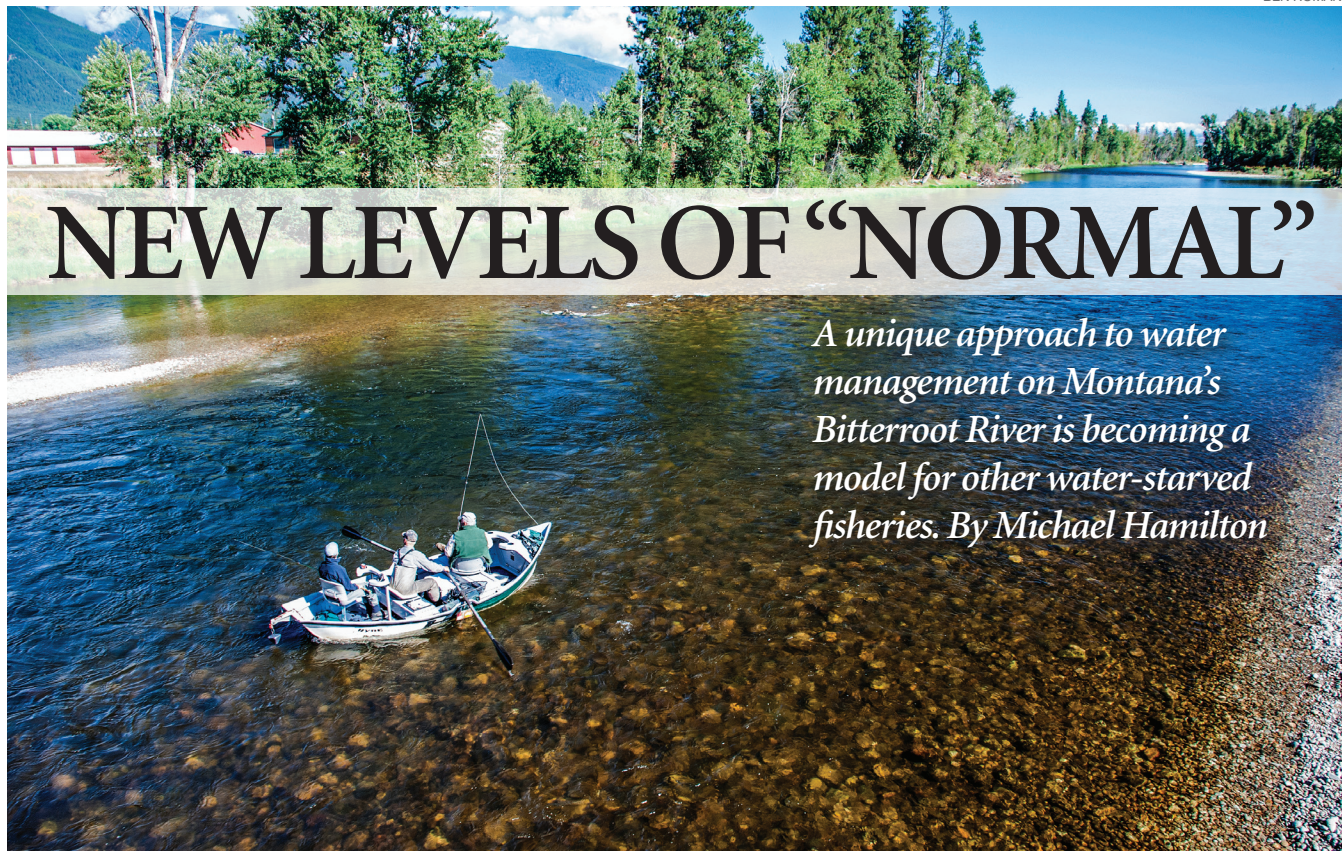


CONSERVATION

BEN ROMANS



NEW LEVELS OF “NORMAL”

A unique approach to water management on Montana's Bitterroot River is becoming a model for other water-starved fisheries. By Michael Hamilton

Chances are you've never heard of Painted Rocks Reservoir (PRR). Why would you? By dam standards its mid-size, remote, and somewhat non-descript. But its role in protecting flows and fish, and providing water for irrigation in the legendary West Fork and main stem of the Bitterroot River in Western Montana, is a unique model of how managers can allocate water as a public commodity to serve the needs of the environment, and the economy, in the face of rapid cultural and environmental change.

Constructed in 1939 by the Montana State Water Conservation Board, the 143-foot high, 800-foot long dam sits 40 miles south of Hamilton, Montana, adjacent to the Bitterroot National Forest. Four mountain high creeks located in the West Fork of the Bitterroot Watershed—West Fork, Slate, Blue Joint, and Overwhich—fill the reservoir each year. At full capacity, the reservoir can store close to 45,000 acre feet of water. However, because of reduced snowfall in general, and early

melting snow packs, PRR holds on average 32,000 acre feet of water annually.

Of the 19 reservoirs owned and operated by Montana's Department of Natural Resources and Conservation (DNRC), only Painted Rocks boasts a historic three-way public/private partnership agreement between the DNRC, Montana Fish, Wildlife and Parks (FWP) and the Painted Rocks Water Users Association (PRWUA). The PRR agreement calls for the taking of water collaboratively and using it for public and private purposes.

“It's the DNRC's responsibility to insure the reservoir is filled and operated safely and that water is available for delivery to contract holders when they request it,” notes DNRC's reservoir manager, Larry Schock.

Historically, this just wasn't done. Examples of dedicating large amounts of stored water in perpetuity to benefit a public use like cooling instream flows to aid fish are scarce. Traditionally, farmers and ranchers hold water rights that have short-term negotiable leases. As a result, water stored in reservoirs is seldom avail-

able for non-irrigators to buy. Without an agreement in place to secure water flow from Painted Rocks Reservoir, anglers would not be able to enjoy the Bitterroot River through many drought seasons.

able for non-irrigators to buy.

But, under the PRR pact, 25,000 acre-feet of water is marketed (sold as shares) from the reservoir to FWP and to the PRWUA annually. Of the 25,000 acre-feet, 15,000 acre-feet goes to FWP in perpetuity, a major distinction within the agreement. Ten thousand acre-feet is earmarked to PRWUA contract holders primarily for irrigating hay, corn, and potatoes in the Bitterroot Valley.

In many respects, it took the near dewatering of the Bitterroot River in the early 1980s when there was no water management plan in play to mobilize key stakeholders into action. As a result of that drawdown, the public/private sector saw the need to address four key contributing factors—demand for more water; increased pressures from expanding populations; burgeoning economic growth; and, dramatic climate shifts.

To that end, a closer look at how the agreement was created, what obstacles were overcome, and how it is working today, could provide clues on ways to create strategies to manage water comprehensively, rather than individually, and in a way that recognizes both the public and private aspects of the resource. Thus, as is the case in most storytelling, the past informs the present.

Forging an Agreement

In 1979, Victor, Montana resident, Andy Carlson, was a member of the Ravalli Fish and Wildlife Sportsman Club, and chair of its Fish Committee. As he describes it, he found a letter in the club's files that was tucked away gathering dust.

"To everyone's surprise," notes Carlson, "The letter stated that in the 1950s, the Montana Department of Natural Resources and Conservation had paid for 5,000 acre feet of water from Painted Rocks Reservoir to aid instream flows for fish."

Prior to his discovery of the letter, Carlson says the water was unclaimed and no one wanted it. Using the 5,000 acre-feet to get his "foot in the door," Carlson says he approached the Northwest Power Planning Council that had oversight over the Bonneville Power Administration (BPA).

"In the process, I discovered an obscure clause that charged the BPA with mitigating fishery losses in tributaries of the upper Columbia River Basin." Carlson states that the Bitterroot watershed qualified and in 1984, the BPA agreed to purchase an additional 10,000 acre feet of

BOTH BY MONTANA FISH, WILDLIFE AND PARKS



When the lower Bitterroot River was nearly devoid of water at the Bell Crossing access during the summer droughts of 1987 (top) and 1988 (bottom), stakeholders convened and formed a water allocation plan that recognized both the private and public value of the resource, and the need to protect the river's wild brown, cutthroat, and rainbow (below) trout populations.

water from the DNRC to add to the previous 5,000, bringing the total available to 15,000 acre-feet, where it remains today.

FWP funneled the BPA's mitigation dollars after the agency agreed to oversee

and manage the water. As a result of his stewardship, Carlson gets credit from many locals as the primary force behind early efforts to create minimum instream flows to preserve wild trout populations in the West Fork and Bitterroot Rivers.



BEN ROMANS

Overcoming Obstacles

No one questioned that obtaining the additional 10,000 acre feet of water was a victory for the Bitterroot resource. However, all parties soon realized it was only the first step. Because the DNRC owned the reservoir and sold stored water on contract, FWP would still have to negotiate each year, just like private irrigators, to purchase water. According to Trout Unlimited's (TU) Stan Bradshaw, who at the time was FWP's chief counsel, the annual bargaining was tedious at best with both agencies expressing dissatisfaction with each other.

"We needed to write a longer term



At full capacity, Painted Rocks Reservoir (top) can hold 45,000 acre feet of water, and because of the agreement in place, managers portion it out through a 143-foot high dam (bottom) throughout the year for both agricultural purposes and to add cool instream flows that help the Bitterroot's wild trout during years of low flows or high water temperatures.

agreement that would grant FWP more room to negotiate." Bradshaw says that in 1992, "Both agencies left their egos outside of the negotiating room long enough" to produce a 12-year pact.

Cornerstones of the contract were two-fold—create the position of Bitterroot River Water Commissioner to track water releases from the reservoir into the West Fork and main stem of the Bitterroot, when called for by contract partners, all the way to Bell Crossing, and try to maintain stream flows of 400 cubic feet per second (cfs) at Bell Crossing. FWP's senior Biologist Chris Clancy explains that Bell Crossing is below all of the five major headgates on the mainstem of the Bitterroot that divert water to farms and ranches.

"If we can maintain flows of 400 cfs at Bell Crossing, mid July into September, we are usually in good shape."

Fast forward to 2004. With the agree-

ment set to expire, and with FWP and DNRC at loggerheads once again, Montana's TU came to the table in an 11th hour attempt to save the accord from complete collapse.

"We faced seemingly insurmountable differences between the two state agencies when we were asked to mediate," states Laura Ziemer, TU's Senior Council and Water Policy Advisor. Ziemer attributes "trust and money" as game changers that led to successfully setting aside FWP's 10,000 acre-feet of water in perpetuity, thus taking it off the table in any future negotiations.

"The trust the agencies placed in TU to craft solutions, to bridge opposing views and to think beyond both agencies normal range of actions allowed us to complete the landmark agreement."

Ziemer, with help from the BPA's Columbia Basin Water Transaction Program, was also successful in raising \$400,000 to

help fund future repairs on the reservoir.

"Everyone knew that down the pike the reservoir would need rehabilitation. Our premise was simple—we will give you money now to invest in the state's trust account so you have the money later when repairs would be needed."

Additionally, FWP added \$1.1 million to the pot to help offset water storage and distribution costs.

Changing Climates

From Washington State to Wyoming, from California to Colorado, changing climates are the elephant in the room impacting water storage and distribution. Rising temperatures are leading to reduced snowpack and earlier snowmelt. These trends are disrupting the timing and availability of water supplies.

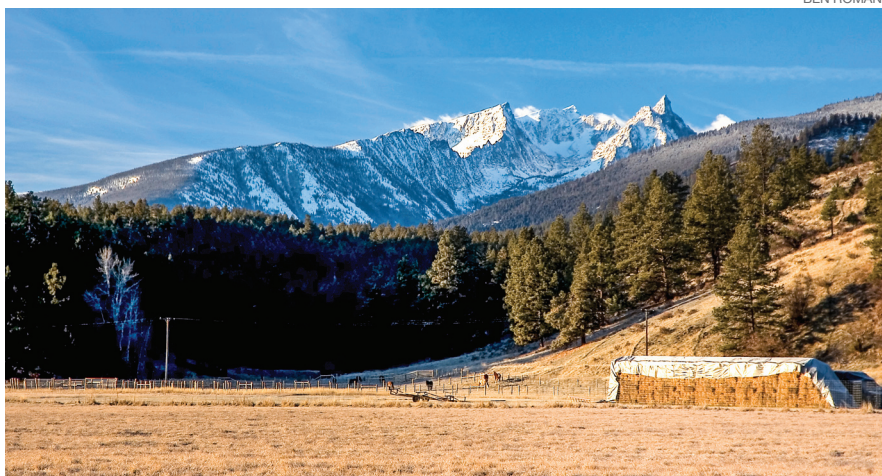
In 2016, an unusual hot and dry April took the Bitterroot Valley by surprise. Daytime water temperatures reached into the upper 70s. The results put irrigators and anglers on edge. Almost overnight, a normal winter snowpack was severely diminished.

"It looked bad," stated FWP's Clancy. "2016 appeared to be the most serious water shortage in many years, even worse than 2015. We knew we would have to drop the target of 400 cfs at Bell Crossing." Clancy says both summers were tough on fish. "We saw some mortality in westslope Cutthroat. They can't handle water temperatures that rise toward 70."

Ideally, in a normal water year, Bitterroot Water Commissioner Al Pernicele would release FWP's water first, in increments up to 125 cfs over a 60-day period, mid July to September. Then in August, Pernicele would begin releasing irrigator's water to fill ditches and canals within the valley. But lately, Mother Nature has been anything but normal.

"What I notice," says Pernicele, "Is that a lot of the runoff is starting to melt as early as February." Pernicele credits the irrigators for supporting their end of the PRR agreement. He says the law allows them to take all of their water out at once if they want to. But he points out that they are willing to keep their head gates closed in low water years even when it might be their water floating by. JR Eyeman, President of the PRWUA, is adamant the partnership works. "No

Since the agreement, many Bitterroot Valley landowners that use irrigation water from Painted Rocks for things like hay production (right) have gone so far as to keep headgates closed in lean years to help protect the resource.



one wants to see the resource destroyed. It's pretty simple. Water is a finite resource. We have 25,000 acre feet between us. We have agreed to share it. If we don't manage it together we're screwed."

The Road Ahead

Across the West, government and non-profits working together have concluded the efficient use of water, for both economic and environmental purposes, requires an ability to adjust water use to changing conditions.

In Washington State, TU is spearheading efforts to build new infrastructure that diverts water from mountain reservoirs to prevent creeks from running dry. In Colorado, The Elkhead Reservoir has in place a perpetual easement of 5,000 acre feet of water for in-river fish habitat as part of the Upper Colorado River Endangered Fish Recovery Program.

Central to these efforts and many others too numerous to mention for this column, is the question: How can we better manage water as a public commodity to meet the needs of the economy and the environment?

As the Painted Rocks Reservoir narrative demonstrates, creating a balance between diverse, competing uses will require an ability to adapt to changing climate conditions and to adjust the way we use

water. Collaboration, communication, and flexibility will be essential to accomplish this balance in the face of demographic, economic, and environmental changes.

Michael Hamilton writes for outdoor and travel publications. He is a former award winning broadcast journalist and lives in Seattle with his wife Pam, and their two cats, Cooper and Mini Cooper.

IF YOU'RE THE GUY THAT HAS TO HAVE THE LATEST OF EVERYTHING, YOU'RE IN LUCK – THIS IS IT.

INTRODUCING
SOLE

AN ENTIRELY NEW PATH TO ONE-PIECE PERFORMANCE.

There's never been a better excuse to add a new fly rod (or two) to your casting arsenal than today. Introducing the SOLE Fly series from St. Croix. Designed and engineered to provide the closest thing to one-piece performance in a fly rod, the SOLE is based on a single, slim ferrule concept with its location just 28" from the tip. The result is a rod that casts with remarkable accuracy at all ranges – long, short and everything in between. Incredible engineering. Unwavering craftsmanship. You won't just be on the cutting edge of new technology – you will love what it provides when you get there. WWW.STCROIXRODS.COM

ST. CROIX RODS
BEST RODS ON EARTH

SOLE FLY

IGAST 2016
New Product Showcase WINNER
BEST FLY ROD

©2017 ST. CROIX RODS

MADE IN USA
ST. CROIX