RECOVERY REPORT

SUMMER 2021

Photo courtesy of Rob Hall

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Director's Message

Congratulations partners to the June Sucker Recovery Implementation Program on the downlisting of the June sucker from endangered to threatened status!

This represents a huge milestone on the road to recovery and is significant on a number of fronts: 1) for Utah, this represents that with diligence and persistence, investments made by the state and partners in federally listed species recovery efforts are not in vain, 2) for ourselves and others, we've demonstrated that natural resource development and management can be accomplished in an environmentally responsible manner while accommodating the recovery of a listed species, 3) from a legal aspect, we're on course to demonstrate that Endangered Species Act (ESA) is not "a highway with no off ramps" but that species can be recovered working within the regulatory framework provided by the ESA. With the downlisting, the Program has flicked on the turning signal and let everyone know that it is truly our intent to exit the ESA highway.

Continued...

We face an uncertain future and there will be challenges ahead, but if looking in our rear-view mirror is any indication, these challenges will be addressed and managed to support the eventual delisting of this unique species. How far we've come!

Immediately prior to the formation of the Program, the June sucker population was comprised of only a few hundred battered, bruised and ancient individuals, still making their annual spawning run up the Provo River. Conditions in the river allowed for successful spawning some years, but the species was not considered in water management practices then, and the altered habitat conditions in the river coupled with a plethora of nonnative predatory fish, did not allow young larvae to develop beyond the yolk-sac stage. June sucker were unable to complete their life cycle in the unique ecosystem they depended upon and within which they evolved. Extinction was imminent, and as a young biologist tasked with their management, the persistence of June sucker in the human-altered Utah Lake system seemed like a hopeless situation.

At that time, those that had management authority over resources necessary to provide for the continued survival of June sucker, that would soon become the initial partners to the Program, did not have very much trust in one another. It wasn't hard for water managers to point the finger at nonnative fish predation as the problem; and alternatively, wildlife managers could turn a blind eye on the nonnative fish issue when these bruised and battered remnants attempting to spawn were dying in the lower Provo River due to lack of water. Public perceptions of Utah Lake were miserable. Dredging up this old history can be painful, but I share this here as a recollection of where we've been and for the benefit of newer members who may not be aware of the conditions at that time. With the formation of the Program, it was recognized and acknowledged that each of the Partners had something at stake when it came to June sucker and we all had a role to play in the conservation of this unique species and its ecosystem.

Over the years, trust among the partners has done a one-eighty, friendships have developed and grown to the point where there is a real sense of camaraderie as we share in the success of what we've collectively been able to accomplish. Likewise, public perception and interest in Utah Lake has improved significantly, in no small part the result of the Program's early and ongoing outreach efforts. Together, we averted the extinction of June sucker to the point where we have tens of thousands of fish in the Utah Lake system today! We have figured out the recipe for recovery and the downlisting is a huge step in that direction and confirmation that we are on the right path.

I am honored to serve in my current role as Program Director, and humbled when I look at how far we've come under this Partnership and all the hard work and contributions of so many that has gotten us to this point. Recovery is just down the road, and with the continued contributions of each partner, we will get there before long. It's just around the next bend.

My hat goes off to you, partners in Recovery.

Chris Keleher
Utah Department of Natural Resources
Recovery Programs Director

PROGRAM PARTNERS

> Utah Department of Natural Resources
> Central Utah Water Conservancy District
> Provo River Water Users Association
> Provo Reservoir Water Users Company
> U.S. Bureau of Reclamation
> U.S. Department of the Interior
> Utah Reclamation Mitigation and Conservation Commission
> U.S. Fish and Wildlife Service
> Outdoor and environmental interests

Meet the June Sucker – A Very Important Fish

Utah Lake is the only place in the world where June sucker occur naturally. Adults grow to 24 inches but baby June sucker, called larvae are so small they fit on a penny. As an indicator species the June sucker serves as an effective measuring tool to monitor the entire lake ecosystem.

The goals of the June Sucker Recovery Implementation Program are carefully designed to restore this June sucker and to address human water needs. Program actions will recover this rare fish, enhance stream flows, improve water quality, restore river and lake habitats, and reduce the impacts made by destructive nonnative fish. As a result, Utah Lake will be a better place environmentally, economically and culturally.

June Sucker Downlisted From Endangered to Threatened

After a thorough review using the best available science, the U.S. Fish and Wildlife Service on February 3, 2021, reclassified the June sucker from endangered to threatened status under the Endangered Species Act. This decision was based on a peer-reviewed assessment that concluded the species is no longer in danger of immediate extinction.

"Downlisting of the June sucker would not have been possible without the strong partnerships that are part of the June Sucker Recovery Implementation Program," said U.S. Fish and Wildlife Service Regional Director Noreen Walsh. "This collaborative conservation is the key to recovering endangered and threatened species, and the Service looks forward to continued efforts to conserve this important indicator species."

"This is an exciting milestone for the June sucker and the June Sucker Recovery Implementation Program, the Service, the Department of the Interior, and our partners," said Interior Assistant Secretary for Water and Science Dr. Tim Petty. "Accomplishing this downlisting from endangered to threatened speaks to the value of being good stewards of our lands and waters, ensuring opportunities to enjoy our fish and wildlife resources, to enhance recreation access and to increase the security of water projects for an area with growing population."

While recovery of June sucker has come a long way, there are still threats to the fish that need continued management. Habitat alterations from changes in river flows and persistent drought, as well as competition and predation from invasive fish species such as common carp and northern pike, still pose a risk to the June sucker and will require us to continue to collaborate in management with all the partners.

But now the June sucker is one step further on the path to recovery.

June Sucker Population Growing

The June sucker was listed as endangered in 1986, at which point an estimated 1000 adults remained. Shortly after listing, a few of the remaining June sucker in Utah Lake were captured and transported to a hatchery in Logan, Utah, where they were bred in captivity. Since the early 1990s, thousands of June sucker from the Logan hatchery have been stocked into Utah Lake, resulting in a steadily increasing adult population. Now there is an abundance of spawning June sucker that are assessed by the June Sucker Recovery Implementation Program using Passive Integrated Transponder (PIT) tags. In 2020 alone, over 2,000 PIT-tagged June sucker were detected in the Provo River, Utah Lake's largest tributary. Scientists estimate that only 10-20 percent of June sucker possess a PIT tag; therefore, it is likely that 10-20,000 June sucker spawn in the Provo River every year.

Restoration efforts transformed a channelized, homogenous system into a network of complex channels and off-channel wetlands, thus providing critical spawning and rearing habitat.

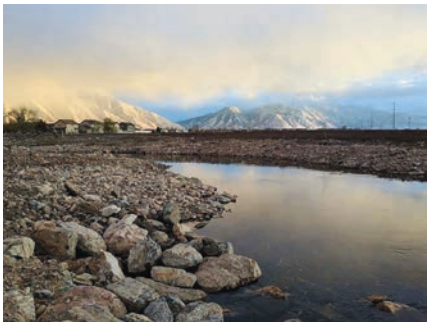
In addition to the success of the hatchery program, it appears June sucker are beginning to complete their natural life cycle in Utah Lake. In 2008, large-scale habitat improvement occurred on Hobble Creek, a critical spawning tributary for June sucker. These restoration efforts transformed a channelized, homogenous system into a network of complex channels and off-channel wetlands, thus providing critical spawning and rearing habitat. Juvenile June sucker have been observed within the Hobble Creek Restoration Area, an indication of successful restoration and an important sign for recovery. Evidence of successful recruitment of juvenile June sucker to adulthood is currently being assessed by matching chemical composition of June sucker fin rays to Utah Lake's water chemistry, a technique commonly used to identify natal origin of fishes. We eagerly await those results, and are optimistic that a substantial number of June sucker are recruiting naturally in Utah Lake due to recent restoration efforts. As more restoration efforts are completed, such as the Provo River Delta Restoration, we expect continued recovery of the June sucker.

Hobble Creek Restored

To date, the most extensive habitat restoration project completed by the June Sucker Recovery Implementation Program has been on Hobble Creek, where the connection between the creek and Utah Lake has been restored.

Hobble Creek is a small but ecologically important stream that runs from Hobble Creek Canyon to Utah Lake. In the 1950s the Creek was moved from its historic bed for agricultural reasons and its water was channeled into a new streambed created mechanically. This altered Creek was steep and straight and made it impossible for native fish to use it as a spawning ground as they had for many years.

The project included sloping a 21-acre piece of property purchased by the Program that was adjacent to the altered Creek and is located where the original Creek had once flowed. The property was transformed to create a floodplain, backwater areas, seasonally flooded oxbow ponds and other marsh-type wetlands. More than 600 trees and shrubs were planted and the area was seeded and re-vegetated with native upland and wetland vegetation.



In 2008, the Program completed the habitat restoration project along the lower reaches of Hobble Creek to improve conditions where the creek entered Utah Lake. The project allowed access for spawning adult June sucker to access the creek and also improved conditions for larval fish to grow and survive.

In the spring of 2009, six months following the restoration, adult June sucker were documented spawning in Hobble Creek for the first time and later biologists were able to identify young June sucker that survived an entire year in the wetlands of the restoration project.

Despite these successes, June sucker still faced a potential recurring threat. Each summer, the flow in Hobble Creek was significantly reduced or the creek would run dry due to irrigation needs, and no infrastructure existed to replenish the water.

In early 2013, a solution for the lack of water was implemented. The Central Utah Project constructed pipelines to bring water from Strawberry Reservoir across Hobble Creek for eventual delivery to the north. The Program worked to complete an environmental assessment to satisfy National Environmental Policy Act (NEPA) requirements that would allow for the release of water from that pipeline to supplement flows in Hobble Creek.

By May 2013, with the completion of the pipeline and the necessary environmental compliance in place, water was released to Hobble Creek to support spawning and recruitment of June sucker. Such deliveries have continued, with approximately 5,000 acre feet of water being added to Hobble Creek each year. Both the June sucker and Hobble Creek have benefited from these flows.

Before the project was implemented, June sucker were not observed spawning in Hobble Creek. Restoring the connection to the lake allowed June sucker to reach a previously inaccessible spawning habitat, and now hundreds of adult June sucker have been observed spawning in the creek.

This project has been a huge success drawing June sucker and other wildlife to it, and even catching the attention of local residents who live nearby.

Provo River Delta Restoration

Decades ago, the Provo River separated into a fan of tributaries that meandered through grassy wetlands before meeting Utah Lake. This dynamic system disappeared as the area was drained and cleared for farming, features like roads and the airport were built, and the river was tamed by upstream dams. The channeled and diked lower Provo River doesn't provide food and habitat, its stagnant water doesn't allow larval June sucker to drift to the lake and the majority of larval June sucker starve or get eaten by predators.

The Provo River Delta Restoration Project is a major undertaking to improve rearing habitat for young June sucker by recreating a delta in their most important tributary, the lower Provo River. The project will further recovery efforts for threatened June sucker, provide unique recreational space for a rapidly growing community, and will help assure continued water use and development for human needs along the Wasatch Front.

The project will divert the majority of the lower Provo River's flow north of its current channel, to create braided waterways and wetland features. Utah Lake will be allowed to expand eastward in this area, to more closely approach its historic shoreline.

A guaranteed minimum flow of water will continue running in the existing river channel. A small dam will be constructed at the end of the channel, near Utah Lake, to maintain a relatively constant water elevation year-round, and an aeration system will be installed to improve water quality aesthetics and odor.

The project's construction began in 2020 and is scheduled to be completed in 2024. The delta area will be a rare and special place located near a large urban center and will add recreational opportunities to those that already exist at Utah Lake. It will connect adults and children with nature.

In 2021, we will continue excavating delta channels and ponds, generally moving from north to south and from west to east. The goal for 2021 is to complete nearly all the planned excavation work so efforts in 2022 can focus on lowering a portion of Skipper Bay dike and preparing to divert the river.

We also plan to irrigate areas where native plants and seed were installed last year to help desirable vegetation get established. Weed control and revegetation of newly disturbed areas will be ongoing with a major revegetation effort planned for late fall.

We will be offering site tours to the public on the second Saturday of each month starting April 10. These tours will be an opportunity to see construction progress and learn more about the project. There will also be opportunities to volunteer to help with invasive weed control.

To go on a site tour contact Paula Trater at 801-560-1790.

PROVO RIVER DELTA

RECREATION FEATURES INCLUDE:

> Access points to reach the river and delta on foot

> Non-motorized boat launching and portaging areas

> New fishing and boating opportunities

> Bird watching and wildlife spotting

RECREATION SUPPORT ELEMENTS INCLUDE:

> Observation tower

> Benches

> Parking lots

> Bathrooms

> Informational signage

For more information about the Provo River Delta Restoration Project, visit: provoriverdelta.us

Water Management

Since 1995 water has been acquired by the June Sucker Recovery Implementation Program and used to supplement flows needed for June sucker recovery. These flows are provided mostly through water acquired under P.L. 102-575 CUPCA Section 207 (b)(4). Approximately 20,000-acre feet of water are provided annually to the lower Provo River and 8,500-acre feet to Hobble Creek. Annual flow recommendations are developed for both rivers by the June Sucker Flow Workgroup, which operates under the Program. The Program continues to fund the operation of flow gages on both tributaries to monitor the delivery and timing of supplemental releases. Several diversion structures within Hobble Creek are being evaluated for needed fish and water passage. Central Utah Water Conservancy District is working to develop agreements with water users to modify these structures for the benefit of June sucker.

Photo courtesy of Rob Hall

Carp Removal

Removing non-native carp from Utah Lake is one of the most critical tasks to allow for June sucker recovery. Since carp were introduced to Utah Lake by the U.S. Government as a food source in the late 1800s, they have been blamed for degrading water quality, loss of biodiversity and significantly altering the lake's ecosystem.

Through their feeding behavior, carp rip through the sediments of Utah Lake looking for food and in doing so, they remove underwater vegetation, which serves as an important refuge habitat for young June sucker to avoid predation.

If left unchecked, the carp would prevent recovery of the June sucker and reduce the lake's recreational uses and overall attractiveness. In the early 2000s, carp represented an overwhelming 91 percent of the total fish biomass in Utah Lake. In February 2010, after years of studying, planning and seeking funding, the June Sucker Recovery Implementation Program initiated a large-scale effort to reduce the enormous population of common carp in Utah Lake.

Ten years later, the removal effort is going strong and through commercial fishing more than 29 million pounds of carp have been removed from Utah Lake. Monitoring efforts have recorded a 78 percent decline in carp density since 2012. Researchers have also traced the return of underwater vegetation in some areas of the lake, something that was unheard of when the project was implemented. The ingenuity and adaptability of the commercial fishing company Loy Fisheries has helped the project be successful to this point. For example, Loy Fisheries has started to use a smaller mesh size on their nets to remove more juvenile carp in addition to the adult carp normally removed. They will also be taking advantage of the low water this year.

Thanks to the financial support and partnership of state and federal partners, the carp removal program has had an impact on both the June sucker and Utah Lake itself. While removing the invasive carp benefits June sucker directly so it can naturally reproduce and recruit young fish into the adult population, the larger benefits are to the Utah Lake ecosystem. Less carp reduces internal nutrient cycling, which reduces the potential for harmful algae blooms. Less carp also means more resources, including habitat and food, are available to support other species in the lake.