TEN YEARS OF PRIVATE INSTREAM FLOW RIGHTS IN THE UPPER CLARK FORK BASIN
Report to the Legislature

Prepared by
The Upper Clark Fork Steering Committee

Introduction

The 1995 legislature enacted two separate bills allowing either a conversion of an existing water right to instream flows or a lease and conversion to instream flows. One statute, section 85-2-439, MCA, was enacted as part of the Upper Clark Fork River Plan, and covers only the upper Clark Fork River Basin above Milltown Dam. The other enactment, found at section 85-2-408, MCA, arose from negotiations among diverse water interests and was statewide in its coverage. Both of these statutes were amended to provide for leases of up to thirty years where the development of a conservation project resulted in making water available for lease or conversion.

The 1995 statutes were not the first instream leasing bills that the legislature enacted. In 1989, the legislature authorized the Montana Department of Fish, Wildlife, and Parks (DFWP) to acquire water rights by lease and convert their use temporarily (up to ten years) to instream flows, as part of what became, through further legislation in 1991, a ten-year pilot leasing study. In 1995, after six years of discussion and debate, the Montana Legislature also authorized private parties to either change or acquire by lease off-stream water rights and convert the purpose and place of use to instream flows to protect fisheries.

While the language of each 1995 enactment is slightly different from the other, both bills share a number of provisions:

- They both allow the leasing of consumptive use water rights and their application to instream flows;
- Both allow water users to simply convert water rights to instream flows without entering a lease with anyone;
- Both bills allow leases for up to ten years with a possibility of renewal;
- Both allow a lease of up to thirty years if the lease involves the installation of a conservation or storage project;
- Both bills require the applicant for a proposed change to prove to the Montana Department of Natural Resources and Conservation (DNRC) that the change will not adversely affect the water rights of another water user;
- Both bills require the renewal of a previously approved lease to go through a completely new application process in order to renew lease, providing other appropriators another opportunity to object; and
- Both bills have a sunset date of June 30, 2005.

The statewide bill has two features not found in the Upper Clark Fork pilot bill. First it requires the applicant for a change to instream use to publish a notice in a newspaper of local circulation *before* filing the application. In addition, it allows other appropriators the opportunity to object during the term of the lease after it has been approved. The language of the two bills is attached as Appendix A.

The issue of whether to continue these bills will come before the 2005 legislature. In order to assist the legislature in its deliberations, this report will look at the events that gave rise to these bills and the discussions, pro and con, which preceded their passage. It will also examine how the leasing program has worked.

Origins of the Private Leasing Bills

In 1989, the legislature passed the original leasing bill after a long debate, allowing DFWP to lease water.

In the 1991 and 1993 sessions, instream flow advocates, recognizing that some water rights holders may be willing to convert their rights to instream flows but unwilling to work with DFWP, introduced bills to allow private parties to purchase or lease water rights for instream flows. Each time, the bills were defeated.

Upper Clark Fork Leasing Proposal

In 1995, pursuant to the goals and recommendations of the 1994 *Upper Clark Fork Basin Management Plan* (*Plan*), the Upper Clark Fork Steering Committee (Steering Committee) proposed that the legislature approve a pilot instream leasing program. The *Plan's* two goals were:

- **Providing for continued planning and management of the waters of the upper Clark Fork River Basin rooted at the local level; and**
- **Balancing all of the basin's beneficial uses.**

The *Plan* states that the purpose of the study should be to "determine the implications of water rights purchases." It lists the following as study objectives:

- **Creating cooperative opportunities for improving instream flows in the upper Clark Fork and its tributaries;**
- **Ensuring that any water user who converts a water right to instream flows can protect that right;**
- **Encouraging leases of water for instream flows while maintaining protection for all water right holders under the prior appropriation doctrine;**
- **Evaluating the tax consequences of water leases for instream flows;**
- **Ensuring that prevailing parties in all objection proceedings in the upper Clark Fork Basin concerning water-use changes - including but not limited to those involving changes from diverted uses to non-diverted uses (i.e. instream flows)—are reimbursed by the non-prevailing parties for attorney fees and costs;**

- **Improving relationships between water users who divert water and those who don't divert.**

The *Plan* made specific recommendations regarding the provisions of an Instream Flow Pilot Study for the upper Clark Fork River Basin:

1) **Water should not have to be diverted to be appropriated for a beneficial use.**
2) **Any water right holder should be able to lease water instream, provided there is no demonstrated adverse effect on other water right holders. The segment of the stream in which instream flows are to be protected should be described in any change-of-use application filings.**
3) **Water for instream flows should be transferable through lease to public or private interests.**
4) **All potentially affected water rights holders should be allowed to object to a change of use for instream flows. (For example, if a proposed instream flow use would disrupt return flows to the detriment of downstream users).**
5) **The cost of objecting by a prevailing party in all change proceedings should be paid by the non-prevailing party.**
6) **Evidence to demonstrate adverse effect should require criteria similar to current change or permit application objections.**
7) **The pilot program should be evaluated two ways:**
   a) **Each lease for or conversion to instream flows should be evaluated for adverse effects on other water users five years after it goes into effect, upon a formal request to the DNRC by the water right holders who claim them.**
   b) **All leases or conversion for instream flows should be reviewed by the on-going basin-wide committee for adverse or beneficial effects ten years after legislative enactment. The results of the review should be reported to the legislature, including a recommendation about whether the instream flow/transfer process should be continued and conversion of the leases to purchase should be allowed.**
8) **The local watershed committees created by the on-going basin-wide committee pursuant to Recommendation A [Recommendation VI.A. of the Upper Clark Fork Water Management Plan] should be encouraged to review, informally, all proposals to leave water instream in an attempt to resolve change conflicts before they reach the DNRC or the water court.**

The Steering Committee proposed these recommendations to allow a pilot leasing project in legislation that passed the 1995 Montana Legislature (Section 85-2-439, MCA). The full text of the study proposal is found in Appendix B.

The Statewide Leasing Proposal

In 1994, Trout Unlimited, the Montana Wildlife Federation, the Montana Stockgrowers Association, the Montana Farm Bureau Federation, the Montana Water Resource Association, and the Montana Association of Conservation Districts, with the assistance of the Montana

Consensus Council, negotiated a bill to allow private entities to lease water rights for instream use or to convert existing water rights to instream use. Those negotiations led to the passage of section 85-2-408, MCA.

The Pilot Program

While the two bills have similar provisions relating to leasing obligations, the bills differ from each other as to reporting requirements. Section 85-2-408, setting forth the statewide program, does not require a report to the legislature at the end of the ten-year period of the statute. The upper Clark Fork basin leasing study set out in section 85-2-439(9) MCA has specific reporting requirements:

> **The Upper Clark Fork River basin steering committee shall complete and submit to the governor and the legislature by December 31, 2004, a report evaluating the effects of all change approvals issued to maintain and enhance stream flows to benefit the fishery resource under this section. The report must:**
> **(a) consider the effects upon other water right holders, tax values and revenue, fisheries, recreation, water quality, and other economic, social, and environmental effects; and**
> **(b) include recommendations to terminate, continue, enlarge, or otherwise modify the pilot program.**

This report will address the items requested in subsection (9)(a) and, in course of addressing those issues, will attempt to address some of the concerns raised in the legislative sessions leading up to the passage of sections 85-2-408 and 439, MCA. It will look in detail at some specific leases and conversions completed in the upper Clark Fork Basin and identify any pending applications as of the date of publication of the report. In addition, because the sample size of leases and conversions in the upper Clark Fork Basin is small (three completed leases and conversions), it will also look at the larger sample of leases under the statewide program (85-2-408, MCA) to address a number of the questions raised in subsection 9(a).

Leases and Conversions in the Upper Clark Fork Basin

To date, three leases for or conversions to instream flows have been completed in the upper Clark Fork Basin, all in the Blackfoot River basin. (See Appendix C, Private Instream Leases and Conversions, 1995–2005). In two of the changes, the water user converted all or part of the right to instream use without leasing it to another party. In the third instance, the water right holder leased the water right to Trout Unlimited.

Cottonwood Creek —The first change in the upper Clark Fork River Basin occurred in June, 1996, when, under the terms of 85-2-439, MCA, DFWP converted part of an irrigation right to instream uses on Cottonwood Creek, a tributary to the Blackfoot River. This project involved lining a ditch to allow DFWP to reduce its diversion of water, and thereby re-water a reach that had been routinely dewatered in the past. The flow rate on this change varies

according to the season from a low of 6 cubic feet per second (cfs) late in the season to a high of 37 cfs in July. DFWP has monitored the fishery since the conversion began and found that westslope cutthroat populations have increased significantly, and while fish densities have declined during the extended drought, they have remained much higher than before the conversion. This conversion has reduced the impact of the extended drought on the fishery in Cottonwood Creek. (Pierce, 2004). There has not been any objection to this instream conversion since DNRC approved it.

Poorman Creek—DNRC approved the next change in 2003, when an irrigator, working with Trout Unlimited, DFWP, the Natural Resources Conservation Service (NRCS), converted part of a water right on Poorman Creek in the upper Blackfoot drainage to instream use. The remainder of the right continues to irrigate the same acreage using an improved conveyance system. The Poorman Creek change is one part of a more comprehensive restoration effort involving a long-term grazing management plan and screening of irrigation intakes to restore habitat in the lower mile of Poorman Creek. (Pierce, 2004) The change to instream flows involved water salvaged by converting leaky irrigation ditches to a pump and pipeline. Where previously the irrigator diverted up to 18.4 cfs to irrigate his fields, after the irrigation improvements, the diversion was reduced to no more than 3.3 cfs. The remainder of what was historically diverted has been protected for instream use. The goal of this project is to increase the opportunity for fish to pass from the Blackfoot River through a reach that has been chronically dewatered and into upper reaches of Poorman Creek. There were no objections to the application for this conversion. (Stan Bradshaw, TU, personal communication, 2004)

North Fork of the Blackfoot—The most recent change, in April, 2004, is a lease to Trout Unlimited for part of an irrigation right to be applied to the North Fork of the Blackfoot. In this case, the irrigators conveyed water approximately two miles to irrigate fields that stood several hundred yards from the North Fork. The irrigator changed the point of diversion and switched from conveyance of the water by a gravity-flow ditch to a pump and pipeline. As in the Poorman Creek instance, the irrigators retained part of the water right (2.0 cfs) to continue irrigating with an upgraded irrigation system. Up to 18.45 cfs is available for fisheries purposes and may be protected instream between July 25 and October 1. As in Poorman Creek the lease in this instance was part of a more comprehensive effort that has included grazing management, stream channel restoration, and screening of irrigation diversions to maintain and improve bull trout and cutthroat trout populations on the North Fork.

For these three applications, only one objection was filed—to the North Fork application. The objectors, a brother and sister, had a small water right claim on the ditch that the applicant intended to no longer use, and, in the objection noted that they had no wish to halt the change, but rather wanted to underscore the existence of the objector's right on the ditch. After a conference with the applicant's lessee, the objectors withdrew their objection.

In addition to the three completed changes, one application is pending before the DNRC. A number of other possible leases are also under negotiation.

Leases and Conversions Outside the Upper Clark Fork Basin

To date, seventeen private leases or conversions have been completed outside the upper Clark Fork Basin. See Appendix C. Of those, ten have been conversions, and seven have been leases. Within these transactions, one objection was filed to the Camp Creek change, but that objection was apparently not pursued by the objector. These transactions occurred in the following drainages:

- Sawmill and Mill Creeks (upper Missouri basin) for up to 3.47 cfs;
- Cold Spring Creek (tributary to the Boulder River of the Jefferson) for up to 3.5 cfs;
- Rock Creek (tributary to Nine Mile Creek in the lower Clark Fork basin) for up to 1.28 cfs;
- O'Brien Creek (tributary to the Bitterroot River) for up to 3.625 cfs;
- Nine Mile Creek (tributary to the lower Clark Fork) for up to .2 cfs;
- Three Mile Creek (tributary to Bitterroot) for up to .19 cfs;
- Camp Creek (in the Bitterroot basin) for up to 2.4 cfs;
- Missouri River north of Great Falls for up to 2.2 cfs;
- Story Creek (Gallatin basin), two changes for up to 1.16 and 2.1 cfs, respectively;
- Cherry Creek (Madison basin) for up to 2.5 cfs;
- Spanish Creek (Gallatin Basin) for up to 2.35 cfs and .28 cfs;
- South Fork Spanish Creek, several rights changed with flow rates ranging from 1.65 cfs to 16.43 cfs;
- South Fork Spanish Creek, for up to 1.13 cfs
- Moose Creek (Madison Basin) for up to 37.5 cfs;
- Squaw Creek (Madison basin) for up to 81.46 cfs; and
- Wolf Creek (Madison Basin) for up to 25 cfs.
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In addition, three applications are pending before DNRC.

Groups Involved in Leasing Instream Water Rights

Three groups have been actively involved in pursuing water rights in the upper Clark Fork Basin and elsewhere in Montana—DFWP, Trout Unlimited (TU), and the Montana Water Trust (MWT). Trout Unlimited became actively involved in leasing in the late 1990s, and the Montana Water Trust began operation in 2002. The primary reason more groups have not been involved in leasing is the lack of the specific expertise necessary to negotiate changes of use and apply for approval of the water rights change. To be able to lease, Trout Unlimited and the Montana Water Trust both had to dedicate resources to developing the expertise necessary to pursue and complete leases and the associated water rights changes. (Stan Bradshaw, TU, personal communication; John Ferguson, MWT, personal communication, 2004)

A number of water users have converted water rights to instream uses without leasing to another party. In fact, as the data above show, more conversions have occurred than leases. In some cases, the water rights holder seeking the conversion did so independently of any other

entity; in one instance, on Poorman Creek, Trout Unlimited assisted the water rights holder in completing and filing the application.

Forms of a Lease or Change

There is no single model by which to describe a water rights lease for instream purposes. Leases and conversions have taken a number of different forms, and others are being pursued. The two that have been most prevalent are:

(1) Simple leases or conversions in which the water right holder changes all or part of a water right to an instream use and retires land from irrigation (seventeen leases or conversions); or

(2) Salvage leases, in which an irrigator provides improvements to the irrigation system in ways that reduce the amount of water used, and applies the water salvaged (i.e. no longer lost to a specific reach) to an instream use (three leases or conversions). The advantage of changes applied to salvaged water is that the irrigator continues production.

In addition to these two methods, a number of other options are being explored with irrigators. These include "dry year" leases in which an irrigator would use water most years, and in dry years would reduce or eliminate diversions; "split season" leases in which an irrigator would use the water for most of the year, and, either through a date trigger or a trigger defined by a low stream flow, would reduce or eliminate diversions; or a tiered lease in which the irrigator would refrain from use for a number of days during runoff to provide channel maintenance flows and then irrigate normally until either a date or flow trigger would require the reduction or elimination of flows. (Stan Bradshaw, TU, personal communication; John Ferguson, MWT, personal communication, 2004). TU has entered into a number of single-season agreements in which the irrigator agrees not to divert water after a fixed date in the irrigation season in exchange for a cash payment. In those cases, TU is now pursuing leases with each of the irrigators. (Stan Bradshaw, TU, personal communication, 2004)

The experience thus far indicates that instream leasing or conversion is a flexible tool that can often be adjusted to meet mutual needs of the fishery and the irrigator without requiring the retirement of productive cropland.

The Practical Effects of Leases for or Conversions to Instream Water Uses

In 1989, and again in 1991 and 1993, those opposed to the concept of leasing expressed a number of concerns about what would happen if leasing of water rights were to be allowed for instream flows. The concerns included:

- A possible reduction of irrigation return flows drying up wells and wetlands and dewatering streams;
- Use of instream flow leases to hold water rights for speculative purposes for later sale and to allow water to be transported out of state;

- A widespread conversion of irrigated land to non-irrigated status with an accompanying erosion of the tax base;
- The failure to transfer water back to the land once it is converted to an instream use;
- An increased need to spend money to protect water rights resulting from lessees describing a point of measurement far down stream below other water rights holders.

Section 85-2-439 MCA was drafted to address many of these concerns. In addition, because of the study portion of 85-2-439, one can now assess whether any of these apprehensions have come to pass.

The Effects of Leasing on Other Water Users —As mentioned above, so far only two objections have been filed to a proposed change under the private leasing statutes. No objections have been raised to any changes to instream use after approval of the change. Of the two objections filed, one was withdrawn after consultation with the lessee (see above). DNRC found deficiencies in the other objection filing, and when notified of the deficiencies, the objector declined to correct the deficiencies. In addition, the Steering Committee queried DFWP to ascertain whether they had any leases challenged after their approval because of adverse effects. They indicated that they have not. (Kathleen Williams, DFWP, personal communication, 2004) Given the absence of objections, adverse effects of the private leasing program on other water users appear to have been negligible to non-existent.

Effects on Return Flows, Stream flows, and Wetlands— The existing change process, described in section 85-2-402, MCA, requires an applicant for a change of use for a water right to prove that the change of use will not adversely affect other water users. This requirement has been reiterated in the leasing and conversion statutes. DNRC, in implementing this provision, requires the applicant to identify and discuss specifically other water rights holders on the stream who might be adversely affected and to provide factual support explaining why other water users will not be adversely affected. This test requires some analysis of return flows and an explanation of why any effect on return flows will not adversely affect other water users. This test is the same as that which any other proposed water right change, such as a change in point of diversion or in place of use, must undergo. As noted above, no substantive objections have raised the issue of return flows, well yields, or stream dewatering. The Steering Committee has been unable to find any circumstance in which a lease has dried up a wetland or reduced stream flows or return flows. In addition, DFWP, whose leases have been in place longer, reports that it has had no leases challenged after approval based on any of these concerns. (Kathleen Williams, DFWP, personal communication, 2004)

The Effect of Pushing Water Past Downstream Users—No leases sought or approved have resulted in a lessee describing a point of measurement far downstream of other water rights holders, forcing them to spend money to protect their rights.

Leases to Hold Water Rights for Later Speculative Sale—While there is nothing in the statutes to preclude a sale of an instream right at a later date, the statutory requirement to provide a flow-monitoring plan for a specific reach of stream is a disincentive against such speculation. The length of reaches protected for instream purposes among the nineteen completed changes has ranged from .25 miles up to 20 miles. For two changes, the reach was not clearly described. In

the case of the 20-mile change, the reach protected was almost entirely within the irrigator's property. At a minimum, an applicant for such a change has to affirmatively act to document the delivery of the protected water through the reach described. To date, the Steering Committee is aware of no attempt to end a lease and convert an instream right to a different use.

Use of Leases To Move Water Out Of State—To date, no instances have been documented in which an applicant has attempted to deliver water to another state by means of an instream lease. While such a result is theoretically possible, it is practically impossible unless a lease occurs close to the state boundary. A number of factors would tend to discourage out-of-state delivery of water by lease. First, downstream senior water rights users could claim the water if necessary to fill their rights. Second, even if an applicant for a change could get approval of a change to instream use that would move the water past other users, the enforcement problems of doing so would likely outweigh the benefits of moving the water downstream. Third, in some cases the instream right is applied to a reach which naturally loses water through the stream bottom, and where this occurs, the applicant for the change must account for that losing characteristic if it will limit the distance over which the water would flow. For example, if an applicant for an instream change documented that all 3 cfs of a water right would eventually be lost to the streambed ten miles downstream, the applicant could not protect any of it past that point.

Finally, moving water downstream would not be economically feasible unless the amount moved would be a significant amount relative to the stream that would have to deliver it to the state border. Any volume of water of less than 5 percent of the total flow of a stream would be virtually impossible to accurately measure (the margin of error in stream-flow measurements tends to be plus-or-minus 5 percent). In part because of the difficulty of measuring small amounts of water in a large river, most of the conversions to date have been on tributaries, not mainstem rivers, and have not attempted to protect the water beyond its confluence with the river to which it is tributary. The only instance of a change to instream use on a mainstem river was a conversion of a 2.2 cfs irrigation permit to the Missouri River. The DNRC regional office noted that measuring and accounting for such a small amount in the Missouri, which has base flows of several thousand cfs, is futile. Notwithstanding that limitation, DNRC granted the change.

The Effects of the Private Leasing Program on Tax Values and Revenue— The Steering Committee has inquired into the number of acres, statewide, that were retired from irrigation as a result of private leases or conversions. To date, the private leasing program has resulted in the removal of approximately 7,484 acres from irrigation in Montana. While all but approximately 1,200 acres of this was the result of leases on one ranch in Madison County, this number includes transactions where the lease or conversion resulted from an earlier decision to remove land from irrigation. There were a few instances where the land had been converted to some higher valued use such as small-acreage subdivisions, in which the water had already gone from the commercial irrigation of crop land or pasture to small-scale lawn and garden irrigation. In most cases, land actually retired from irrigation remained in some kind of agricultural production. In either case, the change in tax revenues, even on a local basis, has been negligible.

The Steering Committee has attempted to identify the consequences of private leases and conversions on the taxable value of the land involved. An inquiry into the tax effects of leasing is not as straightforward as looking at a simple reduction in irrigated acreage. First, in many

instances, the county has not field-reviewed property where leases or conversions have taken place since DNRC approved the changes. Second, Department of Revenue assessments of irrigated land vary according to the method of irrigation. Rather than attempt to discern the tax impact of each transaction that has occurred, the Steering Committee will attempt to characterize the variables that can affect taxable value of agricultural land.

The Department of Revenue taxes agricultural land according to kind of use to which it is put. Following are the agricultural classifications as they relate to non-irrigated and irrigated land, and the per–acre value of that land for purposes of tax assessment:

1) Non-irrigated farmland continuously cropped basis (dry land farming), Grade 3, $536.13/acre
2) Non-irrigated continuously cropped hay land, Grade 3, $533.50/acre
3) Tillable irrigated land by flood irrigation (water class 1), Grade 3, $499.44/acre
4) Tillable irrigated land by sprinkler irrigation (water class 5), Grade 3, $218.25/acre
5) Non-irrigated farmland summer fallow basis, Grade 3A, $127.44/acre
6) Grazing land, Grade 3, $46.23/acre

Irrigated land actually is assessed at a lower rate than non-irrigated, continuously cropped hay land—sprinkler irrigated land is assessed at a lower valuation than flood; grazing land is assessed at the lowest rate of all the agricultural use classes. This declining scale of assessment reflects deductions that have been applied to the assessments. For flood irrigation, the deductions are to reflect labor costs necessary to operate a flood irrigation system. For sprinkler irrigation the deductions are intended to reflect energy costs, such as electricity, necessary to power the system.

So the use to which land is put after a private instream lease or conversion, and the number of acres involved, will influence its taxable value. With regard to the leases that have been done, the degree of change in land use ranges from no change to change from agriculture to subdivision development. Three changes incorporated improvements in the means of conveyance (from ditch to pipe) in which there was little or no change in the acres irrigated. One of those changes, on Poorman Creek, also involved the conversion of part of the irrigated acres from flood to sprinkler. Two conversions involved a change from agricultural use to subdivision development. Three involved going from irrigated cropland to non-irrigated cropland. Nine have involved going from irrigated cropland to grazing land. One transaction was part of a larger stream restoration effort that was mitigation for a highway project. (Laurence Urban, MDOT, personal communication, 2004) Two changes, on Story Creek in the Gallatin Valley, involved a conversion in the use of the property from crop to maintenance of a riparian buffer on a trout stream.

Based on the variety of land-use responses to the private leases and conversions, it is difficult to generalize about what the tax effects of leasing have been beyond each individual transaction—and even when looked at individually, the tax consequences will likely range from some reduction in the tax base to no reduction in the tax base and, in some cases, a slight increase in the tax base.

In analyzing the effects of the private leases and conversions on taxes on a regional and statewide basis in the first ten years of the program, it is instructive to compare the number of acres retired from irrigation to the total number of acres involved in agriculture both county-wide and statewide. While there is some variation in the percentages, the proportion of land removed from irrigation to total irrigated acres is uniformly minute.

In Madison County, the county in which the most acres have been removed from irrigation, the percentage of acres removed of the total irrigated land in the county is 8.9 percent. Virtually all of this was the result of a lease on one large ranch in the Madison Valley. In Jefferson County, the percentage is 1.4 percent. (See Appendix D) With exception of Madison and Jefferson Counties, the percentage of land removed in every case is less than 1 percent of irrigated land within the counties. In fact, the total acreage removed from irrigation by private leases and conversions is 2.2 percent of the irrigated acres and about .7 percent of total croplands in the counties in which the leases occurred. When compared to the 1,413,000 acres irrigated statewide, it is less than one half of 1 percent of all irrigated acres. Lands removed from irrigation by lease or conversion represent less than one tenth of 1 percent of all cropland in Montana. Most of the land removed from irrigation remained in agriculture.

On balance, in the first ten years of the program, beyond some immediate, personal consequences to the lessors or parties converting water rights, the tax and revenue consequences of the private leasing and conversion program is inconsequential.

Another, unrelated issue of taxes has been raised to the two non-profit groups, Trout Unlimited and the Montana Water Trust, that have worked on leases under the program. Each group has been approached by landowners inquiring as to tax benefits if a lease were donated, such as is sometimes done with conservation easements. Federal tax law only recognizes tax benefits for a donor of the entire interest of a property right. According to the United States Internal Revenue Service (IRS), with the exception of some leases of longer than thirty years, leases are not eligible for tax benefits. To date, the IRS has not ruled on the tax deductibility of a donation of a water right in perpetuity for conservation (instream) purposes. In order for the donation of a water right to carry some tax benefit, it would have to entail a permanent donation of the water right to an instream purpose. Because Montana's pilot programs have involved only leases, tax benefits do not appear to be available for donated leases of water rights to instream flows.

Effects of Leasing on Fisheries—Because most of the leases have been specifically targeted to fisheries, they have provided a net benefit to fisheries by increasing or maintaining water in specific habitats. The provision of additional water has improved or protected the duration and amount of flow in the identified protected reach. With one exception, virtually all of the conversions have been on tributaries to main-stem rivers. Tributaries are important to fish populations on main-stem rivers because they provide spawning and rearing habitat for trout that migrate up from the mainstem rivers, in addition to providing habitat for resident fish—those that remain in the tributaries all their lives. In one instance, the amount of increase to the flow of the river (the Missouri) was so small as to defy the measurement of benefit to the fishery

Two streams covered by the leases have been monitored. On Cottonwood Creek in the Blackfoot watershed, populations of westslope cutthroat trout increased substantially after the conversion went into effect. While those numbers have declined some in the recent drought years, they remain substantially higher than before the lease.

On Camp Creek, the Montana Department of Transportation initiated the conversion of a water right to instream use as part of a mitigation package for a highway project. This project also incorporated restoration of the fish channel and a fish ladder to get over another diversion on the stream. Monitoring of the stream reach by DFWP indicates that there has been an increase of juvenile bull trout and westslope cutthroat trout in the stream.

In a number of cases, the lease or conversion has been just one part of a larger stream restoration effort. Often, dewatering in a stream is exacerbated by other habitat problems, such as a degraded streambed or reduced riparian cover, requiring treatment of those problems in addition to putting more water into the stream. (Ron Pierce, DFWP, personal communication, 2004) As a result, those groups active in acquiring leases are learning to evaluate other habitat factors which might limit fisheries in addition to streamflow. (Stan Bradshaw, TU, personal communication, 2004)

It has been the experience of Trout Unlimited and DFWP that leases for water rights are most effective on small tributaries to mainstem rivers. (Stan Bradshaw, TU, personal communication, 2004; Ron Pierce, DFWP, personal communication, 2004). This is borne out by the description of streams described in Appendix C. The reason for the focus on small streams is two-fold. First, a significant amount of spawning and rearing of trout (especially native fish, such as bull trout and cutthroat trout) occurs on the tributaries to mainstem rivers. On the tributaries, a relatively small amount of water can have a substantial benefit on a fishery. Second, on mainstem rivers, the flows are usually sufficiently high that finding a water right with a measurable difference on flows in the stream, let alone the fishery, would be difficult. While it is not impossible, the experience of TU and DFWP has shown that that few leases will occur on large mainstem rivers. Thus far, only one conversion has occurred on a large, mainstem river.

Effects of Leasing on Water Quality—Two key water quality components affected by the amount of stream flow are water temperature and dissolved oxygen, which are related to each other. Typically, as stream flows decrease, water temperatures increase, and as water temperatures increase, dissolved oxygen declines. Hence keeping more water in a stream tends to reduce its temperatures and enhance its dissolved oxygen. The leases to date have had a positive effect on water quality by reducing or maintaining lower water temperatures, and maintaining or improving dissolved oxygen concentrations. While TU has monitored water temperatures as part of its flow-monitoring routine (Stan Bradshaw, TU, personal communication, 2004), the Steering Committee is unaware of any other specific water quality monitoring being performed on the leases or conversions completed to date. Temperature and dissolved oxygen are especially relevant to the management of cold-water fisheries. In most cases, however, the effect of the lease on water quality is localized to the

immediate area in which flows are increased. The committee has not identified any instances in which the leases have resulted in the impairment of any water quality parameters.

Other Economic and Social Effects and Threats to Dominant Cultural Traditions—One recurring concern expressed during the passage of the private instream bill was that, "Once the water is transferred to instream flows, it will be lost to the land forever." Both statutes directly addressed this concern by allowing a water right to automatically revert to the original purpose and place of use upon expiration of the lease. So while the term of a lease may be long, the law minimizes the impediments to returning the land to its former irrigation use. Another early concern was that leases would result in the widespread conversion of agricultural land to non-agricultural land. As noted above, on most of the leases, the land has remained in agriculture.

In the two instances in which subdivision occurred on the land where the leased rights had been used, the decision to subdivide pre-dated the decision to lease the water rights. So, as to the leases during the ten-year pilot project, none have resulted in the removal of land from predominant agricultural use.

As to economic consequences, the experience is similar to the tax and revenue consequences. Any measurable consequences are largely restricted to the person initiating the lease or change. The three salvaged-water leases are the exceptions. In each of the salvaged-water changes, substantial investment in the irrigation system improvements generated business for local agriculturally based businesses.

The Committee did not attempt to ascertain a market value for water rights as a result of this economic study for a number of reasons. First, over half of the changes during the pilot period did not involve a lease. Instead, the water user simply applied to convert the water right without entering into a transaction with another party. No remuneration occurred so no market conclusions could be drawn. Second, of those transactions which did involve a lease with another party, a number resulted in the donation of a lease for nominal or no cash payment. And finally, the number of transactions in which there was some remuneration is too small to provide any meaningful conclusions.

Of those leases where the irrigator received value for the lease, the lease amounts were specific to the individual's needs and circumstances. The lessor's motivations ranged from considerations of lost forage or hay production, to the desire to reduce labor through irrigation improvements, to improve production on a given acreage through irrigation improvements, to a desire to simply keep part of a water right instream for the benefit of fish. On the lessee's part, the perception of value is driven by the importance of the water to a specific fishery goal, the value of the potential fishery, the amount of water available, the availability of funding for a particular lease, and the ability to protect that water in the reach where it is needed. Forms of remuneration have ranged from cash payment to funding of irrigation improvements, to in-kind remuneration (e.g. covering the cost of a change process).

In the future, if the number of transactions for instream leases increases, it may be possible to formulate a more general understanding of the lease value of water rights.

In addition, the Committee did not attempt to draw conclusions as to specific contribution of the leases and conversions to the overall recreational economy of the state. It is generally recognized that sport fishing, especially trout fishing, is a substantial source of income to the state. Estimates of the value of fishing to the state's economy range from $236 million (US Forest Service) to $532 million (American Sportfishing Association, 2003). Because much of the lease and conversion effort goes to maintenance of tributaries that provide spawning and rearing habitat that sustains the fishery in the mainstem, the leases and conversions can be seen to support and improve the fishery that attracts anglers to Montana. In addition, because instream leases and conversions are often part of a more comprehensive effort to restore and improve fish habitat, it is often difficult to break out the portion of contribution that a specific lease provides to a larger recreational economic base.

Lessons Learned in Ten years of Leasing

The first ten years of leasing have revealed considerable information about how leasing water rights for instream flows has been used as a tool, how DNRC addresses the changes, when and where leasing works best. A number of conclusions can be drawn from the pilot private leasing and instream change program:

- Leases of water rights take a substantial period of time to complete because of the many steps necessary to find available water rights, to negotiate those water rights, and to document use of the water right.
- The concerns expressed when the instream leasing programs were authorized have not been borne out in practice because the statutes were designed to address them and the water rights change process protects against adverse effects from other users.
- No adverse effects on other water users in the drainages where leases have been approved have occurred, largely because the safeguards in the statute are a substantial discouragement to projects which might have adverse effects on other users. DNRC scrutiny of changes places a substantial incentive on an applicant for an instream flow change to avoid pursuing a change that would adversely affect other water users. Because the burden is on the applicant to document historic use and anticipate the effects of downstream users, the applicant has to engage in a substantial amount of pre-application research. This research usually identifies the potential problems before the application is ever filed.
- The obligation to document historic use has underscored the need for an accurate adjudication. The parties engaged in acquiring instream leases, Trout Unlimited and the Montana Water Trust, find that claims abstracts filed in 1982 as part of the general adjudication regularly overstate the amount of acres irrigated, and therefore the flow rate and volume of water actually used. Because DNRC places the burden on the applicant to document historic use, change approvals often result in a reduction in the size of water rights claimed.
- Private leases and changes to instream use have proven to be a flexible tool that can provide substantial fisheries benefit in specific instances where flows are limiting fisheries. In most cases, tributary streams offer the greatest potential for fisheries benefits, in part because of the importance of tributaries to mainstem river productivity, and in part because the amount

of water necessary to have a measurable benefit is relatively small. They are particularly valuable as one tool in a larger cooperative watershed effort.

Recommendations

Given these conclusions, the Steering Committee recommends the following:

- Renew the private leasing law and make it permanent— While private leases and changes to instream uses will likely never be as widespread as some imagined, they are nonetheless valuable tools in the array of water management options available to water users and should be made a permanent part of Montana's water law. Since no problems have surfaced after 10 years, no reason is evident for not renewing the law and removing its sunset date.
- Combine the two "pilot" bills into one and make all the requirements for instream changes consistent statewide—The experience in the Clark Fork and statewide does not indicate a need for different programs in different areas of the state.
- Remove the requirement that an applicant has to completely re-apply to DNRC for a new approval upon renewing a lease, but require a leaseholder of any leases initiated after June 30, 2005, to publish notice of the possible renewal of a lease at least one year in advance of the termination date of the lease.
- Maintain the post-approval monitoring requirements.
- Continue to require the description of the specific reach to be protected—This helps assure that changes cannot be used for speculative purposes.
- Continue to allow for the opportunity of a post-approval objection during the term of the lease.
- Continue to keep the burden of proof on applicants that there will be no adverse effects on other users if the program is made permanent or reauthorized.
- Remove the limitation of only one renewal on a lease. This provision mainly anticipated the possible sunset of the law. If the sunset date is removed from the program, then there should not be a limit on the number of renewals of a lease. In addition, parties such as Atlantic Richfield and the Department of Transportation have found leases useful to meet mitigation obligations—but if leases are limited to one or two terms, it may not be sufficient for them to meet those obligations.