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Conservation Corner

Colorado River Summit

In a system over-allocated and threatened by drought, solutions to sustain the massive Colorado River require a new type of collaboration. This spring, Conservancy trustees, staff and key partners from six Colorado River Basin states and Mexico, gathered in Henderson, Nevada, to share ideas and expertise on conservation efforts basin-wide. Participants at the Colorado River Summit discussed water markets, the health of the Colorado River Delta, water management and impact investing. The gathering highlighted the complexity of Colorado River issues as well as the potential for innovative partnerships to secure water for people and for nature.

Happy 100th to Our National Parks!

In 1906, determined to protect America’s wilderness, President Teddy Roosevelt signed the landmark Antiquities Act. A decade later, President Woodrow Wilson sealed President Roosevelt’s vision by signing the act creating the National Park Service (NPS). This August, the NPS celebrates 100 years of protecting some of America’s most treasured landscapes—and sharing their wonders with people of all ages. In February, the Conservancy supported the “Park after Dark” centennial event at Clarke Planetarium, and this July, we will participate in a “bioblitz” at Zion National Park. This event, one of many similar events taking place across the country, will involve volunteers gathering field data to create a rapid biodiversity “snapshot.” Here’s to a new century of our national parks!

Utah Public Lands Initiative

Debates continue over the future of lands and waters in eastern and southeastern Utah. In January, Congressman Bishop and Congressman Chaffetz released the latest draft of the Utah Public Lands Initiative (PLI), which attempts to balance protection and development proposals for public lands in seven Utah counties. The Conservancy has participated throughout the public process, with a special focus on Carbon, Grand and San Juan Counties—home to our Dugout Ranch and Canyonlands Research Center. While the recent PLI draft contained a number of promising concepts, it also includes significant language and provisions that the Conservancy cannot support. Our Utah Chapter submitted its recommendations on improving the measure in February, and hope that future drafts address our concerns.

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Lasting Results

Utah Private Lands Protection
Number of Projects ............... 172
Acres Protected ............... 1,139,363

Utah Public Lands Protection
Number of Projects ............... 40
Acres Protected ............... 130,063
Total Acres Protected ...... 1,269,426
Total Utah Membership ...... 5,487

Cover: Virgin River in Zion National Park. © Scott F. McGee
Beyond the 100th Meridian

Water for people and water for nature in the West

The wonder, of course, is how far we’ve come since John Wesley Powell warned, in 1869, that western lands were not suited to conventional agriculture. (This story is wonderfully told by Wallace Stegner in “Beyond the 100th Meridian”.) Powell’s admonition gave rise not only to the Bureau of Reclamation and a vast web of dams and water works in the Colorado River Basin, but also to an even larger network of canals, check dams, pumping stations, and major dams in virtually every western state. “Make the desert blossom like the rose” was a notion which became etched into the American consciousness. But Powell would have never predicted that, along with the blooms of agriculture, we would grow huge western cities almost entirely dependent on water imported from far away. On our tour, it was fascinating to stand at the foot of the dam that helped launch the modern reclamation age.

And my cause for hope? During this era of climate change, when our western water basins are over-appropriated, state populations are booming, aquatic species are threatened and drought is pervasive, we need a much different water calculus than existed in 1935. In this newsletter, you’ll read about innovative water partnerships that reflect this new calculus; projects based on securing water for people and nature. This is cause for hope. There is more water to go around than might appear if we use it wisely. Adopting this new calculus will require a paradigm shift on a grand scale. However, as the Hoover Dam illustrates, thinking big is in our DNA. Now we need to think big in a different way. Today’s challenge is to make sure nature has a seat at the table as our demand for water grows.

Mark Twain once famously wrote “Whiskey is for drinking, water for fighting.” Today, a more appropriate adage for the Conservancy’s western water work is “Whisky is for drinking, water is for sharing.” This vision may be new, but it’s no bolder than the vision which built Hoover Dam.

THIS SPRING, AS PART OF THE COLORADO River Summit in Henderson, Nevada, many of us were treated to a tour of Hoover Dam. Built in 1935, at the height of the Depression, Hoover was the first dam to capture the awesome power of the Colorado River and tame its vast resources for hydropower, irrigation, flood control and domestic use. Hoover Dam was not the first project of the Bureau of Reclamation, but it remains one of the most grand. Symbolically, it is a kind of “ground zero” for water issues in the West. For me, our tour was cause for wonder. And, somewhat paradoxically, it was also cause for hope.

Dave Livermore
Utah State Director

“Whiskey is for drinking, water for fighting.”
Mark Twain
Biologists seine for fish on the Virgin River, collecting data on flows and habitats critical to native species. © Utah Division of Wildlife Resources
Water for All

Agricultural Efficiency Projects Offer Hope for Utah Rivers

EVERY DROP OF THE VIRGIN RIVER matters. Hundreds of thousands of people in Washington County drink from its waters and rely on its flows to irrigate farms and ranchlands. Carving through the world-class scenery of Zion National Park, the river plays a major role in tourism and recreation. For nature, the Virgin and its tributaries are also an irreplaceable life source, supporting a rich array of plant and animal species—many found nowhere else on Earth.

In the past, the Conservancy has worked with partners to protect the Virgin’s rich streamside corridors. Our newest efforts are taking an exciting plunge...into the water itself. Innovative projects to deliver water more efficiently aim to keep the river flowing and build resiliency in the face of increasing usage demands and heat and drought caused by climate change.

The concept of making water use more efficient—and keeping river flows as high as possible—appeals to everyone, including the region’s many agricultural producers. Along much of the Virgin, irrigation water is still delivered through unlined canals, a system in which precious water is lost to evaporation and by water seeping into the soils of the canals. For those producers who are water and budget conscious, there are now better options.

Working with partners, the Conservancy is coordinating an effort to replace canals near the town of Hurricane with more efficient piping. The water saved through this upgrade will be returned to the stream to increase flows for a 16-mile stretch of the Virgin that supports two federally listed fish: the woundfin and Virgin River chub. The Conservancy and its partners are also backing a similar project in Washington City, where more efficient piping will capture municipal and agricultural run-off and return it to the river in an area vital for the endangered Southwestern willow flycatcher. “On the Virgin, where all of the water is allocated and drought stresses every aspect of the system,” explains Elaine York, “it’s exciting to see people thinking creatively about how we use and protect this resource.”

The Conservancy is joining forces with many important partners on the Virgin, including Hurricane City, the Hurricane Canal Company, the Washington County Water Conservation District, the Virgin River Program, Washington City, and the Utah Division of Wildlife Resources.

Keep it Flowing

Creative problem solving and a unique window of opportunity are providing a brighter future for the lower Price River. The Conservancy is working with partners, including the Division of Water Rights and the Carbon Canal Company, to protect flows critical to the Colorado pikeminnow and other native fish.

Currently, the Carbon Canal Company releases 2 to 4 cubic feet of water into the river—a “pocket water” flow needed to push water out to farmers. But the company plans to upgrade its canal system, which will soon render the pocket water release unnecessary.

In a proactive move, the Conservancy and other stakeholders hope to secure a delivery agreement that ensures the company will continue to release the pocket flow into the Price, maintaining crucial flows for fish downstream.

As the Conservancy raises funds for its new in-stream flow projects on the Price and the Virgin, excitement builds for their broader impact. “We want people to re-think ‘business as usual,’” says Sue Bellagamba, the Conservancy’s Canyonlands Regional Director. “And we want to demonstrate that protecting healthy river flows is the key to a secure water future for all of us.”
The Scott M. Matheson Wetlands Preserve supports unique river habitat crucial to young razorback suckers. © The Nature Conservancy/Linda Whitham
Planning a Fish Nursery at Matheson Wetlands Preserve

THE COLORADO RIVER, FLOWING near Moab, is home to many endangered fish species, including the razorback sucker. For many years, the razorback sucker was thought to have almost completely disappeared from this section of the river. However, in just the past three years, there has been an exciting and unexpected resurgence of this elusive species.

Nearly 20 years ago, The Conservancy and its partners were looking at areas along the Colorado River that could serve as potential nursery habitats for razorback sucker larvae, including the Scott M. Matheson Wetlands Preserve in Moab. Although the Utah Division of Wildlife Resources introduces hatchery-raised razorback suckers into the Colorado each year, studies indicate that natural recriment, which occurs when water floods into off-channel nursery habitat, may be necessary to ensure self-sustaining populations.

Unfortunately, changing river dynamics due to dam operations and the appearance of tamarisk along river banks have dramatically reduced the slow-moving, back-eddy habitat razorbacks need to reproduce. This habitat, however, is found at the Matheson Preserve.

Recently, the Conservancy and its partners at the Utah Division of Wildlife Resources (UDWR) began to revisit the preserve as potential nursery habitat. After conducting research last summer, fish biologists have found razorback sucker larvae along the shoreline of the preserve. This find brings renewed hope that, with a little innovative engineering, the preserve could become a place where these larvae would be protected from predation during that vulnerable part of their lifecycle. Once they are big enough, the fish would then be released back into the river, giving them a much better chance of survival.

The Conservancy has hired an engineer to study what it will take to bring fish larvae into the preserve’s central pond during spring flows and then release them back into the river in the fall. Meanwhile, Central Canyonlands Program Manager and Preserve Manager, Linda Whitham, and her UDWR partners, are moving ahead with plans to develop a nursery and secure funds for this exciting project.

“We’re hoping that by this summer we’ll have a design plan and funding in hand to get started on the project this fall,” says Whitham. “There’s a tremendous ground-swell of enthusiasm from all of our different partners. After 20 years of planning and concerted efforts to bring this species back from the brink of extinction, it’s exciting to think that Moab’s desert oasis may be a part of the solution for this endangered fish.”
Flows on the Little Bear are important to both fish and people. © Fred Summers
Science beneath the Surface

New River Study Focuses on Nature’s Needs

A REMNANT OF PREHISTORIC TIMES, THE Bonneville cutthroat trout is a survivor. About 14,500 years ago, these native trout swam in massive Lake Bonneville, but a warming climate and shrinking lake stranded them in mountain streams. Life for the cutthroats took another drastic turn with the arrival of the pioneers and the introduction of non-native fish. Since then, this species has been in steady decline, but they have hung on—and some of their best remaining habitat is now found in Utah’s Bear River tributaries.

The Conservancy has been active in the Bear River watershed for years, protecting rangelands and precious wetland habitat. But as climate change promises intensifying drought and heat, urgency grows to protect the river water. “We know that lower flows and warmer waters could spell disaster for these fish, but we don’t know exactly what they need to survive—what flows, where, during which seasons, and at what temperatures,” explains Joan Degiorgio, the Conservancy’s Northern Mountains Regional Director. “Without adequate science, it’s hard to take the right conservation actions.”

That’s now changing, thanks in large part to Cache County, which recently created a master water plan to meet community needs, as well as determine what flows are important for native wildlife. “The Bear River and its tributaries, including groundwater, provide water to sustain our communities in Cache County,” said Bob Fotheringham, the Cache County Water Manager. “Our community needs water for natural streams, agriculture and other beneficial uses. Smart water management will ensure sustainable natural systems for future generations.”

Encouraged by Cache County, the Conservancy joined Trout Unlimited, the Utah Division of Wildlife Resources, the Utah Division of Water Quality and Utah State University, as well as landowners, to launch a study to assess the environmental flow needs on the Little Bear and Blacksmith Fork. Tributaries to the Bear, these rivers provide critical habitat for several native fish.

“For the first time, we will have answers about nature’s needs on this river,” says Degiorgio, “which we can use to develop strategies to keep the whole system healthy.” And, the Conservancy hopes, new river science will help write the next chapter in the survival story of fish like the Bonneville cutthroat trout.

Data by Drone

This summer, there will be an unidentified object flying over Yellow Creek, near Evanston, Wyoming. A bird, a plane? Nope, not even Superman. It will be AggieAir—a drone helping scientists gather conservation data in a revolutionary new way. Operated by the Utah Water Research Laboratory at Utah State University, AggieAir will help the Conservancy and its partners capture critical information about flows on Yellow Creek, a tributary of the Upper Bear that supports a range of native fish, including the at-risk northern leatherside chub and Bonneville cutthroat trout.

In the fierce heat of Utah’s summer, scientists know that fish along Yellow Creek are able to survive in temporary pools scattered along the river’s length. But they lack accurate information on the pools’ locations.

“We’re using this drone to fly over hard-to-reach river stretches in the hottest periods of summer, to deliver precise imagery on when and where the pools exist,” explains Degiorgio. “We can then work with landowners, and take proactive steps on the ground to protect these fragile water sources.”
Voices for Nature

With the field season for the Canyonlands Research Center (CRC) just around the corner, cowboys and scientists are gearing up for hard work. Based at the Conservancy’s Dugout Ranch, the CRC supports research on the interactions between climate and land use in arid and semi-arid lands. Information gleaned from CRC scientists will help inform management solutions that meet human needs while protecting the health of the lands and waters on the Colorado Plateau.

The CRC’s new Science Committee is chaired by Dr. Nichole Barger, with the University of Colorado, who brings more than 20 years of experience studying sustainable land management in important ecosystems around the world. “The thing I love most about working at the CRC is the really broad range of people,” says Barger. “I not only get to work with researchers but also federal agencies, and the managers of the Dugout Ranch. I really thrive in those environments, reaching across and communicating with a range of people as we go beyond basic research and determine how to best manage these lands.”

Dr. Barger and her CRC partners have a number of exciting research initiatives unfolding this summer, including a new project, funded by the U.S. Department of Agriculture, to study how to enhance ecosystem services while maintaining agricultural production. Researchers hope to answer questions such as: how does dust mitigation and improved air quality impact soil health, plant diversity and plant production?

Says Barger: “I think the CRC is at a really important juncture. Over the winter, we have continued to build a collaborative research community and strengthen ties to our agency partners. We are now in a great position to welcome more researchers and educators over the next several years.” Learn more at canyonlandsresearchcenter.org.
Great Salt Lake

Vickie Llewelyn has volunteered for The Nature Conservancy for six years, and she can’t wait to help out with the Great Salt Lake Bird Festival this spring. “It really gives me a sense that I have accomplished something worthwhile,” she says. “It’s not monetary, it’s an emotional satisfaction. When you volunteer for The Nature Conservancy, you see what you’ve accomplished and that is a great feeling.” Vickie is one of 400 volunteers who generously give their time and talents to help the Conservancy protect Utah’s special lands and waters. To learn how you can get involved, visit nature.org/utahvolunteer.

Vickie Llewelyn with her grandkids. Courtesy Vickie Llewelyn

Leave a legacy for generations to come.

What better legacy is there to leave than your commitment to protecting the Earth for generations to come? Whether you are taking those first important steps toward planning your estate or are in the process of updating your estate plan, The Nature Conservancy in Utah is here to help.

For more information:

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The Nature Conservancy cannot render tax or legal advice. Please consult your financial advisor before making a gift. Image credit: © Nick Hall. PUTPM051501001
Swimming for Survival

DID YOU KNOW UTAH IS HOME TO seven endangered fish species? The inauspicious list includes the humpback chub, bonytail chub, Virgin chub, Colorado pikeminnow, woundfin, June sucker, and razorback sucker. One of these species, the elusive humpback chub (pictured at left), can be found in the Colorado River. This fish evolved nearly 4 million years ago, yet is so rare it wasn’t even discovered until 1946. By this point, its habitat had already experienced decline.

Utah's streamside habitat is particularly unique, making the preservation of our local freshwater systems critical to the survival of our many rare fish species.

To ensure these species persist, the Conservancy and its partners are working to restore riparian habitat and protect river flows using science-based solutions that support the needs of both human populations and natural ecosystems.

Want to learn more about Utah’s endangered fish species? Visit nature.org/utahendangeredfish

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