

Joshua Tree (Mojave Mid-Elevation Mixed Scrub)



Joshua Tree and *Yucca* landscape near Goldhill, Esmeralda County. Photo by Elisabeth Ammon.

Key Bird-Habitat Attributes

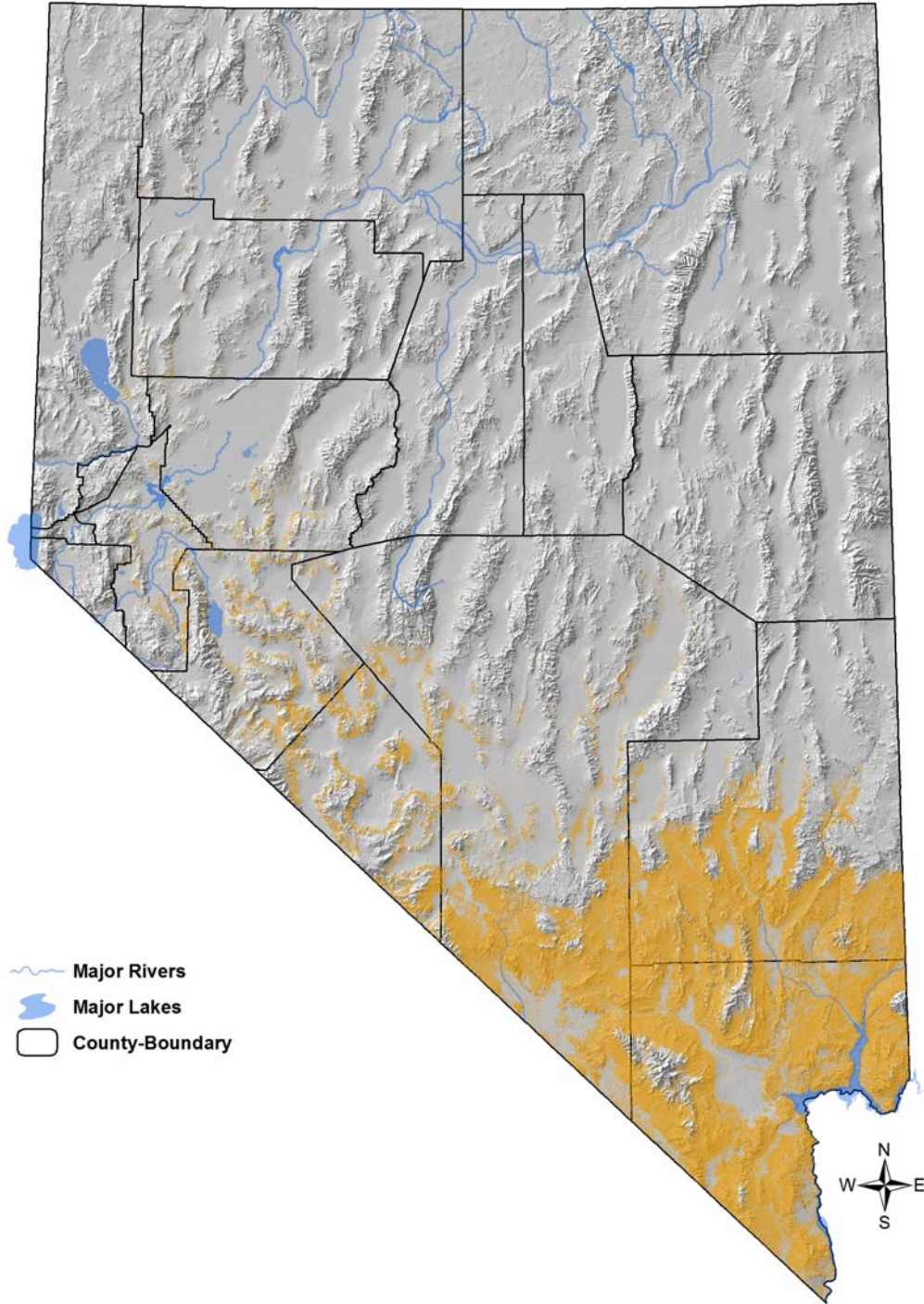
Stand Structure	Multiple species of shrubs in a park-like setting of small to old-growth Joshua tree and <i>Yucca</i> stands; only old individuals of Joshua tree and <i>Yucca</i> useful to several priority species; healthy shrub understory and litter layer for foraging opportunities
Ideal Scale for Conservation Action	200 ha (440 acres) or more
Understory and Invasive Species	Vigorous, species-rich shrub understory, ideally with flowering forbs and shrubs; invasive plants strictly discouraged
Fire Regime; Invasive Plants	Fire prevention best strategy; invasive plants increase fire intervals and should be managed aggressively in this habitat type
Distance to Riparian/Spring Habitats	Proximity of water-dependent habitat increases value to birds
Presence of Cliffs > 30 m (100 ft) Tall	Presence of tall cliffs increases value to birds

Conservation Profile

Estimated Cover in Nevada	Mojave Scrub total (<i>Joshua tree portion needs to be determined later</i>): 3,553,600 ha (8,781,000 acres) 12% of state
Landownership Breakdown	BLM = 60% DOD = 15% DOE = 6% FWS = 6% NPS = 5% Other = 8%
Priority Bird Species	Burrowing Owl Gilded Flicker Costa's Hummingbird Bendire's Thrasher Le Conte's Thrasher Black-chinned Sparrow (Golden Eagle) (Prairie Falcon)
Indicator Species	None needed
Past Impacts	Habitat Conversion Livestock
Most Important Current Threats	Habitat Conversion Invasive Plants Climate Change
Habitat Recovery Time	150-200 years
Regions of Greatest Conservation Interest	Clark and Nye counties
Important Bird Areas	Wee Thump Joshua Tree Forest, Spring Mountains, Sheep Range, Lake Mead

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Mojave Scrub



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Our “Joshua Tree” habitat category includes all Mojave mid-elevation mixed scrub that describes the Mojave scrub’s elevational zone supporting Joshua tree, other *Yucca* species, cactus communities, and a variety of higher-elevation shrub species. This habitat type is characterized by an enormous recovery time (150-200 years), meaning that destruction of a stand will take well beyond the current generation of bird conservation planners’ lifetime to restore back to the same condition. Any loss of Joshua tree/*Yucca* habitat should therefore be considered a complete loss for the purpose of this plan and the next few revisions of it, and the highest priority should be to avoid any losses of Mojave mid-elevation mixed scrub habitats to the extent possible.

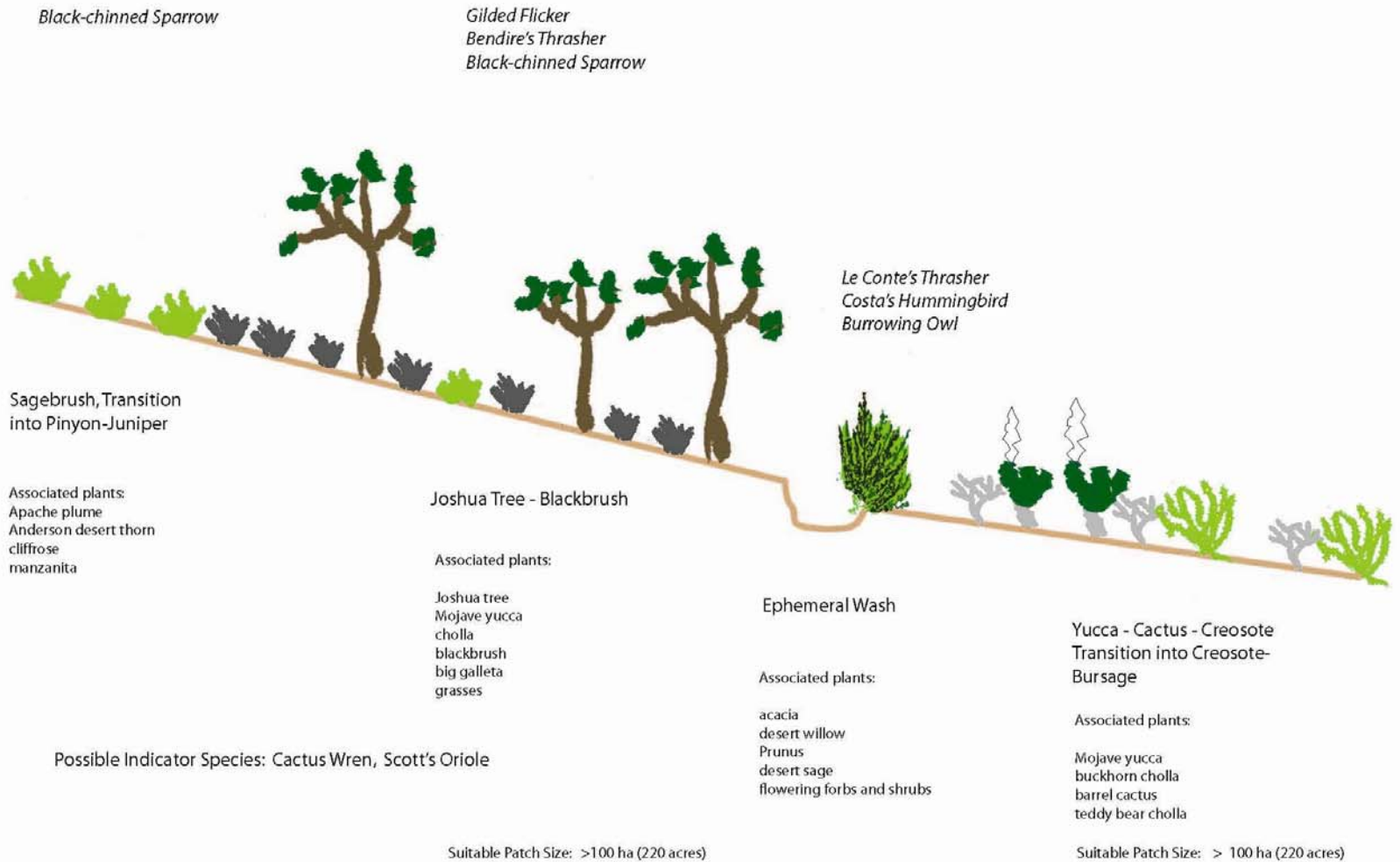
A few species of Nevada are only, or mostly, found in Joshua tree/*Yucca*, including the priority species Gilded Flicker and Bendire’s Thrasher. For both of these species, it is important that the *Yuccas*, Joshua trees, or cactuses have reached a mature or old growth stage before they can be used for nesting.

Traditional threats to this habitat type included habitat conversion and impacts from domestic and feral livestock. Clark County has removed all domestic livestock from public lands, so this threat has been removed from much of Nevada’s portion of this habitat type. New threats include invasive plants, OHV recreation, and climate change, and threats from habitat conversion continue from urban development. Invasive plants are problematic, because they change fire intervals of upland habitats, particularly during drought conditions. In the mid-2000s, large stands of Joshua tree burned down from lightning-ignited fires, which were most likely facilitated by invasive plants and drought conditions. Therefore, our conservation strategies focus on maintaining native plant communities, minimizing habitat conversion, and light land uses.

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Mojave Mid-Elevation Mixed Scrub (Joshua Tree - Yucca - Cactus)

Not To Scale



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Conservation Strategies

Habitat Strategies

1. Manage at landscape scale (> 200 ha or 440 acres). High species richness in shrubs, old-growth *Yucca* spp., and cholla cactuses are particularly suitable for birds.
2. Fire prevention is currently the most important stop-gap measure; in the long-term, fire management and invasive plant control may be coordinated across agencies to prevent frequent fires.
3. Joshua tree habitats are attractive to visitors, which may be encouraged through established trails, but unregulated OHV use should be discouraged.
4. Removal of Joshua tree, other *Yucca* species, and cactuses may be mitigated by replanting them in suitable areas, such as recently burned areas within the same habitat type. Large-scale conversions are, however, strongly discouraged.

Public Outreach

1. Promote public appreciation of healthy Joshua tree – *Yucca* habitats and bird communities, particularly with regard to native understory vegetation and threats from off-road vehicle recreation.

Research, Planning, and Monitoring

1. Joshua tree and *Yucca* stands of Nevada are not mapped, so no reliable spatial data are currently available. We recommend that Clark County's Desert Conservation Program's current effort to map these habitats in Clark County be expanded into Nye and Esmeralda counties through a multi-agency inventory effort.