DOE/EIS-0077-FS

FILE COPY

Final Supplement
Final Environmental Impact Statement

BONNEVILLE POWER ADMINISTRATION

Crow Butte Slough Crossing

Supplement to Final EIS, Ashe-Slatt
(Pebble Springs) 500-kV Transmission Line

U.S. Department of Energy

March 1982

DOE/EIS-0077-FS

Final Supplement
Final Environmental Impact Statement

BONNEVILLE POWER ADMINISTRATION

Crow Butte Slough Crossing

Supplement to Final EIS, Ashe-Slatt
(Pebble Springs) 500-kV Transmission Line

Responsible Official:

WILLIAM A. VAUGHAN
Assistant Secretary for
Environmental Protection, Safety,
and Emergency Preparedness

U.S. Department of Energy
Washington, D.C. 20585

March 1982

NOTICE

Since only minor revisions have been made to the Crow Butte Slough Crossing Draft Environmental Impact Statement (DEIS) Supplement, BPA is circulating only the revisions to the DEIS Supplement and public and agency comments along with BPA's response, in accordance with CEQ regulations 40 CFR 1500.4(m) and 1503.4(c). The summary is also being circulated.

Changes to the DEIS Supplement and Study Documentation Report (SDR) have been made on the following pages:

DEIS	2-3, 5-1, 8-1
SDR	3-89, 3-90, 3-141, 3-143, 7-9

Copies of the DEIS Supplement, SDR and the revisions are available from:

Anthony R. Morrell
Acting Environmental Manager
Bonneville Power Administration
P.O. Box 3621 - SJ
Portland, Oregon 97208

EIS FINAL SUPPLEMENT

Responsible Agency: U.S. Department of Energy, Bonneville Power Administration.

Cooperating Agencies: U.S. Fish and Wildlife Service; U.S. Army Corps of Engineers

Title of Proposed Action: Ashe-Slatt Transmission Line Crossing at Crow Butte Slough

States and Counties Involved: State of Washington, Benton County.

Abstract: The proposed action is to construct a 4,700-foot segment of the Ashe-Slatt transmission line at Crow Butte Slough, overhead on towers on the existing right-of- way. Alternatives to the proposal include undergrounding the line on the right-of-way or on an existing causeway off the right-of-way, and no action (removing an existing temporary overhead line). The proposed action will result in: temporary disruption (along the right-of-way) and/or destruction (at tower sites) of the habitat, including a wetlands area, and localized noise during construction; both direct (aesthetic) and indirect (recreational) visual effects of the towers and lines, some waterfowl mortality from in-flight collisions, possible corona noise or electric/magnetic effects on some animals, and vegetative control by minor herbicide use during operation. Underground alternatives on the right-of-way cause greater temporary disruption and/or destruction of the habitat, temporary deterioration of the water quality, and possible interference with access to the Crow Butte State Park during construction; terminal station visibility, and possible impacts from accidental chemical (dielectric fluid) releases, from minor uses of herbicides, from cable heat on revegetation, or from cooling station noise to animals during operation. The underground alternatives off the right-of-way avoid the wetlands area and have less effect on aquatic elements, but are considerably more disruptive to Park access. The no-action alternative jeopardizes service in the Willamette Valley, a rapidly growing area in western Oregon. While the impacts differ for the proposed action and the different alternatives, and while the proposed action is not environmentally preferred, the overall impact of any of the action options is not significant or sufficient to preclude selection on an environmental basis. The economic advantage of the proposed action is considerable.

Date Made Available to the U.S. Environmental Protection Agency and to the Public:

Draft Supplement: Oct. 23, 1981

Final Supplement: APR 28 1982

For Additional Information Contact:

Anthony R. Morrell, Acting Environmental Manager
Bonneville Power Administration
P.O. Box 3621-SJ
Portland, Oregon 97208
(503) 230-5136

SUMMARY

1.0 SUMMARY

1.1 STATUS

The Bonneville Power Administration (BPA) proposes to install and operate a double-circuit 500-kV transmission line crossing of the Crow Butte Slough of Lake Umatilla in Benton County, Washington. Crow Butte Slough can be considered a sluggish channel of the Columbia River, separated from the main stem of the Columbia by Crow Butte Island. BPA proposes to build this crossing overhead and on the existing right-of-way for the Ashe-Slatt line.

The underlying need to which BPA is responding with this proposal is the need to close a 4,700-foot gap across Crow Butte Slough between two dead ends along the Ashe-Willamette Valley 500-kV transmission line, a segment of the Federal Columbia River Transmission System connecting Hanford and Lower Snake electrical generation with load centers in the Willamette Valley. BPA proposes to close this gap with a double circuit 500 kV line over the Crow Butte Slough. Alternatives to this proposal, analyzed and compared in this Environmental Impact Statement (EIS) Supplement, are various ways of crossing the slough: going underground on the existing right-of-way with various cable systems and methods of installation; going underground off the existing right-of-way; and not closing the gap, the "no-action" alternative.

Decisions on the route for BPA's Ashe-Willamette Valley 500-kV transmission line, referred to above, were made on the basis of the EIS entitled "Final Facility Location Supplement to BPA's Fiscal Year 1976 Program EIS, Ashe-Willamette Valley (Ashe-Pebble Springs--FES 75-79)." This was filed with the Council on Environmental Quality on September 16, 1975. That EIS identified a transmission line route across Crow Butte Slough and Crow Butte Island, but did not show the line as crossing the portion of the island managed as Umatilla National Wildlife Refuge land. A decision to place the transmission line on refuge land was made after the EIS was filed. BPA obtained a Section 10 permit from the U.S. Army Corps of Engineers (Corps) to cross the Columbia River and Crow Butte Slough on September 19, 1979, and a right-of-way permit from the Corps on October 1, 1979.

By early 1980, several controversies had arisen. BPA and the Fish and Wildlife Service (FWS), which manages the refuge, disagreed over whether the FWS or the Corps had authority to grant a right-of-way easement on refuge lands.

There was disagreement over the extent of the impact resulting from waterfowl collisions with the overhead transmission line. And there were questions of BPA's procedures under the National Environmental Policy Act (NEPA), including methodology for determining and mitigating impacts to waterfowl.

A lawsuit was filed on March 28, 1980 (U.S. District Court for the District of Oregon, Civil Action No. 80-366), by the Northwest Environmental Defense Center (NEDC) and three individual plaintiffs. Plaintiffs requested that BPA be stopped from building the transmission line across Crow Butte Island and that the Corps' Section 10 permit across the river and slough and the easement across the refuge be revoked. Defendants were three Federal agencies--BPA, FWS, and the Corps--and BPA's private contractor for the transmission line construction.

Because the several Federal defendants had taken contradictory legal positions on many of the questions posed by the lawsuit, the U.S. Department of Justice needed to arrive at a common Federal legal position. The Department of Justice efforts to arrive at such a position were inconclusive. BPA, the Corps, and FWS reached a compromise solution to form a basis for resumption of construction and possible settlement of the lawsuit:

- Pursuant to the existing Rivers and Harbors Act Section 10 Permit issued by the Corps, BPA would build a double-circuit overhead line across the Columbia River and refuge lands, conduct a study of that portion of the line's impact on wildlife use of the Crow Butte areas, and provide mitigation to compensate for adverse effects if the study results show such mitigation is warranted;
- BPA would build a temporary single-circuit overhead line across Crow Butte Slough and would remove the line within three years;
- BPA would study the engineering, environmental and economic feasibility of an underground crossing of Crow Butte Slough comparing all reasonable options and comparing the "no-action" alternative of removing the temporary line after 3 years and leaving the Ashe--Willamette Valley line uncompleted.

As of this writing, the temporary single-circuit line across Crow Butte Slough has been built and is operating; the double-circuit line has been built across the Columbia River and refuge lands and is operating; and environmental impact studies on the overhead lines have commenced. The lawsuit was dismissed on

March 10, 1981, by Order of United States Magistrate Edward Leavy on the basis of a Stipulation for Dismissal.

The wildlife study required by the Section 10 permit began in October 1979. The report on the pre-construction study was completed in November 1980, predicting an annual waterfowl mortality of about 250 to 400 at the slough. A report on the first phase of the post-construction study was completed in July 1981, indicating that actual values may be only 1 percent of the prediction. The study includes the temporary single circuit overhead line across Crow Butte Slough, and the double circuit line crossing the island and the Columbia River.

Because of the high cost of undergrounding, Representative Bevill, Chairman of the House Subcommittee on Energy and Water Development, in a December 5, 1980, letter to BPA (through the Secretary of the Department of Energy), asked BPA not to commit to an underwater crossing "until the Committee (on Appropriations) has an opportunity to fully review this matter." It is BPA's intention at this time not to make any commitments to the undergrounding alternatives until the Committee on Appropriations has made its views known, and the NEPA process completed.

This EIS Supplement presents the environmental aspects of the decision-making process for the Crow Butte Slough crossing. The scope of this EIS Supplement, then, is to present the environmental information for a decision whether to permanently complete the Ashe-Willamette Valley line by crossing the Crow Butte Slough, and if so, a decision as to which route and which underground or overhead transmission line design to use. These decisions will be made and recorded in a Record of Decision which will be prepared 30 days or more after this Final EIS Supplement is available to the public. The Record of Decision will be published in the Federal Register and will also be otherwise available to the public.

1.2 PROJECT SETTING

The Crow Butte project site is located in south-central Washington on Lake Umatilla on the Columbia River (see Figure 1-1). Crow Butte Island is connected to the Washington mainland by a causeway over Crow Butte Slough. The eastern section of the island is part of the Umatilla National Wildlife Refuge, and the western section is the Washington Crow Butte State Park. The existing Ashe-Slatt right-of-way crosses the refuge, the slough, and Dead Canyon to the north.

The study area is a semiarid environment. Soils are fine and loamy sands with low water-holding capacity. The major limiting factors for vegetation at the site are dry, windy conditions and soils of low fertility. Shrub-steppe is the major vegetation type in the area. A narrow band of riparian vegetation occurs along the Crow Butte shore and along Dead Canyon creek, and marsh has developed at the delta where the creek enters Crow Butte Slough since Lake Umatilla and the slough were formed with the completion of the John Day Dam in 1968.

The Columbia River, east of the site, and to some extent Crow Butte Slough, serve as migratory waterfowl concentration areas during winter. Use of the slough area by waterfowl varies during the winter and depends on weather conditions and food availability. In 1979-1980, waterfowl use was low until mid-January, when it peaked to 20,000 ducks (over 90 percent mallard) resting on the bay east of the causeway. Wildlife seems to concentrate regularly in this area during winters. The land on and around the project site supports significant populations of mammals.

The water quality of the Crow Butte Slough can be generally extrapolated from the water quality of the Columbia River since the slough has a wide opening. Critical parameters such as dissolved oxygen and biological and chemical oxygen demand are within the standards established for river systems, as are the levels of nitrogen and phosphorous and coliform bacteria. Fish communities in the Crow Butte Slough are representative of those in Columbia River backwaters. Fish abundance is at a peak in the summer months when juvenile and adult species such as bass, perch, suckers, and chinook salmon are present. Shad are present in the backwaters during August through October and are the most abundant fish, in annual totals, found in the backwater areas.

The surficial geology of the site is characteristic of the Columbia River Plateau. Incision of Dead Canyon and the Columbia River valley has exposed the layered basalts and interbedded sedimentary units along the valley walls. The less resistant sedimentary units are undercut by erosion on the valley walls, leading to slump on planes in the tuff and landslides in the tuff and overlying basalts. This is particularly evident in Dead Canyon, which also has an active floodplain.

There is no population center on the Washington side within 10 miles of the site. The nearest towns are Paterson and Plymouth, about 12 and 24 miles distant. Crow Butte is about 21 miles from the nearest large town (other than the Tri-Cities), Prosser, the Benton County seat, with a population of approximately

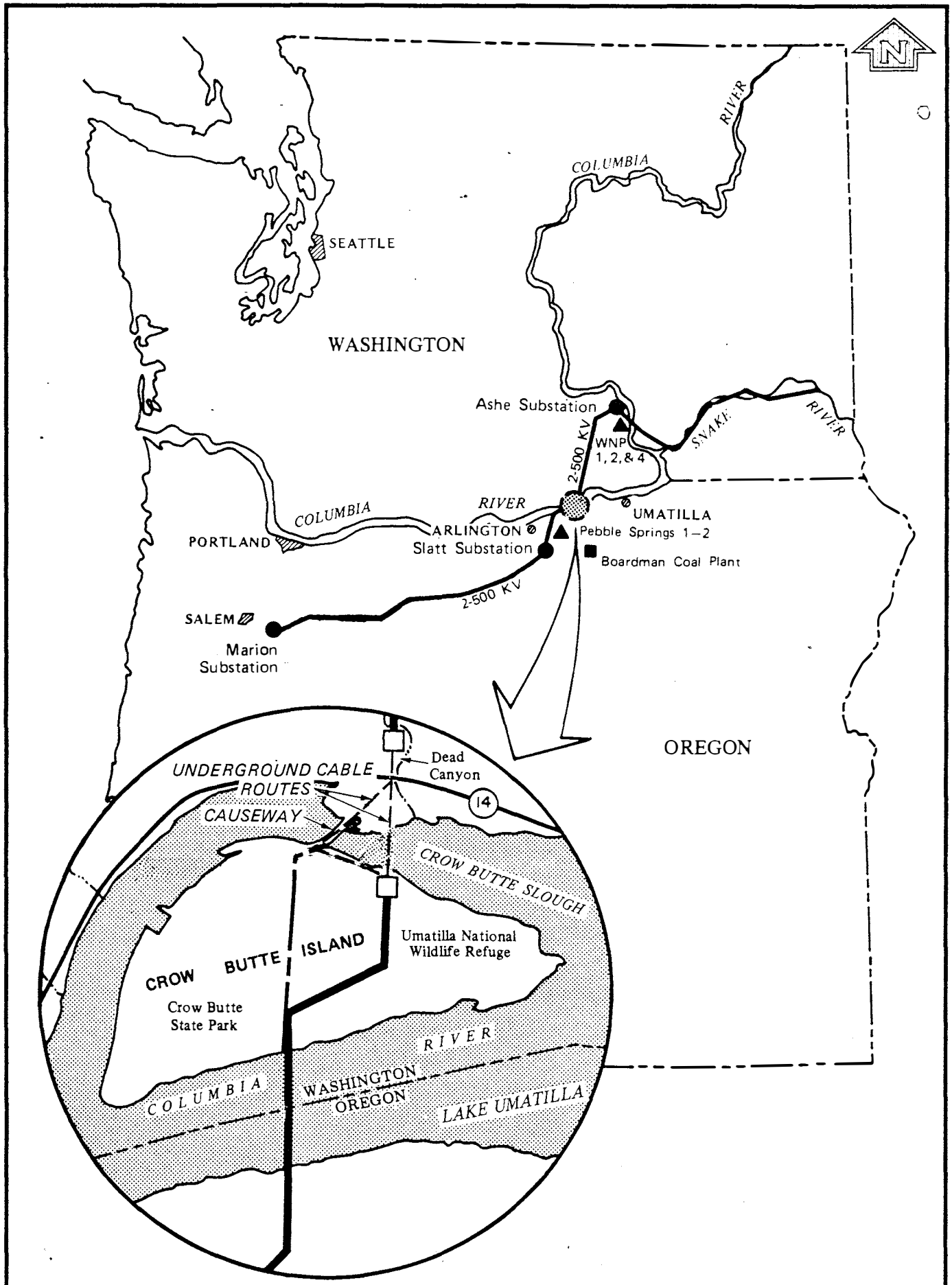

FIGURE 1-1
STUDY REGION

4,000. To reach communities in Oregon, the nearest crossing is at McNary Dam, near Plymouth. Growth in the project area is not expected to be significant.

Agricultural activity has been the predominant land use in the region since the John Day Dam made extensive irrigation possible. The two major land uses at the site are the Umatilla National Wildlife Refuge and the Crow Butte State Park.

The Crow Butte State Park was developed by the Corps of Engineers when the slough was flooded. It is presently managed by the Washington State Park and Recreation Commission. There are facilities for boat launching, picnicking, swimming, and overnight camping. The Park access road crosses the causeway.

Transportation routes in the vicinity of the site include the state highway (S.R. 14), which is the main connector between Pasco and the west, on the north side of the Columbia River. In addition, the Burlington Northern Railroad parallels the highway.

Because of the relatively unpopulated rural desert environment, ambient sound levels on Crow Butte Island vary from as low as 30 dB in quiet periods to as high as 60 dB with intrusive noise from traffic on S.R. 14, train traffic, and recreational boating.

There are several major transmission corridors in the vicinity of Crow Butte. Overhead transmission lines connect the hydroelectric projects on the Columbia and Snake Rivers and the nuclear projects at Hanford with western Washington and Oregon. Lines that come within the immediate project area are the McNary-Big Eddy and the McNary-Ross lines, in addition to the Ashe-Slatt line.

1.3 MAJOR CONCLUSIONS

The major conclusion of this study is that the environmental impacts of the proposed action and the alternatives do not appear to be significant. Furthermore, the variation in overall impact among alternatives is so slight that no alternative emerges as the obvious choice. A mathematical ranking was undertaken, however, and the environmentally preferred alternative determined in this way is an underground crossing of the Crow Butte Slough, in a trench on the existing right-of-way. Gas-insulated cables and self-contained, oil-filled cables were ranked as equally preferred. High-pressure, oil-filled, pipe-type cables were judged to have greater potential for environmental impact than the other cable types because they have larger volumes of oil, which could spill should an accident occur.

The underground alternatives which would involve the construction of a new causeway to Crow Butte Island on the existing right-of-way were all less environmentally preferred because the route crosses a wetlands area. The alternatives which would use the existing causeway to cross the slough were not preferred because of the temporary interference with access to the Crow Butte State Park during construction.

The overhead line options were computed to be less preferred environmentally than any of the underground alternatives, as a result of the waterfowl collision issue, and the issue of indirect visual impacts on recreation. Preference for the overhead proposal in many impact categories is not treated in the mathematical formulation but is apparent in the text. This is discussed in Section 1.4. Economically, the overhead line installations offer considerable advantages over the underground alternatives.

The no-action alternative was judged least desirable due to the expected socioeconomic disruptions caused by noncompletion of the Ashe-Slatt line.

While impacts differed for the different options, it is important to note that the overall weighted impact for all issues did not show much variance between alternatives. In fact, the overall impact for each alternative (except the no-action) was rated as limited to insignificant.

The impacts of the overhead proposal (in the areas of major concern) are the direct but incremental visual impacts of the lines and tower structures for the second circuit between the existing dead end towers, the indirect incremental aesthetic impacts of same on recreational activity associated with the Crow Butte State Park, occasional direct collisions by waterfowl in the Slough area, and possible but uncertain electric or magnetic effects on particular animals.

Other impacts of the overhead proposal are the temporary disruption of the terrestial and aquatic habitat, including a wetlands area, as a result of construction noise and activity, particularly around the towers, the temporary loss of habitat at the sites where additional towers would be erected, and the possible disturbance of some animals by occasional corona noise during wet weather operation. These latter impacts did not enter into the mathematical ranking process. This is explained in the following section.

The impacts of the preferred underground alternatives (in the areas of major concern) are the incremental visual effects of termination stations at the dead-end

towers, as well as temporary impacts associated with the construction phase, especially excavation and filling along the right-of-way. Temporary alteration of chemical constituents in the water column and increases in suspended material are the principal impacts in the water quality area; aquatic biota and fish could also be affected by changes in these parameters as a result of interference with feeding and respiratory processes. In addition, the preferred underground alternative is expected to have some impact on the public's access to Crow Butte State Park as a result of construction vehicles and activity where the right-of-way and the existing causeway intersect underneath S.R. 14 and the railroad bridge.

Other impacts of the preferred alternatives are construction disturbance to aquatic and terrestrial communities and destruction of habitat at terminal stations and on the right-of-way, as well as possible minor effects from cable heat. Again, these latter impacts did not enter into the ranking of alternative preference, as explained in the following section.

1.4 AREAS OF CONTROVERSY

A primary area of controversy was the waterfowl mortality rate as a result of collisions with overhead lines, and whether this rate was ecologically significant. Another controversy arose about the potential use of the right-of-way on private land in Dead Canyon for community development.

There were additional issues associated with the proposed action and its alternatives; these were identified as areas of concern through the scoping process, and are listed below in order of relative importance:

- Waterfowl and endangered bird species
- Land use/potential for development
- Electric/magnetic effects
- Chemical pollution
- State Park access
- Noise
- Visual effects
- Erosion/sedimentation
- Wetland habitat.

While consideration of these nine areas of concern provided the focus for determining the environmentally preferred alternative in this Draft EIS Supplement, a comprehensive evaluation of all potential environmental impacts associated with the proposed action and its alternatives was conducted and is discussed in the Study Documentation Report. There are some areas in which impacts occur that are not treated as critical issues. These impact areas include: total terrestrial habitat loss, including riparian and upland areas; noise impacts on wildlife from refrigeration equipment for the force-cooled cable alternatives; heat impacts on terrestrial ecology from self-cooled cables; and construction activity impacts and habitat destruction impacts on aquatic ecology for underground alternatives along the existing right-of-way. These are areas in which the overhead proposal compares favorably with the underground alternative, but since they were not weighted in the mathematical treatment, the overhead proposal was numerically ranked as less preferred.

Conversely, some of the issue areas identified as critical through the scoping process were investigated and found to have limited-to-insignificant impacts associated with them. These included land use (all underground alternatives); electric and magnetic effects (all alternatives); erosion potential (all alternatives) and impacts to endangered species (all alternatives).

Another major issue is the relative cost of overhead and underground systems. A cable crossing on the existing right-of-way at Crow Butte may cost 10 to 30 times more than an overhead crossing, depending on the type of underground system and the number of cables. A cost analysis separate from this environmental study will be incorporated in the Record of Decision.

1.5 ISSUES TO BE RESOLVED

The issues to be resolved can be stated as follows:

- Whether to cross Crow Butte Slough with the 500-kV Ashe-Slatt transmission line
- If the slough is to be crossed, whether the lines will be overhead or underground
- If the lines are to be underground, what cable system will be employed
- Whether the route for the underground lines will involve a trench on the existing right-of-way, a new causeway on the existing right-of-way, or a trench along the existing causeway.

- Whether any additional mitigation measures not included in the proposed action are warranted.

1.6 STUDY DOCUMENTATION REPORT

The Study Documentation Report, distributed with the Draft EIS Supplement, describes the data, sources, assumptions, methodology, results, and conclusions for the Crow Butte Study.

CHANGES TO EIS

TABLE OF CONTENTS (cont'd)

5.0 AFFECTED ENVIRONMENT

5.1 SOCIAL AND ECONOMIC CONDITIONS

In this section the existing and future socioeconomic, land use, transportation, aesthetic, and recreation aspects are described.

5.1.1 Regional Land Use and Socioeconomic Factors

The Crow Butte Island site is located on the northern side of the Columbia River within the State of Washington (see Figure 5-1). It is situated in Lake Umatilla, which was formed as a result of the completion of the John Day Dam in 1968 and is separated from the mainland by a narrow slough.

Areas on both sides of the river in the vicinity of the site have intense agricultural activity. Although the area is very arid, irrigation has recently become possible as a result of the availability of water from the lake. On the Washington side, the land is constrained by steep bluffs and ridges resulting from erosion of the basalt lands. The Horse Heaven Hills to the north, which have been traditionally sacred areas for Indian tribes, includes approximately 34,000 acres of irrigated farmland in the vicinity of the project site. In addition, the area generally north of the Horrigan Road alignment is intensively farmed as a dryland wheat production area comprising some 200 square miles. The Yakima River basin, about 50 miles north of the site, is rich in alluvial soils and provides many of the important orchards and unique agricultural lands for the State of Washington.

About 37 miles to the east of Crow Butte Island is the Tri-Cities area of Washington (Richland, Kennewick, Pasco), which includes the Hanford Reservation and the associated nuclear power developments at that site. This is a growing residential area and provides most of the income base for Benton County.

There is no major population center on the Washington side within 10 miles of the site. The nearest town is Paterson, which is a small community providing very limited services, located about 12 miles from the site. Plymouth, another small community, is 24 miles distant. The site is about 21 miles from the nearest large town (other than the Tri-Cities): Prosser, the Benton County seat, with a population of approximately 4,000.

To the north of Crow Butte in Benton County, there are approximately 125 large circle irrigation units. On the west side of Dead Canyon the Mercer Ranches operate approximately 25 circles, and on the east side Three Wells and Hundred Circle Farms operate approximately 100 circles. Agricultural commodities grown on these lands include wheat, potatoes, corn, and soybeans.

8.0 PUBLIC REVIEW

8.1 AGENCIES, ORGANIZATIONS AND PERSONS RECEIVING COPIES OF THE STATEMENT

The following list identifies the agencies, organizations and persons to whom copies of the statement are sent.

LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS TO WHOM COPIES OF THE STATEMENT ARE SENT

Federal Agencies

Advisory Council on Historic Preservation
Oak Ridge National Laboratory
Public Health Service
Tennessee Valley Authority
U.S. Department of Agriculture
  Forest Service
  Region 6
  Soil Conservation Service
U.S. Department of Army, Corps of Engineers
  Office of the Chief Engineer
  Portland District
  Seattle
  Walla Walla District
U.S. Coast Guard
U.S. Department of Commerce
  National Marine Fisheries Service
  Portland
  Seattle
U.S. Department of Energy
  Federal Energy Regulatory Commission
  Western Area Power Administration
U.S. Environmental Protection Agency
U.S. Department of Housing & Urban Development
U.S. Department of the Interior
  Bureau of Indian Affairs
  Bureau of Land Management
  Bureau of Reclamation
  Bureau of Mines
  Fish & Wildlife Service
  Geological Survey
  National Parks Service
  Interagency Archeological Service
  Office of the Secretary
  Office of Environmental Project Review
U.S. Department of Transportation
  Federal Aviation Administration
Water Resources Council

State Agencies

Idaho Division of Budget, Policy Planning and Coordination
Montana Office of Budget and Program Planning
Montana Research & Information Systems Division
Montana State Clearinghouse
Montana State Department of Natural Resource and Conservation

Oregon Department of Environmental Quality
Oregon Department of Fish & Wildlife
Oregon Intergovernmental Relations Division
Oregon State Department of Energy
Oregon State Department of Environmental Quality
Oregon State Department of Transportation
Oregon State Forestry Department
State of Washington Department of Fisheries
State of Washington Environmental Review Section
Washington Department of Ecology
Washington Department of Natural Resources
Washington Environmental Council, Inc.
Washington State Department of Ecology
Washington State Department of Fish & Game
Washington State Department of Game
Washington State Office of Community Development
Washington State Parks & Recreation Commission
Washington State Transportation Division

State Historic Preservation Officers

Benton County Museum and Historical Society
Department of Anthropology, University of Montana
Department of Sociology/Anthropology, University of Idaho
Idaho State Historical Society
Idaho State University Museum
Museum of Natural History, University of Oregon
Oregon State Historic Preservation Office
State Historic Preservation Officer, Montana Historical Society
Washington Archeological Research Center
Washington State Historical Society
Washington State Office of Archaeology and Historic Preservation

Regional Clearinghouses & Counties

Oregon

Columbia Region Association of Governments
East Central Oregon Association of Counties
Mid-Columbia Economic Dev. Dist.
Morrow County Board of Commissioners
Morrow County Planning Department
Oregon State Clearinghouse
Umatilla County Board of Commissioners

Washington

Benton County Board of Commissioners
Benton County Planning Department
Benton-Franklin Governmental Conference

Government Depository Libraries

Aubrey R. Watzek Library
Boise Public Library
Boise State University Library
College of Idaho Terteling Library
College of Southern Idaho Documents Library
Daniel J. Evans Library
David O. McKay Library
Eastern Oregon State College Library
Eric V. Hauser Memorial Library
Everett Community College Library
Everill S. Collins Memorial Library
Everett Public Library
Fort Vancouver Regional Library
Governmental Research Assistance Library
Harvey W. Scott Memorial Library
Henry Suzzallo Memorial Library
Idaho State Library
Idaho State University Library
John F. Kennedy Memorial Library
Library Association of Portland
Mabel Zoe Wilson Library
Montana State University Library
North Olympic Library System
Northrup Library
Oregon College of Education Library
Oregon State Library
Oregon Supreme Court Library
Penrose Memorial Library
Port Angeles Public Library
Portland State University Library
Seattle Public Library
Southern Oregon State College Library
Spokane Public Library
University of Idaho Library
University of Montana Library
University of Oregon Library
University of Washington School of Law Library
Victor J. Bouillon Library
Washington State Library
Washington State University Library
William Jasper Kerr Library
Willamette University Library

Interest Groups - Oregon

Audubon Society of Oregon
Columbia County Small Woodlands Association
Columbia Group, Sierra Club
Ducks Unlimited
League of Women Voters of Oregon
National Wildlife Federation

Nature Conservancy
Oregon Environmental Council
Oregon League of Environmental Voters
Oregon Wildlife Federation
Salem Audubon Society
Sierra Club
The Wilderness Society

Interest Groups - Washington

Columbia River Citizens Compact & Washington Wildlife Study Council
Friends of the Earth
Sierra Club
Washington Department of Game
Washington Environmental Council
Washington Wildlife Study Council

Environmental Defense Centers

Environmental Defense Fund
Environmental Law Committee of Young Lawyer's Section of
Seattle-King County Bar Association
Natural Resource Defense Council
Natural Resources Defense Council
Northwest Environmental Defense Center
Northwest Environmental Defense Center (NEDC)
Northwest Fund for the Environment
Pacific Marine Environmental Laboratory

Student Interest Groups

Environmental Affairs Commission
Environmental Studies Center, Western Washington University
Idaho State University Outdoor Program
Institute for Environmental Studies, University of Washington
OSU Environmental Center, ECO-Alliance
Oregon Student Public Interest Research Group

Others

Benton County P.U.D.
Benton Rural Electric Association
Boeing Agricultural-Industrial Co.
Burlington Northern Railroad
Chairman, Confederated Tribes of the Umatilla Reservation
Clark County PUD
Clatskanie PUD
Columbia Basin Electric Coop
Columbia River Gorge Commission
Cowlitz County PUD
East Oregonian
Hermiston Herald
Milne Fruit Farms

NUS Corporation
Oregon High Desert Museum
Pacific Northwest Generating Company
Pacific Power & Light Company
Portland General Electric Co.
Prosser Record-Bulletin
Umatilla Electric Co-op
Washington Natural Heritage Program
West Oregon Electric Cooperative, Inc.

Individuals

John Agnew
Harriet Alexander
Michael Anderson
Robert & Louise Andrews
Jim Angell
Dick Beightol
Frank Berg and Arthur Berg
Paul Bernsen
R. W. Blodgett
Nancy Bock
Ross Bruner
Craig Corder
Marion Corder
Cliff Durbin
Gerald Erickson
Al Evans, Jr.
L. Loren Eyler
Douglas Getchell
John Goldsbury
Robert G. Graves
Henry G. Helber
Howard J. Houser
Michael Jennings
Jerry Johnson
Edgar Jones
L. L. Jones
Rupert Kennedy
Virginia Keyes
Bill Kitto
Pat Lafferty
Rich Larson
R. M. Leslie
Larry N. Marvin
D. R. Mason
George E. McDowell
John McKay
Margaret Meacham

Bud & Don Mercer
Mary Ann Mercer
Milton Mercer
Milton Mercer, Jr.
Milton Mercer, Sr.
Rick Mercer
Bruce O. Nicholes
Sid Morrison
David Patterson
Kathie Peck
Allyn Phillips
Carolyn Rinta
L. S. Rodman
Gary L. Shaw
Marilee Smith
Leonard Steiner
Beverly Strassman
Nancy Thomas
Terry Walker
Natalie Walsh

PUBLIC AND AGENCY COMMENTS

8.2 PUBLIC AND AGENCY COMMENTS

The following are copies of the comments received by BPA.

COMMENT LETTERS

Crow Butte Slough Crossing

Page	Individual/Organization	Date Received
1	U. S. Department of Transportation/FAA Northwest Region	November 5, 1981
2	State of Washington Department of Transportation	November 12, 1981
3	U. S. Department of Agriculture Rural Electrification Administration	November 16, 1981
4	Benton-Franklin Governmental Conference	November 30, 1981
5	State of Oregon Intergovernmental Relations Division	November 30, 1981
6	Benton Rural Electric Association	December 9, 1981
7	Edgar Jones Kennewick, Washington	December 9, 1981
8	Benton County Planning Dept.	December 15, 1981
9	U. S. Department of the Army Portland Dist. Corps of Engineers	December 16, 1981
10	U. S. Department of Transportation United States Coast Guard	December 18, 1981
11	State of Washington Department of Game	December 23, 1981
12	State of Washington Department of Ecology	December 23, 1981
13	U. S. Department of the Interior Office of the Secretary Environmental Project Review	December 28, 1981
14*	U. S. Environmental Protection Agency Region X, Seattle, WA	January 25, 1982

*Late letter (letter was received postmarked beyond the official close of comment date).

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
NORTHWEST REGION
FAA BUILDING KING COUNTY INT'L AIRPORT
SEATTLE, WASHINGTON 98108

November 2, 1981

John E. Kiley
Acting Environmental Manager
Bonneville Power Administration
P. O. Box 3621-SJ
Portland, OR 97208

Dear Mr. Kiley:

We have reviewed the Draft Supplement to the Final Environmental Impact Statement for the Crow Butte Slough Crossing and have no comments. Thank you for the opportunity to review the proposed project.

Sincerely,

Mark A. Beisse
Acting Chief, Planning and
Programming Branch, ANW-610

cc:
ANW-530

JOHN SPELLMAN
Governor

DUANE BERENTSON
Secretary

STATE OF WASHINGTON

DEPARTMENT OF TRANSPORTATION

November 6, 1981

Mr. John E. Kiley, Environmental Manager
Bonneville Power Administration
P.O. Box 3621, SJ
Portland, Oregon 97208

Bonneville Power Administration
Crow Butte Slough Crossing
Draft Supplement to Final Environmental
Impact Statement

Dear Mr. Kiley:

We have received the subject document and have no objections to the proposal but have the following comment:

> The proponent should be made aware that a permit will need to be obtained from the Department for any utility crossing of a state highway.

If you have any questions, please call Bob MacNeil, District 5 Design Engineer at 558-2229.

Sincerely,

ROBERT S. NIELSEN
Assistant Secretary for Public
Transportation and Planning

By: JOSEPH BELL, Manager
Planning Implementation and
Environmental Policy

RSN:lac
JB/WBH

cc: R. C. Schuster

United States Department of Agriculture

Rural Electrification Administration

Washington D.C. 20250

NOV 3 1981

SUBJECT: Draft Supplement to Final Environmental Impact Statement - Crow Butte Slough Crossing

TO: Acting Environmental Manager
Bonneville Power Administration
P.O. Box 3621-SJ
Portland, Oregon 97208

On October 20, 1981, Bonneville mailed a copy of the environmental document designated above to the Secretary of Agriculture. The Secretary's office has requested REA to review and comment on the document. REA has no substantive comments to offer concerning the document.

Martin J. Lyon

for FRANK W. BENNETT
Director
Power Supply Division

BENTON-FRANKLIN GOVERNMENTAL CONFERENCE
P. O. BOX 217 • 1935 TERMINAL DRIVE • AT THE RICHLAND SKYPARK • RICHLAND, WA. 99352
TELEPHONE A.C. (509) 943-9185

November 23, 1981

Department of Energy
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

Attention: Peter T. Johnson
Administrator

Re: A-145-81, 05-1-11-01
Crow Butte Slough Crossing -
500 kV transmission line

Dear Mr. Johnson:

Thank you for notifying us of the above noted proposal.

Under Part II of the "A-95" Circular, the Governmental Conference assigned file number A-145-81 to this notice and considered the proposed project at its November 20, 1981 Board meeting. As the District Clearinghouse for this region, the Conference concluded that the proposed project is not in conflict with the development plans, goals and objectives as of this date and we, therefore, endorse the proposal.

Sincerely,

Donald P. Morton

Donald P. Morton
Executive Director

DPM:em

cc: Robert R. Goranson

VICTOR ATIYEH
GOVERNOR

Executive Department

155 COTTAGE STREET N.E., SALEM, OREGON 97310

November 24, 1981

Peter T. Johnson
Administrator
Department of Energy
Bonneville Power Administration
P.O. Box 3621
Portland, OR. 97208

Dear Mr. Johnson:

Crow Butte Slough Crossing
OR811026-029-4

Thank you for submitting your draft supplement to the final Environmental Impact Statement for Oregon review and comment.

Your draft supplement was referred to the appropriate state agencies for review. The consensus among reviewing agencies was that the draft adequately described the environmental impact of your proposal.

We will expect to receive copies of the final statement as required by Council of Environmental Quality Guidelines.

Sincerely,

INTERGOVERNMENTAL RELATIONS DIVISION

Kay L. Wilcox

Kay Wilcox
A-95 Coordinator

KW:cb

DEC 7 1981
EVH

Benton Rural Electric Association

402 7th St. — P.O. Box 150 — Phone 786-2913

Prosser, Washington 99350

SERVING IN BENTON AND YAKIMA COUNTIES SINCE 1937

December 3, 1981

Mr. John Hooson, Engineering and Construction
Environmental Coordinator
Bonneville Power Administration
P. O. Box 3621
Portland, Oregon 97208

Re: Requested Comments for Crow Butte Crossing

Dear Mr. Hooson:

As Manager of one of the distribution utilities serving the electric needs of the Plymouth-Paterson-Crow Butte areas along the Columbia River, I am delighted to hear that overhead facilities are being considered for crossing the Crow Butte slough to permanently complete the Ashe-Slatt transmission facility.

The wildlife studies of the past couple of years conclusively prove that an overhead facility is compatible with the environment of this area. It would be ridiculous to needlessly spend additional millions of dollars to install this line-segment underground when not at all necessary. Installing the facilities overhead, without damage to the environment, will ultimately save money for all of the Northwest rate payers. An additional benefit is the improved reliability of service of overhead versus underground, as we in the industry are well aware when faced with operating and maintaining these facilities.

I cast my vote for putting this "500 KV underground boondoggle" quietly to death, and then get the permanent overhead facilities completed as rapidly as possible. We do have other matters of critical concern to the future of the Northwest to which we must give our undivided attention! (WPPSS #4 - #5 matters).

Respectfully submitted,

Joe Chiara

JOE CHIARA
Manager

JC:pr

Rec'd - EVH
DEC 7 [illegible]

December 3, 1981

John Hoosen
Engineering and Construction
Environmental Coordinator
P.O. Box 3621
Portland, Oregon 97208

Subject: Comments on Environmental Impact - Crow Butte Crossing

Dear Mr. Hoosen,

The Bonneville Power Administration proposes to construct an overhead transmission line across Crow Butte Slough to complete the Ashe-Slatt line.

Overhead transmission lines are a proven concept and probably the most cost effective in use today. Any environmental impact to water fowl or other migrating birds would be of a temporary nature. Assuming that the line towers are constructed to prevent bird electrocution, I see no impact to either the birds' well-being or to any human ascetic values. In my opinion, no further time or money should be spent on alternatives such as underground lines or relocation of lines. BPA should proceed.

Very truly yours,

Edgar Jones

Edgar O. Jones

6001 W. 16th Ave.
Kennewick, Washington 99336

TERRY A. MARDEN
PLANNING DIRECTOR

CLARK W. STOLLE
ASSISTANT PLANNING DIRECTOR

PROSSER 786-4666
TRI-CITIES 545-2019
AREA CODE 509

BENTON COUNTY PLANNING DEPT.

P.O. BOX 910 - COURTHOUSE ANNEX
PROSSER, WASHINGTON 99350

December 10, 1981

Acting Environmental Manager
Bonneville Power Administration
Post Office Box 3621 - SJ
Portland, OR 97208

RE: Draft Supplement Final Environmental Impact Statement Crow Butte Slough Crossing

Dear Sir/Madam:

This office has reviewed the draft supplement final EIS and offers the following comments:

1. Page 5-1, paragraph 3, sentence 4: "The Horse Heaven Hills to the north have traditionally been sacred areas for Indian tribes and have not been extensively farmed because of their inaccessibility and arid characteristics." This statement is not correct. The Horse Heaven Hills area in the vicinity of the project site includes approximately 34,000 acres of irrigated farmland with another 25,000 acres being actively studied for irrigation development. In addition to this irrigated farmland, the area generally north of the Horrigan Road alignment is intensively farmed as a dryland wheat production area. In the general vicinity alluded to in the draft supplement between Crow Butte and the Yakima Valley, this dryland farming area comprises some 200 square miles. It is the productivity of these kinds of areas, both irrigated and dryland, that have been responsible for Benton County ranking fifth in the State in regard to total agricultural production values according to the latest Census of Agriculture.

2. Page 5-1, paragraphs 4 and 5: Distances given in these paragraphs are incorrect. Approximate distances from the project site to Prosser, Paterson, Plymouth, and the Tri-Cities are 21 miles, 12 miles, 24 miles, and 37 miles respectively.

Thank you for this opportunity to review and comment upon the draft supplement EIS. I hope these comments will be helpful to you.

Sincerely,

TERRY A. MARDEN
Planning Director

By Robert D. De Long
ROBERT D. DE LONG
Comprehensive/Environmental Planner

RDD:afw

DEPARTMENT OF THE ARMY
PORTLAND DISTRICT, CORPS OF ENGINEERS
P. O. BOX 2946
PORTLAND, OREGON 97208

NPPEN-PL-NR

11 December 1981

Mr. Peter T. Johnson, Administrator
Bonneville Power Administration (SJ)
P.O. Box 3621
Portland, OR 97208

Dear Mr. Johnson:

We have reviewed the Crow Butte Slough Crossing Environmental Impact Statement Supplement, and we have no comment.

Thank you for the opportunity to review this document.

Sincerely,

PATRICK J. KEOUGH
Chief, Planning Branch

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS
COMMANDER (dpl)
THIRTEENTH COAST GUARD DISTRICT
915 SECOND AVE
SEATTLE WA 98174
PHONE 206 442-7523

16476
DPL81-911

16 DEC 1981

Mr. John E. Kiley, Environmental Manager
Bonneville Power Administration
P. O. Box 3621
Portland, OR. 97208

Dear Mr. Kiley:

We have reviewed your Draft Supplement Environmental Impact Statement for Crow Butte Slough Crossing, dated 20 October 1981. Pursuant to the Council on Environmental Quality Regulations we have no comment on your environmental statement. However, we do have an interest in the non-permitted causeway crossing of a navigable waterway mentioned in this document. Our personnel in the Bridge Administration program will contact you regarding this matter.

Thank you for providing us with the opportunity to review this document.

Sincerely,

R. J. COPIN
Captain, U. S. Coast Guard
Chief of Staff
13th Coast Guard District

Copy: Commandant (G-WS-1), U. S. Coast Guard

JOHN SPELLMAN
Governor

FRANK LOCKARD
Director

STATE OF WASHINGTON
DEPARTMENT OF GAME
600 North Capitol Way, GJ-11 • Olympia, Washington 98504 • (206) 753-5700

December 17, 1981

John E. Kiley, Environmental Manager
Bonneville Power Administration
Post Office Box 3621
Portland, Oregon 97208

DRAFT SUPPLEMENTAL FINAL EIS:
Crow Butte Slough Crossing,
Benton County

Mr. Kiley,

Your document has been reviewed by our staff as requested; comments follow.

The discussion of mitigation measures (page 4-9) implies there is an acceptable amount of waterfowl mortality which need not be mitigated. Since the majority of waterfowl produced in the Columbia River Valley are from the John Day Pool, especially the Umatilla National Wildlife Refuge (page 5-13), any unmitigated loss is unacceptable.

We feel the fate of potential mitigation measures, especially relating to waterfowl mortality, should be clarified. Since the Umatilla National Wildlife Refuge lands were originally set aside for wildlife under the Fish and Wildlife Coordination Act, any action which results in a loss of wildlife must be considered a non-conforming use. Any loss must be considered significant and should be mitigated. This draft supplement should include language ensuring that all losses identified in post-construction studies are mitigated.

Thank you for the opportunity to review this document.

Sincerely,

THE DEPARTMENT OF GAME

Mark H. Grandstaff, Applied Ecologist
Environmental Affairs Program
Habitat Management Division

MHG:cv
cc: Agencies
Region

11

JOHN SPELLMAN
Governor

DONALD W. MOOS
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Mail Stop PV-11 • Olympia, Washington 98504 • (206) 459-6000

December 21, 1981

Acting Environmental Manager
Bonneville Power Administration
P.O. Box 3621 - SJ
Portland, Oregon 97208

Dear Sir:

Thank you for the opportunity to review the supplemental draft environmental impact statement for the Crow Butte Slough Crossing. We reviewed the EIS and have the following concerns.

The EIS indicates the proposed action will require Section 10 and 404 permits from the Corps of Engineers. The Department of Ecology will review these permits. In addition, a water quality certification and a short-term modification of the water quality standards will be required from the Department of Ecology.

The Spill Prevention Control and Countermeasure (SPCC) Plan (page 6-39) will need to be reviewed by the Department of Ecology. In the event of a spill, the Department of Ecology Central Regional Office must be notified. Their 24-hour emergency spill response telephone number is (509) 575-2490.

If you have any questions, please contact Mr. Clar Pratt at (509) 575-2490.

Sincerely,

Barbara J. Ritchie

Barbara J. Ritchie
Environmental Review Section

BJR:lc

cc: Clar Pratt

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

ER 81/2209

DEC 21 1981

Acting Environmental Manager
Bonneville Power Administration
P.O. Box 3621-SJ
Portland, Oregon 97208

Dear Sir:

Thank you for Mr. Johnson's letter of October 20, 1981, transmitting copies of the draft supplement to the Final Statement for the Columbia River Crossing at Crow Butte Slough (Ashe-Slatt), 500 kV Transmission Line, Benton County, Washington. Our comments are presented according to the format of the statement or by subject.

Environmental Consequences

The supplement includes discussion of shrub-steppe vegetation under Affected Environment. However, the section on environmental consequences does not address project impacts on this habitat type. In view of the loss of shrub-steppe habitat caused by road and tower construction on Crow Butte Island, the final supplement should discuss this issue.

Endangered Species

The draft supplement notes that none of the project alternatives would jeopardize the long-term productivity of the bald eagle or peregrine falcon. Since Bonneville Power Administration received concurrence to these findings from the Fish and Wildlife Service in conformance with the Endangered Species Act, it is suggested that the following paragraph be added on page 3-143:

> By letter of May 12, 1981, the Fish and Wildlife Service concurred with the findings of no effect to the bald eagle or peregrine falcon. They recommended that BPA include monitoring of the effects of the Crow Butte powerline crossing on bald eagles and peregrine falcons with the proposed waterfowl monitoring. Emphasis should be directed towards eagle and falcon collisions with transmission lines, especially during periods when large concentrations of waterfowl are present. Attention should also be given to any population shifts or changes in use patterns of bald eagles.

Mitigation

It would be helpful if the final supplement would clarify what mitigation efforts would be instituted. These measures are presently cited as possibilities without indication of commitment.

We hope these comments will be helpful to you.

Sincerely,

13

Bruce Blanchard, Director
Environmental Project Review

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION X
1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101

REPLY TO ATTN OF: M/S 443

21 JAN 1982

Anthony Morrell
Acting Environmental Manager
Bonneville Power Administration
P. O. Box 3621-SJ
Portland, Oregon 97208

Dear Mr. Morrell:

The Region 10 office of the Environmental Protection Agency has reviewed the Draft Supplement to the Crow Butte Slough Crossing Final EIS and rated it LO-1. We apologize for the delay in sending this rating and hope it has not caused you any great inconvenience.

Sincerely,

Gary L. O'Neal

Gary L. O'Neal, Director
Environmental Services Division

8.3 RESPONSE TO PUBLIC AND AGENCY COMMENTS

Concerning the comment by the State of Washington Department of Transportation that a permit is required for any utility crossing of a state highway, BPA is aware of this permit requirement and accordingly has obtained permit No. US-1051.

Concerning the comment by the Benton County Planning Department about the present extent of agricultural activity in the general vicinity of Crow Butte and areas to the north, this EIS Supplement has been revised to reflect the information provided. Similarly, concerning the distances to four communities near the project area, this report has been revised (see Section 5.1.1).

Concerning the comment by the United States Coast Guard as to possible construction of a causeway across a navigable waterway, BPA will coordinate any actions or permits as appropriate if one of the underground alternatives involving causeway construction is pursued.

Concerning the comment by the State of Washington Department of Game that all waterfowl losses resulting from the Crow Butte crossing should be mitigated, BPA studies to date show no biologically significant waterfowl losses at the crossing. BPA will provide mitigation as reasonably required to compensate for the effect of the aerial lines.

Concerning the comments by the State of Washington Department of Ecology that the Sections 10 and 404 permits and the Spill Prevention Control and Counter measure (SPCC) Plan will be reviewed by the Department of Ecology, BPA will implement an SPCC Plan and will submit all of the subject documents to the Department of Ecology if one of the underground alternatives to the proposed action is pursued.

Concerning the comment by the United States Department of the Interior (DOI) that impacts to shrub-steppe vegetation and habitat be discussed, it should be noted that Sections 3.1.4.1, 3.1.4.2 and 3.1.6 of the Study Documentation Report address this issue in some detail.

Concerning the comment by the DOI that the Biological Assessment (Section 3.8 of the Study Documentation Report) be modified, the suggested modification has been made. A continuing wildlife study sponsored by BPA includes gathering data on bald eagles and peregrine falcons. Results to date show

no effect on these species. Concerning the comment that mitigation measures be clarified, the above-mentioned study includes the objective of determining appropriate mitigation for an overhead crossing. Certain mitigation measures are conditional upon the selection of the proposed action or a particular alternative to it, and the required schedule for completion of the Ashe-Slatt line, and cannot be qualified prior to the Record of Decision.

Concerning the comments by Mr. Milton Mercer, Jr. about the accuracy of certain data on existing and past land use factors, this EIS has been revised as appropriate to reflect information provided by Mr. Mercer and the Benton County Planning Department (see Section 5.1.1).

Concerning the comment by Mr. Richard Beightol that a cost analysis of the proposed action and the alternatives be performed, it should be noted that a cost analysis separate from this environmental study will be incorporated in the Record of Decision. Approximate costs are given in Section 6.9 of this EIS Supplement. Concerning Mr. Beightol's comment that visual impacts are subjective, recognition is made in the EIS Supplement that "aesthetic quality involves individual perceptions and values." Nevertheless, certain systems for quantification are also cited in the EIS Supplement and Table 6-1, based on concepts introduced in the literature, includes viewer sensitivity as a factor.

A S

CHANGES TO SDR

- Transmission lines, including overhead and/or underground transmission facilities
- Site activities related to Crow Butte State Park.

Aerial photos were reviewed prior to the site visit and were verified for ground truth. Based on the aerial photographs, the photos taken at the site, topographic maps, and personal observations, the visual impacts of the towers were determined and evaluated.

Statistical data were reviewed and summarized. Planning and land use information was reviewed and evaluated for presentation.

The entire Ashe-Slatt transmission line has been constructed overhead (the crossing at Crow Butte Slough being temporary), so that the impacts of the crossing alternatives may be compared based on the existing conditions with the towers in place. If no action were taken, the towers would remain in place at the terminals north and south of the slough. It is within the context of these conditions that potential impacts are evaluated. The towers between the terminals would be removed in the case of either the underground or the no action alternatives. Following the analysis, the 27 crossing alternatives were evaluated on a comparative basis for each area of concern.

3.4.3 EXISTING CONDITIONS

3.4.3.1 Land Use and Socioeconomic Factors

The Crow Butte Island site is located on the northern side of the Columbia River within the State of Washington. It is situated in Lake Umatilla, which was formed as a result of the completion of the John Day Dam in 1968. It is separated from the mainland by a narrow slough.

Areas on both sides of the river are subject to intense agricultural activity; while the area is very arid, irrigation has recently become possible as a result of the availability of water from Lake Umatilla. On the Washington side, the land is constrained by steep bluffs and ridges resulting from erosion of the basalt lands. The Horse Heaven Hills to the north, which have been traditionally sacred areas for Indian tribes, includes approximately 34,000 acres of irrigated farmland in the vicinity of the project site, with another 25,000 acres being actively studied for irrigation development. In addition, the area generally north of the Horrigan Road alignment is intensively farmed as a dryland wheat production area comprising some 200 square miles. The Yakima River basin about 50 miles north of the site, is rich in alluvial soils and provides many of the important orchards and unique agricultural lands for the State of Washington.

About 37 miles to the east of Crow Butte Island is the Tri-Cities area (Richland, Kennewick, Pasco), which includes the Hanford Reservation and the associated nuclear power generation at that site. This is a growing residential area and provides most of the income base for the Benton County.

There is no major population center on the Washington side within 10 miles of the site. The nearest town is Paterson, which is a small community providing very limited services, located about 12 miles from the site; Plymouth, another small community, is 24 miles distant. The site is about 21 miles from the nearest large town (other than Tri-Cities): Prosser, the Benton County seat, with a population of approximately 4,000. To reach communities in Oregon, the nearest crossing is at McNary Dam, near Plymouth. Growth in the project area is not expected to be significant.

Land use in areas adjacent to the Crow Butte State Park and the transmission line corridor relates to activities in Benton County, Washington, and Morrow County, Oregon (see Figure 3-2). Both areas are primarily agricultural and it is anticipated that agriculture will continue to be the major activity in the longer term.

On the Washington side, to the north of Crow Butte in Benton County, there are approximately 125 large circle irrigation units. On the west side of Dead Canyon the Mercer Ranches operate approximately 25 circles and on the east side, Three Wells and Hundred Circle Farms operate approximately 100 circles. Agricultural commodities grown on these lands include wheat, potatoes, corn, soybeans.

This is an area of low residential density, as most of the workers on the farms or at Crow Butte commute from Prosser, Paterson, Hermiston, Umatilla, and beyond. As seen in Table 3-7, Benton County population has grown at a rate of approximately 4.25 percent according to projections made since the last Census. Incorporated areas have grown at over 5 percent per year. Preliminary projections indicate a population figure for the County of nearly 106,000, most of which would be in the Tri-Cities area (Richland-Kennewick-Pasco). It is too early to determine the accuracy of these projections, however, since there has been a reduction in planned activities at the Hanford reservation.

Morrow County, Oregon, which is located directly opposite the site across the Columbia River, had an estimated population of 6,400 in 1978--about 7 percent that of Benton County. The town of Boardman, in Morrow County, had a 1977 population of about 1,000. Morrow County is also increasingly agricultural.

3.8 BIOLOGICAL ASSESSMENT

3.8.1 SPECIES IDENTIFICATION

On November 4, 1980, the U.S. Fish and Wildlife Service promulgated a list of proposed endangered and threatened species for the Crow Butte study area (see Table 3-14). The only species listed (50 CFR Part 17) which regularly occurs on or near the project site is the bald eagle (Haliaeetus leucocephalus), (Burkholder, 1980; Herrington, 1980; Blum, 1980). A small number of these birds, fewer than half a dozen to perhaps 20, apparently use the slough and river during winters to prey upon fish and waterfowl (James, 1980; Blum, 1981). The species is not known to nest in the region, and its occurrence is considered uncommon in fall and winter and rare in spring on the Umatilla Wildlife Refuge (USFWS, 1978). The bald eagle is listed as a threatened species in Washington and Oregon by the Fish and Wildlife Service.

The American peregrine falcon (Falco peregrinus anatum) is a rarely observed species. Individuals may on occasion migrate along the Columbia River and Crow Butte Slough in spring and fall. It is listed as an endangered species, formerly breeding in eastern Washington. However, during the 1970's no nesting records for the region have been discovered (Howard, 1980). Further, the project area does not appear to contain suitable nesting sites, since trees and ledges are scarce.

3.8.2 DATA COLLECTION

A number of wildlife professionals were consulted to determine the presence and abundance of these two endangered species (Burkholder, 1980; Herrington, 1980; Blum, 1980; Gore, 1980; James, 1980). Consultations were accomplished through personal interviews and telephone and written communications. An onsite, qualitative inspection was made of the project area to assess general habitat suitability for these species. Relevant literature and scientific data were reviewed where available to determine habitat needs and other requirements (Meyer, 1979). Personal knowledge of bald eagle behavior was also utilized in the assessment, where appropriate, to evaluate the effects of the proposed actions on the species. In addition, BPA is sponsoring a two-year field study of the effects of the existing, temporary overhead line crossing Crow Butte slough. As part of this study, data on bald eagles and peregrine falcons are being collected.

3.8.3 IMPACT ASSESSMENT

The proposed action and all alternatives will result in some construction activity, with the underground alternatives involving the most activity. If

construction activities take place from late spring to early fall as planned, there would be little likelihood of disturbing any bald eagles in the area. Even if activities occurred at other times, or if there were any eagles in the area disturbance would be minor. These birds utilize a large area for hunting, only a small portion of which lies within the project site. Also, their use of the slough seems dependent on the presence of substantial waterfowl.

The only adverse effect which might result from operation would be potential collisions with overhead lines (Alternatives 9 and 10). However, the very low population density of eagles on the site, together with mortality rates from previous studies (James, 1980), suggest that collisions would be extremely unlikely. It is concluded that neither the proposed action nor any alternative will jeopardize the long-term productivity of the species.

In addition, overhead lines are not unusual features within the ranges of these birds in this region. The overhead towers might benefit the eagles, who might use them for perching, hunting, or even nesting. Suitable perching or nesting sites presently are not common near the site. Since eagles have been known to use towers in this manner in other areas, it seems unlikely that electric or magnetic discharges would cause any significant effects. However, almost nothing is known regarding long-term, subtle, chronic effects of electric or magnetic fields on this or any species. Research is continuing to search for such evidence.

Similar impacts could occur for peregrine falcons, but the probability is even lower than for bald eagle impacts, since no peregrine falcons have yet been sited in the project area, during the course of the field study, which includes the winters of 1980-81 and 1981-82.

By letter of May 12, 1981, the Fish and Wildlife Service concurred with the findings of no effect to the bald eagle or peregrine falcon. They recommended that BPA include monitoring of the effects of the Crow Butte powerline crossing on bald eagles and peregrine falcons with the proposed waterfowl monitoring, and urged that emphasis be directed towards eagle and falcon collisions with transmission lines, especially during periods when large concentrations of waterfowl are present. Accordingly, the objective of the present field study and analysis includes gathering data on bald eagles and peregrin falcons and determining effective mitigation measures if there are negative impacts from the completion of the Ashe-Slatt line.

As a result, the following issues were determined to be of particular concern for this study, and their relative importance is as shown:

- Waterfowl and endangered bird species 25%
- Land use/potential for development 25%
- Electric/magnetic effects 10%
- Chemical pollution 10%
- State park access 10%
- Noise 5%
- Visibility 5%
- Erosion/sedimentation 5%
- Wetland habitat 5%

In general, participants in the scoping process emphasized concern over long-term, operational impacts rather than short-term, construction or accidental impacts.

It is important to emphasize that issues are not equivalent to impacts; to make them so would bias the study. Prioritization of issues focuses the study of potential impacts to enable a determination of the environmentally preferred alternative on the basis of the relative important issues to the parties at interest. This determination as well as a detailed discussion of the breakdown of the issues for purposes of weighting the impacts is given in Section 5.0, Overall Ranking of Alternatives.

7.4 CONTINUING EFFORTS

The Draft EIS Supplement and this Draft Study Documentation Report were publicly distributed for review by the steering committee; Federal, state, and local agencies; and individuals and groups of the general public. A distribution list is given in Section 8.1 of the Final EIS (FEIS) Supplement. The review process included a public meeting on December 1, 1981 at Umatilla, Oregon. The comments received are shown in Section 8.2 of the FEIS Supplement, and the response of the Bonneville Power Administration to those comments in Section 8.3. In this way, the scoping process is viewed as a continuing effort to involve all interested parties.