

## Bluehead Sucker (*Catostomus discobolus*)

### Species Status Statement.

#### Distribution

Bluehead sucker is native to three major river basins in eastern Utah including the Green, Colorado, and San Juan River drainages (UDWR 2006). Numerous tributary drainages within these three basins continue to support populations of this species, including the White, Duchesne, Price, San Rafael, Dirty Devil, Dolores, and Escalante river systems.

Additionally, bluehead sucker is the only large river species in the Colorado River system that occurs naturally outside the Colorado River Basin. Recent genetic research differentiates bluehead sucker in the Bonneville and Snake River basins from those residing in the Colorado River Basin (Hopken et al 2013). This fish (originally described as green sucker) historically occurred in the upper Snake, Weber, and Bear River drainages. Sampling in northern Utah through 2010 had identified only one population remaining, in the Bonneville Basin's Weber River. However, in 2011 Utah fisheries managers discovered additional populations of bluehead (or green) sucker through inventories of Raft Creek and Pole Creeks, in the Snake River Basin.

Table 1. Utah counties currently occupied by this species.

<b>Bluehead Sucker</b>	
BOX ELDER	SAN JUAN
CARBON	SANPETE
DAGGETT	SUMMIT
DAVIS	UINTAH
DUCHESNE	UTAH
EMERY	WASATCH
GARFIELD	WASHINGTON
GRAND	WAYNE
KANE	WEBER
MORGAN	

#### Abundance and Trends

Bluehead sucker populations in the mainstem Green, Colorado, and San Juan rivers appear to be more stable than those in the tributaries. Consistent base flows and access to riffles in mainstem rivers increase survival and recruitment of young fish to adults.

In some tributaries (e.g., White and Dolores rivers) bluehead sucker populations are robust, containing multiple age classes and regular recruitment of young fish to adults ensuring a self-

sustaining population. Catch data has also shown populations to be stable in the Escalante and Fremont rivers since the start of monitoring efforts in 2009.

Conversely, bluehead sucker population are struggling in other tributaries. Their abundance has decreased on the Price River in recent years, likely due to drought and fire impacts. Bluehead sucker in the Weber River are experiencing a recruitment bottleneck with virtually no recruitment, due to the many dams and diversions either drowning or blocking access to many spawning habitats, and altering the hydrologic and thermal regimes of accessible reaches (Maloney 2017).

Bluehead sucker have experienced range contraction in recent years, and now occupy only 47% of their historical range (Budy et al. 2015).

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

#### Habitat Needs

Bluehead sucker habitat consists of many factors including annual and peak flows, habitat availability, type, and substrate, and water quality. Bluehead sucker needs access to complex habitat to support its full life cycle and allow for successful recruitment. River reaches lacking riffles or rocky substrate are typically unoccupied by this species, creating a patchy distribution.

On larger rivers, individuals congregate near fast moving riffles with cobble size substrate. Adults spawn on gravel (Maddux and Kepner 1988) and are associated with riffles (Stewart et al. 2005, Bower et al. 2008), pools, and locations with cover (Sigler and Miller 1963, Bower et al. 2008). Larvae and juveniles utilize quiet shoreline and backwater habitats, as they grow more quickly in the warmer water these habitats provide (Robinson and Childs 2001).

#### Threats to the Species

The variety of habitats required by different life stages is associated with in-channel complexity (riffles, pools). Removing excessive amounts of water from river systems degrades or destroys this complexity (Graf 2006) by reducing the stream power required to form and maintain habitat complexity. Dewatering also reduces benthic productivity, severs access to critical habitats, and in extreme cases results in fish kills.

Impassable dams and large reservoirs sever connectivity between river reaches, resulting in fragmented populations and disruption of the species' life cycle. Establishment of predatory non-native fish throughout the range decreases bluehead sucker recruitment, as young fish are especially vulnerable to predation. In many tributaries, reduction of spring floods has facilitated encroachment of invasive vegetation (tamarisk, Russian olive) resulting in channelization and loss of complex habitat.

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>Bluehead Sucker</b>
<b>Very High</b>
Agricultural / Municipal / Industrial Water Usage
Droughts
Invasive Wildlife Species - Non-native
Presence of Diversions
Water Allocation Policies
<b>High</b>
Channelization / Bank Alteration (direct, intentional)
Dam / Reservoir Operation
Inappropriate Fire Frequency and Intensity
Oil Shale
Presence of Dams
Spills and Production Water
Tar Sands
<b>Medium</b>
Increasing Stream Temperatures
Invasive Plant Species – Non-native
Pipelines / Powerlines - Energy Development
Sediment Transport Imbalance
Storms and Flooding

### **Rationale for Designation.**

Maintaining self-sustaining bluehead sucker populations in Utah requires protecting strong populations from threats, while improving habitat and reducing threats for struggling populations. Designation as a Sensitive Species will facilitate continued collaborative management and ensure that the species continues to thrive in Utah and avoid Endangered Species Act listing in the future. Measures taken to conserve bluehead sucker should also benefit flannelmouth sucker and roundtail chub.

### **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 bluehead sucker would have wide-ranging impacts to developing and managing water

resources in Utah. It would also impact recreational fisheries management, and oil and gas development, especially due to habitat impacts from associated infrastructure and water use and potential contamination during production. There would also be increased costs of regulatory compliance for many land-use decisions and mitigation costs.

### Literature Cited.

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