

Woundfin Recovery



An innovative partnership develops creative solutions to provide water for an endangered fish in the driest and fastest-growing county in Utah

Swimming on the Edge

The endangered Woundfin (*Plagopterus argentissimus*) is one of the rarest species on earth. Uniquely adapted to the Virgin River, self-sustaining populations are restricted to just 16 miles in southwestern Utah.

This small, silvery minnow contends with various threats, including habitat loss, invasive fish species, and low-flow conditions. Consequently, the Woundfin requires management under the Endangered Species Act.

In response to these challenges, the Virgin River Program was established in 2000. The Program is a cooperative partnership between local, state, federal, and private entities to enhance, recover, protect, and preserve native species while providing water for human needs.

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Sleek Survivor – Endemic to the Virgin River, endangered Woundfin have relatively large fins and scaleless, streamlined bodies to help them live in swift, silty water. They rarely survive more than two years in the wild. Woundfin are well-adapted to the Virgin River's sandy, shallow runs, where they feed on aquatic invertebrates.



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Woundfin Recovery Actions

Virgin River Program partners developed a multi-disciplinary plan to guide key recovery actions for the Woundfin.

Increased Fish
Survival &
Persistence

Habitat
Enhancement &
Restoration

Non-native Fish
Management

Red Shiner
Eradication

Streamflow &
Water
Management

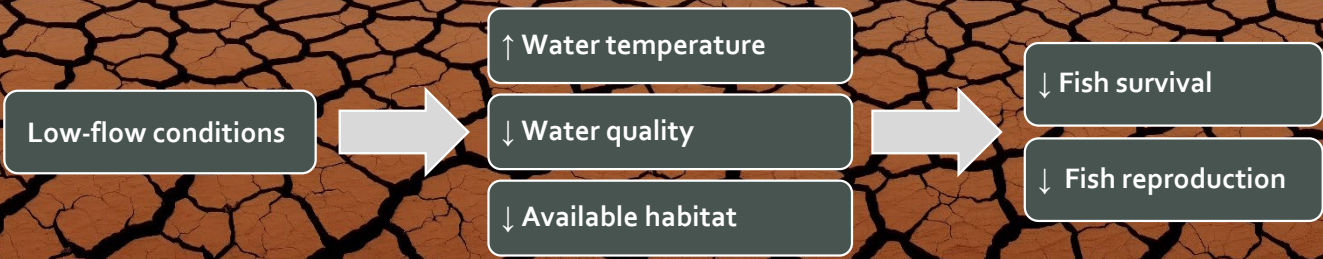
Water Quality &
Sediment
Management

Washington Fields
Diversion Fish
Screens

Woundfin
Population
Monitoring

Woundfin
Stocking

It's obvious fish need water, but how do low-flow conditions harm Virgin River fish?

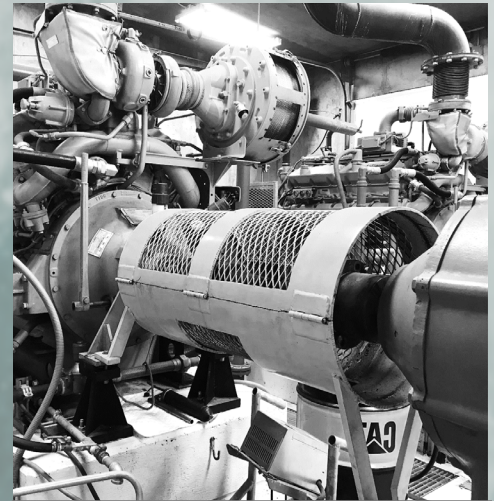


PUMPBACK SYSTEM:
Win-Win Solutions for Fish & Water Users

Virgin River Program partners conducted scientific studies in the early 2000's and determined that, besides invasive aquatic species, the primary threat to Woundfin and Virgin River Chub is low summer flow resulting in high water temperatures.

In response to this problem, Program partners developed the pumpback system in 2012, a creative solution to modify the point of flow delivery and sustain streamflow as far upstream as possible to reduce high water temperatures for Woundfin and Virgin River Chub below Quail Creek Diversion.

Since its implementation, the pumpback system has successfully decreased instream temperatures during summer months and reduced the amount of time native Virgin River fishes are exposed to extreme thermal conditions. This innovative solution has successfully increased Woundfin survival and reproduction while maintaining sufficient water for human use.

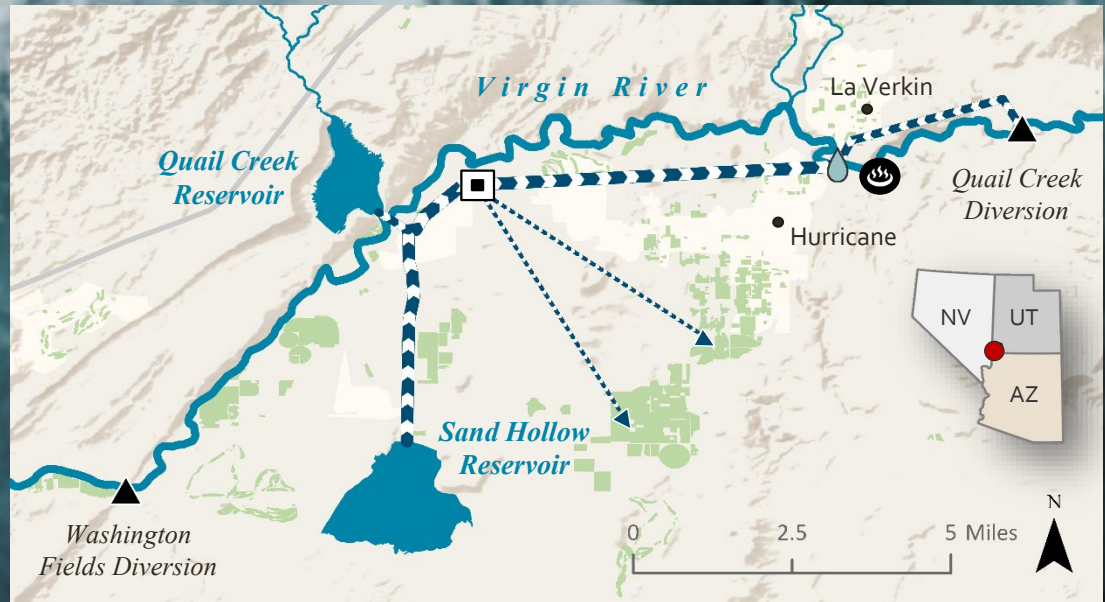


The pumpback system is powered by natural gas engines.



LEGEND

- Pumpback
- Water release site
- Irrigated land
- Hot springs
- Water pipelines
- Diversions



The pumpback system maintains flow in the Virgin River during critical periods, alleviating threats to Woundfin and other native fish species.

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