

Marshes (Permanently Inundated)



Marsh wetland along the Lower Truckee River, Washoe County.
Photo by Elisabeth Ammon.

Key Bird-Habitat Attributes

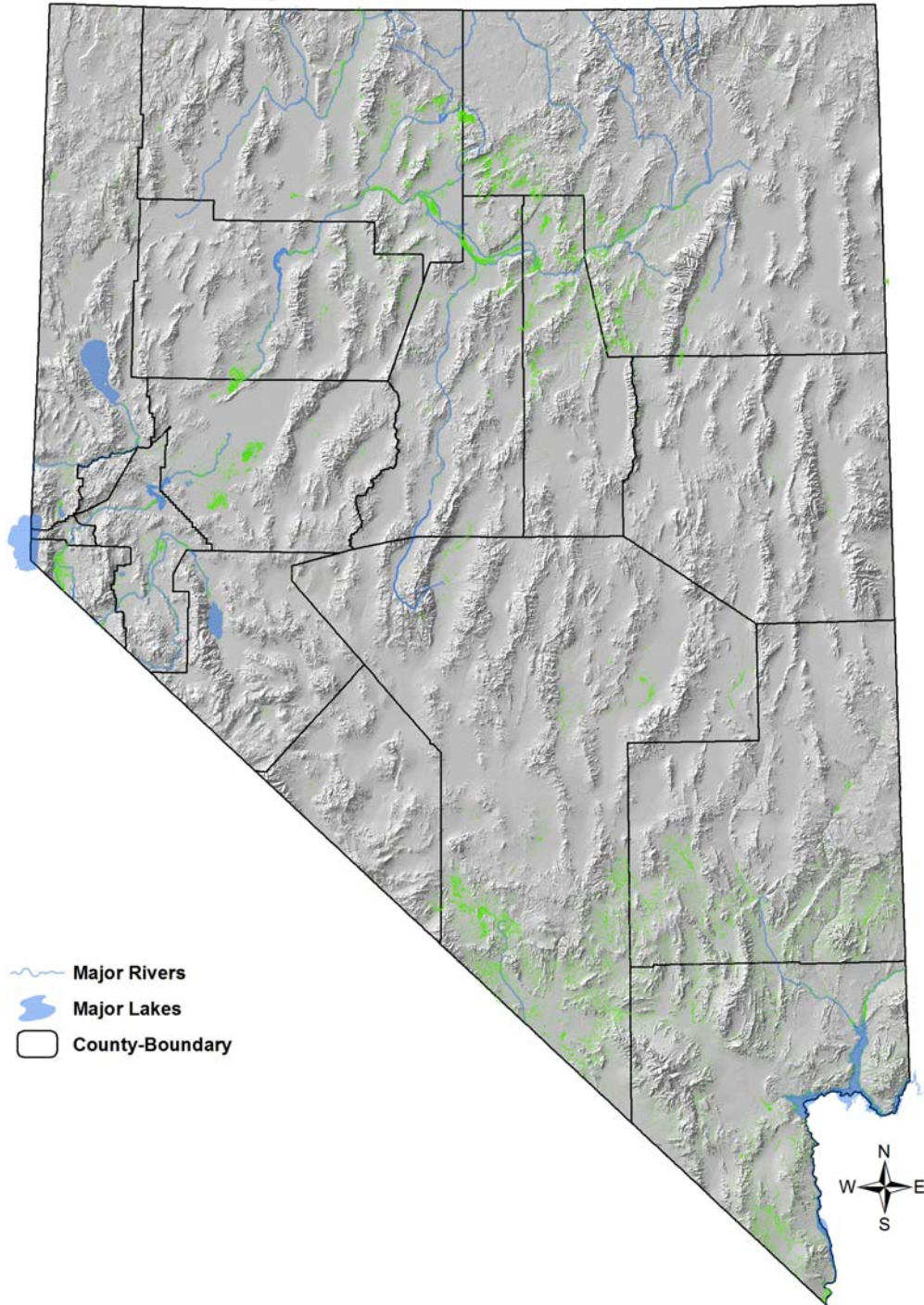
Plant Species Composition	Multi-species emergent and submerged vegetation best, particularly with bulrush in deep sections and rushes and sedges at shorelines
Ideal Scale for Conservation Action	wetland complexes 1 ha (2.2 acres) or larger; smaller patches useful too, if intact; 100 m or larger buffer of native vegetation around most shorelines ideal
Wetland Vegetation Cover	mosaic of approximately 1:1 ratio of open water and emergent vegetation (hemi marsh), with more open water in deeper sections
Hydrology	Wetlands with inflow and outflow system ideal, but terminal marshes also valuable; permanent water ideal, or seasonal flooding during much of the year
Other Features	Islands particularly beneficial, especially in larger wetlands; sedge islands (semi-submerged) and islands with dry vegetation both useful

Conservation Profile

Estimated Cover in Nevada	35,500 ha (87,800 ac) 0.1% of state
Landownership Breakdown	Private = 41% Undesignated waterbodies = 18% BLM = 12% BOR = 11% Other = 18%
Priority Bird Species	Cinnamon Teal Northern Pintail Lesser Scaup Canvasback Redhead Wilson's Phalarope Willet Long-billed Dowitcher Marbled Godwit (western Nevada) Black Tern Franklin's Gull Snowy Egret Least Bittern (Mojave) Clapper Rail (Mojave) Willow Flycatcher Tricolored Blackbird (Carson Valley)
Indicator Species	None needed
Past Impacts	Habitat Conversion Surface Water Diversion/Impoundments
Most Important Current Threats	Habitat Conversion Surface Water Diversion/Impoundments Climate Change
Habitat Recovery Time	5-10 years
Regions of Greatest Conservation Interest	Churchill, Humboldt, Washoe, Elko, Clark counties
Important Bird Areas	Carson Valley, Ruby Lake, North Ruby Valley, Boyd Humboldt Valley Wetlands, Franklin Lake, Lahontan Valley, Carson River delta, Washoe Valley, Swan Lake, Mary's River, Monitor Valley, Ash Meadows NWR, Pahrnagat Valley, Lower Muddy River

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Lowland Riparian, Wetland, and Wet Meadow



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Marsh wetlands are rare on the Nevada landscape, but they support a large portion of priority species that depend on them. While waterfowl is commonly associated with large waterbodies during migration and wintering, most waterfowl and some other species depend on marshes and their shorelines for nesting. In addition to the large number of priority species that specialize on wetlands, many upland birds also depend on wetland resources, including access to water, shelter, and foraging opportunities. Riparian areas and wetlands together form the most critical support of bird species richness in Nevada and should therefore be regarded among the overall highest priorities for habitat conservation.

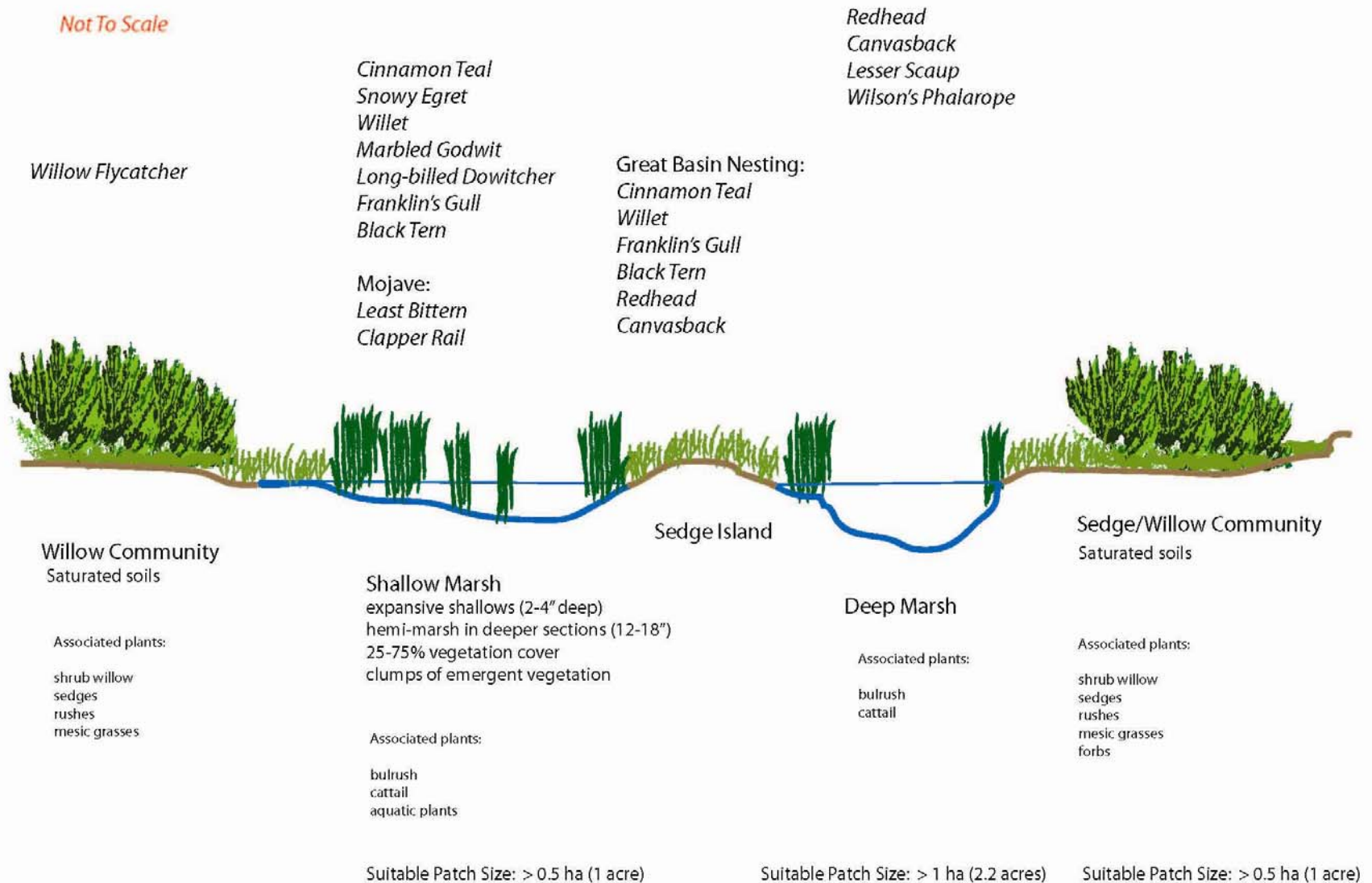
An approximately equal proportion of open water and emergent vegetation is often described as an ideal setting, and patchiness, rather than clean edges, between open water and vegetation is particularly suitable for birds. Islands are especially valuable for nesting and resting by a variety of species, because they are safe from most predators. Therefore, wetland creation and restoration projects may be planned to include emergent or dry islands in the wetland center with deep water between island and shore. Connectivity with other water-dependent habitats, including other wetlands, open waterbodies, wet meadows, riparian areas, and agricultural areas should also be considered in overall landscape management. Ideal settings would include some or more intact water-dependent habitat types in the vicinity of a wetland, depending on natural conditions that have supported them historically. However, small isolated wetlands also play an important role in bird conservation. While they may be too small to attract wetland birds, they can provide critical water access and foraging opportunities for upland species, such as Greater Sage-Grouse, Gambel's Quail, and a wide variety of songbirds.

In the larger landscape (within several miles), features such as large trees, woodland edges, and cliffs may add significant bird value to a wetland location, as birds using these adjacent landscape features often make heavy use of wetlands for foraging. Today's threats to wetlands are largely the same as past threats, and include surface water diversions, habitat conversion, groundwater loss, domestic and feral livestock, and water quality impacts. However, added threats, such as increased pressure on water resources for municipal uses and climate change compound traditional impacts to wetland birds.

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Not To Scale



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Conservation Strategies

Habitat Strategies

1. Manage at the scale of the entire wetland or wetland complex that can be supported by available water. Small patches are also suitable, but ideal management sizes exceed 1 ha (2.2 acres). Buffers around the wetland shores are beneficial to most species, which include ground-nesters in nearby uplands.
2. Intensive land uses, such as heavy use by domestic and feral livestock, should be avoided because they increase the risk of weed invasion and declining water quality.
3. Hydrology ideally features year-round (or near year-round) inundation with an inflow and outflow system, but terminal marshes that are semi-permanent from spring runoff are also extremely valuable.

Public Outreach

1. Promote wetland management for wildlife with private landowners and agencies. Highlight as one of the most important overall bird conservation measures that can be implemented in Nevada.

Research, Planning, and Monitoring

1. If losses of wetlands to other land or water uses are expected, planning for mitigation of habitat loss may be necessary.
2. A comprehensive inventory of wetland systems of Nevada, including small wetlands has not been completed, and may be one of the most valuable tools to monitor future losses and effects of climate change on wetlands.