

## Wetlands

Wetlands in the site area are located along the Columbia River and near the existing Benton Public Utility District (PUD) transmission line. The wetlands along the transmission line are located just west of Plymouth Road and between Plymouth Road and I-82. The wetlands in this area are five small, isolated palustrine wetlands. The forested portions of the wetlands are dominated by such species as black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) and Russian-olive (*Elaeagnus angustifolia*). The scrub/shrub portions are dominated by coyote willow (*Salix exigua*) and other willow species (*Salix* spp.). The emergent portions are dominated by cattail (*Typha latifolia*), hardstem bulrush (*Scirpus acutus*), and three-square bulrush (*Scirpus americanus*). The WDFW identifies these wetlands as priority habitats.

The wetlands along the Columbia River are palustrine emergent (herbaceous) wetlands dominated by such species as cattail and reed canarygrass (*Phalaris arundinacea*). Patches of forested wetlands also occur along the banks of the Columbia and include black cottonwood, aspen (*Populus tremuloides*), and coyote willow. A complex of forested and emergent wetlands is present along the Columbia River in Oregon, near the McNary Substation. In addition to previously noted species, black locust (*Robinia pseudo-acacia*) and false indigo (*Amorpha fruticosa*) are present in forested portions. There are several open water ponds associated with the wetlands.

## Riparian

Riparian habitat is associated with streams or other water bodies. Within the site area riparian habitats occur along the Columbia River. The dominant species in forested riparian habitats in the site area is black cottonwood. Other common species include aspen, willow, and false indigo. The WDFW has identified most of these riparian areas as priority habitats.

## Cliffs

Cliff areas over 25 feet high and below 5,000 feet in elevation are identified by the WDFW as priority habitats. Priority cliff habitat is located in one section of the site area. This cliff area is south of Silusi Butte and east of I-82. The cliff is almost vertical and overlooks the Columbia River.

### 3.4.1.1.2 Threatened and Endangered Species

As part of agency consultation, the National Marine Fisheries Service (NMFS); the Ephrata, Washington, office of the United States Fish and Wildlife Service (USFWS); Washington Department of Natural Resources (WDNR); and WDFW were contacted to obtain records of special-status species in the vicinity of the site area. A small portion of the site area is also in Oregon near the McNary Substation. The Portland, Oregon, office of the USFWS and the Oregon Natural Heritage Program (ONHP) were contacted to obtain records of special-status species in the vicinity of the McNary Substation. Copies of letters received from these agencies can be found in Appendix D.

For this document, discussion of both federal and state endangered, threatened, proposed, and candidate species, as well as federal species of concern and state sensitive species is included.

All of the Proposed Action occurs within Washington. A very small portion of the alternate Benton PUD/BPA transmission interconnection would occur in Oregon. For the species identified by the Oregon office of the USFWS, only those species with known occurrences within 2 miles of the site area are discussed. Table 3.4-1 contains the special-status species with known occurrences in the site area identified by all agencies contacted.

**Table 3.4-1  
 List of Special-Status Species**

Common Name	Scientific Name	Status	
		Federal	State
<b>Plants</b>			
Shining flatsedge	<i>Cyperus bipartitus</i>	none	S (WA)
Umtanum desert buckwheat	<i>Eriogonum codium</i>	C	E (WA)
Palouse goldenweed	<i>Haplopappus liatriformis</i>	SOC	T (WA)
Columbia cress	<i>Rorippa columbiae</i>	SOC	C (OR), T (WA)
<b>Wildlife</b>			
Bald eagle	<i>Haliaeetus leucocephalus</i>	T	T (OR), T (WA)
Ferruginous hawk	<i>Buteo regalis</i>	SOC	SC (OR), T (WA)
Sage grouse	<i>Centrocercus urophasianus</i>	C	SV (OR), T (WA)
Washington ground squirrel	<i>Spermophilus washingtoni</i>	C	E (OR), C (WA)
White-tailed jackrabbit	<i>Lepus townsendii</i>	none	SU (OR), C (WA)
Painted turtle	<i>Chrysemys picta</i>	none	SC (OR)
<b>Fish</b>			
Middle Columbia River Steelhead	<i>Oncorhynchus mykiss</i>	T	SC/SV (OR), C (WA)
Upper Columbia River Steelhead	<i>O. mykiss</i>	E	C (WA)
Upper Columbia River Spring Chinook	<i>O. tshawytscha</i>	E	C (WA)
Snake River Sockeye	<i>O. nerka</i>	E	C (WA)
Snake River Fall Chinook	<i>O. tshawytscha</i>	T	T (OR), C (WA)
Snake River Spring/Summer Chinook	<i>O. tshawytscha</i>	T	T (OR), C (WA)
Snake River Steelhead	<i>O. mykiss</i>	T	SV (OR), C (WA)
Bull trout	<i>Salvelinus confluentus</i>	T	SC (OR), C (WA)

Notes:

Explanation of Status Codes:

- |                                                       |                               |
|-------------------------------------------------------|-------------------------------|
| E = Endangered                                        | S = Sensitive                 |
| T = Threatened                                        | SC = Sensitive – Critical     |
| C = Candidate for Listing as Threatened or Endangered | SU = Sensitive – Undetermined |
| SOC = Species of Concern                              | SV = Sensitive – Vulnerable   |

**Plants**

As part of agency consultation, the Ephrata office of the USFWS identified one special-status plant, Umtanum desert buckwheat (*Eriogonum codium*), that may occur in the vicinity of the site area. The WDNR noted two special-status plant species reported to occur in the vicinity of the site area: Palouse goldenweed (*Haplopappus liatriformis*) and shining flatsedge (*Cyperus bipartitus*). The ONHP also listed Columbia cress (*Rorippa columbiae*) as historically occurring near the site area. Each of the species and their habitat requirements are described below.

### *Umtanum Desert Buckwheat*

Umtanum desert buckwheat is listed as a federal candidate and a state endangered species in Washington. It is endemic to a very narrow range in Benton County. It is currently only known to occur on one ridgeline in the Hanford Reach area (WNHP 2000). In this area the species occurs at elevations ranging between 1,100 and 1,320 feet on flat to gently sloping microsites near the top of the steep, north facing basalt cliffs overlooking the Columbia River. The only cliff habitat within the site area overlooks the Columbia River, east of I-82. However, this cliff is less than 400 feet in elevation. Umtanum desert buckwheat is unlikely to occur in the site area.

### *Palouse Goldenweed*

Palouse goldenweed is listed as a federal species of concern and a state threatened species in Washington. It is endemic to the Palouse region of southeastern Washington and adjacent Idaho. This species generally grows in stable plant communities that are dominated by bunchgrass with scattered patches of deciduous shrubs. In the site area, Palouse goldenweed has been reported in the vicinity of the community of Plymouth.

### *Shining Flatsedge*

Shining flatsedge is listed as a state sensitive species in Washington. It grows along streambanks and other wet, low places in valleys and lowlands. In Washington, it occurs in riverine wetlands in small embayments and backwaters of the Columbia River. In the site area, shining flatsedge is known from the banks of the Columbia River in and near Plymouth Park.

### *Columbia Cress*

Columbia cress is listed as a federal species of concern, a state candidate in Oregon, and a state threatened species in Washington. This species is endemic to Washington, Oregon, and California and found in two disjunct regions. In Washington, this species is only known from two segments of the Columbia River. In Oregon, Columbia cress has been found along the Columbia River and in the south-central portion of the state. Columbia cress typically occurs in the lowest vegetated riparian zone. The ONHP noted one historic record of Columbia cress west of Umatilla, Oregon. ONHP notes that this site, which was last observed in 1915, was most likely inundated by the construction of John Day Dam.

## **Wildlife**

As part of agency consultation, the USFWS identified one federally threatened wildlife species, bald eagle (*Haliaeetus leucocephalus*), as likely to occur in the vicinity of the site area. The WFDW noted two state threatened species reported to occur within the vicinity of the site area: sage grouse (*Centrocercus urophasianus*) and ferruginous hawk (*Buteo regalis*). The ONHP identified three species as occurring within 2 miles of the site area in Oregon: Washington ground squirrel (*Spermophilus washingtoni*), white-tailed jackrabbit (*Lepus townsendii*), and painted turtle (*Chrysemys picta*). Each of the species and their habitat requirements are described below.

### ***Bald Eagle***

The bald eagle is listed as a federally threatened and a state threatened species in Oregon and Washington. The bald eagle population has been steadily increasing since the species received federal protection in 1978. The USFWS is expected to delist the species in the near future (Stinson et al. 2001). Bald eagles are large birds of prey that nest and forage along fish-bearing waters. They primarily consume fish, but will also feed on waterfowl and carrion. Bald eagles build large stick nests in conifer trees and occasionally in deciduous trees or on cliffs. Nests are most common near marine shorelines, but also occur on rivers and lakes. Nesting bald eagles are uncommon in eastern Washington, with only three known nests occurring in the Columbia Basin (Tiller 2002).

Wintering bald eagles are scattered throughout the major tributaries of the Columbia River in eastern Washington where trees, fish, and waterfowl are present. There are no known bald eagle nests or wintering concentrations near the site area. The closest active nest site in Washington is near Toppenish on the Yakima River, over 40 miles from the site area. During site investigations in February, two adult and two immature bald eagles were observed flying near the Columbia River and one adult was seen flying over the adjacent property east of the Williams Co. compressor station. Wintering bald eagles are occasionally known to use the area for perching and foraging habitat. They are more likely to use the Umatilla National Wildlife Refuge, located 5 miles west of the plant site.

### ***Ferruginous Hawk***

The ferruginous hawk is listed as a federal species of concern, a state sensitive-critical species in Oregon, and a state threatened species in Washington. Ferruginous hawks are uncommon and found in steppe vegetation of south-central and eastern Washington. They hunt primarily on uncultivated grasslands and feed mainly on ground squirrels and pocket gophers, but will also take birds and reptiles. Ferruginous hawks nest on cliffs, rock outcrops, high bluffs, utility towers, or in isolated trees. They typically nest away from roads or areas with people and prefer low disturbance areas. Ferruginous hawks are most sensitive to disturbance during the breeding season within 0.6 mile of nest sites (WDFW 2000). The absence of undisturbed natural habitat in the region has likely made the population vulnerable (WDFW 2000). The closest ferruginous hawk nest is located approximately 2 miles east of the site area on the cliffs identified as priority habitat by WDFW. No ferruginous hawks were observed during field investigations.

### ***Sage Grouse***

The sage grouse is listed as a federal candidate, a state sensitive-vulnerable species in Oregon, and a state threatened species in Washington. They are associated with high quality shrub-steppe habitats and feed on sagebrush, grasses, forbs, and insects. In the spring, sage grouse group together in areas called “leks” for displaying and mating. Nests are usually within 1 to 4 miles from the lek. The sage grouse has become increasingly rare in the Pacific Northwest due to loss and degradation of habitat through conversion to agriculture and other land uses. Approximately 40 percent remains of the estimated 10.4 million acres of shrub steppe habitat that existed in eastern Washington (Hays et al. 1998). Habitat used by sage grouse is a subset of this remaining acreage, and is narrowed further by elevation, slope, soil type, size of shrub-steppe

patch, and habitat quality. Only two sage grouse populations remain in Washington, both of which are north of the site area in Douglas and Grant counties (Hayes et al. 1998). The WDFW noted one individual occurrence of sage grouse approximately 1.5 miles north of the site area, but the report was in 1985 and no other occurrences in the area had been noted since 1979. No sage grouse were observed during field investigations and no high quality shrub-steppe habitat occurs in the site area.

#### *Washington Ground Squirrel*

The Washington ground squirrel is listed as a federal candidate species, a state endangered species in Oregon, and a state candidate species in Washington. They are associated with native grasslands, sagebrush, and sandy or rocky hills. Washington ground squirrels excavate their burrows in shrub-steppe and native grassland habitat with friable soils and low clay content. Populations of this colonial rodent have decreased severely, which correlates strongly with the conversion of preferred habitats to agricultural use (Marshall et al. 1996). The ONHP noted one record of Washington ground squirrel within 2 miles of the site area in Oregon. No Washington ground squirrels were observed during field investigations.

#### *White-Tailed Jackrabbit*

The white-tailed jackrabbit is listed as a state sensitive-undetermined species in Oregon and a candidate species in Washington. They prefer open native grasslands and sagebrush habitats but can also be found in openings in coniferous forests and occasionally in alpine meadows. White-tailed jackrabbits feed on grasses and green vegetation in summer and may eat woody twigs in winter. They primarily occupy habitat with 10 inches or more of rainfall per year. Populations of this jackrabbit have decreased due to the conversion of preferred habitats to agricultural use and the disappearance of native grasses (Marshall et al. 1996). They are most abundant in the northern portion of its range in Washington. The ONHP noted one, undated record of white-tailed jackrabbit within 2 miles of the site area in Oregon. No white-tailed jackrabbits were observed during field investigations.

#### *Painted Turtle*

The painted turtle is listed as a state sensitive-critical species in Oregon. Painted turtles are found in marshes, slow rivers, ponds, and lakes, and prefer slow waters with large amounts of aquatic vegetation and suitable basking sites. They feed on insects, tadpoles, and most aquatic plants. They are usually found in stock ponds, oxbow lakes and sloughs, and small ponds in the Columbia River floodplain (in this region). Oregon populations of the painted turtle have decreased in recent years due to lack of sustained population renewal (Marshall et al. 1996). This is possibly due to the predation of turtle hatchlings by introduced bullfrogs. In addition, herons also take hatchlings, and raccoons and skunks prey upon eggs. Predation by introduced large-mouth bass is a major factor on populations occurring in the Willamette River Valley and lower Columbia River. The ONHP noted one record from 1981 of painted turtle west of Umatilla. There is no known threat to painted turtle populations in Washington. No painted turtles were observed during field investigations.

## Fish

The Columbia River is the main water body in the site area. Fourmile Canyon is the only drainage channel or “stream” identified by field biologists and the WDFW Priority Habitats and Species database in the site area that discharges to the Columbia River. Fourmile Canyon is an intermittent stream and contains no fish habitat. It was dry at the time of the surveys in February and April 2002. It contains sand and rock substrate, tumbleweeds, and tall sagebrush (as discussed under shrub-steppe habitat in subsection 3.4.1.1.1). The channel of Fourmile Canyon varies throughout the site area. Between SR 14 and the Burlington Northern Santa Fe (BNSF) railroad tracks, the channel ranges from no distinct channel bed to 30 feet in width of sand and gravel. Between the BNSF railroad tracks and Christy Road, the channel has been graded and is now disrupted by an apple orchard and a fallow agricultural field. South of Christy Road, the channel is approximately 7 feet wide. However, the channel widens and becomes indistinct close to the Columbia River.

The NMFS and USFWS identified a combined total of eight threatened or endangered fish species that occur in the site area. The species identified by the NMFS as using the Columbia River in the site area include the Middle Columbia River Steelhead (*Oncorhynchus mykiss*), Upper Columbia River Steelhead (*O. mykiss*), Upper Columbia River Spring Chinook (*O. tshawytscha*), Snake River Sockeye (*O. nerka*), Snake River Fall Chinook (*O. tshawytscha*), Snake River Spring/Summer Chinook (*O. tshawytscha*), and Snake River Steelhead (*O. mykiss*). The USFWS identified bull trout (*Salvelinus confluentus*) as likely to occur in the Columbia River near the site area. Discussions of the species are described below.

Under the Endangered Species Act (ESA), vertebrate populations are considered a “species” if they are “distinct.” The USFWS classifies and lists salmonid species by Distinct Population Segments (DPS). The NMFS classifies and lists salmonid species by Evolutionary Significant Unit (ESU). “To be considered an ESU or DPS, a population or group of populations must (1) be substantially reproductively isolated from other populations and (2) contribute substantially to the ecological or genetic diversity of the biological species” (Myers et al. 1998). Factors used in determining ESUs and DPSs include spatial, temporal, and genetic isolation, maturation rates, and other life history traits. Seven salmonid ESUs and one salmonid DPS migrate through the Columbia River in the site area and all receive some federal and state protection.

### Steelhead

The life history of the steelhead trout varies more than that of any other species of Pacific salmonid. They can be anadromous or freshwater resident and under some circumstances, apparently yield offspring of the opposite form (Busby et al. 1996). Resident forms are usually called rainbow, or redband trout. Those that are anadromous can spend up to 7 years in freshwater prior to becoming smolts and migrating to the ocean. Steelhead trout will travel as far as 1,200 miles upstream to their spawning grounds. This species has the ability to spawn more than once whereas all other species of *Oncorhynchus*, except coastal cutthroat trout (*O. clarki clarki*), (in the northwestern U.S.) spawn once and then die (Busby et al. 1996). All steelhead in the Columbia River upstream from The Dalles Dam are summer-run, inland steelhead (Schreck et al. 1986; Reisenbichler et al. 1992; Chapman et al. 1994). Summer-run steelhead are maturing

as they enter the stream from May through November and spawn between March and June of the following year.

**Middle Columbia River Steelhead.** This ESU includes all naturally spawned populations of steelhead and their progeny in the Columbia River Basin from above the Wind River in Washington and the Hood River in Oregon (exclusive) upstream to, and including, the Yakima River, Washington. Steelhead of the Snake River Basin are not included in this ESU (Busby et al. 1996). Under the ESA, this ESU is listed as threatened. Benton County (and the site area) lies within the ESUs designated critical habitat (Federal Register 2000). Life history information for steelhead of this region indicates that most middle Columbia River steelhead smolt at 2 years and spend 1 to 2 years in saltwater prior to re-entering freshwater, where they may remain up to a year prior to spawning (Howell et al. 1985; BPA 1992).

**Upper Columbia River Steelhead.** This inland ESU includes all naturally spawned populations of steelhead and their progeny in the Columbia River Basin upstream from the Yakima River, Washington, to the U.S.-Canada border. Under the ESA, this ESU is listed as endangered. Benton County (and the site area) lies within the ESUs designated critical habitat (Federal Register 2000). Life history characteristics for Upper Columbia River Basin steelhead are similar to those of other inland steelhead ESUs; however, some of the oldest smolt ages for steelhead (up to 7 years) are reported from this ESU (Busby et al. 1996).

**Snake River Steelhead.** This inland ESU includes all naturally spawned populations of steelhead and their progeny in the Snake River Basin of southeast Washington, northeast Oregon, and Idaho. Under the ESA, this ESU is listed as threatened. Benton County (and the site area) lies within the ESUs designated critical habitat (Federal Register 2000). Snake River Basin steelhead enter freshwater from June to October and spawn during the following spring from March to May. Snake River Basin steelhead usually smolt as 2 or 3 year olds.

### *Chinook Salmon*

The general life history of anadromous chinook salmon includes both freshwater and saltwater phases of development. Incubation, hatching, and emergence occur in freshwater, followed by migration to the ocean, at which time smoltification occurs. After several years, maturation is initiated and adults return to freshwater habitats to spawn in their natal streams. Stream-type chinook salmon spend extended periods in freshwater before smoltification, in contrast to the ocean-type that emigrates to the ocean as a sub-yearling smolts.

**Upper Columbia River Spring Chinook.** This ESU includes all naturally spawned stream-type chinook salmon and their progeny above Rock Island Dam on the Columbia River, including those in the Wenatchee, Entiat, and Methow Rivers, but excluding the Okanogan River. Under the ESA, this ESU is listed as endangered. Benton County (and the site area) lies within the ESUs designated critical habitat (Federal Register 2000). Six spring-run chinook hatchery stocks (Chiwawa, Methow, Twisp, Chewuch, White River, and Nason Creek) are considered part of this ESU. At least six populations of spring-run chinook salmon in this ESU have become extinct, and almost all remaining naturally-spawning populations have fewer than 100 spawners (Myers et al. 1998). This ESU represents an important genetic resource, in part because it

presumably contains the last remnants of the gene pools for populations from the headwaters of the Columbia River (Myers et al. 1998).

**Snake River Fall Chinook.** This ESU includes all naturally spawned populations of fall-run chinook salmon in the mainstem Snake River and any of the following subbasins: Tucannon, Grande Ronde, Imnaha, Salmon, and Clearwater Rivers. Under the ESA, this ESU is listed as threatened. Benton County (and the site area) lies within the ESU's designated critical habitat (Federal Register 1993).

**Snake River Spring/Summer Chinook.** This ESU includes all naturally spawned populations of spring/summer-run chinook salmon in tributaries to the Snake River upstream of the Snake and Columbia River's confluence, including the following subbasins: Tucannon River, Grand Ronde River, Imnaha River, and Salmon River. Under the ESA, this ESU is listed as threatened. Benton County (and the site area) lies within the ESU's designated critical habitat (Federal Register 1993). Populations in this ESU emigrate to the ocean as yearlings and mature at ages 4 and 5 (Myers et al. 1998).

#### *Sockeye Salmon*

Sockeye salmon differ from other species of salmon because they require a lake environment for part of their life cycle. Although spawning occurs in the gravel of the streams, the fry migrate upstream or downstream to the lake environment soon after they emerge. They occupy this habitat during their stay in freshwater, which is typically 1 to 2 years.

**Snake River Sockeye Salmon.** This inland ESU includes populations of sockeye salmon from the Snake River Basin, Idaho (extant populations occur in the Stanley River subbasin). Under the ESA, this ESU is listed as endangered. Benton County (and the site area) lies within the ESU's designated critical habitat (Federal Register 1993). Sockeye salmon are native to the Snake River and historically were abundant in several lake systems in Idaho and Oregon. In this century, a variety of factors (including overfishing, irrigation diversions, obstacles to migrating fish, and eradication through poisoning) have led to the demise of all Snake River sockeye salmon except those returning to Redfish Lake in the Stanley Basin of Idaho (Waples et al. 1991).

#### *Bull Trout*

Bull trout exhibit resident and migratory life history strategies through much of the current range. Resident bull trout complete their entire life cycle in the tributary (or nearby) streams in which they spawn and rear. Migratory bull trout spawn in tributary streams where juvenile fish rear from 1 to 4 years before migrating to either a lake (adfluvial), river (fluvial), or in certain coastal areas to saltwater (anadromous), where maturity is reached in one of the three habitats (Federal Register 1998). Bull trout are found primarily in colder streams, although individual fish are found in larger river systems throughout the Columbia River Basin (Federal Register 1998). Strict cold water temperature requirements make bull trout vulnerable to activities that warm spawning and rearing waters.

**Columbia River DPS.** The Columbia River DPS occurs throughout the entire Columbia River Basin and its tributaries, excluding bull trout found in the Jarbidge River, Nevada. All bull trout populations in the coterminous United States are listed as threatened by the USFWS. Benton County (and the site area) lies within the DPS. The Columbia River population segment is represented by relatively widespread subpopulations that have declined in overall range and numbers of fish. A majority of Columbia River bull trout occur in isolated, fragmented habitats that support low numbers of fish and are inaccessible to migratory bull trout. The decline of bull trout is primarily due to habitat degradation and fragmentation, blockage of migratory corridors (by flood control structures, dams, and water diversions), poor water quality, past fisheries management practices, and the introduction of nonnative species. Bull trout are estimated to have occupied about 60 percent of the Columbia River Basin, and presently occur in 45 percent of the estimated historical range (Federal Register 1998). The Columbia River DPS is significant because the overall range of the species would be substantially reduced if this discrete population were lost.

**3.4.1.1.3 Other Wildlife Species**

Several other wildlife species were observed in the site area occurring in the habitats previously described. Table 3.4-2 includes species observed during field investigations.

**Table 3.4-2  
 Wildlife Species Observed During Site Investigations**

Common Name	Scientific Name
<b>Birds</b>	
Pied-billed grebe	<i>Podilymbus podiceps</i>
Double-crested cormorant	<i>Phalacrocorax auritus</i>
Common goldeneye	<i>Bucephala clangula</i>
Common merganser	<i>Mergus merganser</i>
Mallard	<i>Anas platyrhynchos</i>
American widgeon	<i>Anas americana</i>
Wood duck	<i>Aix sponsa</i>
Canada goose	<i>Branta canadensis</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
American robin	<i>Turdus migratorius</i>
California quail	<i>Callipepla californica</i>
Rock dove	<i>Columba livia</i>
Mourning dove	<i>Zenaida macroura</i>
European starling	<i>Sturnus vulgaris</i>
Northern flicker	<i>Colaptes auratus</i>
Black-billed magpie	<i>Pica pica</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Bald eagle	<i>Haliaeetus leucocephalus</i>
American kestrel	<i>Falco sparverius</i>
Northern harrier	<i>Circus cyaneus</i>
Killdeer	<i>Charadrius vociferus</i>
Long-billed curlew	<i>Numenius americanus</i>
Belted kingfisher	<i>Ceryle alcyon</i>
Say's phoebe	<i>Sayornis saya</i>

**Table 3.4-2 (Continued)**  
**Wildlife Species Observed During Site Investigations**

Common Name	Scientific Name
Western meadowlark	<i>Sturnella neglecta</i>
Great blue heron	<i>Ardea herodias</i>
House finch	<i>Carpodacus mexicanus</i>
American goldfinch	<i>Carduelis tristis</i>
American crow	<i>Corvus brachyrhynchos</i>
Song sparrow	<i>Melospiza melodia</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>
Savannah sparrow	<i>Passerculus sandwichensis</i>
Dark-eyed junco	<i>Junco hyemalis</i>
Yellow-rumped warbler	<i>Dendroica coronata</i>
Marsh wren	<i>Cistothorus palustris</i>
Golden-crowned kinglet	<i>Regulus satrapa</i>
<b>Mammals</b>	
California ground squirrel	<i>Citellus beecheyi</i>
Badger (evidence of use)	<i>Taxidea taxus</i>
River otter	<i>Lutra canadensis</i>
Mule deer (evidence of use)	<i>Odocoileus hemionus</i>
Beaver (evidence of use)	<i>Castor canadensis</i>

Four other wildlife species that are considered to be state monitor species were identified by the WDFW as reported to occur in the vicinity: osprey (*Pandion haliaetus*), Swainson's hawk (*Buteo swainsoni*), prairie falcon (*Falco mexicanus*), and long-billed curlew (*Numenius americanus*). State monitor species do not receive additional protection under state laws but are considered "watch species" by biologists and managed by WDFW to prevent them from becoming endangered, threatened, or sensitive. These species do not have any federal status. WDFW noted an osprey nest on a platform on the Columbia River near the McNary Dam, and a prairie falcon nest on the basalt cliffs, north of the dam. A long-billed curlew nest is noted 1 mile east of the McNary Dam in a local canyon along the river. These three records are approximately 1.5 to 2 miles from the site area. The WDFW also noted a Swainson's hawk nest approximately 4 miles northwest of the site area. One of these species, the long-billed curlew, was observed during site investigations on the north side of SR 14.

#### **3.4.1.1.4 Noxious Weeds**

Noxious weeds are nonnative, invasive species that threaten agriculture, rangelands, waterways, parks, wildlife, property values, public health and safety, and general ecological health and diversity of native ecosystems. Noxious weed infestations are the second leading cause of wildlife habitat loss (WSNWCB 2001).

The Noxious Weed Control Boards of Washington and Oregon identify lists of noxious weed species that require control, eradication, or monitoring. In addition, the Benton County Noxious Weed Control Board maintains a list (a subset of the Washington State list) that is specific to Benton County.

Class A noxious weeds are nonnative species with a limited distribution within a state and require eradication. Class B noxious weeds are regionally abundant but may have limited distribution in some counties. In Washington, in regions where a Class B noxious weed is unrecorded or of limited distribution, prevention of seed production is required. In these areas the weed is a “Class B designate.” However, in regions where a Class B species is already abundant or widespread, control is a local option. In these areas the weed is a “Class B non-designate.”

Washington State has two additional categories for noxious weeds. Class C noxious weeds are already widely established, but placement on the state list allows counties to enforce local control if desired. The state also has a monitor list to gather more information on selected nonnative species. There is no legal or regulatory aspect to the monitor list.

During field visits to the site area, species that are on these noxious weed lists were observed. These species are listed in Table 3.4-3.

**Table 3.4-3  
 Noxious Weeds Observed During Site Investigations**

Common Name	Scientific Name	Status	
		Oregon	Washington <sup>a</sup>
False indigo	<i>Amorpha fruticosa</i>	None	Class B designate <sup>b</sup>
Diffuse knapweed	<i>Centaurea diffusa</i>	Class B designate	Class B non-designate
Reed canarygrass	<i>Phalaris arundinacea</i>	None	Class C <sup>c</sup>
Swainsonpea	<i>Sphaerophysa salsula</i>	Class B designate	Class B non-designate
Common mullein	<i>Verbascum thapsus</i>	None	Monitor

<sup>a</sup> The Class B designate status shown for Washington is specific to Benton County.

<sup>b</sup> False indigo is a Class B designate noxious weed except within 200 feet of the Columbia River.

<sup>c</sup> Not on Benton County Noxious Weed Control Board list of enforced Class C weeds

### 3.4.1.2 Proposed Action

#### 3.4.1.2.1 Plant Site

##### Habitats

The PGF plant site and gas pipeline interconnection<sup>1</sup> is composed entirely of the agricultural habitat type. The plant site, which is approximately 44.5 acres, was an apple orchard but was recently cleared. The plant site is bordered to the south by the Williams Co. compressor station, an industrial site. The land adjacent to the north, east, and west of the plant site is fallow agricultural land. Land under active cultivation lies west, north, and northeast of the site.

A water supply/wastewater pipeline would be installed that would run south of the plant site to an area just north of Christy Road. This pipeline route would cross fallow agricultural habitats.

<sup>1</sup> Note – All discussion and analysis of the plant site also includes the 800-foot gas pipeline that is directly adjacent to the plant site.

## **Threatened and Endangered Species**

### *Plants*

No special-status plant species were observed on or adjacent to the PGF plant site. In addition, no suitable habitat was identified. The nearest known record of a special-status plant species is over 1 mile east of the plant site.

### *Wildlife*

No appropriate habitat for foraging or nesting occurs at the plant site area for any listed wildlife species. A bald eagle was observed flying over orchards west of the plant site during field investigations. Wintering bald eagles are known to forage and perch along the Columbia River, approximately 0.75 mile south of the plant site, particularly during the winter. No other listed species were observed on or adjacent to the plant site. The closest ferruginous hawk nest is over 5 miles east of the plant site, and there are no known bald eagle nests, or sage grouse leks in the region. Because the plant site is cleared of vegetation, no habitat for Washington ground squirrels or white-tailed jackrabbits is present.

Low to moderate noise levels currently exist at the plant site due to the neighboring Williams Co. compressor station, the AgriNorthwest grain facility to the east, and the BNSF railroad tracks on the north side of Christy Road. Existing noise levels are described in Section 3.7, Noise.

### *Fish*

There are no streams, waterways or fish habitat on the plant site. Fourmile Canyon, the nearest drainage channel, is located approximately 0.4 mile east of the plant site. The Columbia River shoreline is located approximately 0.75 mile south of the plant site.

## **Other Wildlife Species**

Because the plant site was recently cleared, it does not contain any foraging or nesting habitat for most wildlife species. Several birds were observed flying over the plant site, including American kestrel, northern harrier, western meadowlark, and black-billed magpie. Adjacent to the plant site, an existing irrigation pond contains open water for waterfowl and some cattails at the perimeter suitable for blackbirds, sparrows, and wrens. Mallards and a song sparrow were observed at the irrigation pond during site investigations.

## **Noxious Weeds**

No noxious weeds were observed on the plant site during field observations. However, diffuse knapweed was noted on adjacent properties. Diffuse knapweed is a Class B non-designate weed in Benton County due to its widespread distribution within the County.

### **3.4.1.2.2 Transmission Interconnection**

#### **Habitats**

The transmission interconnection would cross two habitat types. The southern end of the transmission interconnection alignment is agricultural land. Part of this agricultural land is fallow. Nonnative grassland is present at the northern end of the alignment.

#### **Threatened and Endangered Species**

##### *Plants*

No special-status plant species were observed on or adjacent to the proposed transmission interconnection. In addition, no suitable habitat was identified. The nearest known record of a special-status plant species is over 1 mile east of the transmission interconnection alignment.

##### *Wildlife*

No listed wildlife species were observed on or adjacent to the transmission interconnection. In addition, no suitable nesting habitat was identified for bald eagles, ferruginous hawks, sage grouse, or painted turtles. The closest ferruginous hawk nest is over 5 miles east of the transmission alignment, and there are no known bald eagle nests or sage grouse leks in the region. Small amounts of nonnative grasslands that provide marginal potential habitat for Washington ground squirrels and white-tailed jackrabbits are present along the transmission interconnection.

##### *Fish*

There are no streams, waterways, or fish habitat on or adjacent to the proposed transmission interconnection. Fourmile Canyon is the nearest drainage channel and is located approximately 0.4 mile to the east. The Columbia River shoreline is located approximately 0.75 mile south of the plant site.

#### **Other Wildlife Species**

Wildlife species observed on or adjacent to the transmission interconnection are typical of nonnative grassland and agricultural habitats. Such species include meadowlark, white-crowned sparrow, and black-billed magpie. Northern flicker, American crow, and killdeer were seen flying over these areas. Birds of prey such as the northern harrier, American kestrel, and red-tailed hawk were observed hunting in the nonnative grassland habitats. Small mammals such as deer mice, pocket mice, voles, prairie dogs, and ground squirrels may also use the nonnative grassland habitats.

#### **Noxious Weeds**

Diffuse knapweed is present along the transmission interconnection alignment. Diffuse knapweed is a Class B non-designate weed in Benton County due to its widespread distribution within the County.

### **3.4.1.2.3 Access Road**

#### **Habitats**

The access road would cross three habitat types and use a portion of existing road. The western end of the road alignment crosses agricultural land. Moving eastward, the alignment crosses Fourmile Canyon, which contains shrub-steppe habitat. The eastern end of the alignment contains a mixture of agricultural, shrub-steppe, and nonnative grassland habitats. The shrub-steppe habitat crossed by the access road alignment is not considered high quality because of the large amount of nonnative species and the lack of habitat features.

The off-load platform adjacent to the AgriNorthwest grain facility would be used to station a crane to pull freight from the BNSF Railway. The location where the off-load platform would be built is currently nonnative grassland and previously disturbed areas.

#### **Threatened and Endangered Species**

##### *Plants*

No special-status plant species were observed on or adjacent to the access road alignment. In addition, no suitable habitat was identified. The nearest known record of a special-status plant species is over 1 mile east of the access road alignment.

##### *Wildlife*

No listed wildlife species were observed on or adjacent to the access road alignment. The closest ferruginous hawk nest is over 4 miles east of the access road alignment and there are no known bald eagle nests or sage grouse leks in the region. The grassland areas could provide foraging habitat for ferruginous hawks and bald eagles. The shrub-steppe habitat located in Fourmile Canyon (described below) is not considered high quality and is limited in size, and is therefore not likely preferred by sage grouse. Washington ground squirrels and white-tailed jackrabbits may use the shrub-steppe and nonnative grassland areas present along the access road alignment.

##### *Fish*

The proposed access road would cross Fourmile Canyon approximately 0.4 mile east of the plant site. At this location, the channel is 27 feet in width. No fish or fish habitat are present in Fourmile Canyon.

#### **Other Wildlife Species**

Wildlife species observed on or adjacent to the proposed access road are typical of agricultural, shrub-steppe, and nonnative grassland habitats. In agricultural and nonnative grassland areas, such species include western meadowlark, white-crowned sparrow, and black-billed magpie. Northern flicker, American crow, and killdeer were seen flying over these areas. Birds of prey such as the northern harrier, American kestrel, and red-tailed hawk were observed hunting in the nonnative grassland habitats. Small mammals such as deer mice, pocket mice, voles, prairie dogs, and ground squirrels may also use the nonnative grassland habitats.

Species observed in shrub-steppe habitats include those noted above and some additional species, including: song sparrow, savannah sparrow, California quail, and mourning dove. California ground squirrels were observed using the rock piles and slopes of Fourmile Canyon. Badger burrows and prairie dog holes were also observed in the shrub-steppe habitat.

Fourmile Canyon is a north-south drainage channel that extends from Horse Heaven Hills south to the Columbia River. The canyon is an intermittent stream that only contains water during spring runoff and flood events. Near the access road, Fourmile Canyon contains shrub-steppe habitat and is bordered by nonnative grassland and agricultural habitats. South of the road access, it travels under the BNSF railroad tracks and is disrupted by an active orchard and fallow agricultural fields. No topographic variance or presence of Fourmile Canyon is visible in the orchard or fallow fields. The canyon then crosses underneath Christy Road, where a distinct channel bed is visible again, and shrub-steppe and riparian habitats are present between the road and the Columbia River. Portions of the canyon may act as a wildlife corridor for large mammals (such as mule deer) between the mountains and the Columbia River. However, it has many interruptions by roads, railroads, fields, and an orchard. Mule deer tracks were observed in the sandy portions of the canyon during field investigations.

Fourmile Canyon is a Fish and Wildlife Conservation Area for Benton County, as detailed in the Benton County Code (BCC) and *Benton County Comprehensive Land Use Plan* (Benton County 1998). Fish and Wildlife Conservation Areas provide habitat for biological resources and protect threatened and endangered species. The objective is to maintain sufficient habitat to support baseline populations of threatened or endangered species that are observed in the conservation area. WDFW has no records of threatened or endangered species in the portion of Fourmile Canyon in the site area. No threatened or endangered species were observed during field investigations.

### **Noxious Weeds**

Diffuse knapweed is present along the access road alignment. Diffuse knapweed is a Class B non-designate weed in Benton County due to its widespread distribution within the County.

#### **3.4.1.3 Alternate 230-kV Transmission Interconnection**

The existing conditions for the alternate 230-kilovolt (kV) transmission interconnection would be the same as the existing conditions for the proposed transmission line, because the proposed 500-kV line and the existing 230-kV line are in the same physical location.

#### **3.4.1.4 Alternate Transmission Interconnection**

##### **3.4.1.4.1 Habitats**

The alternate Benton PUD/BPA transmission interconnection alignment would cross all seven major habitat types in the site area. As the alignment runs from the PGF plant site south to Christy Road it crosses fallow agricultural land. The majority of the rest of the transmission would involve upgrading the existing Benton PUD transmission line, which runs along the south side of Christy Road east for approximately 2 miles. This portion of the existing line is adjacent to a strip of shrub-steppe habitat. The line then turns north and crosses Christy Road. From

Christy Road, the line runs north for approximately 0.4 mile through nonnative grassland. The nonnative grassland along this section of the transmission line is dominated by cheat grass but does have small pockets dominated by native grasses such as Sandberg's bluegrass. However, nonnative species are the dominant vegetation in the vicinity of each existing tower.

After running north for 0.4 mile, the existing line turns east and runs for approximately 2 miles to where it crosses I-82. The western end of this portion is nonnative grassland with small pockets dominated by native grasses. As it nears Plymouth Road, the transmission line is adjacent to two small isolated wetlands. On the east side of Plymouth Road, the transmission line crosses shrub-steppe habitat and lies adjacent to two more isolated wetlands. The existing line then crosses I-82, where it connects to the BPA transmission line. The alternate Benton PUD/BPA transmission interconnection would follow the existing Benton PUD line until just east of I-82, where it would turn south and follow the BPA transmission line south across the Columbia River. This alignment travels south and crosses the cliff habitat in Washington. On the Oregon side, it crosses riparian and wetland habitat before connecting to the McNary Substation.

#### **3.4.1.4.2 Threatened and Endangered Species**

##### **Plants**

Palouse goldenweed is known to occur in the vicinity of the alternate Benton PUD/BPA transmission interconnection, near the community of Plymouth. Potential Palouse goldenweed habitat is present along the Benton PUD transmission line from west of Plymouth to I-82.

The alternate Benton PUD/BPA transmission interconnection would also cross the cliff overlooking the Columbia River east of I-82. This could be considered potential Umtanum desert buckwheat habitat. However, given the extremely restricted range of this species, it is unlikely this species is present in the site area. Site investigations revealed only one buckwheat species, snow buckwheat (*Eriogonum niveum*), in the vicinity of the cliff.

In addition, potential (though not necessarily likely) Columbia cress and shining flatsedge habitat could be present on the southern bank of the Columbia River near the McNary Substation. However, shining flatsedge is not a state-listed species in Oregon. The ONHP notes that more information is needed on this species to determine if state listing for this plant is warranted (ONHP 2001).

##### **Wildlife**

No listed wildlife species other than bald eagles were observed on or adjacent to the alternate Benton PUD/BPA transmission interconnection route. In addition, no suitable nesting habitat was identified for bald eagles, ferruginous hawks, or sage grouse. The closest ferruginous hawk nest is over 2 miles east of the eastern end of the alternate Benton PUD/BPA transmission interconnection route and there are no known bald eagle nests or sage grouse leks in the region. Wintering bald eagles forage and perch along the Columbia River, which is less than 1 mile from the portion of the alternate transmission interconnection route along Christy Road. Ferruginous hawks may forage in the shrub-steppe and grassland habitats near the cliffs east of the alternate Benton PUD/BPA transmission interconnection route. Painted turtles may use the small ponds

associated with wetlands along the Oregon side of the Columbia River, Washington ground squirrels and white-tailed jackrabbits may use the shrub-steppe and nonnative grassland habitats present.

## **Fish**

The alternate Benton PUD/BPA transmission interconnection route crosses Fourmile Canyon about 0.25 mile from the Columbia River. Although no fish or fish habitat are present in Fourmile Canyon, the route would cross the Columbia River, in which fish habitat does exist, east of I-82.

### **3.4.1.4.3 Other Wildlife Species**

Because the alternate Benton PUD/BPA transmission interconnection would cross several habitat types, many wildlife species were observed during field investigations. In agricultural and nonnative grassland areas, species observed include western meadowlark, white-crowned sparrow, and black-billed magpie. Northern flicker, American crow, and killdeer were seen flying over these areas. Birds of prey such as the northern harrier, American kestrel, and red-tailed hawk were observed hunting in the nonnative grassland habitats. Small mammals such as deer mice, pocket mice, voles, prairie dogs, and ground squirrels may also use the nonnative grassland habitats.

Species observed in shrub-steppe habitats include those noted above and some additional species, including Say's phoebe, song sparrow, savannah sparrow, California quail, and mourning dove. Badger burrows and prairie dog holes were also observed in the shrub-steppe habitat.

The isolated wetlands occurring along the alternate Benton PUD/BPA transmission interconnection route on both sides of Plymouth Road provide open water areas for waterfowl as well as scrub/shrub and forested areas for several other bird species. The forested and emergent wetland complex on the Oregon side of the Columbia River also provides ponds and suitable vegetation. Species observed in the wetland habitats included red-winged blackbird, great blue heron, mallard, pied-billed grebe, wood duck, American widgeon, marsh wren, song sparrow, American goldfinch, northern flicker, black-billed magpie, red-tailed hawk, house finch, American crow, white-crowned sparrow, and an unknown owl species. Evidence of beaver use was also present in the open water area of one wetland.

### **3.4.1.4.4 Noxious Weeds**

Diffuse knapweed and swainsonpea are present along the alternate Benton PUD/BPA transmission interconnection route in Washington. Diffuse knapweed and swainsonpea are Class B non-designate weeds in Benton County due to their widespread distribution within the County. False indigo, reed canarygrass, and common mullein are present along the Oregon portion of the alignment. However, these species do not have any noxious weed status in Oregon (ONWCP 2001).

### **3.4.1.5 Access Alternative**

#### **3.4.1.5.1 Habitats**

The alternate construction and operation access roads would require improving existing roads. The alternate access road alignments border three habitat types (see Figure 3.4-1). Most of the alignment is adjacent to nonnative grassland. The eastern end of the alignments border agricultural land and developed/residential/industrial habitat.

#### **3.4.1.5.2 Threatened and Endangered Species**

##### **Plants**

No special-status plant species were observed on or adjacent to the alternate access road routes. In addition, no suitable habitat was identified. The nearest known record of a special-status plant species is over 1 mile east of the alternate access road routes.

##### **Wildlife**

Bald eagles were observed south of the proposed alternate access roads between Christy Road and the Columbia River during field investigations. Two adult eagles were seen perched in large cottonwoods bordering the river and two immature eagles were seen flying over the shrub-steppe and riparian areas near the river. No other listed species were observed on or adjacent to the alternate access road routes. The closest ferruginous hawk nest is over 5 miles from the plant site, and there are no known bald eagle nests, or sage grouse leks in the region. Washington ground squirrels or white-tailed jackrabbits may use the shrub steppe areas south of the alternate access road routes between Christy Road and the Columbia River.

Low to moderate noise levels currently exist along the alternate access road routes due to the neighboring Williams Co. compressor station, the BNSF railroad tracks on the north side of Christy Road, and usual traffic along Christy Road. Existing noise levels are described in Section 3.7, Noise.

##### **Fish**

The alternate construction and operation access roads would require no new crossing of Fourmile Canyon. Both roads are near the Columbia River and would require some improvement of existing roads.

#### **3.4.1.5.3 Other Wildlife Species**

Wildlife species observed on or adjacent to the alternate access road routes are typical of nonnative grassland and agricultural habitats. Such species include western meadowlark, white-crowned sparrow, and black-billed magpie. Northern flicker, American crow, and killdeer were seen flying over these areas and using patches of shrubs and trees. Birds of prey such as the northern harrier, American kestrel, and red-tailed hawk were observed hunting in the nonnative grassland habitats. Small mammals such as deer mice, pocket mice, voles, prairie dogs, and ground squirrels may also use the nonnative grassland habitats.

The alternate operation access road would pass near the Williams Co. compressor station site. This area is considered developed/residential/industrial, but planted trees and shrubs along the road provide some habitat for bird species not observed in other habitats. Such species include dark-eyed junco, European starling, yellow-rumped warbler, and house finch. This area contains moderate noise levels from the existing compressor station.

#### **3.4.1.5.4 Noxious Weeds**

Diffuse knapweed and common mullein are present along the alternate access road routes. Diffuse knapweed is a Class B non-designate weed in Benton County due to its widespread distribution within the County. Common mullein is a monitor species that does not require any containment or control.

### **3.4.2 ENVIRONMENTAL CONSEQUENCES**

#### **3.4.2.1 Methodology**

Impacts to biological resources were assessed by first discussing potential impacts for each species or habitat and each project component or alternative. Second, the level of impact was determined for the specific situations of each expected impact. Four factors were considered in the evaluation of the level of biological impacts: magnitude, geographic extent, duration and frequency, and likelihood. The magnitude of impact reflects relative size or amount of an impact. The geographic extent of an impact considers how widespread the project impact might be. The duration and frequency of an impact (whether the impact is a one-time event, intermittent, or chronic) also helps define its limits. The likelihood of an impact (whether the impact is likely to occur) is the final evaluation factor. By considering each of these factors, the evaluation of impacts was kept uniform and systematic. The following impact ratings were used in this section: high (significant), moderate, and low. In general, impacts to individuals within a population are not great enough to be biologically significant, unless only small populations of the species exist. Table 3.4-4 presents these criteria for determining whether biological impacts would be significant or not.

The threatened and endangered species impact assessment is guided by the provisions of the ESA of 1973, as amended. The ESA prohibits the taking (broadly defined) of endangered species within the United States. Any unlawful taking of a threatened or endangered species is considered significant. However, the ESA allows taking that otherwise would be prohibited if such taking is incidental to, and not the purpose of, a lawful activity.