

# Private Water Leasing *A Montana Approach*

A report on the 10-year history  
of a unique Montana program



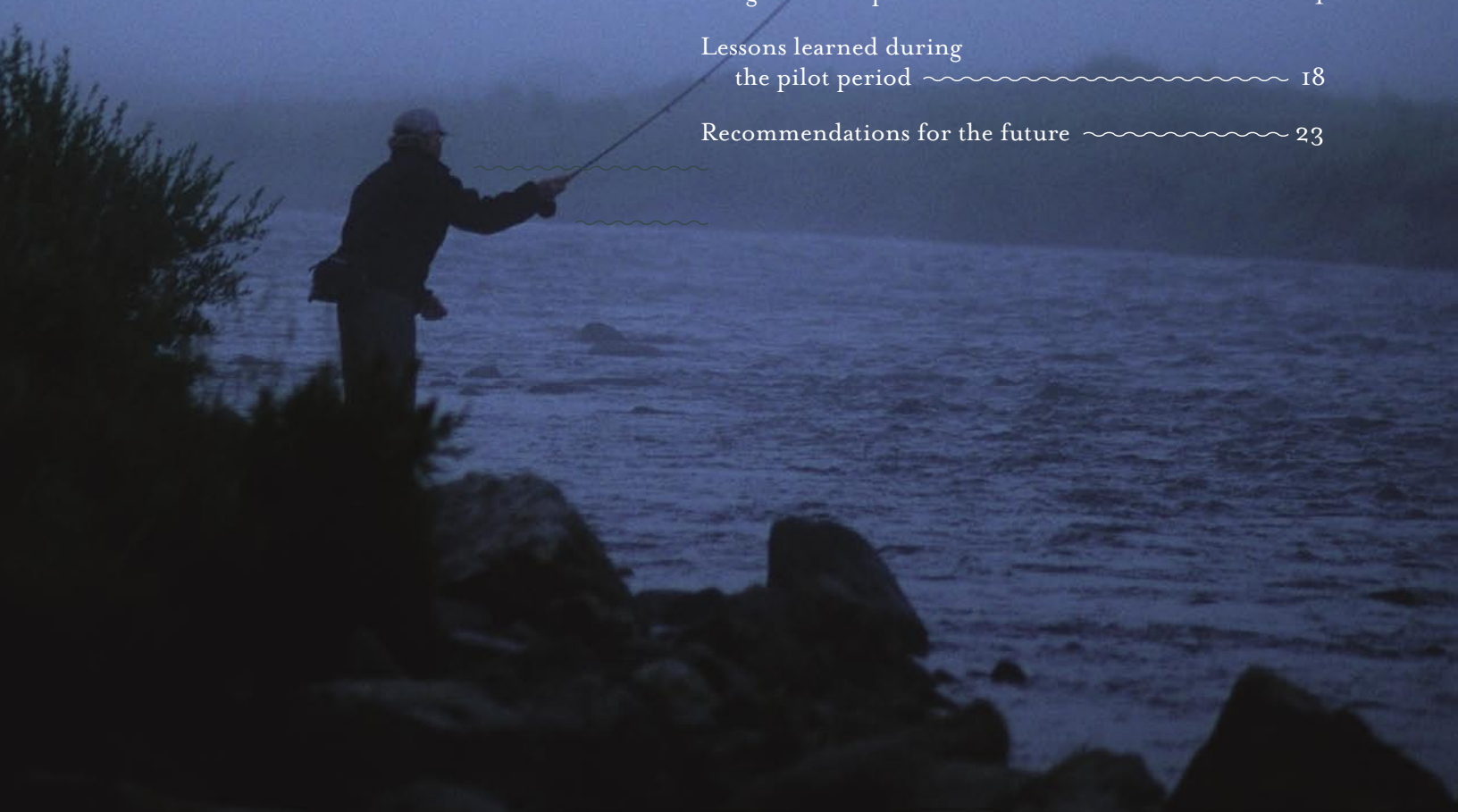
# Executive Summary

Montana is known worldwide for its trout fisheries. Yet, Montana's trout streams are suffering. Competing uses for water, restrictive water laws, and prolonged droughts over the past two decades have all served to put stress on the habitat trout depend on, in spite of efforts through the Montana wild trout program to help the fish survive. In 1995, after years of rigorous debate, the Montana Legislature, with the assistance of conservation and agricultural groups, came up with a concept designed to help address the problem. A unique, Montana-style approach, the idea is known as private water leasing. Under the program, conservationists and water right holders work together to develop a lease that improves stream flows for trout while benefiting the farming or ranching operation and protecting all private water rights.

A ten-year pilot program that the 2005 legislature will consider renewing, the water leasing program has been an unqualified success. Streamflows have been restored and fisheries enhanced in several of Montana's most storied trout rivers, including the Blackfoot, Madison, Jefferson and Yellowstone. Equally significant, because of the careful way the program was designed, during its 10-year trial period there have been no adverse effects on other water users in the drainages where leases have been approved.

## Table of Contents

A Montana solution ~~~~~	6
Map of Private to Instream Uses ~~~~~	10
Benefits to fisheries and agricultural producers ~~~~~	14
Lessons learned during the pilot period ~~~~~	18
Recommendations for the future ~~~~~	23



# Foreword



**T**rount Unlimited is pleased to produce this analysis of the ten-year history of the private water leasing program: *Private Water Leasing—A Montana Approach*. It is a critical time for this program. In June of 2005, this program expires unless the Montana Legislature renews it. Trout Unlimited has produced this report to share our positive experience with water leasing over the past ten years. Our experience is that water leasing benefits trout and agricultural producers alike. This report considers lessons learned from the pilot program and describes opportunities that private water leasing holds for the future.

When the Montana Legislature passed the water leasing statute, opponents argued that it would accelerate an end to traditional agriculture in Montana and lead to out-of-state water speculators staking Montana's water. Not only have these dire predictions not come true, but the water leasing statute has allowed unprecedented cooperation between agricultural and conservation interests, who are working together to find flexible, commonsense ways to benefit agriculture and fisheries. We hope that you enjoy this piece, and come away with the sense—as we do—that private water leasing should continue in Montana as a good idea that builds bridges between agricultural production and healthy streams.



Laura Ziemer and Stan Bradshaw. Photo by Anne Sherwood.

Stan Bradshaw

*“The water leasing statute has allowed unprecedented cooperation between agricultural and conservation interests, who are working together to find flexible, commonsense ways to benefit agriculture and fisheries.”*

# The Challenge



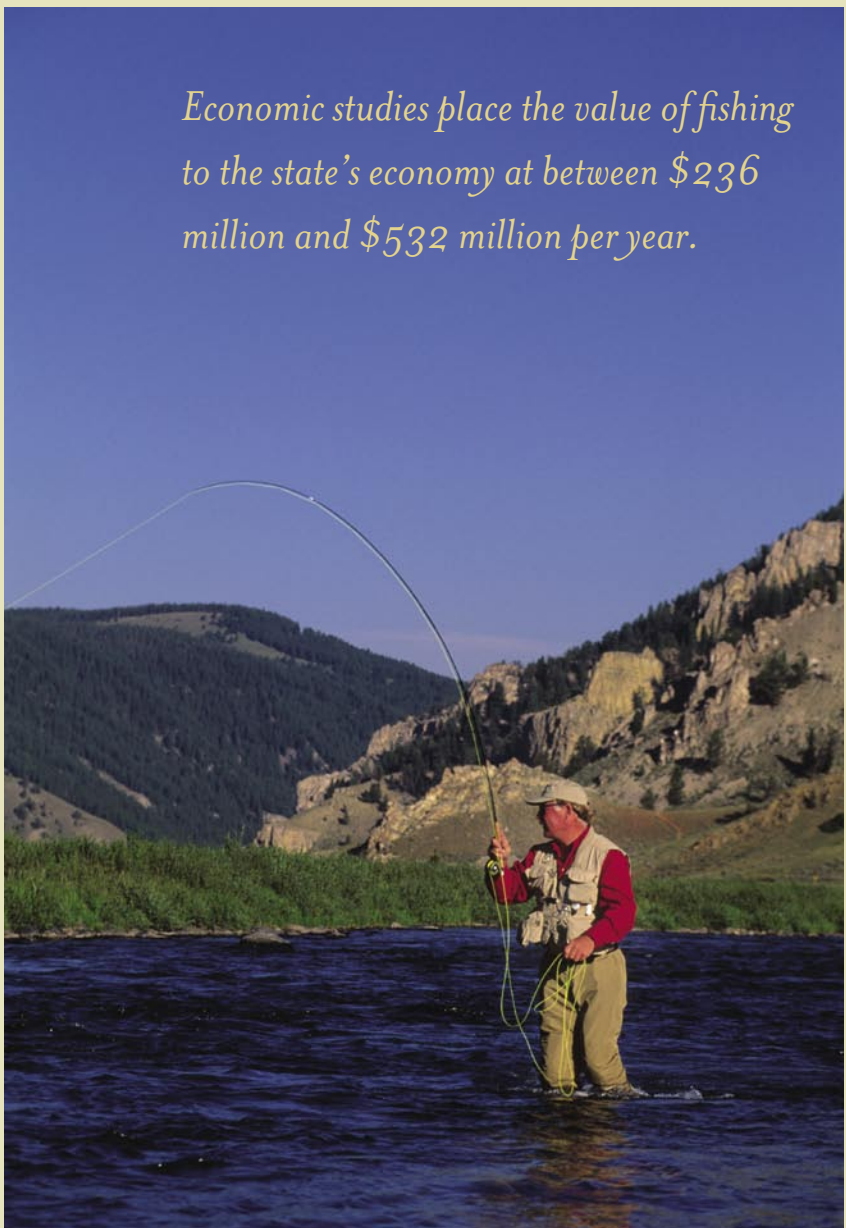
Montana's rivers have a global reputation. The Blackfoot, the Missouri, the Yellowstone, the Madison, the Bitterroot, and others are waters that have come to define wild trout fishing throughout the world. One only need to look at the number of nonresident fishing licenses purchased each year in the state—at or near 200,000 in most of the last decade—to see the impact of this reputation. Economic studies place the value of fishing to the state's economy at between \$236 and \$532 million per year.

Montana is also unique for its management of its streams and rivers. Since the inception of its wild trout program in the 1970s, the state has been a leader in maintaining and restoring trout habitat. But fish require water to survive. Unfortunately, over the past two decades, with repeated and extended drought and

burgeoning population growth in many parts of the state, Montana has faced substantial challenges in keeping water in its rivers. Sections of streams have dried up, stranding migrating trout and harming spawning redds.

Century-old water laws have complicated the challenge of protecting and enhancing flows in the state's rivers and streams. Conceived when Montana was in its infancy, our water laws were designed to encourage diverting water from streams for "beneficial" purposes—at that time, primarily mining and agriculture. The system of water rights evolved so that those who first settled and developed the state were given a priority water right—their water needs had to be met first before others could have their needs satisfied. Compounding the problem for the fish and the rivers was the fact that a water rights holder who chooses not to divert his or her water would forfeit his or her water rights. This "use it or lose it" tenet actively discourages leaving water instream. (See "First in Time, First in Right" on facing page.)

Fish in net photo by Brian O'Keefe.



Gallatin River. Photo by Anne Sherwood.

## First in time... first in right.

Like most of the western United States, Montana operates under what is known as the doctrine of “prior appropriation.” Under this legal doctrine, those with water rights with the earliest dates—some going as far back to the 1800s—have the right to have their water needs fulfilled before the needs of water right holders with later dates are met. This means that in a year when there is not enough water in a stream to satisfy all water rights, the early water right holders get water, the later rights don’t. The law was created to help assure the development of the state by guaranteeing water to those who first settled here.

The doctrine has often complicated efforts to protect fisheries. On many rivers, the state has granted far more water rights than there is water in dry or even normal water years. In addition, the “use it or lose it” rule is hostile to water conservation and contributes to dry streams across the West. The “use it or lose it” rule means that if you don’t use your water right by diverting water from the stream, you lose your water right. Water leasing solves this problem by recognizing a valid water right where the water is purposefully left in the stream for a fishery benefit.



*Broken O Ranch near the Sun River. Photo by Doug O’looney.*

Beginning in 1969, the Montana Legislature first enacted laws that specifically allowed water rights to be used to protect fish in the stream. While the changes the legislature made were limited, legislators nonetheless recognized that the enhancement of fisheries was also a valuable use of water. However, because of the priority water system, the modifications to the law had only a small effect, especially in dry years when irrigators who had older water rights could literally dry up a stream by exercising their water rights to take all of the streamflow.

It became apparent to many in Montana that additional legal tools were needed to protect the state’s rivers and streams, especially during drought—tools that would leave water in the stream when needed most by trout, yet were flexible enough to meet the needs of irrigators while respecting the state’s tradition of prioritizing water rights. One new tool would be the ability to purchase or lease irrigation water rights, and then put that water back instream, on a willing-buyer, willing-seller basis. Hardly a new idea—the Montana Supreme Court recognized the right to sell water rights as early as 1895—the concept began to gain traction as state policy makers saw it as a fair, workable approach to solving the dilemma faced by the state’s fisheries, and the growing recreational economy that depended upon those fisheries.



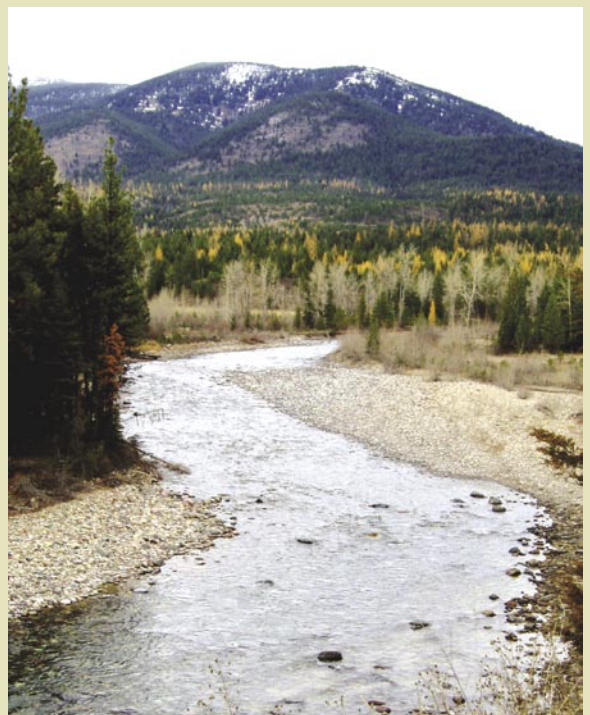
*Blackfoot River above Scotty Brown fishing access.  
Photo by Stan Bradshaw.*

## A Montana Solution



**I**n 1989, Trout Unlimited, along with the Montana Department of Fish, Wildlife, and Parks (FWP) and several conservation and sportsmen's groups, proposed legislation that would allow water right holders to convey their water to other parties to be used to maintain the health of a fishery, without losing the original priority date of the water right. Designed to protect both the state's fisheries and water right holders, especially those in the agricultural community, the proposal became known as water-leasing.

The legislative debate over the proposal was long and at times heated. While many viewed water leasing as a cooperative, market-based approach to providing more water for fisheries, some saw it as an erosion to the state's long tradition of carefully protecting the interests of water users. In spite of those concerns, the legislature in 1989 passed a leasing pilot project that allowed FWP to lease water rights on four streams. In the 1991 legislative session, the legislature expanded the pilot period to ten years and increased the number of streams on which the agency could seek leases. In the first ten years of the program, from 1989 to 1999, FWP completed ten leases of water rights for instream flow. In 1999, its leasing program was renewed for an additional ten years.



*Right: North Fork of Blackfoot River  
above Weaver Diversion. Photo by Stan  
Bradshaw. Photos of John and Irene  
Weaver, facing page, by Stan Bradshaw.*

## Lease Improves Flows on Critical Section of the North Fork of the Blackfoot River

An innovative water lease has helped to keep water running on a section of the North Fork of the Blackfoot River critical to the continued survival of imperiled native bull trout and cutthroat trout.

The lease, which was negotiated between Trout Unlimited and John and Irene Weaver, will leave as much as 18.5 cubic feet of water per second in a portion of the river that, in the past, has suffered from dewatering.

As part of the agreement, TU substituted the Weaver's irrigation canal with a pump and pipes and a more efficient center-pivot irrigation system. The new equipment will replace nearly two miles of irrigation canal that has leaked as much as 65 percent of the water diverted from the river. In addition, because the Weavers relied on the ditch to water stock, the agreement included the installation of a solar powered stock-watering well.

For the Weavers, the lease represents a reduction in labor and a more reliable system. "Every year, it took us four to five days of dang tough work to clean that ditch. And even then we couldn't always get water down it," said John. "I've wanted to get off that ditch for years. Because of the financial help of this lease, I finally got it done."

Irene notes that without TU's help, it might never have happened. "Even if we could have afforded to do this change by ourselves, I don't think we could even have gotten to first base on changing our point of diversion if it hadn't been for Trout Unlimited," said Irene.

*"Every year, it took us four to five days of dang tough work to clean that ditch. And even then we couldn't always get water down it."*

*~ John Weaver*



In 2001, the drought and diversions from several large irrigation ditches dewatered this section of the North Fork of the Black River, stranding migrating bull trout in pools before they could reach the Blackfoot River. The Department of Fish, Wildlife, and Parks was forced to net and transport the trapped bull trout to the main river. The Weaver-TU lease will leave water in that portion of the North Fork.

"This agreement is a valuable first step in our efforts to improve critical stream flows on the North Fork, and it underscores the value of cooperation. The Weavers now have a more efficient, less labor-intensive irrigation system and we will have moved a step closer toward securing the North Fork as one of the West's premier bull trout habitats," said TU's Stan Bradshaw, the attorney who negotiated the agreement.



*"Even if we could have afforded to do this change by ourselves, I don't think we could even have gotten to first base on changing our point of diversion if it hadn't been for Trout Unlimited."*

*~ Irene Weaver*

# The Private Option



In the early 1990s, conservation groups also began to work with various interests in the state to further expand the leasing concept to allow for fishery water leases between water right holders and individuals and organizations other than FWP. The idea behind this approach was to expand the potential for leases and thus the number of fisheries that would be protected and enhanced. It was also designed as a tool to encourage some water right holders who felt uncomfortable leasing their water to a government entity like the state, to consider participating in the leasing program by leasing to a non-profit group like Trout Unlimited.

In 1991, legislation was introduced in the Montana Legislature to allow the holders of a water right to sell, lease, or donate their water rights to anyone on a willing-buyer, willing-seller basis. As was the case with the legislative proposal to allow leasing with FWP, the debate was fierce—at times hearing rooms overflowed with people who wanted to testify. Some were concerned that allowing leasing to improve stream flows would reduce return flows from irrigation. Others feared that leases would allow water to flow out of state.

In the 1991 and 1993 legislative sessions, the proposal was intensely debated but not approved by the legislature. However, by 1995 two things occurred to break the impasse. First, the Upper Clark Fork River Steering Committee, as part of a four-year planning effort designed to improve flows through locally based, cooperative water management, proposed a pilot instream leasing program that would give water right holders two options: they could lease their water to private groups or individuals for instream use; or they could simply convert their rights to an instream use without a lease. To accomplish such a conversion, a water rights holder



*Lower Hyalite Creek, often called "Middle Creek," has been dry in many years during the late summer months. A tributary to the Gallatin River, Gallatin valley irrigators and Trout Unlimited are thinking about ways to keep water in the creek. Photo by Laura Ziemer.*





would simply apply to the state permitting agency, the Department of Natural Resources and Conservation (DNRC), to change the use of their water right from a consumptive use (such as irrigation) to an instream use.

The second event was a cooperative effort by the conservation and agricultural communities to develop a private leasing option that was workable for both interests. Trout Unlimited, the Montana Stockgrowers Association, the Montana Wildlife Federation, the Montana Farm Bureau Federation, the Montana Association of Conservation Districts, and the Montana Water Resources Association worked together to craft legislation that allowed water users to either lease their water rights to private parties or to convert them to instream use without a lease.

As a result of these two efforts, dual measures proposing private leasing projects were introduced into the 1995 session of the Montana Legislature. The first allowed for private water leases in the Upper Clark Fork Basin. The second permitted instream leases to be privately held statewide. Similar bills except for their geographic scope, both measures authorized the leasing program for ten years, until 2005. Unlike previous legislative sessions where the debates were marked by acrimony, both bills easily passed the legislature and the governor signed them into law.

In 1999, the Montana Legislature affirmed the private water leasing program. The legislature extended the allowable lease term to 30 years if the instream flow right was made possible through improved irrigation efficiency. This legislative amendment to the water leasing program was approved with hardly a dissenting vote. Now both programs sunset on June 30, 2005, and the legislature will have to reauthorize them in the 2005 legislative session in order for the programs to continue.

*Geoff Moser measures flows for a water lease on Squaw Creek, a tributary to the Madison River. (See "Madison River Fishery Benefits from Lease" on page 19). Hydrographers like Mr. Moser (people who measure streamflows) record flows in "cubic feet per second," or "cfs." One cubic foot per second of water equals 448.8 gallons per minute. The spring flows pictured here on Squaw Creek are approximately 74.4 cfs. Photo by Laura Ziemer.*

*The Montana Legislature will have to reauthorize the water leasing program in 2005 in order for the program to continue.*

# How private leasing works



**B**oth the Upper Clark Fork River Basin and statewide leasing pilot programs are similar in how they operate. They allow leasing consumptive-use water rights (typically agricultural irrigation rights) in order to improve stream flows. Water right holders can also convert their water right to instream flows without entering into a lease with anyone, by changing the use of their water right to an instream use with the DNRC. Leases and private conversions can run for up to ten years with a possibility of renewal.

The private water leasing statute includes a number of elements to assure that the water rights of those not participating in a lease are protected. The applicant for a private lease must identify the length of stream to be protected, and must also prove to the DNRC that the rights of other water users will not be adversely affected. In addition, other water right holders are allowed to object to the lease even after the DNRC has approved it, which means that if another water rights holder did not anticipate an adverse effect there is a chance to raise that concern after the water lease is in place. When the lease expires, to renew it the participants must go through a completely new application process.

There are four stages to acquiring an instream flow lease. In most cases, Trout Unlimited identifies a stream in which flows are a limiting factor to fish, and spends time to understand how water use from the stream is affecting the stream flows. Second, Trout Unlimited must negotiate a water lease with a willing water rights holder. Third, the landowner (with Trout Unlimited's help) applies to the DNRC for the approval of a change to an instream use for all or part of the leased water right.

Finally, the DNRC reviews the water right and proposed changes, and either approves or denies the proposed lease. Experience has shown that this process takes anywhere from one to four years, with the average lease going from initial expression of interest from a landowner to DNRC approval in roughly two years. Although there is quite a bit of variability among DNRC offices, it generally takes about a year for the DNRC to process the proposed change in use.

Few conflicts have arisen over proposed leases. This is in part due to the requirement in both the private and the Upper Clark Fork leasing pilot programs that applicants must show that a proposed change won't have any adverse effect on downstream water rights holders. Because the person or entity applying to DNRC for a lease has the burden of showing that there will be no adverse effect, transactions where there is a potential for conflict get screened out before an application gets filed. The fact that no objections have occurred after a lease has been in place shows that both programs are working as intended.



*Poorman Creek near the confluence near the bottom of the protected reach. Photo by Stan Bradshaw.*

## Irrigator Helps to Restore Habitat on Poorman Creek

The upper reaches of Poorman Creek are home to native westslope cutthroat trout and, occasionally, bull trout. But just before the creek enters the Blackfoot River near Lincoln, it becomes a losing reach—water seeps out of the streambed and into the ground water. In severe drought years, the lower mile of the creek has been known to dry up completely.

Historically, the tendency of the lower creek to be dewatered has been aggravated by a cattle and hay operation that diverted water through leaky ditches and grazed cattle along the stream. Despite these problems, Poorman Creek shows great promise as spawning and rearing habitat for bull trout and westslope cutthroat trout, as long as the fish have a way to traverse through the section that was chronically dewatered.

In 2003, Eddie Grantier, the rancher on the lower end entered into a cooperative agreement with the Big Blackfoot Chapter of Trout Unlimited, the U.S. Fish and Wildlife Service, the Montana Department of Fish, Wildlife and Parks (FWP), and the Natural Resources Conservation Service. These groups provided funding to replace his ditches with a pump and pipe and to institute a grazing management program to help the creek bed recover from the impacts of grazing. In return, Eddie provided labor for part of the restoration work and agreed to dedicate the “saved” water to help support fish in Poorman Creek. Although he decided not to lease the in-stream right and instead just converted a portion of his irrigation right to instream flows, Trout Unlimited assisted him with the preparation of the application and helps to monitor flows on the creek.

For Eddie’s part, the arrangement offers him a good deal. “I’ve always believed in trying to conserve water, but I also have to balance that against keeping my operation going,” he said. “This agreement has provided me with a chance to make some improvements to my operation, and hopefully save me money in the long run. Without the ability to work with TU, FWP, and the other groups to convert part of my water right and leave it instream, I don’t think I’d have pulled this off.”

As a result of the improvements, instead of diverting up to 18 cfs, Eddie now only needs to divert 3.3 cfs to adequately irrigate his crop. The fish benefit from the difference. While there will be years when lower Poorman still dewater during critical migration periods, Eddie’s project means it will happen less often, providing more spawning and rearing habitat for trout than they had before.

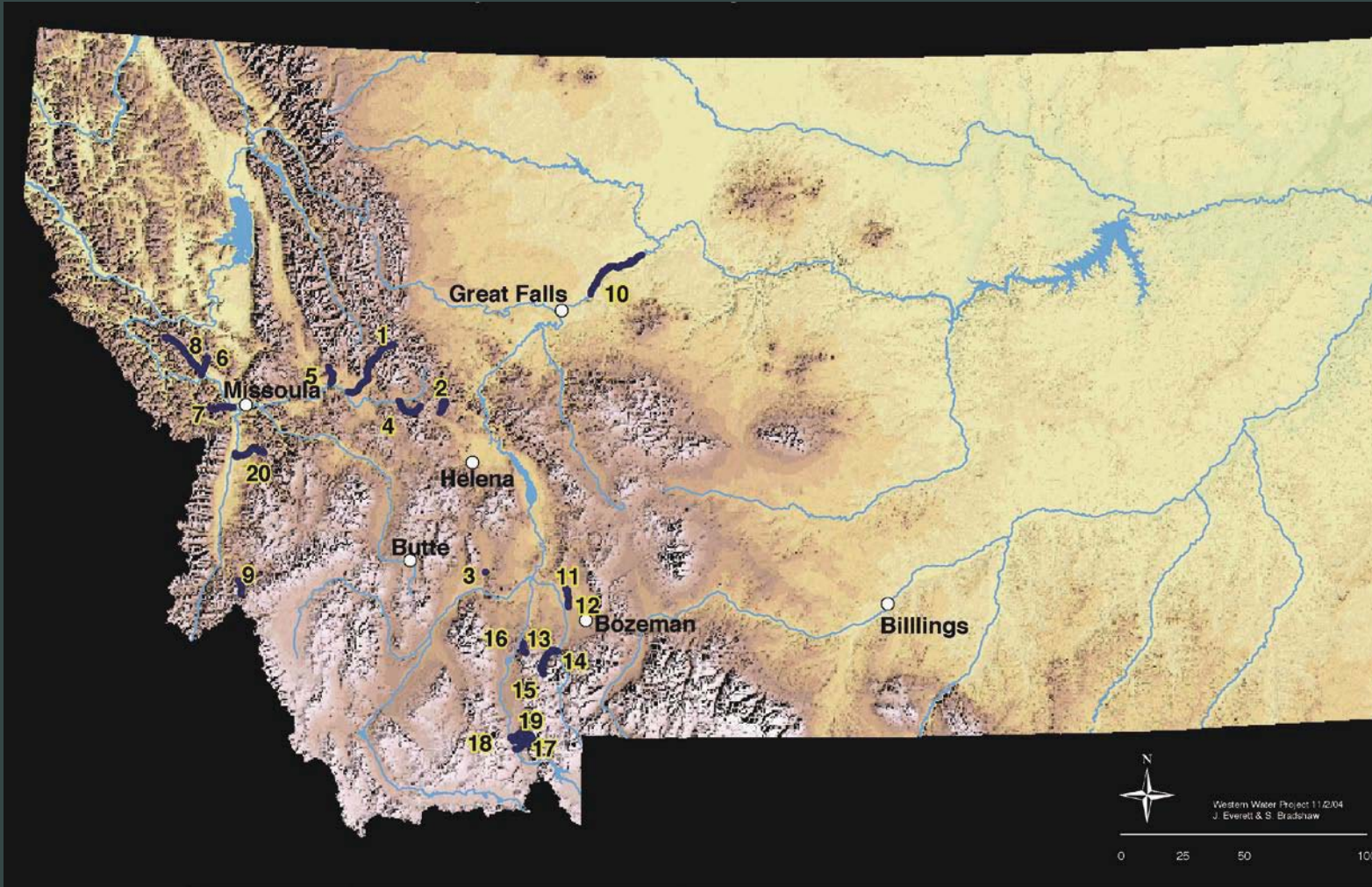
*“This agreement has provided me with a chance to make some improvements to my operation, and hopefully save me money in the long run.”*

*~ Eddie Grantier*

*Eddie Grantier. Photo by Stan Bradshaw.*



# Map of Private to Instream Uses



Montana's private leasing law requires lessees to monitor stream flows on streams protected by a lease. TU's volunteer hydrographers devote considerable time to training with experts like retired USGS hydrologist Ron Shields (left). Also pictured are volunteers Bob Ritter and Geoff Moser. Photo by Mike Clark.

## Private Lease And Conversions 1995 - 2005

	Source	Conversion (c) or Lease (l)	Lessee	Lease	Expiration Date	Priority Date(s)	Quantity (Flow, cfs)
<b>1</b>	NF Blackfoot River	l	TU	30 Years	4/12/34	11/20/10	18.45 (salvage)
<b>2</b>	Sawmill and Mill Creek	c	n/a	5 Years	12/31/06	4/1/08 3/26/1890 7/15/01	3.47
<b>3</b>	Boulder River	c	n/a	10 Years	8/1/18	10/24/79	3.5
<b>4</b>	Poorman Creek (Blackfoot Drainage)	c	n/a	15 Years	11/2/18	7/22/1889	15.11 (salvage)
<b>5</b>	Cottonwood Creek (Blackfoot Drainage)	c	n/a	10 Years	6/30/05	5/1/1884	Spring 14-37 Summer 6-32 Fall 6-8
<b>6</b>	Rock Creek (Nine Mile Drainage)	l	TU	8 Years	6/20/05	8/25/1894	1.28
<b>7</b>	O'Brien Creek	l	MWT	10 Years	5/24/14	12/31/1891	3.625
<b>8</b>	Nine Mile Creek	l	MWT	10 Years	5/25/14	6/20/31	0.2
<b>9</b>	Camp Creek	c	n/a	10 Years	4/30/12	3/21/1888	2.4
<b>10</b>	Missouri River	c	n/a	10 Years	10/15/13	6/16/77	2.2
<b>11</b>	Story Creek	c	n/a	10 Years	10/8/12	6/1/1869	2.1
<b>12</b>	Story Creek	c	n/a	10 Years	10/8/12	6/1/1869	1.16
<b>13</b>	SF Spanish Creek	c	n/a	10 Years	10/25/10	7/10/1888	1.13
<b>14</b>	Spanish Creek	c	n/a	10 Years	10/3/11	6/1/10 5/1/1881	0.28 2.35
<b>15</b>	SF Spanish Creek	c	n/a	10 Years	10/3/11	6/1/10 7/1/1889 5/1/02	23.39 1.65 6.55
<b>16</b>	Cherry Creek	c	n/a	10 Years	10/3/11	5/1/43	2.5
<b>17</b>	Moose Creek (Madison Drainage)	l	TU	10 Years	8/20/11	8/3/1886	37.5
<b>18</b>	Squaw Creek (Madison Drainage)	l	TU	10 Years	8/20/11	6/30/1886	81.46
<b>19</b>	Wolf Creek	l	TU	10 Years	8/20/11	8/20/1886	25 cfs
<b>20</b>	Three Mile Creek	l	n/a	10 Years	10/5/14	4/1/38	0.19 cfs



# Benefits for fisheries and agricultural producers



Since 1995, there have been 20 leases or changes approved statewide under the terms of the private leasing pilot programs. Of those, eight have been leases to another party, and 12 have been conversions in which the water right holder simply initiated the change process on their own. The first lease occurred in 1997, when the Westslope Chapter of Trout Unlimited leased a water right on a tributary of Nine Mile Creek in the Clark Fork drainage. Currently, there are two other lease applications pending.

These leases have improved trout fisheries in some of Montana's most well-known rivers and streams. (See "Stream Flows and Trout" on facing page.) The Blackfoot, the Missouri, the Clark Fork, the Madison, and the Yellowstone, to name a few, have benefited from the leasing program. Other lesser-known streams, like Rock Creek and Cold Spring Creek also have had their fisheries improved. Leasing has also allowed landowners to tackle much more ambitious habitat restoration projects. In one case, on Fridley Creek, a tributary to the Yellowstone River that had been severed from the main river for 70 years was reconnected, providing vital spawning access for native Yellowstone cutthroat and rainbow trout. In order to protect that reconnection, an irrigator on the tributary is converting part of his irrigation right to a fisheries flow. (See "Tributary is Reconnected to the Yellowstone" on page 17.)

*Photo by Anne Sherwood.*



*Throughout Montana, trout returning from their spawning beds are trapped in a tributary or are unable to even enter the tributary due to low flows.*



Photo by Chris Eaton.

## Stream flows and trout

Due to their need for cold, clean water, trout are extremely sensitive to increased water temperatures, poor water quality, and degraded habitat often caused by fluctuating stream flows. Fish that are stressed from environmental factors are also far more vulnerable to parasites and disease, such as whirling disease. In addition, trout, including native cutthroat and bull trout, often spawn in the tributaries of larger rivers and require adequate flows to migrate, spawn, and then to return to the mainstem river.

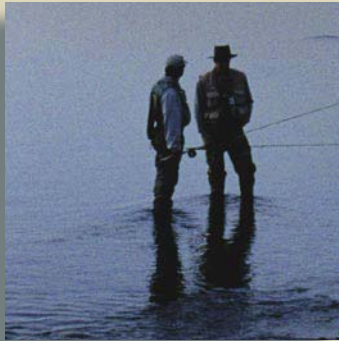
Throughout Montana, trout returning from their spawning beds are trapped in a tributary or are unable to even enter the tributary due to low flows. In drought years, these conditions are exacerbated and often extend to mainstem rivers.

Eggs and juvenile fish are also dependent on adequate flows to hatch and continue their life cycle. Thus, it's critical to assure adequate flows to keep spawning beds covered with clear, cold water.

The leases have also provided opportunities to the state's agricultural producers to improve their management flexibility to the long-term benefit of their businesses. In several cases, the program has shown that an irrigator's water needs can continue to be fully met—through the introduction of new labor-saving technologies—while at the same time a trout fishery has had its flows improved. Others have received financial benefits by signing a lease. In each case, irrigators have protected their water rights from abandonment, kept ownership of their water rights, and also put water back in streams. There have also been indirect benefits as a result of the private water-leasing pilot programs. Both conservationists and agriculturalists have discovered that they have common needs that can be addressed by working together. So too, the leasing program has shown that Montana's traditions—such as its priority water laws—can be kept intact while allowing for water to be used to protect the state's famed fisheries.

*In each case, irrigators have protected their water rights from abandonment, kept ownership of their water rights, and also put water back in streams.*

# Recommendations for the future



In ten years, the pilot private leasing program has proven itself to be an effective and workable approach in helping to restore or enhance stream flows on Montana's rivers and streams. There have been no adverse effects on other water users in the drainages where leases have been approved, largely because the safeguards in the statute soundly discourage those projects that might have adverse effects on other water rights holders. And while leasing has not become the panacea for all of the low-flow problems in the state, it nonetheless has proven itself to be a flexible tool that can provide substantial benefits where low flows are limiting fisheries. Private leases are particularly valuable as one tool in a larger cooperative watershed restoration effort.

To continue the program's effectiveness and the benefits it can bring to fisheries and agriculture alike, Trout Unlimited recommends that the Montana Legislature renew the private leasing law and make it permanent. Based on our experience in water leasing, Trout Unlimited has the following specific legislative recommendations:

*"...the cooperation that made the lease possible, signified a new chapter in Montana's water history — a history whose chapters have been better known for discord rather than cooperation."*

*~ John Youngberg,  
Montana Farm Bureau.  
Guest Editorial, "Cooperation produces landmark water lease,"  
Billings Gazette,  
October 15, 2001.*

~ Private water leasing should become a permanent part of the Montana Water Use Act.

~ For efficiency and function, the legislature should combine the two programs—private leasing and leasing in the Upper Clark Fork drainage—into one and make the requirements for instream changes consistent statewide.

~ The leasing statute should allow for permanent transfers of water rights to instream use, should an agricultural producer deem that to be in his or her best interest, thereby giving more options to the water rights owner.

~ Because the initial application process is so thorough and restrictive, the leasing statute should allow for automatic renewals of the instream use upon the expiration of the lease term, if the water rights holder asks for it.

~ The water rights holders should be allowed to renew their instream uses as many times as they would like to, rather than be limited to one or two renewals.

~ Remove the duplicative notice requirement, and instead require notice of the change application once the application is filed with the DNRC and the period for filing an objection has begun, as is done with every other change application.

Trout Unlimited strongly believes that the implementation of these recommendations would strengthen the leasing program to the benefit of fisheries and agricultural producers alike. It would secure a valuable cooperative tool for the enhancement of Montana's wild trout fishery.



## Tributary Is Reconnected to the Yellowstone

For the first time in 70 years a tributary to the Yellowstone River was reconnected with the mainstem thanks to collaboration among Murphy's Ox Yoke Ranch, Trout Unlimited, the Gallatin Valley Land Trust, the Montana Department of Fish, Wildlife, and Parks, and the Natural Resources Conservation Service. By converting part of its water right to an instream flow, the ranch is keeping flows in the North Fork of Fridley Creek even during the low-flow season. This reopens the creek to spawning and rearing for both resident fish from Fridley Creek, as well as migratory fish from the mainstem of the Yellowstone—including Yellowstone cutthroat and rainbow trout.

In the 1930's, an irrigation canal was constructed that intersected the North Fork of Fridley Creek, causing it to flow into the canal rather than the Yellowstone River. The 2004 project put the North Fork of Fridley Creek through an 80-foot culvert, under the irrigation canal, into its old channel to the Yellowstone River. To accommodate the culvert, the channel was reconstructed upstream and downstream of the canal.

"I've been wanting to do this my whole life," said Sean Murphy in June of 2004, who owns and ranches Murphy's Ox Yoke Ranch. "Three weeks and a day ago, this was dry," said Murphy of the stream channel below the irrigation canal. "It's a project that keeps us ranching. We get what we need and the fish get what they need."

The project also features a new groundwater well and two new micro-pivot sprinkler systems on Murphy's Ox Yoke Ranch to replace the water used from the creek for flood irrigation during the low-flow season. Because Fridley Creek irrigation water will be replaced with groundwater, the owners of the ranch agreed to commit the full amount of their water right from Fridley Creek to maintain healthy streamflows in lower Fridley Creek during the low-flow season.

*"It's a project that keeps us ranching. We get what we need and the fish get what they need."*

*~ Sean Murphy*



*Sean Murphy and dog Mondo beside restored section of North Fridley Creek. Photo by Laura Ziemer*

for diversion. In many other cases, when the land was removed from irrigation it was not removed from agricultural production, and it was done so as part of the owner's management decision. For example, on the Sun Ranch, the owner converted from irrigated hay production to non-irrigated pasture by reducing the size of his cow herd. In addition, the fear that land will be lost to irrigation forever once a lease occurs is unfounded because under the leasing statutes, a leased water right automatically reverts to its original use upon expiration of the lease.

~ The leasing program has not affected taxable land values. In virtually every case, the land to which the water right was attached has remained in the taxable category it was in before the lease, so the changes to instream flow have not had a measurable effect on the taxable value of the land.

## Lessons learned during the pilot period

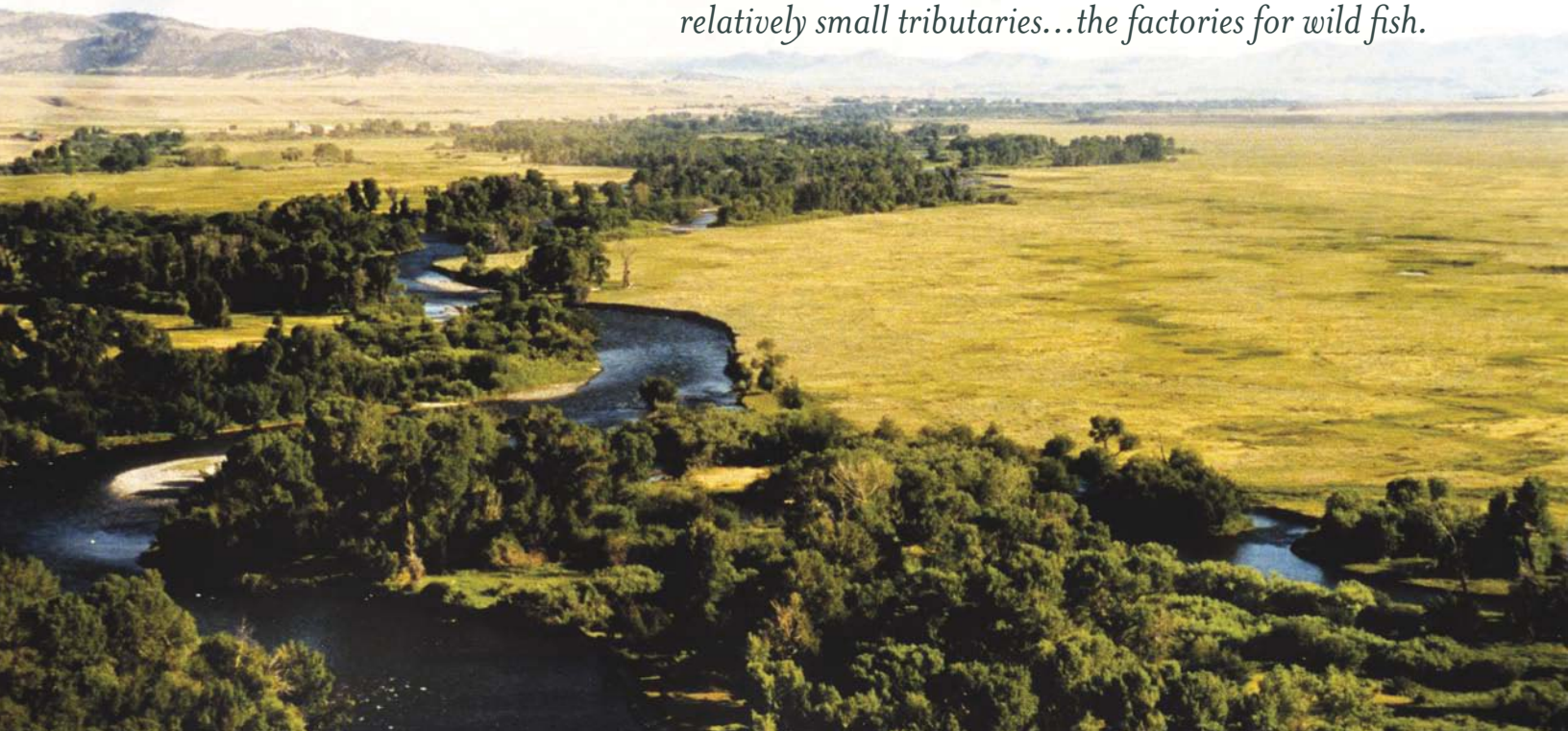


Ten years of practical experience with private water leases and conversions to instream flows has shown that while water leasing can create great results for trout habitat, it also has its limitations. Changing an existing water right to an instream use won't always re-water a stream. Water rights on a nearly dry stream can often be very complicated, making it nearly impossible to set up a workable system. Just the right combination of seniority of the water right, location of the diversion, the amount of water to be left instream, the condition of the stream itself, and the willing participation of the irrigator all have to come together to create a successful water lease.

Experience has also shown that changing a water right to instream uses for fishery purposes is most effective on tributaries, as opposed to mainstem rivers, which is why groups like Trout Unlimited and the Montana Water Trust have focused on those streams. Of the 20 leases or changes that have been completed, 19 were on tributary streams. Tributaries are vital to the health of wild trout fisheries because they often provide critical habitat for spawning and rearing. In many locations in the state, they are quite literally the spawning and rearing factories for wild fish. In the case of the Blackfoot River, for example, more than a decade of research by the FWP indicates that where the tributaries are healthy, the mainstem fish populations are fine; when the tributaries are impaired, the mainstem fish populations are poor.

On most tributary streams, the amount of water necessary to provide good spawning and rearing habitat is relatively small. As a result, a little bit of water in a tributary can go a long way in restoring a mainstem fish population. On the other hand, thus far it has not proven to be time or cost-effective to pursue a change for a water right on a mainstem river where it is difficult to measure the impact of that addition to flows and on the well-being of the fishery.

*Experience has also shown that changing a water right to instream uses for fishery purposes is most effective on relatively small tributaries...the factories for wild fish.*



## Madison River Fishery Benefits from Lease

A long-term water lease is returning water to three important spawning tributaries of the Madison River and benefiting that river's legendary trout fishery.

The lease, between Trout Unlimited and Roger Lang, the owner of the Sun Ranch, will provide flows up to 25.5, 37.5, and 81.46 cubic feet per second (cfs) in Wolf Creek, Moose Creek, and Squaw Creek, respectively. The lease is not only protecting water instream for spawning and rearing habitat for several species of trout migrating from the Madison River, it is also providing significant habitat improvement for trout that stay in the tributaries year-round. In fact, the lease has allowed Lang, Trout Unlimited, and others to begin an ambitious effort to restore native westslope cutthroat trout to the ranch (and, if successful, to the upper Madison).

The decision of the Sun Ranch to lease water to a private, non-profit conservation group was precedent-setting as the largest lease of its kind, not only in Montana, but also in the West. Lang decided to lease the water because he wanted to change how the ranch was being managed, lessening the need to use the full water right. Even with this large lease, the ranch continues to maintain an active cattle operation.

"This water lease is part of my management philosophy of the ranch: work with my neighbors, maintain my cattle operation, and be good to the land," said Lang. "I look forward to watching these streams recover and start to support the fishery that they once had."



Photo by Brian O'Keefe.

*"This water lease is part of my management philosophy of the ranch: work with my neighbors, maintain my cattle operation, and be good to the land."*

*~ Roger Lang*

Another restraint on the leasing program is that, unlike conservation easements, water leases are not tax deductible. Making leases tax deductible could help to increase participation, but the leases would have to share some of the characteristics of a conservation easement—permanency and a full property interest—before landowners could receive tax benefit from either the state or federal government.

A final lesson from the private leasing pilot program has been that instream flow changes often work best when they are integrated with other habitat improvement projects. If flows are improved on a stream channel that has been degraded by other activities, the lease may not achieve its intended result. Thus, leases and changes to instream uses are proving to be most valuable in cooperative watershed efforts where wide scale habitat restoration and enhancement is occurring. On the North Fork of the Blackfoot River, a multi-year, combined project is underway to restore native trout habitat in approximately 5.6 miles of the river. The effort includes screening of irrigation ditches, habitat restoration of tributary streams within the drainage, and leases or changes of specific water rights. In the case of the North Fork, no single water right is sufficient to fully address streamflow concerns. As a result, the watershed group is working with several irrigators to improve stream flows at key times of the summer and fall, while maintaining on-going agricultural operations.

# Opportunities for the future



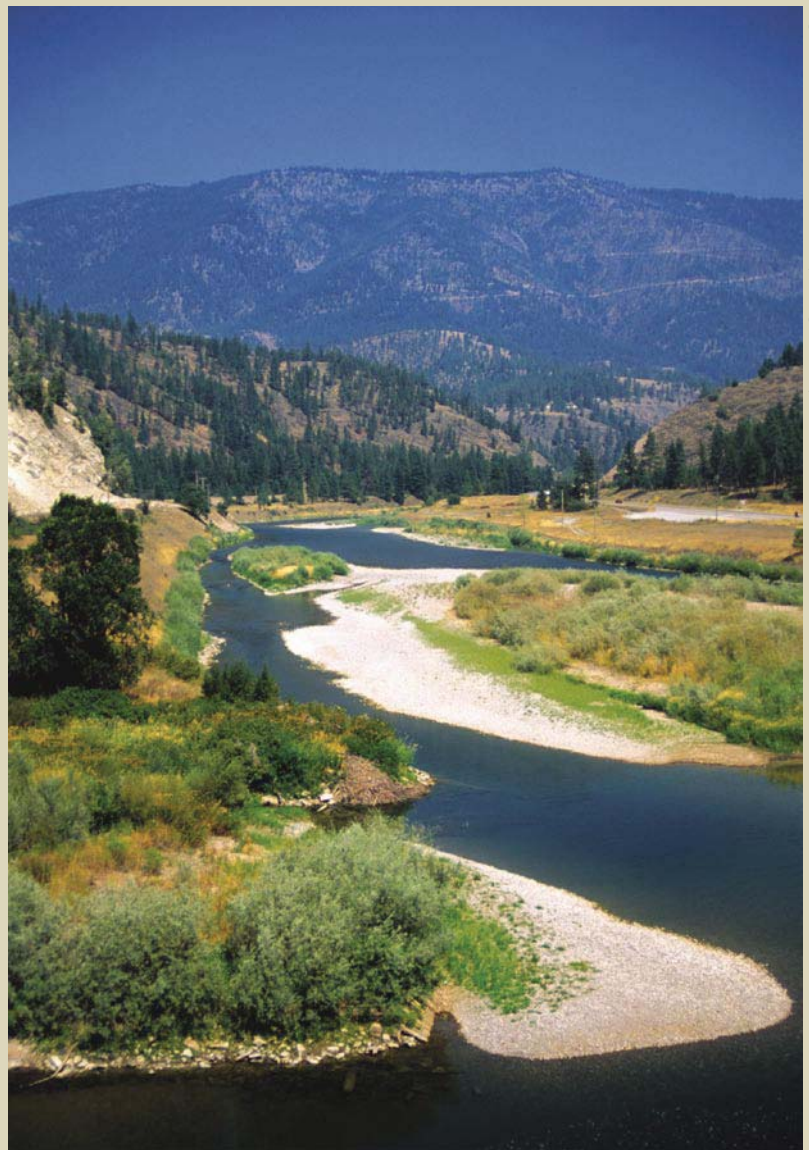
**T**he ability of the private leasing pilot programs to use an irrigation right to improve stream flows has proven to be a remarkably flexible and valuable tool for fisheries and landowners alike. After nearly ten years of experience, new ways to manage private leases are being developed. If the Montana Legislature reauthorizes the private leasing program, the range of opportunities to effectively protect stream flows will continue to broaden.

Thus far, there have been primarily two kinds of leases—a simple change of a water right resulting in the irrigation of fewer acres, or the installation of irrigation improvements (e.g. pipeline in the place of ditch, sprinkler irrigation instead of flood irrigation, center pivot in place of a wheel line) that reduce the amount of water necessary to maintain or improve crop yields. But several other innovative alternatives are currently underway.

Trout Unlimited has entered into single-season arrangements in which the water right holder irrigates for most of the season—until stream flows get to a certain point or at a specified date—at which time they stop irrigating to keep flows in the river when they are most needed for spawning, rearing, or migrating fish. This “split-season” arrangement allows the irrigator to remain productive while still providing important fisheries flows at critical times, such as when trout spawn. Both Trout Unlimited and the Montana Water Trust are working on longer-term split-season leases.

A variation of the split-season lease that is being explored involves sharing water use at two different times of the season. For example, on a small creek in the Blackfoot drainage, the landowner is considering substantial restoration work that would improve the ability of the stream to deliver

*If the Montana Legislature reauthorizes the private leasing program, the range of opportunities to effectively protect stream flows will continue to broaden.*



Big Blackfoot at Bonner. Photo by Doug O'Looney.

## Leasing Has Become a Promising Drought Tool

One potentially important use for the leasing program that is just now emerging is the assistance it can provide in cooperative drought response efforts. One example is the Blackfoot Drought Response Committee, which has led a volunteer, cooperative effort over the past five years to lessen the impact of drought on the Blackfoot River. The committee is currently exploring a split-season lease with a large landowner that would be triggered when flows drop below a set level. The lease, the primary purpose of which will be to assist the basin-wide voluntary drought plan, will help to assure adequate flows in the river late in the season when it's needed most, while allowing the irrigator to continue to use water during part of the season. In exchange for helping to improve his irrigation efficiency, the irrigator would convert part of two water rights to be left in stream when flows on the Blackfoot River fall to the trigger levels. This would benefit both the tributary from which the irrigator diverts water, and flows on the Blackfoot River.

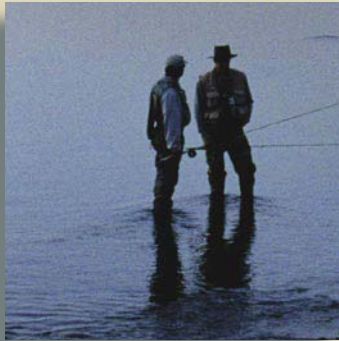


*Smith River near Eden  
Bridge, August 2001.  
Photo by Doug O'looney.*

water, and allow him to enter into an arrangement in which he would refrain from irrigating for part of the high-flow period in order to allow for a few days of high flows to help maintain the restored channel. The second part of the lease would provide for normal irrigation up to either a specific date or to a specific minimum flow trigger, after which he would stop irrigating and the water would be used for stream flows.

Another option for the leasing program that holds promise is the so-called "dry year" lease. Under this arrangement, a water user continues irrigation in years in which snowpack and precipitation assure adequate flows for both irrigation and fisheries. Under the lease they would reduce or stop irrigation in dry years, when there is not enough water for both uses. In return, the irrigator could receive annual payments and/or a single season payment when the water is needed to support fish.

# Recommendations for the future



In ten years, the pilot private leasing program has proven itself to be an effective and workable approach in helping to restore or enhance stream flows on Montana's rivers and streams. There have been no adverse effects on other water users in the drainages where leases have been approved, largely because the safeguards in the statute soundly discourage those projects that might have adverse effects on other water rights holders. And while leasing has not become the panacea for all of the low-flow problems in the state, it nonetheless has proven itself to be a flexible tool that can provide substantial benefits where low flows are limiting fisheries. Private leases are particularly valuable as one tool in a larger cooperative watershed restoration effort.

To continue the program's effectiveness and the benefits it can bring to fisheries and agriculture alike, Trout Unlimited recommends that the Montana Legislature renew the private leasing law and make it permanent. Based on our experience in water leasing, Trout Unlimited has the following specific legislative recommendations:

*"...the cooperation that made the lease possible, signified a new chapter in Montana's water history — a history whose chapters have been better known for discord rather than cooperation."*

*~ John Youngberg,  
Montana Farm Bureau.  
Guest Editorial, "Cooperation produces landmark water lease,"  
Billings Gazette,  
October 15, 2001.*

~ Private water leasing should become a permanent part of the Montana Water Use Act.

~ For efficiency and function, the legislature should combine the two programs—private leasing and leasing in the Upper Clark Fork drainage—into one and make the requirements for instream changes consistent statewide.

~ The leasing statute should allow for permanent transfers of water rights to instream use, should an agricultural producer deem that to be in his or her best interest, thereby giving more options to the water rights owner.

~ Because the initial application process is so thorough and restrictive, the leasing statute should allow for automatic renewals of the instream use upon the expiration of the lease term, if the water rights holder asks for it.

~ The water rights holders should be allowed to renew their instream uses as many times as they would like to, rather than be limited to one or two renewals.

~ Remove the duplicative notice requirement, and instead require notice of the change application once the application is filed with the DNRC and the period for filing an objection has begun, as is done with every other change application.

Trout Unlimited strongly believes that the implementation of these recommendations would strengthen the leasing program to the benefit of fisheries and agricultural producers alike. It would secure a valuable cooperative tool for the enhancement of Montana's wild trout fishery.

*In ten years, the pilot private leasing program has proven itself to be an effective and workable approach in helping to restore or enhance streamflows on Montana's rivers and streams.*

## Acknowledgements

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This page: Upper Gallatin River. Photo by Anne Sherwood.





*“The Montana leasing program benefits trout and agriculture alike—it is a classic example of how both conservationists and agricultural interests can work together for the common good of the state.”*

*~ Stan Bradshaw  
Trout Unlimited  
Montana Water Project*