

Clapper Rail

Rallus longirostris



Photo by Jenny Ross

Habitat Use Profile

Habitats Used in Nevada	
Marsh Mojave Lowland Riparian	
Key Habitat Parameters ●	
Plant Composition	Cattail, bulrush, sedges, willow spp.
Plant Density	Patches of low stem densities (< 75-80/m ²) required ³
Mosaic	Shallow marsh with variable stem densities, interspersed with dry spots, mudflats, open water, buffered by riparian ^{1,3}
Water Depth	< 30 cm (12") in marsh ³
Hydrology	Minimal daily fluctuation in stage ³
Response to Vegetation Removal	Positive to prescribed burns in overgrown sites ³
Area Requirements ●	
Minimum Patch Size	8 ha (20 ac) ³
Recommended Patch Size	150 ha (370 ac) ³
Home Range	Up to 24 ha (59 ac) ³

Conservation Profile

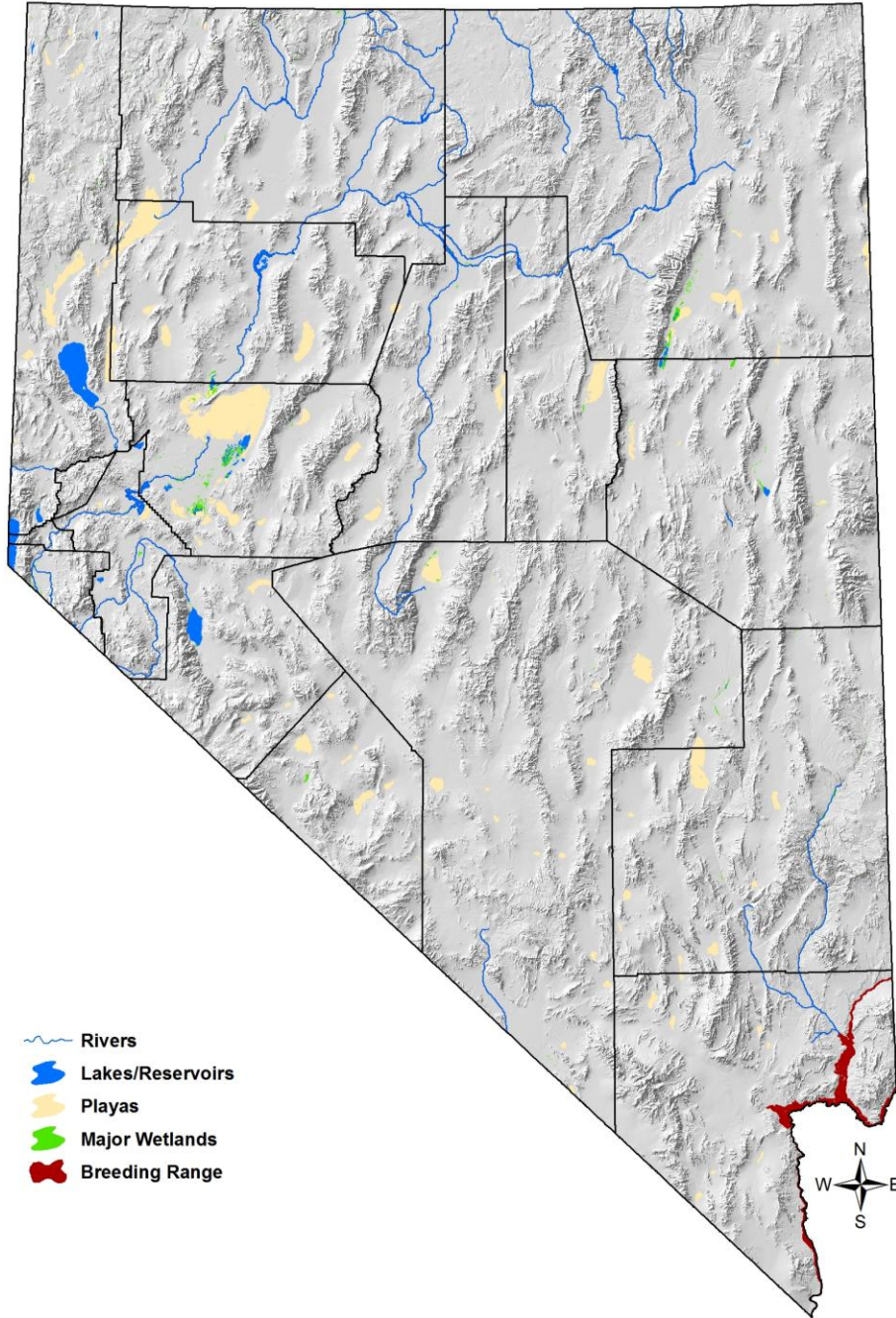
Priority Status	
Conservation Species	
Species Concerns	
ESA listing: Endangered subspecies (Yuma Clapper Rail) Small population size Habitat threats	
Other Rankings	
Continental PIF	None
Audubon Watchlist	None
NV Natural Heritage	S1
USFWS	Endangered subspecies, Migratory Bird
BLM	Special Status
USFS	None
NDOW	Endangered
Other	CC MSHCP: Watchlist, LCR MSCP: covered; proposed as covered by Virgin River HCP
Trends	
Historical ●	Rangewide subspecies declines, but pattern in Nevada unclear ¹
Recent ●	In Nevada, stable or increasing ²
Population Size Estimates	
Nevada ●	20 – 40 ²
Global ●	7,000 (Yuma Clapper Rail only) ³
Percent of Global ●	0.4%
Population Objective	
Maintain/Increase ^{EO}	
Monitoring Coverage	
Source	Secretive marshbird surveys by USFWS, BOR, SNWA, and others
Coverage in NV ●	Very good
Key Conservation Areas	
Protection	Muddy and Virgin Rivers
Restoration	Muddy and Virgin Rivers, Desert Springs and Wetlands (Mojave)

Natural History Profile

Seasonal Presence in Nevada	
Year-round	
Known Breeding Dates in Nevada	
Late March – August ¹	
Nest and Nesting Habits	
Nest Placement	Near shoreline in dense vegetation where water depth < 2.5 cm or dry ^{1,3}
Site Fidelity	Moderate for breeding territory ¹
Other	Multiple alternate nests, re-nesting after failure, moving of nest content ^{1,3}
Food Habits	
Basic	Omnivorous
Primary Prey	Crustaceans, especially crayfish ³ ; clams
Secondary Prey	Small fishes, other vertebrates, seeds, insects, eggs ¹

Clapper Rail

Rallus longirostris



Note to reviewers: Clapper Rails were recently confirmed in Ash Meadows NWR by Carl Lundblad, but while highly suggestive of breeding, breeding was not confirmed. The revision of the map will include this as a “potential breeding” site.

Clapper Rail

Rallus longirostris

References: ¹ Eddleman and Conway (1998), ² Garnett et al. (2004), ³ USFWS (2009), ^{EO} expert opinion

Overview

Unlike their east coast relatives, Yuma Clapper Rails are mostly restricted to the freshwater environment of the Lower Colorado River and its tributaries. In Nevada, the average number of Clapper Rails detected is 14 individuals (Garnett et al. 2004), but recent research estimates that approximately only about one in three birds that are actually present is detected using standard survey methods (Conway [insert ref]). Therefore, our conservative population estimates for Nevada is 20 - 40 individuals, allowing for significant annual variation that has been observed since the species was first surveyed in 1999.

Clapper Rails are restricted to the Mojave portion of Nevada, where they are found in large patches of shallow marsh habitat with moderately dense cattail or bulrush, avoiding both open water and overgrown emergent stands (USFWS 2009). Most birds that have been documented to date in Nevada were found in the Colorado River tributaries Virgin and Muddy rivers. In addition to the breeding areas listed above, other sites where breeding might be confirmed in the future include Ash Meadows NWR (where the species was detected in three locations in 2009, C. Lundblad pers. comm.), Big Marsh (Clark County), the Las Vegas Wash, and possibly Pahranaagat NWR. It is possible that the species has become more common in Nevada in recent decades due to impoundments and subsequent marsh development along the lower Colorado River, which was not assumed to provide suitable habitat in the Nevada region historically (Garnett et al. 2004). With the center of its historic range in the Colorado River delta, this species may respond to climate change with continued northward migration, if sufficient marsh habitat is available in its path. Our current understanding of recent population trends, threats, and habitat requirements are derived largely from studies of Arizona populations. With a continuation of current research and monitoring programs for the species, a better understanding of Nevada's population will likely emerge.

As one of only two federally endangered bird species in Nevada, management recommendations for the Yuma Clapper Rail are already well developed (USFWS 2009). Because the species is often found in wetlands with artificial hydrological regimes, management of their habitat using prescribed fire has recently been found to be beneficial for the species as it can be used to create open emergent marshes in previously choked thickets. Ideal prescribed fire regimes have not yet been identified (USFWS 2009).

Abundance and Occupancy by Habitat

- Population estimate derived from Garnett et al. (2004)
- Density ranges from 0.09 – 0.79 birds / ha in Arizona (Eddleman and Conway 1998)

Clapper Rail
Rallus longirostris

Nevada-Specific Studies and Analyses

- Species inventories by USFWS, SNWA, USBR, and others

Main Threats and Challenges

- Conversion or dewatering of Marsh habitat
- Significant changes in water level during nesting
- Invasive plants that degrade habitat quality

Species with Similar Conservation Strategies

- Least Bittern
- Snowy Egret

Further Reading

- Yuma Clapper Rail Recovery Plan (USFWS 1983, 2009)

Conservation Strategies

Established Strategies

1. Conservation strategies are provided by the Yuma Clapper Rail Recovery Plan (USFWS 1983, 2009). Key elements of the recovery plan include:
 - Maintaining consistent water levels in Muddy River and Virgin River valley wetlands, where possible
 - Controlling nest predators in specific areas where unusual predation levels exist
 - Continuing current studies and monitoring to better determine Nevada-specific population trends, threats, and habitat requirements
 - Limit invasive plants in marsh habitats