OWEB Focused Investment Partnership Priority
OREGON CLOSED LAKES BASIN WETLAND HABITATS

Summary Statement of Priority

The OWEB Board will consider proposals for investment in Closed Lakes Basin Wetland habitats for Initiatives that address habitat conservation and restoration needs to achieve ecological outcomes over time at the landscape scale, which will restore and protect ecologically meaningful areas.

OWEB's Focused Investment Priority for Closed Lakes Basin wetland habitats guides voluntary actions that address primary limiting factors related to the quality of this habitat type. These actions also support and/or improve watershed functions and processes. **Actions will be guided by the habitat, limiting factors, ecological outcomes, and conservation approaches outlined in Oregon's State Wildlife Action Plan (SWAP), the Intermountain West Joint Venture's (IWJV) Habitat Conservation Strategy Implementation Plan, and other plans listed at the end of this document.**

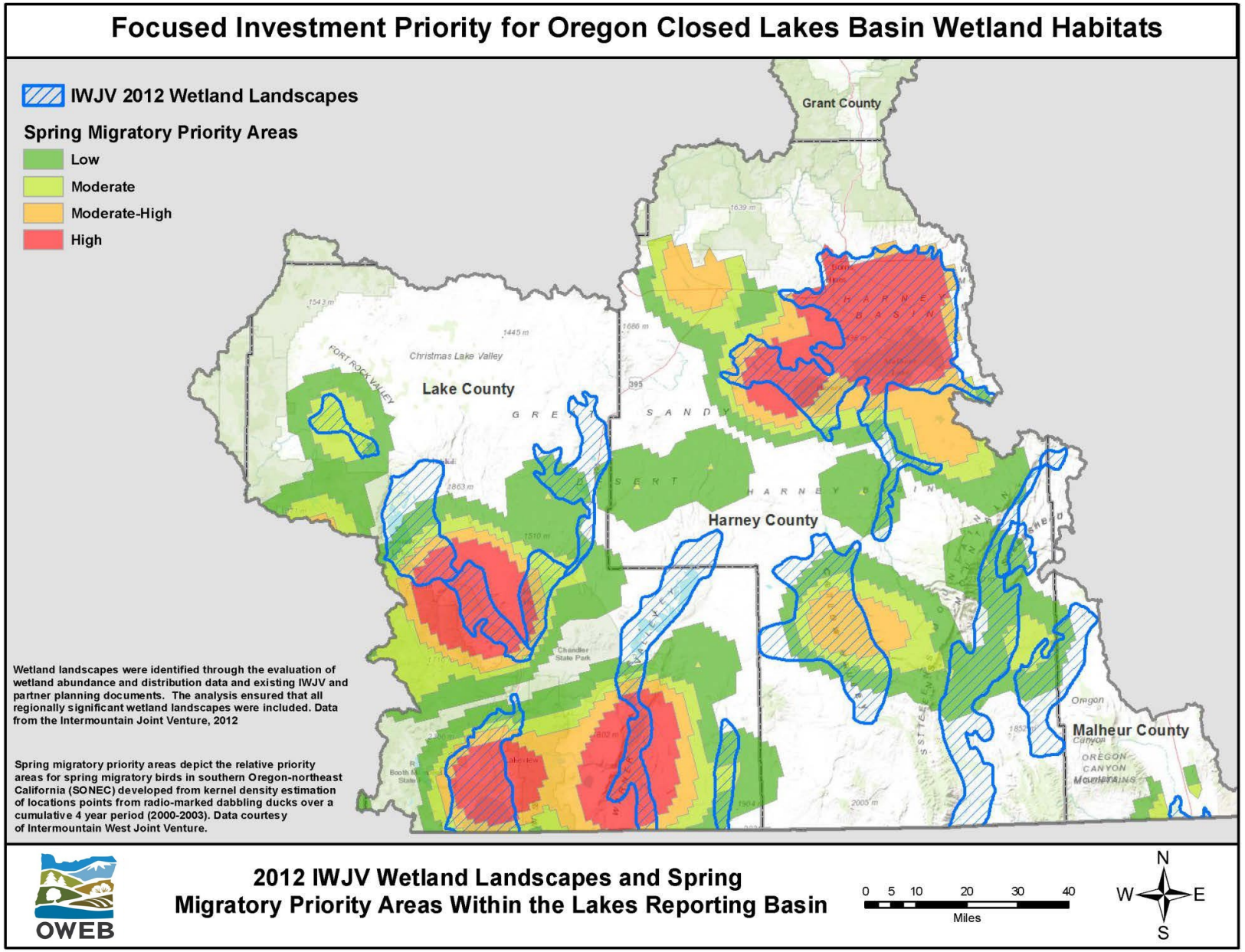
Background

Where it occurs

The Closed Lakes Basin wetlands exist within the Southern Oregon Northeast California (SONEC) region, which is a portion of the Closed Lakes network within the Great Basin (see map). The SONEC region geography and habitat has been defined by the IWJV and in the federal North American Waterfowl Management Plan. The Closed Lakes Basin within the SONEC region is an important part of the Pacific Flyway. Within the SONEC region, a significant amount of wetland and floodplain habitat is located on private land, most of which is managed as flood-irrigated hay and pastureland. These habitats are critical for migratory and resident birds and also support native fish species.

In Oregon, Closed Lakes Basin wetland habitat exists primarily in Lake and Harney Counties (including Malheur National Wildlife Refuge), with a small portion in Malheur County. Closed Lakes Basin wetland habitats include shallow lakes and marshes, wet meadows, and irrigated pasturelands. Many of the region's smaller historical wetlands have been lost due to conversion or degradation from stream channelization, water use, water diversions, and historical overgrazing. Many of the managed wetland/pastures exist in the floodplain of tributaries and lakes in the area. Closed Lakes Basin wetlands represent a unique chain of desert oases that, as an integrated network, provide critical habitat and food for waterbirds throughout the year.

Figure 1: Map of Focused Investment Priority for Oregon Closed Lakes Basin Wetland Habitats



The map above displays 2012 IWJV Wetland Landscapes and Spring Migratory Priority Areas Within the Lakes Reporting Region in Lake, Harney, and Malheur Counties, ranked: Low, Moderate, Moderate-High, and High.

Indicator species and/or species of interest supported by this habitat

The SONEC region, which includes the Oregon Closed Lakes Basin, provides essential wetland habitats important for migratory birds. Moreover, the Closed Lakes Basin provides crucial breeding and wintering habitats for many bird species. The majority of North America's snowy plovers (federally listed under the Endangered Species Act (ESA)), North America's eared grebes, long-billed dowitchers, white-faced ibis, and many Species of Greatest Conservation Need as identified in the Oregon SWAP breed, nest, or otherwise use Oregon's Closed Lakes Basin during migration. Additional migratory and resident bird species also rely on this habitat.

Of particular importance is habitat for migratory bird species during spring migration. This region provides a diversity of food production at different salt regimes throughout the year; thus, seasonal water conditions drive habitat function and productivity. Additionally, the Closed Lakes Basin wetlands support native fish species such as Warner and Modoc sucker fish (ESA-listed), tui chub, and redband trout.

Why it is significant to the state

Closed Lakes Basin wetlands are ecologically unique high-desert wetlands that provide critical habitat for numerous migratory and resident bird species. This region has international importance as habitat for migratory birds, including the ESA-listed species cited above.

Oregon's Closed Lakes Basin wetland habitats are a significant portion of the greater SONEC complex of wetlands that are so critical to the millions of birds that travel the Pacific Flyway each year. The IWJV recognizes the SONEC region as one of two priority areas in the Intermountain West for wetland-dependent birds. Greater sage-grouse depend on these wetland habitats for foraging habitat for brooding (see related priority). ESA-listed Warner and Modoc sucker fish also are found in this habitat, as referenced above.

Indigenous people in the region have long utilized the lake and wetland resources for food, tools, and shelter. The region fosters a historic and vitally important ranching community and associated economy that depends on the ecological health of these wetland habitats. Malheur National Wildlife Refuge and other wildlife areas in the Closed Lakes Basin are critical recreation and economic resources for these rural counties.

Water is extremely limited in this region. Climate change is expected to affect wetlands through shifting precipitation patterns, increased droughts, more high-severity wildfire, and warmer temperatures. This may further reduce water availability, which could slow habitat recovery, increase invasive vegetation, and lead to higher salinity levels in lakes and wetlands. This lends added urgency to the importance of conservation efforts in this unique habitat.

Key limiting factors and/or ecological threats, with a focus on ecosystem function and process

- Loss and degradation of wetland habitat, including salinization and an imbalance of seasonal saline gradients.
- Seasonal water availability as a result of altered natural hydrologic functioning, including the conversion to sprinkler irrigation from flood irrigation that provided surrogate wetland habitat, and impacts of climate change.
- Fragmented habitat as a result of dam building that altered stream networks to facilitate land drainage and agriculture development.
- Proliferation of invasive common carp, whose feeding behavior has destroyed vast natural marsh habitat by uprooting vegetation and increasing suspended sediments and turbidity. This significantly reduces vegetation otherwise available as a food source for birds and other wildlife.
- Invasive plant and macroinvertebrate species, which can reduce food production for native bird species.
- Landscape-scale disturbance, including wildfire, landslides, flooding or similar events may occur within the FIP geography. Post-disturbance restoration actions addressing landscape-scale disturbance may be eligible FIP actions.
- Loss of wildlife habitat connectivity. Many species rely on the ability to move throughout the landscape to fulfill their daily and seasonal needs for access to food, shelter, and opportunities to reproduce. ODFW produced Priority Wildlife Connectivity Areas (PWCAs) maps to show where habitat connectivity is most important. Fifty-four species were selected for the project as surrogates, representing a variety of taxa, movement types, dispersal capabilities, and sensitivity to anthropogenic threats. FIP Initiatives may include actions enhancing PWCAs within the geographic boundary of their FIP Initiative.

Reference plans

4) Oregon State Wildlife Action Plan
5) North American Waterfowl Management Plan
6) Intermountain West Joint Venture Habitat Conservation Strategy Implementation Plan
7) Intermountain West Joint Venture Implementation Plan
8) Alvord Lake Subbasin TMDL and WQMP