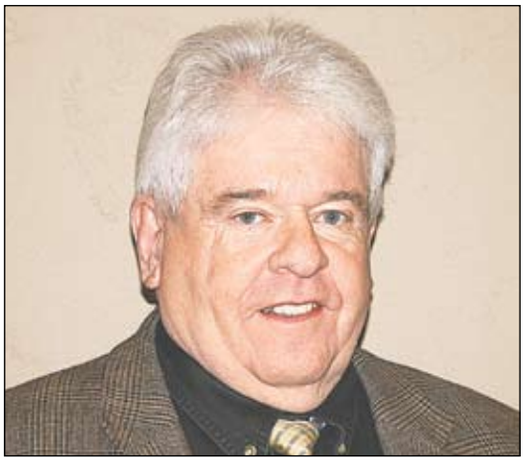
VIRGIN RIVER
PROGRAM

2009 Newsletter

Program Director's Message — Joint efforts lead to joint benefits

It is that time again when the Virgin River Program (Program) begins to reflect back on the current year in order to evaluate accomplishments and to decide which projects need to be tackled in the coming year.

While the Program is dedicated to implementing measures to recover and protect native species in the Virgin River, it is also committed to enhancing the ability to provide adequate water supplies for sustaining human needs. Achieving these goals requires good coordination and cooperation. We are continuing to make progress toward accomplishing these goals due in large part to joint efforts between the Program, its partners and the local community. Some of the Program's efforts this year include:



- Completion of a pump project that will allow the Program to use Sand Hollow Reservoir water to supplement low river flows. This will increase the flows in critical sections of the river.
- Completion of a fish barrier in the Virgin River Gorge. This barrier will help prevent upstream movement of invasive species, particularly the red shiner, from the lower Virgin River basin into Utah.
- Late in 2008 and throughout 2009, over 36,600 woundfin were either stocked in the river or held in hatcheries for propagation, growth and holding until released in 2010. Approximately 5,000 Virgin River chub were also stocked in the Virgin River.
- The Program donated the aquarium in the Washington County Water Conservancy District's (District) new office building. The aquarium features all six species of native fish found in the Virgin River.

As director of two fish recovery programs in Utah, I have learned to rely on local water providers, those who know most about water, to find mutually acceptable solutions that will provide water for both native species and people. Water managers know where there is flexibility in the system and they know how to operate water systems to meet dual goals. A prime example is the water released by the District from Kolob Reservoir over the past few years that has helped support native fishes during extreme drought and hot summer conditions.

Even though there are increased demands on water in the Virgin River, flows today are far better than they were decades ago and the future looks even brighter.

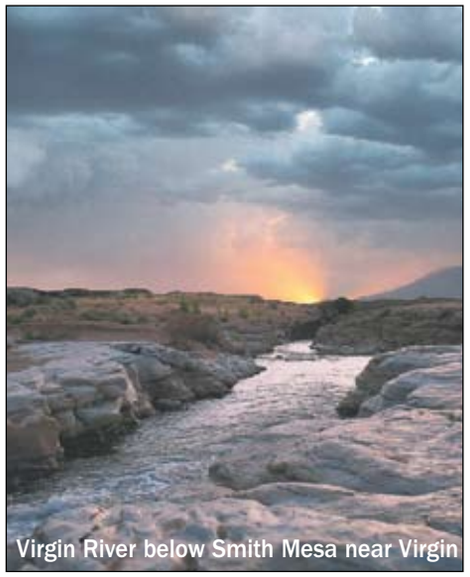
The dual goals of the Program protect both native species and people. As long as the Program, its partners and the local community continue to work cooperatively with one another, we can keep water available for public use and still protect and enhance our native fish population.

Reed E. Harris

Reed Harris, Program Director

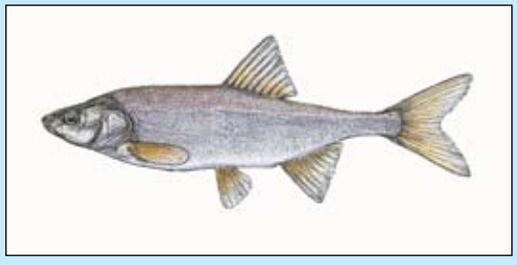
The 2nd Annual Virgin River Program Photo Contest Winner

Thank you to everyone who entered photos in the 2nd Annual Virgin River Program Photo Contest. Over 300 photos were submitted, all of which captured the beauties of Mother Nature in a creative and artistic fashion. The winning photo (below) was taken by C.L. Cannon. C.L. received an IPod shuffle.



Virgin River below Smith Mesa near Virgin

The woundfin minnow is one of the most rare fish species on earth. The endangered woundfin is found only in a small section of the Virgin River. Woundfin live only one to two years. Their survival depends upon sufficient flow in the river, especially during hot summer months.



The Virgin River chub is a rare and beautiful fish that can grow up to 18 inches. It feeds on small fish, insects, and plant matter. Now listed as an endangered species, the Virgin River chub is found only in the lower portions of the Virgin River system.

Healthy flora, fauna and folks goal of Program and City

By Laura Taylor, St. George Park Planning Manager

The trail system in St. George City (City) is a much-loved public amenity that will ultimately be part of a county-wide system stretching from Zion National Park to Gunlock Reservoir. The trail system affords an up-close and personal connection to the river that supports wildlife and human life in Washington County—the Virgin River and its tributaries.

This is where the Virgin River Program (Program) enters the picture. The Program works to conserve and protect fish in the river while at the same time working to enhance the ability to provide adequate water for human needs. The City is excited to be working in partnership with the Program to provide educational opportunities through this vast trail system that will teach the community more about the natural history of the Virgin River.

At any given point along the trail, the public can listen to songbirds and see fish in pools of water surrounded by cattails, willows and other wetland plants.

It is common to see lizards, jackrabbits, ducks, deer, muskrats and possibly beaver. The panoramic views are exquisite.

The City and the Program are currently working together to:

- augment existing native vegetation with more willow trees and
- install signs at each end of the trail system describing the river's natural history.

In addition to the learning experience, the trails are a favorite place for exercise and recreation. The climate in Washington County allows residents to be active year round. The trails provide opportunities for walking, running, biking and roller blading, which will ultimately maximize the health of all Utahns.

The river trail system promotes a restorative emotional connection with nature while encouraging a healthy lifestyle. The City and the Program invite you to get out and familiarize yourself with the ecosystem that benefits you.

For a map and more information on this extensive trail system, log on to http://sgcity.org/parks/trails/.

East side of the Virgin River just south of the Man O' War bridge

War waged to protect local species from extinction

By Ann Jensen, Washington County Water Conservancy District

Over the past seven years, the Virgin River Program (Program) has been dedicated to maintaining the natural river habitat and a healthy native fish population in the river.

Nonnative species are the greatest threat to native fish. The red shiner is a predatory nonnative fish that eats the eggs and young of native fish and competes for habitat. As a result, the woundfin and the Virgin River chub, two species native to the Virgin River, are listed as endangered species. Woundfin are only found in the Virgin River and chub are found in the Virgin and Muddy rivers. Without intervention, both species could face extinction. The partners in the Program have been working to eradicate red shiner starting with the efforts of the Utah Division of Wildlife Resources in 1988. Since its inception in 2002, the Program has made this eradication a priority.

The woundfin is one of the rarest species on earth and is found only in a small section of the Virgin River.

Recently, these efforts at eradicating red shiner have been rewarded. Red shiner have not been seen in the Virgin River or in the tributaries since May 2008. The Program considers this a major accomplishment toward endangered fish recovery. However, the Program cannot rest on its laurels. Monitoring for the presence of the red shiner is constant. It only takes two to once again fill the river with nonnatives.

Hands-on event teaches children importance of a healthy river system

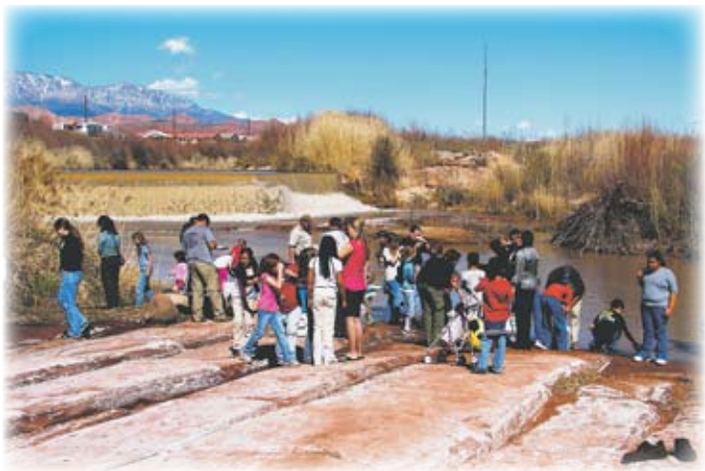
By Ann Jensen, Washington County Water Conservancy District

Preserving struggling fish species does not revolve solely around getting rid of the unwanted fish found in the river. It also involves increasing the presence of the native fish in various ways such as improving fish habitat and increasing fish populations through the use of a hatchery. The fish raised in a hatchery environment are eventually stocked in the river and monitored for survival and reproduction.

The Program is dedicated to educating the public about the ecology of the Virgin River. What better group to educate than children?

In March 2009, fourth-graders from Sandstone Elementary helped the Utah Division of Wildlife Resources stock 1,600 endangered Virgin River chub in the river. This was the first time children had helped with stocking.

The event provided a perfect opportunity to teach the students that a healthy river will sustain aquatic life and meet reasonable human needs into the future.



Teamwork achieves common goal – water to meet all needs

By Corey Cram, Washington County Water Conservancy District

The Virgin River Program (Program) is funding a project that will use water from Sand Hollow Reservoir and the Washington County Water Conservancy District's (District) Quail Creek pipeline to help address conditions that threaten fish survival. These conditions include warm river temperatures during the middle of the summer that contribute to fish mortality.

Pumps are being installed along the pipeline that will take water from the Virgin River to Quail Creek and Sand Hollow reservoirs. Pumps and other structures will allow water to be moved up the Quail Creek pipeline, opposite from normal pipe flow conditions.

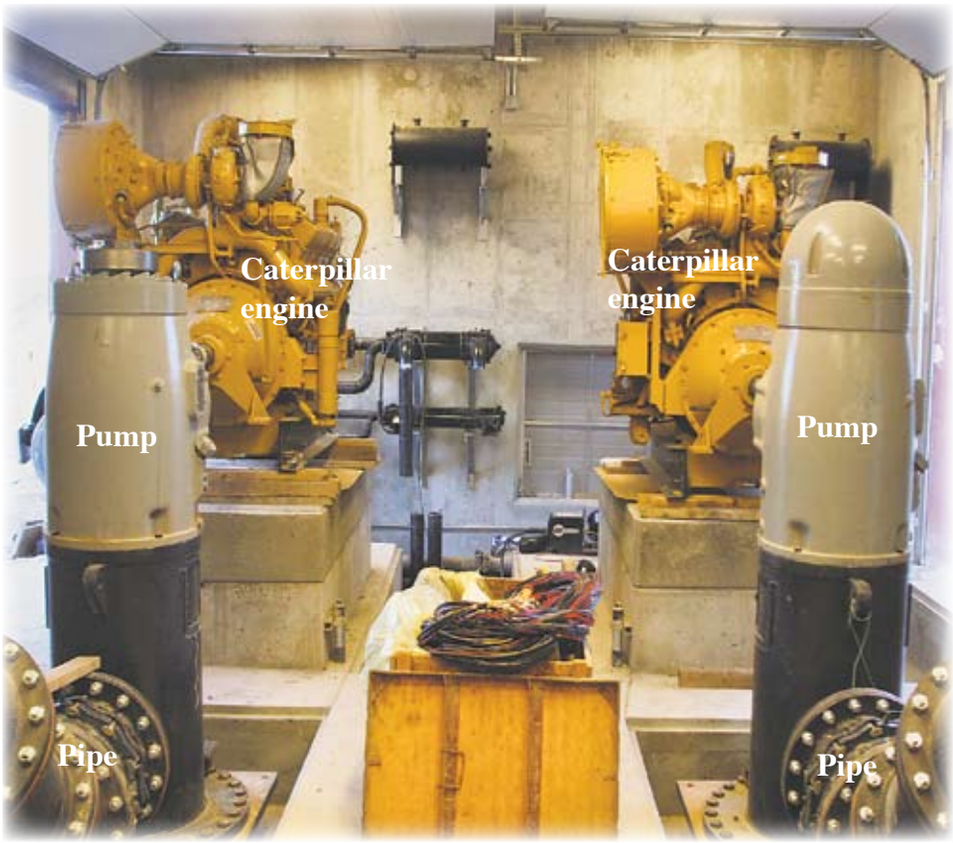
During low river flow conditions that generally occur in July and August, water will be pumped up the pipeline from Sand Hollow to be used by irrigators in Hurricane Valley. Since this irrigation water is coming out of Sand Hollow Reservoir, more water will remain in the river.

The District, as one of the major partners in the endangered fish recovery efforts in the Virgin River, attempts to provide water management strategies that allow it to meet water demand and benefit endangered fish.

The additional water remaining in the river will not be lost. It will be part of the water that is normally diverted out of the river for irrigation of the Washington Fields. The District is usually required to provide additional flows in the river to meet the water needs at Washington Fields. The water added to the river with this pumping system will take the place of water that is normally used to meet downstream water rights.

In addition to funding this project, the Program is also paying for its operation and maintenance. The Program has a two-fold purpose. It was established for the recovery of native species and also to allow for continued use of water resources for our residents. This is just one more Program project that benefits our community.

The Program is a good example of how solutions can be found that benefit both fish and people.



Barriers no obstacle to success

By Steve Meismer, Virgin River Program Local Coordinator

Since the mid-1980s, a nonnative fish, the red shiner, has been preying upon native fish in the Virgin River. Wherever a red shiner is found in the river, native fish are not found. The red shiner has a major advantage over native species. The female can reproduce up to 19 times each year producing 500-1,000 offspring with each spawning. A red shiner can produce up to 10,000 offspring annually. Compare this with the native fish that spawn only once or twice per year.

Physical barriers are constructed as a management technique to limit upstream movement of the red shiner from their source in Lake Mead and the lower Virgin River into Utah. In 1988, the Washington County Water Conservancy District (District) constructed the first fish barrier two miles upstream of the Utah/Arizona stateline. This barrier helps prevent the upstream movement of red shiner. However, red shiner were already upstream.

A second barrier was built in Blooming-ton in 2002 immediately downstream of the southbound I-15 bridge over the Virgin River.

Since 2003, the Virgin River Program (Program) has made great strides toward getting rid of red shiner. In 2004, red shiner were caught by the thousands. May of 2008 was the last time a red shiner has been found in the Virgin River upstream of the stateline barrier.

Photo of the fish barrier as the project was nearing completion. Note the access road on the far side of the river.

A high probability still exists, however, that a major storm event producing significant amounts of water could allow red shiner to pass the existing barriers. Therefore, in 2009 a third barrier was constructed at Milepost 15 in the Virgin River Gorge. This barrier is higher than previous structures. During low flow conditions, the design will pose a vertical barrier to upstream movement of red shiner and during floods the water will be flowing too fast to allow the fish to move upstream.

Because of the use of the Virgin River Gorge for recreation during high flows, a portage path was installed to allow boaters a means to avoid the barrier.

Once again, cooperation between the Program that paid for the barrier and the District that managed the project, has yielded a solution to a problem that could threaten the progress of endangered fish recovery in Washington County.

Program donates 650-gallon fish tank to Washington County Water Conservancy District

By Steve Meismer, Virgin River Program Local Coordinator

An aquarium featuring native fish was donated by the Program to the District for its new office building. The tank is designed with a current so that the water moves from one side to the other. The water temperature changes throughout the day to simulate river conditions.

The aquarium is stocked with about 40 fish representing each of the six native species. Two of the species are endangered: woundfin and the Virgin River chub. Other local fish on display include the flannelmouth sucker, speckled dace, Virgin spinedace and desert sucker. The Program maintains the aquarium.

The public is invited to come into the District office to view these native fish.

Virgin River Fish Word Search

AQUARIUM
BARRIER
COMMUNITY
COOPERATION
EGGS
HABITAT
NATIVE
NONNATIVE
PARTNERS
RIVER
SANDHOLLOW
SPINEDACE
TRAILS
WATER
WOUNDFIN

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