

Virgin Spinedace Conservation Agreement



An innovative partnership returns a native minnow to **90%** of its historically occupied habitat, precludes the need for listing under the Endangered Species Act, and serves as a model for **cooperative conservation**.

The **Virgin Spinedace** (*Lepidomeda mollispinis*) is a unique minnow species found only in the upper mainstem Virgin River and its tributaries in southwestern Utah, Arizona, and Nevada.

By 1994, threats to Virgin Spinedace reduced populations to approximately 60% of their historic distribution. This endemic minnow was proposed for listing as a threatened species under the **Endangered Species Act (ESA)**. In response to the proposed federal listing, local state, and federal stakeholders developed the **Virgin Spinedace Conservation Agreement and Strategy (VSCAS)** in 1995. Together, VSCAS partners identified conservation strategies to restore Virgin Spinedace and **remove threats** warranting ESA listing.

The VSCAS successfully restored Virgin Spinedace to over 90% of their historically occupied range. For over 25 years, the VSCAS has provided a flexible and efficient partnership for resolving conflicts, crafting proactive solutions, and balancing conservation and water development.

Miniature Trout - Although Virgin Spinedace aren't closely related to trout, their body shape and behavior are similar. This **silvery, streamlined minnow** is 3-5 inches in length and prefers **deep pools** sheltered by vegetation or rocks. Virgin Spinedace are active during the day and eat aquatic **invertebrates**.



~60%

Percent of historical habitat occupied by Virgin Spinedace *before* the VSCAS.

~90%

Percent of historical habitat occupied by Virgin Spinedace *after* the VSCAS.

~140

Number of river miles currently occupied by Virgin Spinedace.

8

Number of VSCAS signatories at the local, state, & federal level.

2

Times USFWS determined that ESA listing for Virgin Spinedace was not warranted (1996 & 2021).



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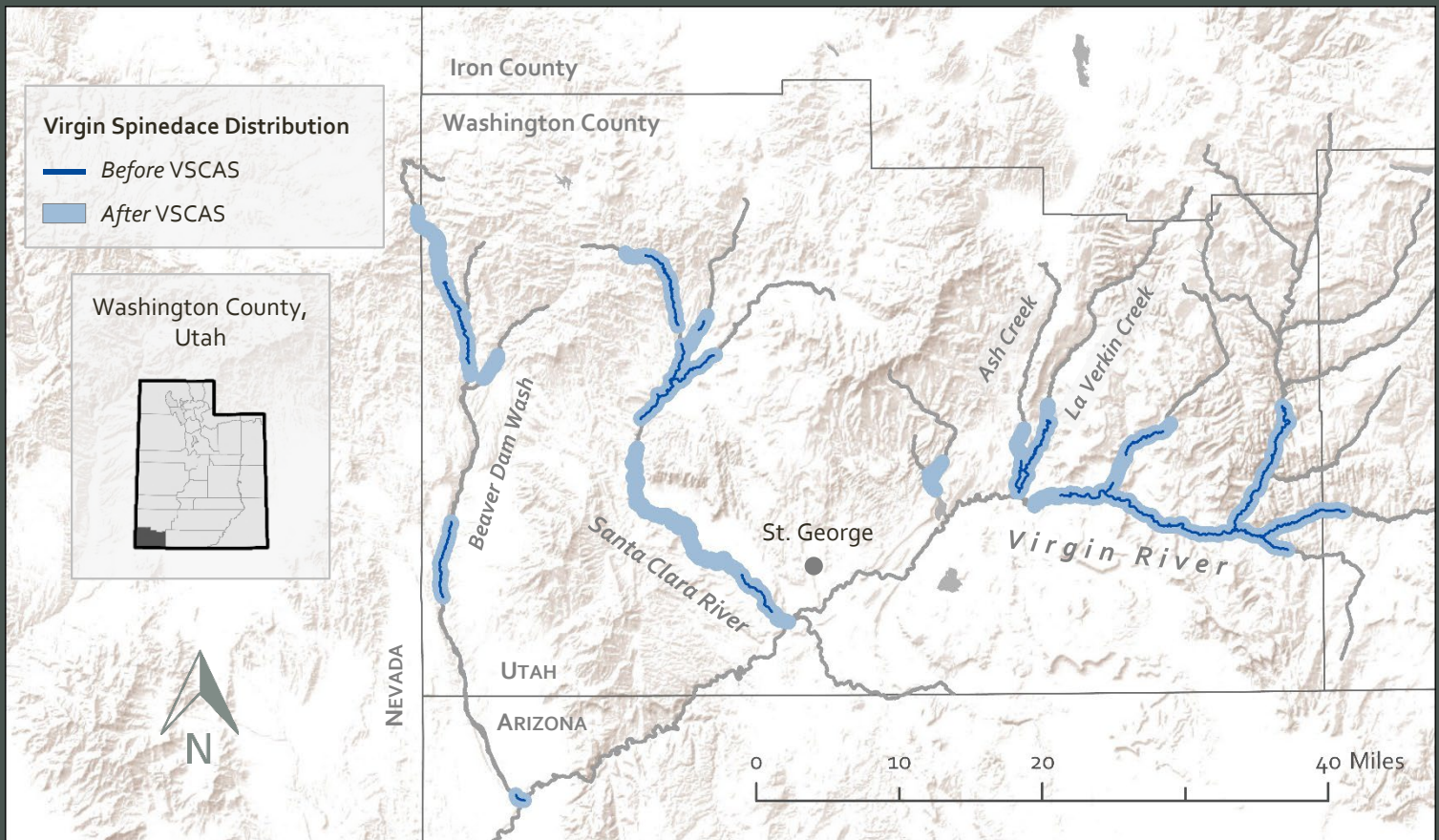
Local, state, and federal partners have worked together to restore and enhance Virgin Spinedace abundance and distribution throughout the Virgin River Basin. The species now occupies more than **90%** of its historical habitat (see figure below). This expansion has occurred despite periods of extreme **drought, wildfires, and flooding.**

The VSCAS prevented ESA listing of Virgin Spinedace in 1995 and again in 2021, thereby:

- ▶ Avoiding large scale critical habitat designation along all Virgin River tributary streams
- ▶ Alleviating regulatory burden on water users and landowners
- ▶ Providing ease and flexibility in infrastructure maintenance and development



The Virgin Spinedace has returned to **90%** of its historically occupied habitat, showing that the VSCAS is an **effective, flexible, and powerful** management tool for native fish conservation and recovery.



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