

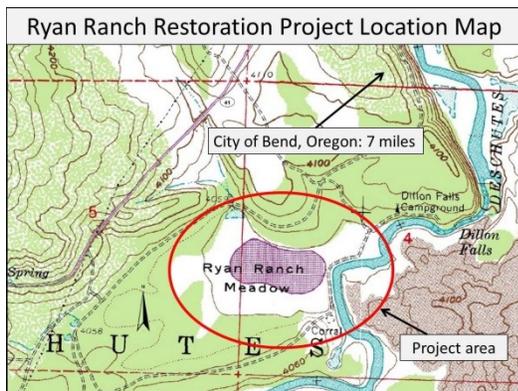
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Ryan Ranch Restoration Project

Public Outreach Frequently Asked Questions

Where is Ryan Ranch?

Ryan Ranch is located adjacent to the Deschutes River immediately above Dillon Falls on the Bend/Fort Rock Ranger District of the Deschutes National Forest.



Locator map and aerial photo of Ryan Ranch adjacent to the Deschutes River

Who is the Forest Service working with on this project?

The Forest service is partnering with multiple governmental and non-governmental partners, including local irrigation districts associated with the Deschutes Basin Board of Control (DBBC), the Upper Deschutes Watershed Council, U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife and the Bureau of Reclamation.

What is the history of Ryan Ranch?

Ryan Ranch was homesteaded in the 1890s and acquired by the Federal Government in 1944. A berm along the Deschutes River was first constructed in the 1920s to keep the river from flooding valuable pasture land in Ryan Ranch. The berm was enhanced in the late 1940s after the construction of Wickiup Dam.



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Berm at Ryan Ranch with Deschutes River trail, borrow ditch and open meadow

What is the ecological function of Ryan Ranch?

Ryan Ranch historically functioned as an emergent freshwater marsh that was connected to surface flows from the Deschutes River. The basin has been disconnected from surface water in the river for nearly 90 years by an artificial berm and currently functions as a seasonal wetland.



Data compiled by Gould in 1915



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What is the current hydrologic cycle at Ryan Ranch?

Groundwater in Ryan Ranch is seasonally re-charged during the winter and spring months by aerial precipitation and subsurface inputs of snowmelt and rain from the east slopes of the Cascades. The water table recedes below the surface of the basin in early summer as a result of evapotranspirative consumption by vegetation and minor rates of seepage.

Seasonal groundwater levels rise above the surface in Ryan Ranch under current conditions



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What is the vegetative composition of Ryan Ranch?

Vegetation in Ryan Ranch is a mix of native and non-native vegetative species. The invasive species Reed canarygrass is prospering as native wetland sedges struggle to compete under the current seasonal supply of water.



Extensive areas of non-native Reed canarygrass (purple seed heads) are encroaching on native sedges in Ryan Ranch

Why is the USFS planning restoration at Ryan Ranch?

Erosion of the riverbank and artificial berm is compromising the Deschutes River Trail and contributing sediment into the river. The existing elevation of the berm and riverbank prevents the establishment of native riparian vegetation capable of resisting this erosion. Lowering the elevation of the riverbank would allow thickly rooted sedges to be re-established along the immediate floodplain of the river.



Extensive riverbank and berm erosion (left) and preferred riverbank elevation and vegetation (right)

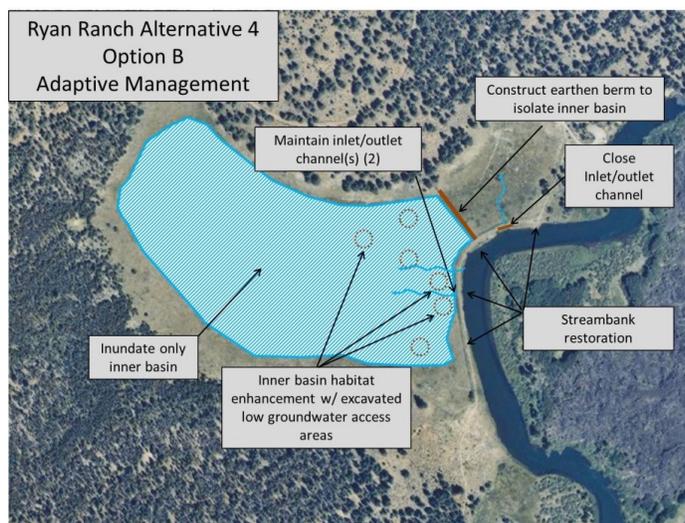


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Why is a Pilot project being implemented?

The Pilot project is a test to monitor the dynamics of surface water added to Ryan Ranch before full restoration occurs. Concerns for potential water loss as a result of seepage will be addressed by this test as part of an Adaptive Management Strategy. Results of this test will be used to inform the extent of wetland restoration that occurs at Ryan Ranch.



Possible Adaptive Management restoration scenario informed by the Pilot project

Why is potential water loss a concern?

Water flowing in the Deschutes River during the spring and summer months is allocated to water users associated with the Deschutes Basin Board of Control (DBBC) and instream uses held in trust by the Oregon Water Resources Department (OWRD) for the Oregon Department of Fish and Wildlife. Loss of water from the river has the potential to harm the water rights of these users. The Forest Service has worked closely with the local irrigation districts to implement a Pilot Project and develop an Adaptive Management Strategy to ensure that downstream water users will not be adversely affected by this restoration project.



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What does the Pilot project entail?

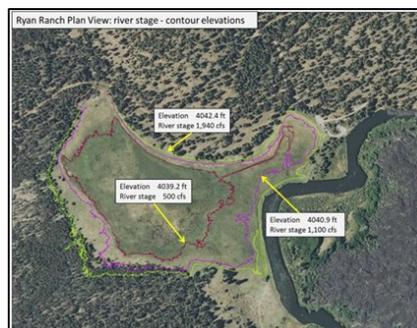
Three culverts were installed in January, 2015 to allow surface water to enter Ryan Ranch and be measured under a Limited License Agreement administered by OWRD. Water levels in wells installed in the basin will be measured to monitor the dynamics of the groundwater in response to the added surface water. The results of the monitoring will be assessed by the USFS and the DBBC to help adaptively manage the long term restoration component of the project.



Two culverts recently installed connecting the river and Ryan Ranch beneath the berm

What is the Forest Service planning to restore at Ryan Ranch?

The project would restore approximately 0.3 miles of riverbank that is steadily eroding under current conditions. It would also restore the historic surface water connection between the river and Ryan Ranch if water loss measured in the basin during the Pilot project is acceptable. Approximately 65 acres of freshwater emergent marsh habitat adjacent to the Deschutes River could be restored as a result of this project.



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Potential combination of open water and marsh vegetation created in Ryan Ranch

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What species will benefit from this project?

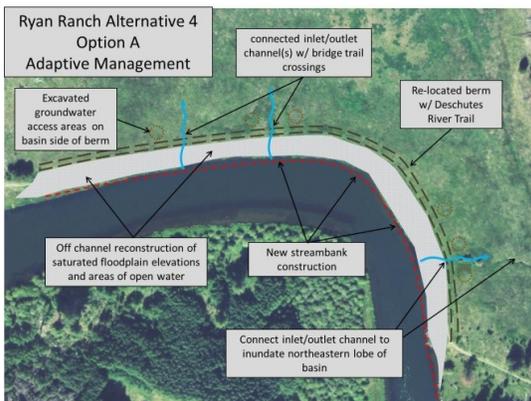
The Ryan Ranch project would benefit many aquatic species associated with fresh water emergent wetlands, including the Oregon spotted frog, which was recently listed as Threatened under the Endangered Species Act. Habitat created by the project would also benefit numerous wildlife species, including migratory birds, water fowl, and elk.



Restored hydrologic conditions would support more vigorous growth of native wetland sedges and provide a longer duration of water for species like the Oregon spotted frog.

What will happen to the Deschutes River Trail?

The Deschutes River Trail will be maintained in the Ryan Ranch area as through access for hikers, bikers and other trail users. The existing berm that supports the trail will be moved approximately 30 feet away from the river as part of the riverbank restoration and will continue to support the trail under all of the Adaptive Management options. The project will also provide American Disabilities Act (ADA) accessible parking, facilities and hiking opportunities on site.



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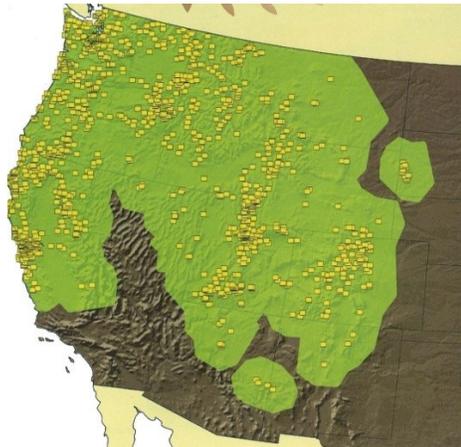
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How long has this project been developed?

Planning for restoration of the riverbank and wetland habitat began in 2008. An Environmental Assessment was completed in 2013 and released with a draft Decision Notice on January 22nd, 2014. A Final Decision Notice was released following an Objection period in May of 2014. The Pilot project is being implemented in the spring of 2015.

What about bumblebees?

The Western Bumblebee has been documented throughout the inner mountain west but is in apparent decline in native west-side Cascade habitats. The Western has not been observed at Ryan Ranch to date and flowering perennial and forb species associated with moist meadow habitats favored by this species are in very low abundance on site. As a result, the restoration at Ryan Ranch is unlikely to affect the Western Bumblebee.



Range and observation sites of the Western Bumblebee (*Bombus occidentalis*)
in the western United States



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What about the resident elk herd?

Restoration of the Ryan Ranch wetland is expected to improve habitat for the local elk herd that resides in the area. Elk wade and swim across the Deschutes River to use and access other wetlands in the area and will readily adapt to the extended duration of water in Ryan Ranch. An increase in riparian vegetation complexity as a result of the project is likely to provide more cover and diverse browse for this species.



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