

Great Basin Lowland Riparian



Lowland riparian corridor along the Lower Truckee River, Washoe County. Photo by Stewart Rood.

Conservation Profile

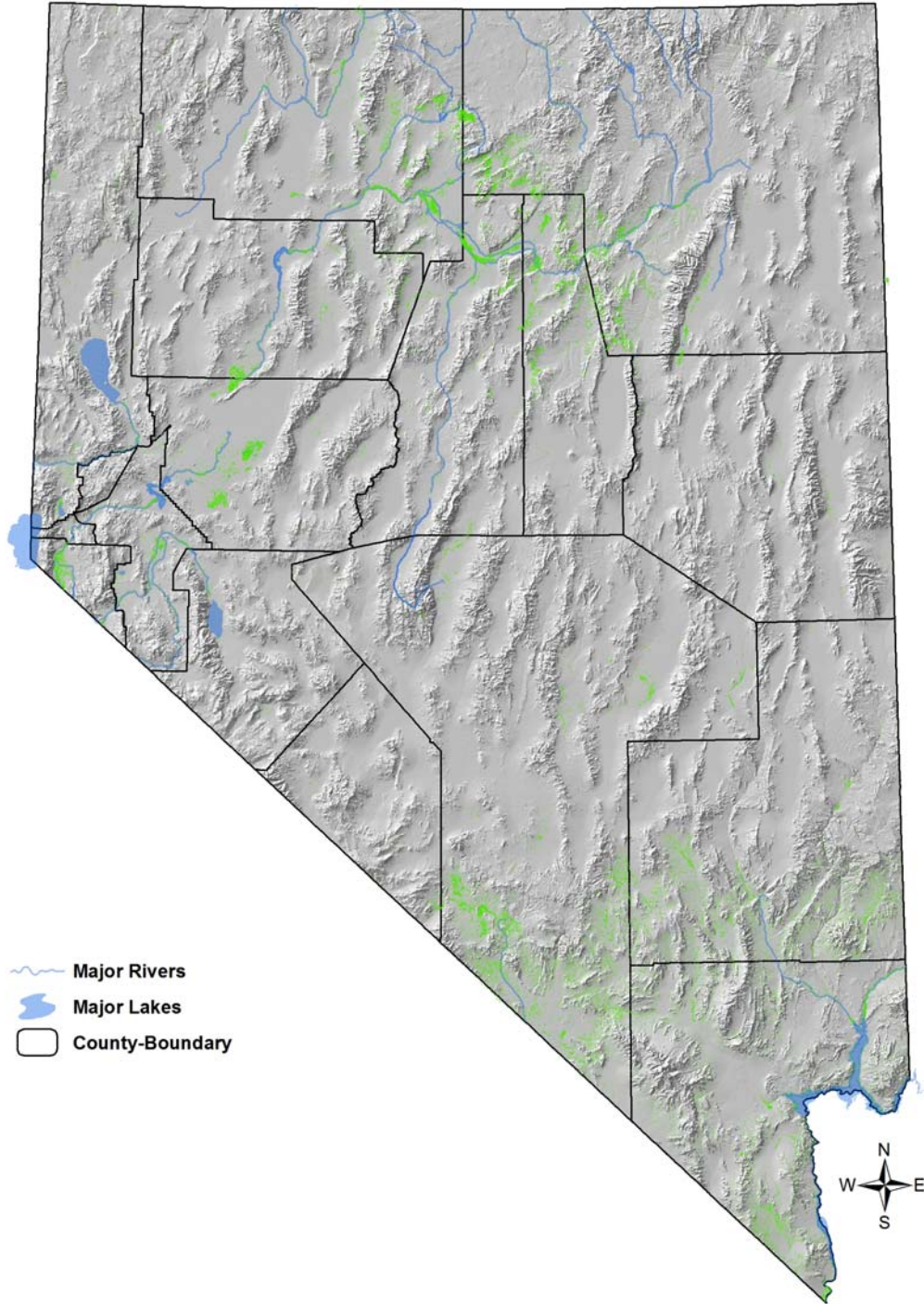
Estimated Cover in Nevada	All lowland riparian in Nevada: <i>draft</i> 245,300 ha (606,300 ac) 0.9% of state
Landownership Breakdown	<i>being analyzed, misclassifications on map</i>
Priority Bird Species	American White Pelican Cinnamon Teal Northern Pintail Willet Snowy Egret Bald Eagle Swainson's Hawk Cooper's Hawk Yellow-billed Cuckoo White-throated Swift Willow Flycatcher
Indicator Species	Yellow Warbler (breeding) Wilson's Warbler (migration)
Past Impacts	Surface Water Diversions/Impoundments Channelization Habitat Conversion Livestock
Most Important Current Threats	Surface Water Diversions/Impoundments Invasive Plants Climate Change
Habitat Recovery Time	25 years
Regions of Greatest Conservation Interest	Truckee, Carson, Walker, and Humboldt rivers, and multiple smaller streams and rivers, such as Mary's, Reese, Little Humboldt, Queen and King's rivers
Important Bird Areas	Carson River delta, Mary's River

Key Bird-Habitat Attributes

Stand Structure	Multi-aged tree stands with riparian shrub understory, interspersed with groves of dense riparian shrubs (willows and others) and floodplain wetlands
Ideal Scale for Conservation Action	50 ha (110 acres) or more
Plant Species Composition	Mixed stands of cottonwood and tree willow with multiple species of shrubs as understory; tree willows especially productive for birds; saturated soils or patchy wetlands
Plant Condition	Connection to groundwater critical for riparian woodlands; dying off of shrubs or young trees often first sign that connection to water is getting lost
Connectivity with Uplands	A buffer of 500 m or more is desirable around riparian corridors to accommodate transitional habitats (e.g. buffaloberry) and access by upland bird species
Presence of Cliffs > 30 m (100 ft) Tall	Presence of tall cliffs increases value to birds

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Lowland Riparian, Wetland, and Wet Meadow



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Lowland riparian areas have historically likely supported among the largest proportions of bird species richness in Nevada, even though they only cover less than one percent of the Nevada landscape. Dominant woodland species include Fremont cottonwood (*Populus fremontii*) and various species of willows (*Salix* spp.). Other riparian shrubs, trees and a large variety of herbaceous plants are also found in intact systems, and their presence is likely important for maintaining the bird community. A recent review of the historic changes of the bird community of the Lower Truckee River (Ammon 2002) found that birds were most strongly impacted by the historic loss of floodplain wetlands and riparian shrub thickets. However, the overall wholesale losses of native riparian woodland corridors, regardless of type, were likely an equally important factor in the historic loss of riparian birds. While past surveys of riparian birds have focused primarily on nesting birds, it should also be noted that lowland riparian areas are perhaps the most important stop-over habitat in the Great Basin for migrating landbirds. Finally, it should also be noted that rivers that support significant fish populations may be critical for fish-eating birds, such as American White Pelican, Snowy Egret, and mergansers. These use rivers particularly heavily during the post-breeding season and during migration.

Past threats from surface water diversions, impoundments, channelization, and habitat conversion to agricultural and urban uses continue to keep riparian birds at reduced species richness and abundances compared to historic times. More recent threats, such as climate change effects and invasive plants, will likely compound these impacts. However, significant habitat restoration efforts are underway along the Truckee River and other smaller systems. Restoration projects are also planned for portions of the Carson and Walker rivers. The efforts will at least partially mitigate for past losses in the wildlife community.

While most of our priority species of this plan are actually not riparian in their habitat use during much of the year, far-reaching effects of intact riparian areas on the health of upland bird communities and migrant populations should be considered. Species such as Greater Sage-Grouse, Rufous Hummingbird, and Brewer's Sparrow may depend directly or indirectly on the existence of intact riparian areas, whether they use it for shelter, forage, or depend on groundwater effects on adjacent vegetation types.

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Not To Scale



Suitable Patch Size: >

Possible Indicator Species: Yellow Warbler, Wilson's Warbler, Orange-crowned Warbler

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Conservation Strategies

Habitat Strategies

1. Manage at landscape scale (> 50 ha or 110 acres, but smaller patches are valuable if intact) with the goal of maintaining mosaic of open, mixed-age tree canopy, riparian shrub thickets, flowering shrubs and forbs, and interspersed floodplain wetlands. High species richness in plants and presence of willows are particularly suitable for birds. Patch sizes within the mosaic may be small (1/4 - 1 acre), while the overall riparian woodland corridor should be contiguous.
2. Old-growth trees are important to several priority species, but the overall value of a patch is likely most improved by adding a native riparian shrub and wetland component.
3. Riparian areas near urban or rural settlements in particular attract feral cats and other predators. Strategic plantings of particularly impenetrable shrubs (e.g., wild rose) are useful for discouraging opportunistic predators and cowbirds.
4. Removal of invasive plants, such as salt cedar, Russian olive, or tall whitetop, should be followed by active restoration of native riparian vegetation in the removal sites, as these weedy species often take advantage of disturbed soils and become more easily re-established in the absence of competition.

Public Outreach

1. Promote public appreciation of healthy pinyon-juniper and its bird community, particularly with regard to native understory vegetation and threats from off-road vehicle recreation.

Research, Planning, and Monitoring

1. Mitigation options for past impacts should be aggressively explored with agency and funding partners, including opportunistic conservation planning if necessary, based on the high value of any intact riparian habitat to birds. Areas in which little habitat restoration has been attempted, for instance on the Humboldt River system or the many small streams and spring systems throughout the Great Basin, may be examined for new opportunities.