- Proposed Yakima River Basin Integrated Water Plan –

Wymer Dam

Destroying Shrub-Steppe Habitat

[The Proposed Integrated Plan proposes a $1.07 billion Wymer project between Ellensburg and Yakima, that would not only destroy shrub-steppe habit, but could also lead to the construction of two additional dams at Burbank Creek and Selah Creek.]

Wymer Dam and Pump Station

Yakima River Basin Study, Volume 1 Proposed Integrated Water Resource Management Plan - April 2011

A new Wymer Dam would be constructed to create an off-channel storage facility in the intermittent stream-bed of Lmuma Creek Canyon, approximately 8 miles upstream of the Roza Diversion Dam. The storage capacity of the reservoir would be approximately 162,500 acre-feet.

Water would be pumped into the reservoir from the Yakima River during winter, spring, and potentially summer, during high-flow periods from upstream reservoir releases, which has the potential to mitigate for artificially high summer flows. The facility would allow for increases in winter flows in the upper Yakima River to benefit fish. On average much of the storage capacity would be used annually to improve instream flows upstream and downstream of the reservoir.

The remaining storage capacity would be used for carry over or drought relief storage. Two pump station options are being considered, and a preferred option will be selected through the final planning report and environmental review process described in Section 6.0. Option 1 includes a new pump station at Thorp, including a new pipeline from the pump station to an upgraded KRD North Branch Canal system and a new tunnel to deliver water to the Wymer Reservoir.

Option 2 would be a pump station on the Yakima River just upstream of Lmuma Creek, with water conveyance through a new pipeline that would deliver water to Wymer Reservoir.

Wymer Reservoir releases would pass through tunnels, a siphon, and a hydroelectric powerhouse to the Roza Canal at the existing Roza Canal intake structure. Another alternative could be to release water into the Yakima River at Lmuma Creek. The feasibility of removing the Roza Dam would be evaluated as part of implementing the Wymer project. The downstream conveyance alignment provides for connection with future potential storage sites within the Burbank Creek and Selah Creek drainages. (Page 43)

The Bureau of Reclamation previously reviewed impacts to shrub-steppe habitat in the Yakima River Basin:

Yakima River Basin Water Storage Feasibility Study – PR/FEIS - Volume 1;
US. Bureau of Reclamation December 2008
http://www.usbr.gov/pn/programs/storage_study/reports/eis/final/volume1.pdf

4.7.1 **Affected Environment**

Vegetation issues of concern involve the loss of shrub-steppe associated with the development of facilities under some of the alternatives and effects to riparian and wetland habitat along the river corridor as a result of changes in flows. The loss of shrub-steppe is also an issue for wildlife, as it

could be affected by its loss. Movement corridors for some species may also be affected with the development of some of the facilities.

Shrub-steppe communities were historically a dominant vegetation type in eastern Washington, and have been extensively studied (Yakima Subbasin Fish and Wildlife Planning Board, 2004). The shrub-steppe vegetation type is a mixture of woody shrubs, grasses, and forbs generally dominated by Wyoming big sagebrush and bluebunch wheatgrass in east-central Washington (Daubenmire, 1970). Environmental factors such as elevation, aspect, soil type, proximity to water, and others contribute to an individual site's vegetation diversity potential. For example, at higher elevations and on north-facing slopes, three-tip sagebrush and Idaho fescue may dominate; on ridge tops with shallow soils, rigid sage-brush and Sandberg's bluegrass and/or bluebunch wheatgrass may dominate (Yakima Subbasin Fish and Wildlife Planning Board, 2004). Rabbitbrush may be common on recently burned sites. Other grasses and shrubs that may be scattered throughout dominant stands of Wyoming big sagebrush and bluebunch wheat- (p. 4-78) grass include needle and thread, Thurber's needle grass, Indian rice grass, squirreltail, Cusick's bluegrass, short-spine horsebrush, antelope bitterbrush, spiny hopsage, and basin sagebrush (Crawford and Kagan, 2001). More alkaline sites may support black greasewood, basin wild rye, and inland saltgrass (Daubenmire, 1970). Estimates of historic vegetation cover on undisturbed sites range from 5- to 30-percent shrub cover and from 69- to 100-percent bunchgrass cover.

Agricultural, residential, and urban development over the past century have changed the landscape drastically, resulting in large losses of shrub-steppe habitat. Approximately 40 percent of the estimated 10.4 million acres of the shrub-steppe vegetation type that existed in Washington before the 1800s remains today (Dobler et al., 1996). This residual habitat continues to be threatened by continued loss/conversion of habitat; declines in vegetative diversity; reduction of microbiotic crusts, which are an indicator of undisturbed habitat and prevent the influx of exotic species (e.g., cheatgrass); and isolation of habitat (Service, 2007b). The further loss of habitat and the degradation of remaining shrub-steppe can be attributed to increased fragmentation, varying fire management practices, competition with exotic and invasive species, overgrazing from livestock, off-road vehicle use, and overall conversion and development (Crawford and Kagan, 2001). In the Yakima River basin, three large properties remain that continue to support large blocks of shrub-steppe: the YTC; a portion of the Yakama Reservation; and the ALE Reserve, located on Hanford Reach National Monument and managed by the U.S. Fish and Wildlife Service (Yakima Subbasin Fish and Wildlife Planning Board, 2004). Table 4.19 presents the shrub-steppe acreage at major facility sites for each alternative area (Service, 2007b). More detailed treatment of this vegetation type is found in the Yakima Subbasin Plan (Yakima Subbasin Fish and Wildlife Planning Board, 2004) and the numerous references cited within that report.

Table 4.19 Shrub-steppe habitat at major facility sites (acres)
Location - Wymer site 1,055 (p. 4-79)

The Wymer site provides core habitat for bighorn sheep (*Ovis canadensis*), Townsend ground squirrel, golden eagle (*Aquila chrysaetos*), ferruginous hawk, short-eared owl, long-billed curlew, loggerhead shrike, sage sparrow (*Amphispiza belli*), Brewer's sparrow (*Spizella breweri*), sage thrasher, greater sage-grouse, black-tailed jackrabbit, Merriam's shrew, mule deer, pallid bat, and small-footed myotis. Peripheral habitat exists for the white-tailed jackrabbit. Other species that may live in the diverse habitats within the affected areas include the coyote (*Canus latrans*), badger (*Taxidea taxus*), western kingbird (*Tyrannus verticalis*), western meadowlark (*Sturnella neglecta*), mourning dove (*Zenaida macroura*), western rattlesnake (*Crotalus virdis*), Great Basin spadefoot toad (*Spea intermontana*), and northern sagebrush lizard (*Sceloporus graciosus*) (Service, 2007b).(p. 4-80)