

Relict Leopard Frog (*Lithobates onca*)

Species Status Statement.

Distribution

Relict leopard frog was once believed to be extinct. The species is currently known to persist in 19 locations in extreme southern Nevada and northwestern Arizona (Harris 2006, Relict Leopard Frog Conservation Team 2016). There are also historic occurrences known from Utah's Washington County, though the species no longer exists there.

Table 1. Utah counties currently occupied by this species.

Relict Leopard Frog
WASHINGTON

Abundance and Trends

Relict leopard frog historically occupied portions of the Mojave Desert in extreme southwestern Utah. At present it remains extirpated from the state.

Statement of Habitat Needs and Threats to the Species.

Habitat Needs

This species inhabits streams, springs, and wetlands with relatively clear shallow water (Relict Leopard Frog Conservation Team 2016). Radio-telemetry studies of adult frogs have shown that habitat heterogeneity at small scales is an important habitat component. There is a nocturnal tendency to select relatively open areas with minimal tall vegetation, while diurnally the frogs spent more time near denser vegetation (Harris 2006).

Threats to the Species

Habitat modification and destruction by human agency, and invasive species, encompass the major threats to relict leopard frog. In remaining habitats, invasive plants disrupt the frogs' preferred habitat structure, and invasive wildlife (especially, American bullfrogs (*Lithobates catesbeiana*), red swamp crayfish (*Procambarus clarkii*), and various nonnative fishes) either directly predate upon eggs, tadpoles, and/or adults, or compete with them for resources. There is some evidence from Nevada and Arizona that some grazing systems might benefit habitat for relict leopard frog by limiting vegetation encroachment (Bradford 2004).

Table 2. Summary of a Utah threat assessment and prioritization completed in 2014. This assessment applies to the species' entire distribution within Utah. For species that also occur elsewhere, this assessment applies only to the portion of their distribution within Utah. The full threat assessment provides more information including lower-ranked threats, crucial data gaps, methods, and definitions (UDWR 2015; Salafsky et al. 2008).

Relict Leopard Frog
Very High
Droughts
Small Isolated Populations
High
Channelization / Bank Alteration (direct, intentional)
Invasive Plant Species – Non-native
Invasive Wildlife Species - Non-native
Medium
Increasing Stream Temperatures
Spring Development / Capping

Rationale for Designation.

Utah Division of Wildlife Resources is a signatory partner on both the Conservation Agreement and the Conservation Assessment and Strategy for this species. Repatriating relict leopard frog to its historic distribution is an objective of the Conservation Agreement (Relict Leopard Frog Conservation Team 2016). Due to ongoing management progress, in 2016 relict leopard frog was found not warranted for ESA listing (Endangered Species Act 2016).

Economic Impacts of Sensitive Species Designation.

Sensitive species designation will facilitate management, and aid in preventing ESA listing, during the early phases of repatriation and recovery of this species in Utah. Because this species is currently considered extirpated, ESA listing prior to any repatriation and recovery efforts would have minimal direct impacts to the state of Utah, though downstream impacts to Arizona and Nevada could indirectly affect Utah interests. If ESA listing occurred after repatriation and recovery efforts, the listing could impact the development and management of water resources in Washington County, Utah. Classifying all repatriated populations as experimental and nonessential would help prevent such impacts and help prevent a listing.

Literature Cited.

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