way, and the construction of the proposed transmission line would permanently alter the viewshed of the area. The spanning of Lock and Dam No. 2 would be visible to recreationist, and even though the transmission line would be set back from residential houses, it may still be visible.

The licensees proposals would reduce the visual effects to the environment, but the final design of the visual control measures to be used would need to be based on the finalized route of the transmission line, which hasn't been completed. Therefore, the staff recommends that, before starting project construction, the licensee should consult with a landscape architecture firm to develop a visual resource mitigation plan. The plan should include the use of non-specular materials and dark colored poles to minimize visual effects. Glass insulators should not be used.

The proposed substation and access road would not adversely affect the aesthetics of the area. The buffer of trees would limit visibility from the river, and there is an existing transmission line adjacent to where the substation and access road would be built.

Staff do not agree with Mr. Szczur's suggestion of rerouting, since this would require the transmission right-of-way to go through established hardwood forests. Trees would need to be removed, degrading the aesthetics of the area, and reducing habitat for terrestrial species.

Unavoidable Adverse Effects

The landscape would be permanently altered by the proposed transmission line, but the visual treatment plan should mitigate the adverse affects.

b. Land Use

Four owners⁹ of a single parcel of land protested the placement of the 80-foot easement across their property for the proposed transmission line. The proposed transmission line would be situated between the railroad tracks and the White River. Currently, the tract of land is for sale for the purpose of development, and Crommett/Musser believe the proposed transmission line would result in the property being used solely as an easement. Crommett/Musser propose burying the transmission line to accommodate future development of the property.

We conclude that the placement of the easement and the transmission line would limit, but not entirely preclude development of the Crommett/Musser land. The Crommett/Musser land is approximately 410 acres, and the transmission easement would be approximately 12 acres. Development of housing would not be permitted within the easement, but the easement would not affect the development of roads, nor would it affect the development of the remaining property.

The transmission line would also limit, but not preclude, development of housing along the Crommett/Musser waterfront property. About a third of the proposed transmission right-of-way would be located along a narrow strip of waterfront property within an existing transportation corridor. A limited amount of land would be available for development. The 80-foot-wide transmission easement, however, should not hinder

⁹ Barbara Musser, Patrick Crommett, Daniel Crommett, and Mike Crommett Credit Shelter Trust (Crommett/Musser) are the joint owners of the single parcel of land.

the development of the remaining waterfront.

The staff does not agree that underground transmission line should be installed on the Crommett/Musser property. There is a high probability that the construction of an underground transmission line could disturb and adversely affect unknown archeological sites. A cultural resource survey conducted in 2001 documented many subsurface archeological sites on properties which had similar landscape and geology as the Crommett/Musser property.

Unavoidable Adverse Effects

There would be an unavoidable effect on land use of the transmission right-of-way. Housing could not be developed within the transmission right-of-way, although other development, such as roads, would not be precluded. The proposed transmission easement would not preclude the agricultural use of the lands. Animals would still be permitted to graze within the easements for the proposed transmission right-of-way.

c. Underground Transmission Line

To reduce the visual impacts to the Riverside City and Kennedy Point Parks, and to avoid spanning Riverside City Park, the licensees have proposed to install 0.75 miles of underground transmission line. The underground transmission line would follow existing pipeline and city road right-of-ways. The Batesville Water Utilities (Batesville Water) expressed concern that the underground line would be in the vicinity of Batesville Water's water and wastewater transmission and distribution lines. Batesville Water requested that the licensees cooperate with them in the planning and construction of the underground transmission line.

The use of the underground transmission line would benefit the aesthetics of the area. Currently, no overhead transmission lines are present in this area of the proposed transmission right-of-way and using the underground line would enable recreationists to continue to enjoy the existing viewsheds of the area.

To interconnect with the powerhouse, the proposed underground transmission line would be routed through Riverside City Park, temporarily restricting recreationists from this area of the Park. As an alternative, recreationist could use the Kennedy Point Park, located directly across the river from Riverside City Park. Though Kennedy Point Park lacks playground equipment available at Riverside Park, its picnic and restroom facilities would be available for use during the temporary restrictions.

The staff agree that the Batesville Water Utilities should be consulted during the planning and construction of the underground transmission line. The licensees have previously cooperated with Batesville Water, and a continuation of this cooperation would help avoid inadvertent disturbance of the underground water and wastewater lines during construction. Documentation of consultation should be filed with the Commission when the final plans for the transmission right-of-way, substation, and access road are filed for approval.

Unavoidable Adverse Effects

The underground construction of the transmission line would result in an unavoidable short-term impact to the Riverside City Park. Recreationists would be temporarily restricted from the construction area.

5. Cultural Resources

Native Americans once inhabited the area encompassing the White River Projects. The Quapaw tribe once occupied much of eastern Arkansas, and the Osage tribe lived in the Ozark region of Arkansas. Through the Treaty of 1808, the Osage ceded territory that includes Independence County to the United States. Evidence for Native American occupation includes archaeological sites and scattered artifacts. Also, the city of Batesville is one of the oldest settlements in the state, with the first Euroamerican settling in 1812. Subsequent Euroamerican settlements left a variety of remains in the project area, including buildings and structures.

In 2001, a Phase I Cultural Resource Survey was conducted for all but 1.5 miles of the 20.6 miles of transmission right-of-way; access was not granted for an unsurveyed section. The survey identified 37 archeological sites within the transmission right-of-way, of these, 24 sites are potentially eligible for the National Register of Historic Places (National Register). Fifteen historic structures within view of the proposed transmission right-of-way have been identified as being potentially eligible for the National Register.

Phase I Cultural Resource Survey Addendum A, submitted in 2002, examined the area where the proposed substation and access road would be built. No cultural features were discovered along the proposed access road or inside the footprint of the proposed substation. A previously unrecorded archeological site was found in the transmission right-of-way outside of the proposed substation footprint.

Phase I Cultural Resource Survey Addendum B, submitted in 2002, examined a

transmission route deviation to the proposed transmission route. For approximately 1.25 miles, the transmission right-of-way would be moved closer to the Missouri Pacific Railroad corridor. No additional Historic Properties were discovered along the alternative route. One previously identified archeological site extends into the right-of-way for the deviation.

Staff's Analysis

a. Historic Properties

The Arkansas State Historic Preservation Office (SHPO), determined that 21 archeological sites could be affected by the construction of the proposed transmission line. Three of the archeological sites and none of the 15 eligible historic structures would be adversely affected (letter from Ken Grunewald, Arkansas Historic Preservation Program, Little Rock, Arkansas, March 26, 2002). The archeological site described in Addendum A was severely eroded and affected by previous transmission line construction, so it was deemed not eligible for the National Register (letter from Ken Grunewald, Arkansas Historic Preservation Program, Little Rock, Arkansas, January 15, 2002).

The SHPO requested that the Commission execute a Programmatic Agreement (PA) for the White River Projects. The SHPO recommended that the PA should include provisions for surveying the transmission right-of-way where landowner access was not granted; how the sites considered potentially eligible are to be avoided or tested; and who would be responsible for implementation of the avoidance or testing of potentially eligible sites (letter from Ken Grunewald, Arkansas Historic Preservation Program, Little Rock, Arkansas, October 23, 2001).

The SHPO also informed the licensees that they must contact the appropriate federally recognized Indian tribe(s) to determine if properties of religious or cultural significance are present within the area of potential effect (APE) (letter from Ken Grunewald, Arkansas Historic Preservation Program, Little Rock, Arkansas, January 15, 2002). The Bureau of Indian Affairs indicated that the Chickasaw Nation, Caddo Indian Tribe, and the Osage Tribe may attach religious or cultural significance to the Historic Properties within the APE.

The construction of the proposed transmission line may adversely affect the 21 archaeological sites potentially eligible for the National Register. The licensees have proposed to span the sites and erect the necessary poles away from the sites, but the ground-disturbing activities necessary for construction could still adversely affect the

sites. We conclude that the implementation of a Memorandum of Agreement (MOA) is necessary to protect any potentially eligible Historic Properties that may be adversely affected during construction. The MOA should accommodate any unidentified Historic Properties discovered during construction. A MOA is being developed in consultation with the Arkansas SHPO, the Osage Tribe, and the Quapaw Tribe¹⁰, and would require the licensees to develop a treatment plan that would avoid, minimize, or mitigate any adverse effects to potentially eligible Historic Properties.

We, therefore, recommend that the licensees prepare and file for Commission approval, and upon approval implement, a treatment plan for the White River Projects that, at a minimum, includes principles and procedures to address the following: 1) avoid, minimize, or appropriately mitigate any adverse effects to Historic Properties during license amendment-related land-clearing or ground-disturbing activities; 2) avoid, minimize, or appropriately mitigate any adverse effects to previously unidentified Historic Properties that may be discovered during license amendment-related land-clearing or ground-disturbing activities; 3) treatment of Historic Properties threatened by project-related ground-disturbing activities, and vandalism; and 4) treatment and disposition of any human remains that may be discovered; and 5) comments received from the SHPO, the Osage Tribe, and Quapaw Tribe on the treatment plan.

We disagree with the SHPO's recommendation that a Programmatic Agreement (PA) is needed to mitigate the effects on cultural resources. A PA is executed to mitigate for situations that may affect cultural resources during the entire length of the license. A MOA is designed to protect cultural resources during the interim period of construction. Each original license for the White River Projects includes articles that protect cultural resources for the duration of the licenses. Once the Alterations are constructed, they would become integrated into the appropriate licenses, and the Historic Properties would be protected by the original license articles.

b. Unsurveyed Transmission Right-of-Way

The staff agree with the SHPO that the 1.5 miles of the transmission right-of-way not initially surveyed needs to be surveyed prior to construction. There is a distinct possibility the area may have undiscovered archeological sites which may be eligible for the National Register. A potentially eligible prehistoric site was discovered west of the non-surveyed area, while east of the area, prehistoric and historic debris were uncovered.

¹⁰ The Chickasaw Nation and Caddo Indian Tribe never responded to the letters which invited them to participate in the Section 106 process and the development of the MOA and its stipulations.

The staff, therefore, recommend a Phase I Cultural Resource Survey be conducted by a person or persons who meet, at a minimum, the professional qualifications standards for architectural history and archeology in the Secretary of Interior's Standards (48 FR 44738-39). The results of the survey should be sent to the Arkansas SHPO, the Osage Tribe, and the Quapaw Tribe for review and comments. The licensee should file with the Commission the survey results and any comments received at least 90 days before the start of any construction. If eligible or potentially eligible Historic Properties are discovered, the stipulations in the MOA and associated treatment plan should be implemented.

c. Transmission Right-of-Way Deviation

The staff recommend that Independence County implement their proposed transmission right-of-way deviation. The deviation is minor; the transmission route would be moved 900 feet east of the proposed route, and would completely avoid five of the 21 archeological sites that may be potentially eligible for the National Register. One potentially eligible archaeological site would be spanned. The five sites should not be affected by the construction of the transmission line and the possibility of disturbing the sites during future maintenance of the transmission line would be reduced. In addition, the deviation would place the transmission line closer to the hardwood riparian buffer, screening the view of the transmission line and improving the aesthetics of the area (See Section 4.a).

Unavoidable Adverse Effects

There would be no unavoidable adverse effects on cultural resources. Any effects on Historic Properties would be kept to a minimum by implementing the stipulations of the MOA.

6. Electric and Magnetic Fields

The proposed 25-kV transmission line corridor does not traverse residential lands along the above ground segment (about 19 miles). In a comment letter dated March 25, 2002, Don Szczur, a private citizen whose property lies along the transmission line right-of-way, stated he did not want the transmission line to cross his property because he intends to build a house on the site. He further states that a transmission line would alter the value of the property and would expose the cattle grazing in the area to Electric and Magnetic Fields (EMF).

Review of the available scientific literature indicates considerable uncertainty concerning whether and how exposure to EMF might adversely affect human health. There appears to be no scientific consensus about the EMF issue-except a general agreement that better information is needed

The most authoritative assessment of EMF's effect on humans and animals was issued in June 1999 by the National Institute of Environmental Health Sciences (NIEHS). After Congressionally-mandated research, it has concluded that the evidence for a risk of cancer and other human disease from the electric and magnetic fields around power lines is "weak." The report says, "Virtually all of the laboratory evidence in animals and humans and most of the mechanistic studies in cells fail to support a causal [cause and effect] relationship." The NIEHS report followed a six-year research program and a two-year review by the institute and by outside scientists. The industry had no control over what research was conducted. To assist NIEHS in reaching its conclusions, several panels of scientists reviewed the data in open, public hearings. A major panel of scientists – many of them EMF researchers – was assembled to advise NIEHS. The panel rejected EMF as a "known" or proven, or even "probable" carcinogen.

The findings of the scientific community indicate EMF associated with this proposed transmission line would not likely affect the health of residents in the area should any decide to build homes close to the project power lines but outside the proposed 80-foot-wide right-of-way.

V. FINDINGS OF NO SIGNIFICANT IMPACT

In general, the construction of the Alterations would have minor adverse affects on geological resources, terrestrial resources, wildlife, wetlands, cultural resources, land use and aesthetics and no affects on human health, water quality, fisheries, floodplains, and threatened and endangered species. Our review; however, did not identify any resources that would be significantly affected. We conclude that none of the resources that we studied would experience significant adverse effects under the proposed actions or any of the action alternatives.

On the basis of the record and this EA, issuing license amendments for the White River Projects, as proposed by the licensees, plus the measures that we recommend, would not constitute a major federal action significantly affecting the quality of the human environment. For this reason, and pursuant to Commission regulations, no Environmental Impact Statement is required for the actions.

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