mile 66; about 4,000 feet of road between corridor mile 70 and 71 to avoid wetlands; and about 900 feet of road at corridor mile 96 to access south side river crossing up on the bluff.

Page 2-9, paragraph 3 has been modified as follows:

Holes for tower footings are dug with a trackhoe (or blasted, if necessary) and footings put in place at each tower site. Towers are either assembled at the tower site and lifted into place by a large crane (30- to 100-ton-capacity) or assembled at a staging area and set in place by a large sky-crane helicopter. The towers are then bolted to the footings.

Page 2-10, text added as last bullet item as follows:

- 100-ton crane used to lift towers up onto their footings.

Page 2-14, text added after paragraph 2 as follows:

The Bonneville preferred and environmentally preferred alternatives are as follows:

- The Bonneville preferred alternative is the Proposed Action (to construct the McNary–John Day Line) with the following short-line routing alternatives; McNary Substation Alternatives, Alternative A – Relocate Building; Hanford –John Day Junction Alternatives, Alternative A – North Side; Corridor Mile 32 Alternatives, Alternative A – Parallel Existing Line Across Tribal Allotment; Corridor Mile 35 Alternatives, Alternative A – Parallel Existing Line Across Tribal Allotment.
- The No Action Alternative (not to construct the proposed line) is the environmentally preferred alternative.

Affected Environment, Environmental Consequences, and Mitigation (Chapter 3)

Land Use and Recreation

Page 3-2, paragraph 4 has been modified as follows:

Land use within the corridor is primarily agriculture (irrigated cropland, dryland wheat farming, and grazing). Irrigated agricultural uses in the project corridor include poplar tree farms, orchards, and a variety of crops such as potatoes, corn,

onions, carrots, and asparagus. Some crops change annually. There are approximately ~~1,409~~1,412 acres of irrigated and non-irrigated cropland, ~~3,064~~3,067 acres of grazing land, and 2 acres of substation/wildlife land use in the project corridor. There are no lands designated as prime farmland in the project corridor. Table 3-1 summarizes the land uses and the corresponding Bonneville structure numbers within the project corridor. Residential and industrial/commercial land is also adjacent to the corridor (see discussion in the following section on Land Uses Adjacent to Project Corridor).

Page 3-8, paragraph 3 has been modified as follows:

Approximately ~~48~~ 63 acres (~~12~~ 18 acres in cropland and ~~35~~ 45 acres in grazing land) would be impacted ~~during~~ for the construction of the new access roads and spur roads (based on a 25-foot-wide construction area). Approximately ~~93~~ 186 acres (~~29~~ 58 acres of cropland and ~~64~~ 128 acres of grazing land) would be temporarily impacted during the construction of the towers, based on an impact area of ~~0.25~~0.50 acre per tower.

Page 3-9, paragraph 2 has been modified as follows:

The permanent project facilities (not including access roads) would occupy approximately ~~19~~ 20 acres total (6 acres of irrigated and nonirrigated cropland and ~~13~~ 12 acres of grazing land and 2 acres of substation/wildlife area land). New access roads would occupy a permanent footprint of approximately ~~48~~ 63 acres (based on a 25-foot impact area). Table 3-3 identifies the land uses affected by the permanent project footprint.

Page 3-12, after last bullet item, text has been added as follows:

- Repair damages to access roads caused by or arising out of Bonneville use, leaving roads in good or better condition than prior to construction.

Page 3-12, last paragraph has been modified as follows:

During construction, approximately ~~50~~ 85 to ~~55~~ 90 acres of irrigated and nonirrigated cropland and ~~116~~ 190 to ~~125~~ 199 acres of grazing land (shrub-steppe and grasslands) would be temporarily disturbed during construction.

Page 3-13, paragraph 1 has been modified as follows:

Following construction, approximately ~~68~~ 83 acres of irrigated and nonirrigated cropland and grazing land would be converted to transmission line facilities during the life of the project. This includes a small percentage of agricultural land

in Benton and Klickitat Counties in Washington and Umatilla and Sherman Counties in Oregon.

Geology, Soils, and Seismicity

Page 3-15, replace paragraph 1 with new text as follows:

~~A landslide area was observed in the vicinity of tower 40/3 during the field investigation conducted on May 23, 2001. Evidence that this landslide is recent and may continue include a barren vertical headwall scarp, open and acute tension cracks at the ground surface near both upper and lower access roads, and additional open tension cracks at the ground surface extending beneath the northwest footing of tower 40/3. Also, most of the area is not considered to be susceptible to liquefaction, which occurs primarily in weakly developed granular soils under saturated conditions.~~

A landslide area was observed adjacent to and north of McNary-Ross tower 40/3 during the contract field inspection of the proposed line conducted on May 23, 2001. The slide was first observed in 1996 after a period of heavy rainfall. Even though the original movement of the failure was about 2.5 feet, it has remained stable since that time. Bonneville geotechnical engineers have investigated the failure and believe that it is a shallow, rotational slump likely caused by water ponding on the access road during the heavy rainfall. The road in this area is in-sloped and proper drainage is not possible. Although a headwall scarp, tension cracks near the access roads, and tension cracks near tower 40/3 are present, further movement of the failure is of low probability. Proposed access road improvements will enhance the drainage and reduce the chance of movement even more. A new structure of the proposed McNary-John Day line will be sited east of this area, and no new roads will be located across the failure.

Page 3-16, paragraph 2 has been modified as follows:

Construction impacts would total ~~166~~ 211 to ~~181~~ 226 acres depending on the number and location of conductor tensioning sites. This temporary impact is projected to last up to one year and has the potential to increase the rate of erosion along the corridor. In areas along the corridor where quaternary period loess soils have developed as a result of wind deposition, removal of vegetation would likely increase the rate of wind erosion. Erosion rates would most likely return to their current level following construction if plants reestablished along the corridor, naturally, or through revegetation.

Page 3-16, paragraph 3 has been modified as follows:

Approximately 78 acres of existing roads would be reconditioned and widened for the project. About ~~48~~ 63 acres of spur roads and new roads would be constructed for the project. Additionally, between 26 and 39 acres would be disturbed (perhaps cleared of vegetation) for conductor-tensioning sites along the project corridor. Approximately ~~93~~ 186 acres would be disturbed and cleared of vegetation to construct the 360 transmission towers anticipated along the project corridor. Up to 2 acres would be disturbed and cleared of vegetation for substation work at McNary. Additionally, approximately 25 acres of poplar trees would likely need to be removed west of Glade Creek due to safety protocols. A total of 50 acres would be removed from cottonwood production.

Page 3-17, bullet item 4 has been modified as follows:

- ~~Ensure graveled surfaces on access roads in areas of sustained wind~~. In areas of potential wind erosion, apply gravel to access road surfaces.

Page 3-17, bullet item 6 has been replaced as follows:

- ~~Develop additional mitigation measures (using a certified engineer) between corridor miles 39 and 41 due to the presence of an active landslide in the vicinity of tower 40/3.~~
- In the area of landslide (corridor miles 39 and 41) do not construct any new roads within 100 feet of the slide area. Reshape existing access road with out-slope to provide drainage, and site the tower east of the area if possible.

Page 3-17, text added after last bullet as follows:

- Consider helicopter construction in areas of steep slopes to lessen the size of access roads and temporary tower site impacts (laydown areas for materials).

Streams, Rivers, and Fish

Page 3-21, paragraph 1 has been modified as follows:

The ~~proposed action could affect~~project corridor crosses two fisheries protected by the Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Act (16 U.S.C. 1855(b)): which includes the chinook and coho salmon fisheries. All streams identified as either fish bearing or potentially fish bearing in the project area are included in designated EFH for these two fisheries. Chinook salmon that utilize the streams intersected by the project corridor are not currently federally listed, while coho salmon are a candidate for federal protection. However,

steelhead trout are federally listed as a threatened species, and occur, or are likely to occur in the same streams along the project corridor as chinook or coho salmon. ~~Since steelhead trout are a federally listed species and their distribution overlaps with both chinook and coho, the analyses of current conditions and potential impacts to this species also serve to describe all potential impacts to EFH.~~

Page 3-23, paragraph 1 has been modified as follows:

On this basis, a 100-year flood event would reach elevations of 279 feet above-sea-level near the McNary Substation. However, the McNary Substation is located at approximately 290 feet, ~~while towers for the Columbia River crossing would range in elevation from 285 to 310 feet,~~ all above maximum pool levels (McGowin pers. comm.)

The river crossing towers on the south side of the Columbia River were constructed in the 1940's and 1950's with the original ground elevation at approximately 260 – 265 feet. After John Day Dam was completed in the late 1960's, fill was placed to the west and the north of the crossing towers to provide vehicular access when the normal pool elevation of 265 feet was reached. The driving surface of this fill is presently at an elevation of 274 feet. Crossing towers on the north side are sited at approximately 310 feet, above the maximum pool levels.

Page 3-24, paragraph 4 has been modified and new text added as follows:

Except for near McNary Substation, all tower footings would be located on upslope areas and conductors would span all streams. At McNary Substation, the river-crossing towers at the edge of the Columbia River would have a larger footprint than the existing towers they are replacing, requiring fill placement in a pond attached to the Columbia River. Potential impacts to the river and fish would be temporary increases in suspended sediments during construction, and removal of off-channel vegetated aquatic habitats.

Upslope tower work would require the disturbance of soils, thus exposing them to the erosive forces of wind and rain, which could potentially transport sediments to all streams along the project corridor, as well as the Columbia River, and adversely affect fish and fish habitat. All streams would be equally susceptible. If areas cleared for tower footings were reseeded or naturally revegetated after construction, the potential for erosion and sedimentation would be less than if left as bare soil. Tower footings would be drilled where possible, although some areas may require blasting.

Page 3-25, paragraph 3 has been modified as follows:

The project would require approximately 40 miles of existing roads to be reconditioned and upgraded and 12.5 miles of new "spur roads" constructed from existing access roads. ~~This new access and spur road construction would include the clearing and grading of an area 16 feet wide, with an approximate impact area 25 feet wide.~~ The width of disturbance for access roads would be approximately 20 to 25 feet, depending on site conditions (slope of road, soils, terrain, etc.). The impact area may include hill slopes where spoils from cut-and-fill road construction may be sent down slope. ~~Roads would be located on stable hill slopes and road gradients would not exceed 15% in areas with potentially unstable soils.~~ A total of 24 wetlands or other waters of the United States including drywashes would be crossed by access roads. Three miles of new access road would be constructed from corridor mile ~~39~~ 42 to ~~41~~47. This road would cross ~~16~~ several dry washes, all draining to the Columbia River, 2,000 to 3,000 feet downstream. ~~The~~ other approximate 5 miles of new road construction would cross drywashes at corridor miles 13, 34, 36, 48, 49, 50, and 66.

Page 3-26, text has been added after paragraph 1 as follows:

The proposed action and alternatives could affect two fisheries protected by the EFH provisions which includes the chinook and coho salmon fisheries. All streams identified as either fish bearing or potentially fish bearing in the project area are included in designated EFH for these two fisheries. Some streams are included because they may support spawning, rearing, and migratory use by chinook or coho salmon. Other streams are included because they are situated upstream of areas that could potentially be used by salmon, and salmon are sensitive to water quality. Chinook salmon that utilize the streams intersected by the project corridor are not currently federally listed, while coho salmon are a candidate for federal protection.

Chinook salmon and coho salmon are known to be present in the Columbia River and Chapman and Rock Creeks. Coho salmon may also potentially utilize habitat in Glade Creek and the unnamed tributary to Glade Creek. Spawning habitat within the project corridor is present in Glade and Rock Creeks, while all perennial streams along the project corridor could provide limited rearing habitat. The stream temperatures in many of the streams intersected by the project corridor have a naturally high summer time water temperature that exceeds optimum temperature for juvenile salmonids.

The Middle Columbia River ESU of chinook salmon are a spring-run fish. Typically, spring-run chinook salmon are considered "stream-type" fish in that they reside in fresh water as fry or parr for one year or more before smoltification. Coho salmon typically spend one to two years rearing in fresh water before smoltification.

To ensure protection of EFH no riparian vegetation would be removed for the project. The only in-water work anticipated to be necessary at streams utilized or potentially utilized by either chinook salmon or coho salmon is the tower replacement adjacent to the Columbia River, south-side near McNary Substation. As explained on page 3-24, the potential impacts to salmon would be associated with the construction of tower footings at the Columbia River crossing near the McNary Dam. Tower construction associated with this crossing would result in the temporary degradation of water quality, and the removal of off-channel vegetated aquatic habitat.

Page 3-26, paragraph 2 has been modified as follows:

The work associated with the McNary Substation and the towers spanning the Columbia River adjacent to the Umatilla Bridge would occur within the FEMA-designated 100-year floodplain of the Columbia River. However, as stated earlier, except for the river crossing towers, the McNary Substation and the new towers are above the elevation of the 100-year flood event as designated by the U.S. Army Corps of Engineers, who can control the water level of the Columbia River via the dams.

Page 3-28, after bullet item 3, new text has been added as follows:

- Where access roads cross a dry wash, the road gradient should be 0% to avoid diverting surface waters from the channel.

Page 3-29, bullet items 6 and 7 have been revised as follows:

- ~~Avoid blasting during periods when salmonid eggs or alevins are present in gravels.~~
- ~~Avoid blasting within 200 feet of fish-bearing or potentially fish-bearing streams.~~
- Avoid blasting within 200 feet of fish-bearing or potentially fish-bearing streams during periods when salmonid eggs or alevins are present in gravels.
- Conduct in-water work at the Columbia River during Corps of Engineers designated in-water work windows.

Page 3-29, after bullet item 10 new text added as follows:

- Site staging areas away from stream beds.

For Columbia River water work:

- Site staging 150 feet or more from water body.
- If working within 150 feet of water body, check vehicles daily for leaks and diaper stationary power equipment.
- Construct during recommended Corps in-water work windows for the Columbia River (December 1 through March 31).
- Isolate in-water work area and capture and release fish from the work area under the supervision of a competent fisheries biologist experienced in capturing ESA-listed fish.
- Use appropriate fish screens on all intakes and pumps.

Wetlands and Groundwater

Page 3-32, paragraph 5 has been modified as follows:

Of the 45 acres of wetlands located within the project corridor, less than ~~0.5~~1.0 acre of wetland would likely be filled to construct the proposed project. Twenty-four wetlands or waters of the U.S. would be crossed by access roads, and the river crossing-tower adjacent to the Columbia River near McNary Substation would require some wetland fill. Three main wetland complexes contain 73% of the wetlands located within the construction corridor: at the wildlife refuge near McNary Substation, corridor mile 1; the Roosevelt Grade Road from corridor mile 48 to 50; and in the basalt outcroppings east of Harvalum Substation at corridor mile 71 to 75. The other 27% of the wetlands are predominantly riparian wetland associated with the floodplains of perennial streams.

The construction of new access roads in association with the Hanford-John Day Alternatives B and C would potentially fill 0.1 acre of emergent wetlands. The wetlands are associated with a constructed stock pond fed by a well. The construction of an access road through this wetland would destroy emergent vegetation and divert surface flows, potentially affecting hydrological patterns within the greater wetland area.

Access road ford crossings of wetlands and other waters of the U.S. would potentially fill 0.25 acre of emergent wetlands and non-wetland drywashes. Short access road crossings of wetlands and drywashes would occur near corridor miles 13, 34, 36, 48, 49, 50, 66, 71, and 72. These fords would be designed to maintain surface hydrologic patterns and to stabilize road crossings in wet areas to prevent potential rutting and erosion from continued vehicle use. Road crossings would permanently remove vegetation, and could increase sedimentation within adjacent surface waters.

Construction of two new tower footings on the south side of the Columbia River crossing the McNary Dam would require the filling of approximately 0.50 acre of wetland. The wetland is primarily dominated by invasive emergent and shrub vegetation fringing the existing tower sites in an off-channel portion of the Columbia River. Destruction of these wetlands would remove fish habitat and could result in a short-term increase in suspended sediments during construction.

Page 3-36, bullet item 1 has been modified as follows:

- Locate structures, new roads, and staging areas so as to avoid waters of the U.S., including wetlands. Where avoidance is not possible, provide compensation for wetland impacts in accordance with Corps Section 404 permitting requirements.

Page 3-37, paragraph 1 has been modified as follows:

The fill of less than 1 acre of wetland would be unavoidable. The fill is required for the river-crossing towers adjacent to the Columbia River at McNary Substation and for various access road crossings along the project corridor. A small amount of forested wetland vegetation would be removed with the short-line McNary Substation Alternatives A, B, and C. This would not result in a loss of wetland area; however, it would permanently change the wetland vegetation community from forested to shrub dominant.

Vegetation

Page 3-40, paragraph 5 has been modified as follows:

The U.S. Fish and Wildlife Service has identified one federally listed threatened species (Utes ladies' tresses) and one candidate plant species (northern wormwood) as having potential habitat present within the project corridor. Neither species was found during initial field surveys conducted in July 2001. Qualified botanists conducted an additional field survey in April 2002, during the peak flowering period of northern wormwood. No individuals or populations of northern wormwood were found during the additional survey. Botanists will conduct additional field surveys for Utes ladies' tresses prior to construction. These field surveys will take place in late August 2002 to coincide with the peak flowering period of Utes ladies' tresses.

Page 3-40, paragraph 6 and page 3-41 paragraphs 1, 2, and 3 have been modified as follows:

The Washington Natural Heritage Program (WNHP) has identified ~~potential habitat~~the locations of known populations of two state sensitive plant species (Pauper's milkvetch and Snake River ~~in~~cryptantha) in or adjacent to the project corridor ~~for two state sensitive plant species (Pauper's milkvetch and Snake River cryptantha)~~ between structures 47/1 and 48/3. Both species occur in dry, open, flat, or sloping areas in stable or stony soils, where the overall cover of vegetation is relatively low. Pauper's milkvetch is also associated with big sagebrush-bluebunch wheatgrass shrub-steppe communities.

Neither plant species was found during field surveys conducted in July 2001. However, the field surveys verified that favorable habitat for both species is present in the WNHP-identified areas, between structures 47/1 and 48/2.

~~Potential habitat~~ Known locations for ~~a third~~two other state sensitive species, Piper's daisy and smooth desert-parsley, have~~s~~ also been identified by WNHP. Piper's daisy populations are known to occur approximately 2 miles north of the project corridor, at structures 33/4 to 35/3. Smooth desert-parsley populations are known to occur in several locations approximately 2 miles north and east of the project corridor. The July 2001 field surveys of the project corridor found no Piper's daisy or smooth desert-parsley individuals or populations.

Botanists conducted additional field surveys for state-sensitive species in May 2002. The timing of the field surveys coincided with peak flowering periods for four target species. These were the state-sensitive species Pauper's milkvetch, Snake River cryptantha, Piper's daisy and smooth desert-parsley. The May 2002 field surveys also included searches for other State-sensitive species with April to June flowering periods.

None of the four target species were found during the July 2001 or May 2002 field surveys. However, one population of a state-sensitive species, the desert evening-primrose (*Oenothera caespitosa ssp. marginata*) was located near tower 47/1. No other state-sensitive species were found.

Page 3-42, last paragraph has been modified as follows:

The proposed transmission line expansion would result in both permanent and temporary impacts to vegetation within the project corridor. Permanent impacts would total approximately ~~68~~ 83 acres. Permanent impacts are those actions that result in the removal and loss of vegetation through construction and operation and maintenance of new facilities, and that do not allow for reestablishment of the preconstruction cover type. There are 3 sources of permanent impacts: operation of new towers, new access road operation and maintenance, and substation

expansion. The permanent impacts to each vegetative cover type resulting from each of these actions are summarized in Table 3-12. Criteria used to determine permanent impact acreages are described later in this section.

Page 3-43, paragraph 2 has been modified as follows:

Temporary impacts would total ~~166~~ 211 to ~~181~~ 226 acres, depending upon the number and location of conductor tensioning sites. Temporary impacts are those actions that result in disturbance to vegetation during construction of the facilities, but do not result in permanent removal of vegetation, or preclude reestablishment of the preconstruction cover type.

Page 3-43, paragraph 3 has been modified as follows:

There are ~~three~~ two sources of temporary impacts: work areas around tower sites~~, new access road construction,~~ and conductor tensioning sites. The temporary impacts to each vegetative cover type resulting from each of these actions are summarized in Table 3-13. Criteria used to determine temporary impact acreages are described later in this section.

Page 3-44, paragraphs 1 and 2 have been modified as follows:

The construction of 8 miles of ~~a~~ new ~~3-mile-long~~ access roads and 270 (250-foot-long) spur roads would result in ~~48~~ 63 acres of ~~temporary~~ permanent impacts to vegetation communities on the proposed route. ~~The permanent impacts are discussed in the following section on Impacts During Operations and Maintenance. The various vegetation communities temporarily impacted by construction of new access roads are presented in Table 3-13.~~[*Space between paragraphs removed*] Of the area ~~temporarily~~ impacted, approximately half is in the grazed shrub-steppe vegetative cover type. ~~Temporary d~~Disturbance from new access road construction is not likely to noticeably alter the species composition of this cover type, because it is already dominated by those invasive species favored by disturbance.

Page 3-44, paragraph 3 has been deleted:

~~Grassland, scabland/lithosol, and shrub-dominated shrub-steppe communities would have somewhat lower acreages of temporary impacts from new access road construction. These cover types would recover more slowly from the temporary disturbance and would likely see increases in percent cover of invasive and/or disturbance-favored species such as cheatgrass. The recovery of agricultural areas from the temporary disturbance from new access road construction would~~

~~depend on the timing of replanting of the areas, and on local crop management practices such as hydroseeding of exposed soils.~~

Page 3-46, paragraph 4 has been modified as follows:

Operations and maintenance of new access roads would result in the permanent alteration of ~~48~~ 63 acres of existing vegetation communities in the proposed roadbeds. This figure is based on an assumption of 270 new spur ~~access~~ roads, each about 250 feet long, with a 25-foot width, and eight miles of new access roads. In areas where cut or fill activities are required to build or support the roadbed, or at corners in roads, the permanent impact width would be wider.

Page 3-47, paragraph 3 has been modified as follows:

Impact acreage from access road operation would be highest in the grazed shrub-steppe cover type. ~~Ten~~ Thirty-two acres of this cover type would be converted to roadbed. Many of the existing two-track roadbeds in this cover type, and throughout the route, are dominated by low cheatgrass. As such they have a close affinity to the surrounding degraded shrub-steppe, even while converted to access roads. Impact acreage within higher quality vegetation communities (such as shrub-dominated shrub-steppe) are lower, but would result in the creation of new edge communities and a permanent avenue of invasion for nonnative and/or disturbance-favored species.

Page 3-47, after paragraph 5 new text has been added as follows:

Construction of a new tower or spur road in the location of the desert evening-primrose near tower 47/1 would destroy the plants that were found. (Please see mitigation measures.)

Page 3-48, paragraph 4 has been modified as follows:

Plant species that would be affected by the project would include the dominant species listed under each vegetation cover type ~~those listed in the Affected Environment section~~described for the project. Additional plant species that are not dominants are also present in the project area and could be affected, but to a lesser extent. These include some of the species listed ~~and~~ in Appendix C. Grazing and agriculture have previously disturbed most of the proposed transmission line route. The invasive annual cheatgrass is the dominant species along much of the route. However, there are portions of the route that are dominated by native grasses and shrubs. These higher quality shrub-steppe communities are more vulnerable to the types of construction, operation, and maintenance activities required for the project.

Page 3-48, paragraph 5 has been modified as follows:

The proposed project would result in the temporary removal of ~~34~~ 42 to ~~37~~ 44 acres of native plants and ~~approximately 6~~ 7.2 to 7.4 acres of cryptogamic crusts. Permanent project impacts would require the removal of approximately ~~16~~ 19 acres of native plant species, and ~~2.5~~3 acres of cryptogamic crusts.

Page 3-52, after bullet item 8, text has been added as follows:

- If Utes ladies' tresses is found during August 2002 surveys, avoid construction or construction activities in that location.
- Avoid construction or construction activities at location of desert evening-primrose (*Oenothera caespitosa ssp. marginata)* near tower 47/1.

Page 3-52, bullet item 9 has been modified as follows:

- Minimize disturbance to native shrub-dominated shrub-steppe communities~~species and~~ and cryptogamic crusts ~~to the extent~~ where possible during construction. ~~to prevent invasion by nonnative species.~~ Where not possible, consider compensatory habitat through either restoration or acquisition and preservation of shrub-steppe communities.

Page 3-53, paragraph 2 has been modified as follows:

Under the No Action Alternative, vegetation in the project area would not be disturbed by the proposed transmission line construction. The ~~68~~ 83 acres of permanent vegetation impacts and the ~~166~~ 211 to ~~181~~ 226 acres of temporary vegetation impacts would not occur. The existing transmission line corridor would remain at its present width, with no additional area that would likely become dominated by invasive species. Continued impacts associated with operation and maintenance of the existing lines would remain.

Wildlife

Page 3-65, paragraph 4 has been modified as follows:

Construction activities would have both a short-term and long-term impact on habitat used by passerines. Vegetation clearing in uplands for roads, the McNary Substation expansion, and tower sites would result in the temporary (see Table 3-13) and permanent (see Table 3-12) loss of grazed shrub-steppe, shrub-steppe, and grassland, the primary habitat used by passerines. Of the ~~80~~ 188 to ~~87~~ 195 acres of those habitat types to be impacted during construction, ~~36~~ 56 acres will be permanently converted to structures or roads.

Page 3-65, last paragraph has been modified as follows:

Impacts to reptiles as a result of project construction activities would occur within the construction area. Rock piles in uplands inhabited by reptiles may be impacted by clearing for roads and tower sites. The reptiles that would most likely be impacted by the project would be the Striped whipsnake, a state-monitor species, and the western rattlesnake. These two snakes inhabit grasslands, shrub-steppe, and dry rocky canyons (Shaw and Campbell 1974), habitats that are relatively common in the project vicinity. Potential impacts would include the temporary abandonment of suitable habitat as a result of disturbance, and/or the permanent loss of habitat due to the road and/or tower placement. Approximately ~~38~~ 56 acres of potentially suitable habitat (~~9~~ 14 acres of grassland and ~~29~~ 42 acres of grazed shrub-steppe scabland and shrub-dominated shrub-steppe) would be permanently converted to roads or towers (Table 3-12).

Page 3-66, paragraph 5 has been modified as follows:

Between ~~31~~ 63 and ~~39~~ 71 acres of agricultural lands would be temporarily disturbed as a result of ~~road and~~ tower construction and conductor tensioning sites. Eighteen acres of agricultural land would be permanently cleared for new access roads. Clearing of agricultural lands such as corn, alfalfa, and undisturbed patches between crop circles for roads and towers may result in some temporary impact to waterfowl and small mammals using the agricultural lands.

Page 3-67, paragraph 1 has been modified as follows:

Shrub-steppe is common in the project vicinity, but only a few areas were identified as high quality shrub-steppe. Because it is low growing, shrub-steppe vegetation types are compatible with power line clearance requirements. Construction of the project would result in the permanent loss of ~~23~~ 39 acres of grazed shrub-steppe and ~~2~~ 3 acres of shrub-dominated steppe habitat (see Table 3-12).

Page 3-67, paragraph 2 has been modified as follows:

Approximately ~~48~~ 63 acres of vegetation would be would be ~~temporarily~~ permanently removed in the construction of new roads, primarily in agricultural, grassland, and grazed-steppe habitats (see Table 3-12). Construction of new roads would disturb wildlife associated with those habitats. Disturbance from road construction would result from use of heavy equipment and use of the roads following construction. Conversion of irrigated croplands to roads would not have a measurable impact to food resources for waterfowl because of the prevalence of the croplands in the project area.

Page 3-70, paragraph 5 has been modified as follows:

Wildlife may avoid the proposed transmission facilities because of human use such as maintenance, ~~or because of~~ the presence of the structures or lack of forage or cover. Deer would temporarily avoid areas with human activity, while bird responses to power lines may vary by species. For example, waterfowl may avoid habitat areas with transmission lines above them (Willard 1982). On the other hand, raptors are often attracted to transmission towers to use them as nesting sites (Bechard 1990), roosting sites, and places to perch to view the area for prey. Other species such as songbirds may be attracted to the shrub-steppe or grassland vegetation corridors that are undisturbed by agricultural uses or residential uses occurring in rights-of-ways.

Page 3-73, bullet item 10 has been modified as follows:

- ~~If deemed appropriate, i~~Install line markers in avian flight paths or migration corridors, ~~such as~~ near crop circles in the vicinity of the town of Paterson (north of the Umatilla National Wildlife Refuge) ~~if appropriate~~ and at the Columbia River crossings and the Rock Creek crossing.

Cultural Resources

Page 3-77, paragraph 3 has been modified as follows:

There are numerous archaeological sites in the project vicinity. The John Day Reservoir is an area of cultural importance to the peoples of the Umatilla Tribes. In 1999, the Cultural Resources Protection Plan (CRPP) conducted a baseline cultural resources data recording project of the John Day Reservoir. The CRPP gathered data of known archaeological sites and recorded many new sites and isolate finds (~~Dickson~~ Farrow ~~1999~~2001).

Page 3-78, new text has been added after paragraph 2 as follows:

The Warm Springs oral history report provides the following information.

The Culture and Heritage Department of the Warm Springs was consulted regarding cultural information they may have pertaining to the study area. The Culture and Heritage Committee provided a list of elders knowledgeable of the study area. Six elders were interviewed.

The Cultural Resource Department/Oral History Program was responsible for the administration of the project. Brigette M. Whipple, Tribal Anthropologist/Ethnographer, provided project coordination including supervisory oversight, ethnographic investigations, oral history interviews, and

report preparation. Judy Kalama-King, Oral History Technician, conducted archival review of the study area and aided in the oral history interviews. Louis Scott and Fredrick Duran Bobb, Cultural Resources Technicians, provided technical equipment support and aided in the oral history transcription. Sally Bird, Program Manager, provided oversight and technical review.

In the Sahaptin language, the Columbia River is known as Nchi'Wana (big water). The entire Columbia River was utilized for fishing, hunting, plant gathering, travelways, and temporary and permanent camping/villages. It is still used today by the people of Warm Springs who continue to venture to the area to practice their way of life. Opposite the mouth of John Day River on the north bank of the Columbia River, three 19th century Native American villages were located. The project is partially within the Warm Springs ceded lands. The lands were ceded to the United States Government with the signing of the 1855 Treaty with the Tribes of Middle Oregon.

Three tribes that make up the Confederated Tribes of the Warm Springs utilized the Columbia River area historically and continue to do so today. These tribes are the Warm Springs, Wasco, and Northern Paiute. The tribes harvested salmon, medicine, and fibers for basketry and hunted deer and elk in the project area. The Confederated Tribes of the Warm Springs Reservation Oregon (CTWSRO) celebrates the coming of the traditional foods in the spring. Ceremonial fishermen harvest the salmon from the Columbia River for the Salmon Feast. The first harvest is shared with tribal membership. Significant resources in the project area include roots, vegetables, herbs, and plant material for basketry.

The project corridor passes through and is adjacent to terrain that is culturally significant to several Native American tribes. Archaeological sites discovered during the last century document locations that are held as traditional use areas of the CTWSRO—The Walla Walla Bands – Taih or Upper DesChutes, Wy-am or Lower DesChutes, Tenino, Dock-Spurs or John Day's River and Wasco Bands – The Dalles, Ki-gal-twal-la and Dog River.

Thirty-two ethnographic place names were documented during this study. These places denote fishing sites, villages (permanent and temporary), trading places, items and practices, and travel routes.

Plateau people utilized approximately 135 species of plants as sources of foods, flavorings, or beverages. Over 30 species of "root vegetables" including true roots, corms, bulbs, tubers, and rhizomes were part of the traditional diet. There is a wide regional variation in relative importance of different species.

The Cultural Resource Department (CRD) considers the Columbia River, the 79-mile project area, to be a "cultural site" as per Tribal Ordinance 68, Chapter 490. One of the CRD's main concerns is accessibility for the tribal membership to harvest fisheries resources within this portion of their ceded lands. Therefore, the

CRD wants to be sure that the construction of the proposed 79-mile long 500-kV transmission line will not adversely affect the cultural plant and fisheries harvest communities that are traditionally utilized by the CTWSRO tribal membership in the area. The CRD would like to ensure the cultural and natural resources are protected and the traditional use of the area is maintained in accordance with reserved treaty rights. The second CRD concern is the possibility of subsurface remains being disturbed. The CRD recommends that a tribal monitor be present during all ground-disturbing activities.

Page 3-78, new text has been added after paragraph 4 as follows:

After breaking camp on October 22, below the present location of the John Day Dam, the Corps of Discovery worked its way down the Columbia River eventually reaching what would come to be known as Station Camp in mid-November 1805. The decision to winter on the Oregon side of the Columbia River was a result of an historic vote or consultation taken at Station Camp on November 24, 1805.

The Corps of Discovery disembarked from Fort Clatsop on March 23, 1806 retracing their voyage up the Columbia River from the previous fall. Campsites during their return trip through the Mid-Columbia Study Unit included stops near present day Towal on April 22, west of Rock Creek on April 23, west of Roosevelt on April 24, near Alder Creek on April 25, and near the Plymouth town site on April 26, 1806.

Although the locations used as campsites during the expedition are more than likely destroyed or under the water behind the John Day Dam, the legacy of the Lewis and Clark expedition in the Mid-Columbia Study Unit is an important one. Friendly relations with indigenous peoples along the Columbia River facilitated their goal of reaching the Pacific Ocean.

For the next 50 years after the Corps of Discovery expedition, the only Euro-Americans in the Mid-Columbia Study Unit were adventurers, fur trappers, and traders. Euro-American settlement did not commence until the late 1850s. However, once begun, it grew rapidly. Many towns in central Klickitat County were platted during this period, prompting the territorial legislature to establish the areas as a county in 1859.

Page 3-80, paragraph 4 has been modified as follows:

Chapman Creek rises near the Oak Grove district in east central Klickitat County and flows southeasterly 10 miles to the Columbia River at Sundale. It was named for ~~Eldon Chapman, postmaster of Six Prong (a historic community within Klickitat County) in the early 1900s~~ Joe Chapman who established a wood yard for steamers at the mouth of the creek in 1859.

Page 3-81, Field Survey Results, paragraph 4 has been modified as follows:

Of the 10 previously recorded sites situated within or adjacent to the corridor, eight were re-identified in the field. The remaining two sites, 45BN231 and 45BN232, were not relocated. A total of 13 new cultural resource sites were identified during the field surveys. An additional 15 isolate finds were also documented. One historic structure, the Fuhrman Ranch, was identified during fieldwork.

Page 3-84, paragraph 3 has been modified as follows:

Transmission towers and access roads would be sited so as to avoid the known cultural resource sites along the corridor. Of the ~~14~~13 cultural resource sites found, six should require no further action aside from avoidance. The remaining seven sites need further action as described in the Cultural Resource Technical Report (Jones & Stokes 2002). ~~12 require avoidance and two sites require avoidance.~~ Cultural resource monitors should be present when construction excavation and/or ground disturbing activities take place in and around archaeological sites. A monitor's presence would ensure proper handling of sensitive cultural resources if unearthed. Of the ten previously documented cultural resource sites along the corridor, nine require avoidance and one site requires avoidance plus a cultural resource monitor during construction excavation.

Page 3-85, bullet 4 has been replaced as follows:

- ~~Limit the number of contractors to cultural resource site sensitive information on a need-to-know basis.~~
- On maps and in specifications provided to construction contractors, indicate cultural sites as generic avoidance areas to maintain site confidentiality.

Page 3-85, bullet 5 has been replaced as follows:

- ~~Continue consultation with the Umatilla Tribes and the Yakama Nation to determine appropriate tribal monitoring for ground disturbing activities.~~
- Have a monitor on site for construction activities in and around sites eligible for listing in the National Register of Historic Places.
- Determine sites to be monitored based on Bonneville practices for avoiding adverse effects to historic properties, tribal concerns and the Oregon and Washington SHPO concurrence.

Page 3-85, bullet item 6 has been modified as follows:

- Continue consultation with the Umatilla Tribes, Warm Springs Tribes, and the Yakama Nation to set up consultation protocols on site mitigation and management.

Page 3-85, bullet 7 has been modified as follows:

- Continue consultation with the Umatilla Tribes, the Warm Springs Tribes, and the Yakama Nation to ensure that the cultural and natural resources are protected.

Page 3-85, after bullet 7, add a new bullet as follows:

- Conduct offsets and buffers around previously recorded and newly identified archaeological sites based on Bonneville practices for avoiding adverse effects to historic properties, tribal concerns and the Oregon and Washington SHPO concurrence.

Page 3-85, paragraph 3 has been modified as follows:

~~There are no significant cultural resources in the areas of the short-line routing alternatives; impacts are not expected for any of the alternatives.~~

At the Hanford-John Day Junction Alternatives, Alternatives B and C (south-side alternatives), would impact the Fuhrman Ranch. The Fuhrman Ranch is eligible for listing in the National Register. These alternatives would significantly impact both the context and integrity of the Fuhrman Ranch, limiting its potential for listing in the National Register.

Site 12.04-WA-02 is south of the Corridor Mile 35 tower and could be impacted by the Corridor Mile 35 Alternatives, Alternative B – (move entire corridor off tribal property). Further discussion with Bonneville's construction engineers and access road engineers will take place to identify appropriate mitigation measures.

There are no significant cultural resources in the areas of the other short-line routing alternatives; impacts are not expected for any of those ~~alternatives.~~

Public Health and Safety

Page 3-119, paragraph 2 new text has been added following the paragraph:

Contaminated media (soil, surface water or groundwater), if unexpectedly encountered during construction of the project, may present potential risk/liability

to Bonneville staff or construction contractors. Potential risk and liability includes worker health and safety, management of contaminated materials and/or exacerbation of contaminated media.

Page 3-126, new bullet has been added after last bullet on the page as follows:

- Should contaminated media be unexpectedly encountered during construction, work should stop and an environmental specialist called to characterize the nature and extent of contamination and determine appropriate State-approved measures to prevent spread and protect health and safety.

Consultation, Review, and Permit Requirements (Chapter 4)

Page 4-2, delete paragraph 3 and add new text as follows:

~~Jones & Stokes biologists conducted field surveys of the project corridor during summer 2001.~~

A Biological Assessment (Final Biological Assessment, BPA McNary-John Day Transmission Line Project, May 2002) was submitted to the U.S. Fish and Wildlife Service and National Marine Fisheries Service in May 2002. The Biological Assessment concluded that the project activities "may affect, but are not likely to adversely affect" listed species in the project area (bald eagle, pygmy rabbit, bull trout, Ute ladies' tresses, northern wormwood, coastal cutthroat trout [Columbia River/southwest Washington DPS], steelhead trout [Snake River Basin ESU, and Upper Columbia River ESU], sockeye salmon [Snake River ESU], chinook salmon [Snake River Fall ESU, Snake River Spring/Summer ESU, and Upper Columbia River Spring ESU], and any designated critical habitat for these species.

For tower placement adjacent to the Columbia River, an amendment was submitted to the U.S. Fish and Wildlife Service in August 2002, with a conclusion that activities "may affect, but are not likely to adversely affect" bull trout. The tower work requires a Corps permit and is an activity allowed under the National Marine Fisheries Service Programmatic Biological Opinion and Magnuson-Stevens Act Essential Fish Habitat Consultation for Standard Local Operating Procedures for Endangered Species (SLOPES) for Certain Activities Requiring Department of Army Permits in Oregon and the North Shore of the Columbia River.

Appropriate mitigation measures consistent with consultation are listed in Chapter 3 in the sections Streams, Rivers and Fish; Vegetation; and Wildlife.