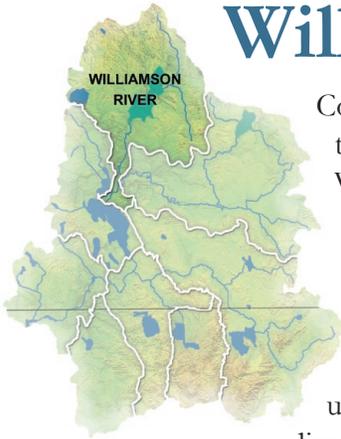


Williamson River Subbasin



Covering about 928,000 acres, the Williamson River Subbasin is the principal tributary for Upper Klamath Lake. Combined, the Williamson and Sprague River subbasins make up 79 percent of the lake's total drainage area. The Winema National Forest and Klamath Falls National Wildlife Refuge account for most of the public land in the subbasin.

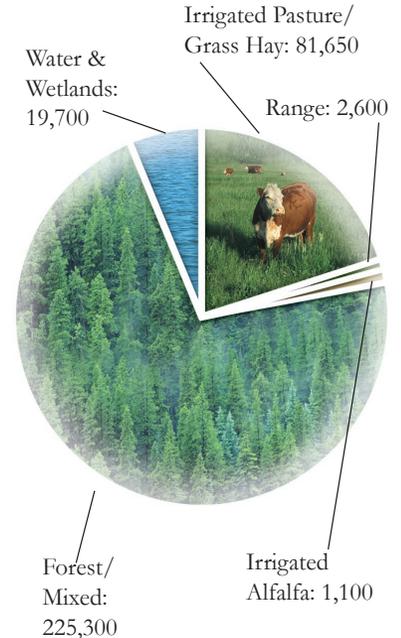
Irrigated pasture is the dominant private agricultural land use. Pasture is almost entirely flood irrigated. Ninety percent is diverted from streams, while groundwater supplies ten percent.

Most diversions do not have fish screens and lack devices to measure water deliveries. Although overall irrigation application efficiency is low, additional water in the water table helps to subirrigate pastures. In addition, the proximity of these pastures to rivers and streams allows most excess diverted water to return to the system for reuse.

Private forest and rangelands make up most of the private land in the basin. Approximately 80 percent of forestlands are used for grazing. Private forestland is in poor to fair condition; over half of the stands are significantly overstocked with trees.

Wildlife habitat has faced considerable degradation in the past. Of the 48 miles of stream that are degraded in the subbasin, restoration efforts have been initiated on approximately 23 miles.

Williamson River Subbasin Agricultural Land Use/Cover



Williamson River Subbasin

Land Ownership

Private Lands	309,400
Public Lands	<u>618,800</u>
Total Land Area:	928,200

Irrigated Acres

USBR Project:	0
Non-USBR:	<u>65,100</u>
Total:	65,100

Resource Concerns

Water quality relating to elevated stream temperatures is a major resource concern in the Williamson River Subbasin, directly impacting fish and wildlife habitat throughout the Upper Klamath Basin.

In 1988, when the Lost River and Shortnose suckers were listed as endangered, the Williamson and Sprague River runs were estimated to have declined by as much as 95 percent during the previous twenty-year period. Important sucker habitat has diminished by nearly 50 percent in the lower reaches and near the mouth of the Williamson River. This has reduced the amount of larval sucker spawning and rearing habitat.

Conservation Accomplishments

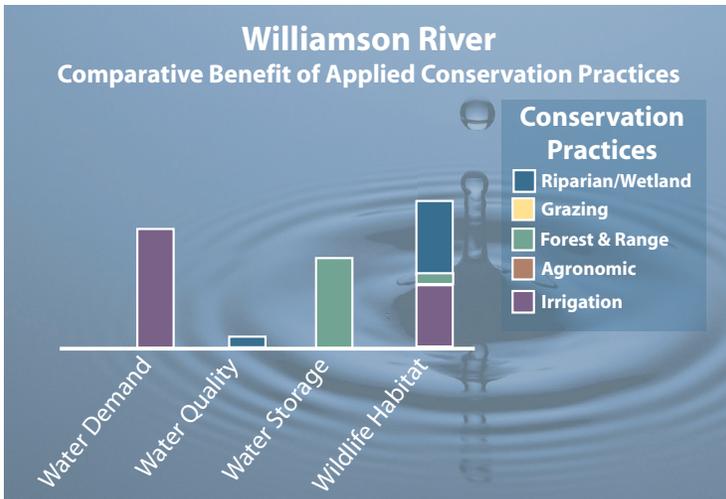
Significant conservation progress has been made in this subbasin. Land managers have improved 500 acres of grazing lands, 1,000 acres of irrigated lands, 235 acres of forestlands and have restored 112 acres of riparian and wetland areas. Heightened landowner awareness of resource concerns and increasing agency, organization, and individual efforts will help this trend to continue.

Of the 48 miles of stream that are degraded in the subbasin, private land managers are working with the US Fish and Wildlife Service and others to restore 23 miles. The Nature Conservancy is restoring approximately 3,200 acres of wetlands, and plans to restore another 3,411 acres at the mouth of the Williamson River.

Priority Conservation Opportunities

Wildlife Habitat & Water Quality: Riparian area and wetland habitat restoration and management provide the best opportunity to improve water quality in the Williamson River Subbasin. This can be accomplished by converting lands from irrigated agriculture to wildlife habitat or creating riparian pasture systems.

Wetland and riparian areas still utilize water. However, this work may reduce total water demand depending on how lands are managed.



Water Demand: Thinning forest stands and managing grazing areas by adding cross fences and off-stream water for livestock can yield more water to meet downstream needs. This will also result in enhanced wildlife habitat and improved water quality in area streams. In addition, forest stand improvements reduce the potential for catastrophic fire.

Conservation Investment

Projected Conservation Acres to be Treated*

Irrigated Land.....	52,300
Range & Forestland ...	71,200
Wildlife Habitat.....	200

Estimated Installation Cost

Irrigated Land	.....	\$12,863,000
Range & Forestland	.....	\$17,290,000
Wildlife Habitat	.....	\$338,000

Estimated Annual Operation, Maintenance & Management Cost

Irrigated Land	.....	\$2,663,000
Range & Forestland	.....	\$669,000
Wildlife Habitat	.....	\$11,000

*Based on conservation need and projected participation rates.