

Northern Leatherside Chub (*Lepidomeda copei*)**Species Status Statement.**Distribution

Northern leatherside chub occurs in pools and low-velocity runs of creeks and small- to medium-sized rivers in the Snake River and Bear River drainages in Utah, Idaho, Wyoming, and Nevada (UDWR 2009). Historically the species was widespread in these basins, as well as the Curlew Valley and the upper Owyhee systems in Idaho and Nevada (UDWR 2009). In Utah, the species is currently limited to a few tributaries of the Bear River and Goose Creek drainages.

Table 1. Utah counties currently occupied by this species.

<b>Northern Leatherside Chub</b>
BOX ELDER
RICH
SUMMIT

Abundance and Trends

Within its remaining occurrences, with significant effort expended thus far, fisheries and land managers appear to have halted the long decline of this species. A diversity of age and size classes indicate favorable demographics for persistence within the diminished distribution, assuming successful threat management can continue in these areas. Expanding the areas currently occupied, and connecting these areas to reoccupy more of the species' historical range, would greatly reduce the likelihood of an Endangered Species Act listing.

**Statement of Habitat Needs and Threats to the Species.**Habitat Needs

Northern leatherside chub inhabits desert streams exhibiting a broad range of widely varying physical conditions, including high variability of stream flow, annual precipitation, gradient, elevation (1278-2734 m), conductivity, and pH (Wilson 1996, Wilson and Belk 2001). This species prefers substrates dominated by coarse fines, with lower percentages of sand-silt and gravel (Wilson and Belk 1996). Recent work also indicates a preference for highly complex habitat, including heterogeneous depth and velocity (Dauwalter et al. 2014, Dauwalter and Walrath 2017). Protecting and improving habitat quality in the areas currently occupied, and restoring habitat quality in more of the species' historical range, would greatly reduce the likelihood of an Endangered Species Act listing.

### Threats to the Species

A major threat to northern leatherside populations is stream dewatering, which is caused by drought and water use (UDWR 2015). Dewatering reduces the amount and quality of available habitat, and creates small isolated populations vulnerable to inbreeding depression, weather extremes, and accidents. Loss of habitat complexity caused by activities including bank modification, removal of riparian vegetation, and channelization also creates unfavorable conditions for leatherside chub. Predation by nonnative fish (particularly brown trout, *Salmo trutta*) is an additional factor threatening northern leatherside chub (Walser et al.1999).

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).

<b>Northern Leatherside Chub</b>
<b>Very High</b>
Droughts
<b>High</b>
Presence of Diversions
Small Isolated Populations
Water Allocation Policies
<b>Medium</b>
Channelization / Bank Alteration (direct, intentional)
Housing and Urban Areas

### **Rationale for Designation.**

Habitat loss and habitat degradation have disconnected and isolated northern leatherside chub populations within streams, and reduced the distribution of the species throughout its historic range (Wilson and Belk 1996). The threats that have restricted the species to this high degree require ongoing management, and warrant maintaining state designation as a Sensitive Species. A multistate Conservation Agreement and Strategy outlines management actions aimed at recovering this fish and keeping it off the Endangered Species List (UDWR 2009). In a 2011 decision, due to partners' coordinated efforts to manage ongoing threats the USFWS found this species to be not warranted for ESA listing. Measures to conserve northern leatherside chub would also benefit some populations of Yellowstone cutthroat trout and bluehead sucker.

### **Economic Impacts of Sensitive Species Designation.**

Sensitive species designation is intended to facilitate management of this species, which is required to prevent Endangered Species Act listing and lessen related economic impacts. The listing of northern leatherside chub would have wide-ranging impacts to developing and managing water resources throughout its range in Utah, and would likely increase mitigation costs associated with water use and development. There would be increased costs of regulatory compliance for many land-use decisions and mitigation costs associated with these decisions.

### Literature Cited.

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