Montane Riparian

Montane riparian setting at China Creek in the Montana Range, Humboldt County. Photo by Elisabeth Ammon.

Key Bird-Habitat Attributes

Stand Structure	Dense, dwarf trees and shrubs of mesic species, with grass and flowering forb understory, transition into montane shrublands with additional deciduous shrub species
Ideal Scale for Conservation Action	10 ha (22 acres) or more, or minimum of 1-5 miles of stream
Plant Species Composition	Aspen, shrub willows, alder, wild rose, currant, and other mesic species
Aspen and Cottonwood	Single trees or small stands of old aspen or cottonwood add particular value for some priority species
Understory	Closed-canopy shrub thickets interspersed with natural meadow openings ideal
Presence of Cliffs > 30 m (100 ft) Tall	Presence of tall cliffs increases value to birds

Conservation Profile

Estimated Cover in Nevada	191,000 ha (472,100 ac) 0.7% of state
Landownership Breakdown	BLM = 39% USFS = 33% Private = 18% Other = 10%
Priority Bird Species	Northern Goshawk Greater Sage-Grouse Mountain Quail Lewis's Woodpecker Calliope Hummingbird Rufous Hummingbird Green-tailed Towhee (White-throated Swift) (Prairie Falcon) (Golden Eagle)
Indicator Species	Cooper's Hawk MacGillivray's Warbler Orange-crowned Warbler Yellow Warbler
Past Impacts	Surface Water Diversion Impoundments Livestock
Most Important Current Threats	Surface Water Diversion Climate Change Livestock Plant Pathogens
Recovery Time	20 years
Regions of Greatest Conservation Interest	Elko, Humboldt, Washoe, White Pine, Lander, Eureka, and Clark counties
Important Bird Areas	Ruby Mountains, Montana Range, Spring Mountains

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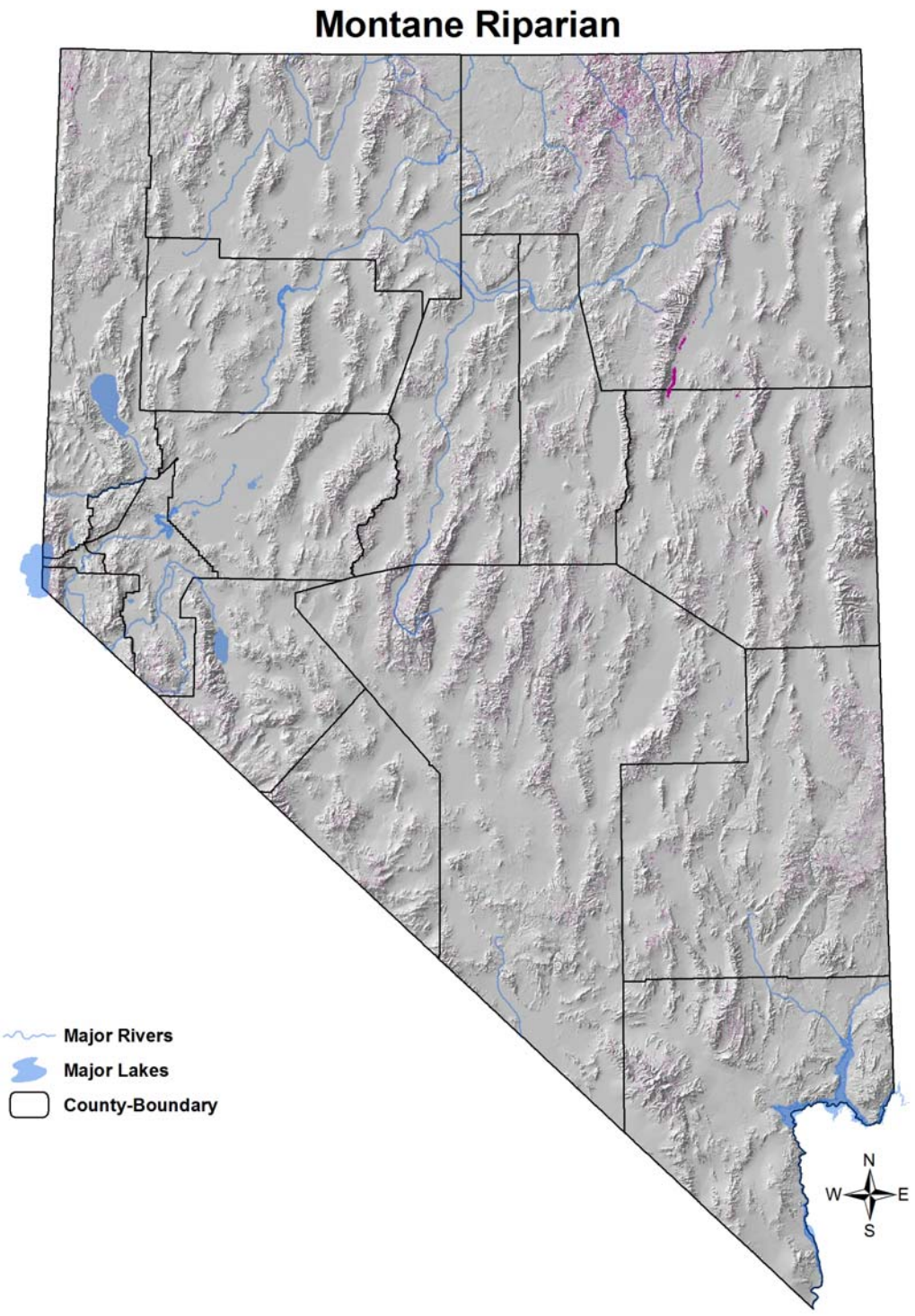

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Montane riparian habitats are scarce on Nevada's landscapes, and are often so restricted that our vegetation maps have trouble capturing them. In the past, montane riparian areas were often the lifeblood for homesteads and outlying ranches, because in many areas they provided the only source of water in a large landscape. Therefore, the riparian areas were often altered during early settlement for diverting water and for sustaining livestock. As a result, many montane riparian areas in Nevada have undergone channel downcutting, loss of riparian vegetation, soil compaction, and loss of instream flows over many decades of various land uses.

Typically, an intact montane riparian area supports narrow stands of willows, aspen, narrow-leaf cottonwood, alder, and a variety of mesic groundcovers throughout the year. For several montane species, these mesic environments become particularly important during the hottest part of the year, where they provide thermal cover, protection from predators, access to water and, most importantly, foraging opportunities on forbs and insects (e.g., brood-rearing Greater Sage-Grouse, Mountain Quail, and a variety of songbirds from both the riparian and upland habitats).

Today, past impacts still leave their mark on Nevada's montane riparian habitats, and are compounded by new threats, such as climate change, prolonged droughts, and motorized recreation. The upside of conserving riparian habitats is that these plant communities respond readily to restoration and enhancement efforts if sufficient water is available. Many areas that are no longer critical for other land uses can be relatively easily restored, as has been demonstrated by multiple protection and restoration projects by land managers, such as the BLM and the USFS, where sections of montane riparian areas were fenced off to allow for passive recovery. Therefore, our conservation strategies focus primarily on protection, enhancement and restoration of riparian resources, as these are not only important for the priority species that nest in them, but also for upland birds that may only visit them at critical times of the year.

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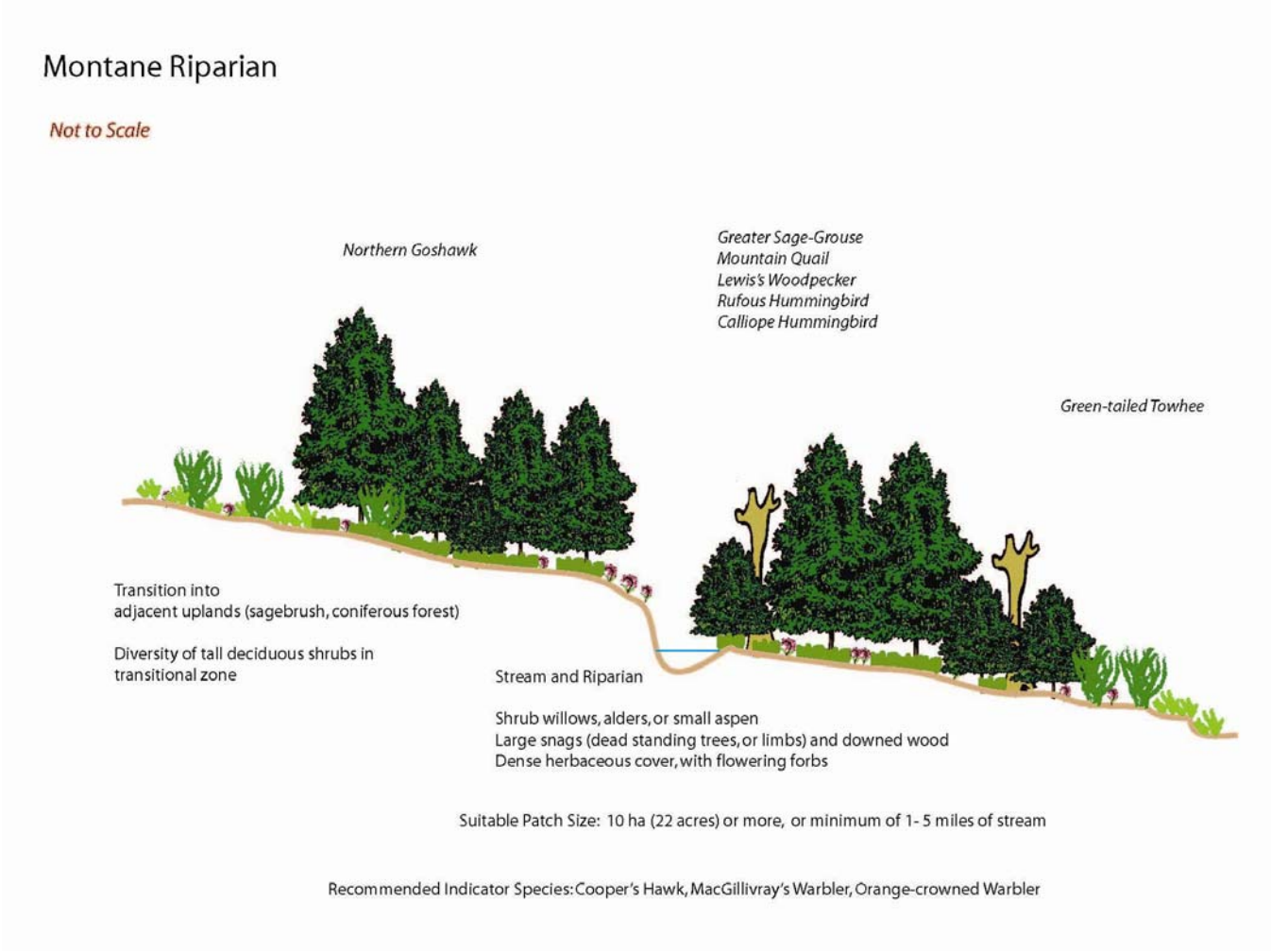

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Conservation Strategies

Habitat Strategies

1. Manage at a relatively small scale, if necessary, of 10 ha (22 acres) or 1-5 miles of stream, with preference given to larger areas, wider riparian corridors, or more miles of stream. Even small patches are valuable, but the desired mesic conditions are better accomplished with larger overall patch sizes.

2. Critical habitat components include dense shrub thickets (willow, alder, wild rose, or other mesic species) with patches of herbaceous cover interspersed. Land uses that have impacts to these vegetation components, such as heavy domestic or feral livestock use and recreation, may be contained by fencing and providing alternate access to water and shade, for example at established road crossings or designated recreation sites.

3. Single large trees, or small stands of these, and large snags provide important opportunities for some priority species, and should therefore be protected to the extent possible.

4. Mitigation for past or current losses may include full restoration of historic stream channels and associated floodplains, or of alternate sites that would support this setting. The primary requirement is sufficient water, and if no source vegetation is available, plantings of native woodlands will significantly accelerate restoration.

Public Outreach

1. Promotional materials about the value and critical habitat components may be made available to private landowners, land management agencies, and the general public. Materials may include tips on avoiding unintentional impacts to riparian resources, including new threats from recreational uses.

Research, Planning, and Monitoring

1. Streams and other small riparian areas are notoriously underinventoried throughout the state, because all available vegetation maps based on remote sensing techniques misclassify or omit significant areas. One of the highest statewide priorities for riparian planning is to generate a comprehensive map of very restricted habitats such as montane riparian.

2. Similar to the aspen delineation project, any mapping effort for montane riparian may include a stand condition assessment, perhaps based on BLM's or USFS's existing assessment protocols, but including habitat elements that support priority bird species. This inventory, which would ideally be an interagency effort, could then be turned into a periodic (every 10 years, or less) monitoring effort to assess the state of riparian areas in Nevada.