Montana Fish, Wildlife & Parks

BIENNIAL PROGRESS REPORT
- FWP WATER LEASING STUDY -
2010 & 2011

Submitted to:

Montana Environmental Quality Council
Montana Department of Natural Resources and Conservation
And
Montana Fish, Wildlife & Parks Commission

Submitted by:

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Leasing Activity Report

Executive Summary: Montana Fish, Wildlife & Parks (FWP) perfected one new instream- flow lease on Lazyman Creek, tributary to the Ruby River during the 2010 and 2011 calendar years. Development of the Lazyman Lease and the administrative approval by Montana Department of Natural Resources and Conservation (DNRC) has been in progress since 2007.

FWP signed also entered into two new water leases in 2010. An *Application to Change of Appropriation Water Right*, that converts the water right purpose to instream flow, for one new water lease on LaMarche Creek, tributary to the Big Hole River, is currently pending before the DNRC. The second new water lease, on Hell Roaring Creek in the Red Rock River basin was terminated by mutual consent of FWP and the private lessor.

Other instream flow projects are presently in various stages of investigation. No existing leases were renewed during the same period. This report also provides a summary of current and past leases as well as a brief overview of leasing program and statutory authorities.

Background: During the low water and drought years of the mid to late 1980s, many Montana streams experienced severe low-flow conditions. It became clear that diversions by senior, existing water-rights holders, coupled with drought conditions, dramatically reduced stream flows or completely dewatered key streams and rivers. These conditions impacted all users of the streams and rivers, including the state's fishery resources and aquatic ecosystems.

After these extreme low-water years, Montanans, through their legislature, created special statutory provisions allowing the transfer of diversionary water rights to instream flow. Under these provisions, on a voluntary and willing-party basis, the water rights system could allow the temporary conversion of existing diversionary water rights to instream flows. Development and passage of this legislation required considerable debate and compromise. Numerous provisions ensure adequate consideration and protection of existing water-right holders.

To create this opportunity, the Legislature relied upon existing provisions in the *Change of Appropriation Water Right* (*Change of Use*) found in Title 85 Part 4 MCA and administered by the DNRC. Instream-flow leasing was implemented through this Part.

In 1989, FWP received limited authority to temporarily lease or convert a water right to an instream flow.[1] In 1995 the Legislature extended authority to a water-right owner to convert their right to instream flow, or lease that water right to private third party for instream flow. That legislative provision was known as the private instream-flow leasing study.[2] In 2005, the legislature made this study a permanent statutory provision.

[1] §85-2-436 MCA
[2] §85-2-408 MCA

Leasing existing water rights to provide instream flow is a tool that provides specific benefits and opportunities. Water leasing for instream flow typically is most suited for re-watering and re-connecting stream reaches subject to seasonal low-flow or drought-year conditions, where there are existing water rights appropriated either from or just above the stream reach of interest. Water leasing is not as well suited to establishing long-term, year-long, instream flow conditions.

Authority to Lease: The conversion of existing water rights to instream flow by FWP is governed by §85-2-436 MCA 2011, *Instream flow to protect, maintain, or enhance streamflows to benefit fishery resources – change in appropriation rights by department of fish, wildlife and parks until June 30, 2019.*

Through this section, FWP has the statutory authority to change a water right to instream-flow use to protect, maintain or enhance stream flows to benefit the fishery resource by:

- leasing and temporarily changing someone else's water right,
- temporarily changing an FWP water right held in fee simple, and
- permanently changing a water right held in fee simple on a limited number of streams (12).

Reporting Requirements: Under subsection 4 of the FWP water leasing statute, the agency has a responsibility to submit a biennial progress report to the FWP Commission, the legislative Environmental Quality Council (EQC) and the DNRC. This biennial report must include a summary of all appropriation rights changed to an instream-flow purpose *in the last two years*. The report must include specific information for each *new* lease including:

- the length of the stream reach and how it is determined;
- streamflow or volume needed to enhance or preserve fisheries;
- the amount of water available for instream flows as a result of the change in appropriation rights;
- contractual parameters, conditions, and other steps taken to ensure that each change in appropriation right does not harm other appropriators, particularly if the stream is one that experiences natural dewatering; and
- methods and technical means used to monitor use of water under each lease.

Leasing Activity 2010 – 2011: DNRC authorized a *Change of Use* to instream flow for Lazyman Creek in November 2011. Lazyman Creek is a small tributary to the Ruby River located in the Gravelly Range of the Beaverhead-Deerlodge National Forest, approximately 40 miles south of Sheridan. It flows through both Forest Service and private lands, and has been identified as a stream suitable for incubation and rearing of fluvial arctic grayling. This instream change provides sufficient flow in lower Lazyman Creek for FWP personnel to artificially incubate grayling and to allow for the rearing of

grayling in the stream. Adult grayling reared in Lazyman Creek should return to the stream to naturally reproduce.

The overall project includes physical stream restoration as well as improvements to the landowner's irrigation system that reduce the amount of water needed to effectively irrigate. The project would improve stream habitat, reduce sediment in both Lazyman Creek and the Ruby River and provide instream flow in lower Lazyman Creek, all of which are necessary to establish natural reproduction of grayling.

The lease requires that the water-right owners leave at least 1 cubic foot per second (cfs) of stream flow in lower Lazyman Creek below their irrigation diversion. When ample water is available, they may divert the full 3.0 cfs of their decreed water right, as long as at least 1 cfs remains instream below the diversion. The flow rate and volume of water being leased would be variable and would depend on hydrologic and climatic conditions. The water right leased is the only diversionary water right on Lazyman Creek.

Specific information for the lease follows:

- The reach of Lazyman Creek in which instream flow is protected by the lease extends approximately 1,700 feet from the only irrigation diversion to the creek mouth. This reach of stream was historically dewatered by irrigation withdrawals.

- FWP staff familiar with the stream, and with the needs for Arctic grayling spawning and rearing, initially estimated that an instream flow of 1 cfs would be sufficient. This value was confirmed by reviewing the cross-sectional profile of Lazyman Creek to determine the flow necessary to provide an adequate depth of passage for adult grayling, as well as to provide adequate water cover over redds.

- The amount of water available for instream flow is up to 1 cfs for the entire May 1 to October 15 period of use. As previously noted, irrigation must only be curtailed at times when necessary to ensure at least 1 cfs of instream flow below the irrigation diversion.

- Investigation of the irrigation system for Lazyman Creek revealed that the water diverted from Lazyman Creek and not consumed by the crop or other means (such as ditch evaporation) ultimately returned to the Ruby River via surface and groundwater, but did not return directly to Lazyman Creek. Under the change to instream flow, up to 1 cfs of the flow historically diverted would now remain in Lazyman Creek and flow into the Ruby River, where it would be available to other water users just as in the past.

  The place of use irrigated by Lazyman Creek is also claimed under a water right from the Ruby River. The diversion for this right has not been functional for many years and, because of high repair costs and permitting

issues involving the Forest Service, it is very unlikely this right will be used during the term of the lease. In the unlikely event the Ruby River right is used, DNRC placed limitations on the use of both the Lazyman Creek and Ruby River rights to ensure that the overall use of water would not increase.

- The improvements to the irrigation system include water-measuring flumes in each of the supply ditches allowing the diversion of irrigation water to be monitored. The effectiveness of the lease is monitored at the downstream location near the mouth of Lazyman Creek to determine if at least 1 cfs remained instream. Streamflow is also monitored immediately upstream of the irrigation diversion. Streamflow monitoring at both sites consists of a staff gauge with a corresponding stage-discharge relationship that is maintained through periodic streamflow measurements. The staff gauge will be read periodically by FWP staff to ensure the lease commitment is being honored. The monitoring schedule will depend both on hydrologic conditions as well as the track record of lease compliance. In addition, stage-recording devices will provide continuous electronic monitoring.

A copy of the Lazyman Creek Authorization to Change issued by DNRC is appended.

FWP signed two new leases during the last biennium. Preliminary investigations of several potential leases and water conservation projects are on-going.

FWP applied to DNRC for approval of a *Change of Use* for the new water right lease on LaMarche Creek, a tributary to the Big Hole River in southwestern Montana. This project is focused on protecting and restoring flows in this important Arctic grayling stream. FWP filed this application with DNRC in August 2011.

As reported in the previous Biennial Progress Report, the FWP Commission endorsed efforts to enter into a water-right lease on Hell Roaring Creek, a tributary to Red Rock Lakes in the Centennial Valley. This stream provides critical habitat for Arctic grayling. A lease was signed in 2010. During preparation of the application for *Change of Use*, however, discussions with neighbors revealed that the historic use of water for irrigation as initially portrayed to FWP may have been overstated. . Pursuing the full leased amount of water may have adversely affected other water users with junior water rights. The limited amount of water put to beneficial use in more recent times, if changed to instream flow, would not provide benefits to the fishery sufficient to justify the effort and cost to pursue the *Change of Use* and monitor the lease over time. For these reasons, FWP and the private lessor mutually decided to terminate the lease.

General Approach to Leasing: Historically, FWP's water-leasing activities largely focused on tributaries to larger rivers that provide important spawning habitat. Typically, these tributaries flow from the mountains onto the valley floor where they are tapped for irrigation. Irrigation diversions often cause seasonal or periodic dewatering between the

diversion and the mainstem river. The dewatered reaches typically extended a few miles or less.

Most current leases target the restoration of flow in these dewatered reaches so that redds are not dewatered, fry can emerge and migrate to the main-stem river, and connectivity between the main stem and tributary can be maintained. Water conservation leases focus on improving irrigation efficiency and keeping the amount of irrigation unchanged, while reducing the diversions so that stream flow can be restored.

Current Leases: FWP has eleven active leases and one conversion of a FWP irrigation right to instream flow. All have approved "Change of Use Authorizations" issued by DNRC. These current instream flow transactions are located on the following nine streams:

1. Big Cr., tributary to the Yellowstone River (two leases)
2. Cedar Cr., tributary to the Yellowstone River (two leases)
3. Mol Heron Cr., tributary to the Yellowstone River
4. Locke Cr., tributary to the Yellowstone River
5. Hells Canyon Cr., tributary to the Jefferson River in the Upper Missouri Basin
6. Cottonwood Cr., tributary to the Blackfoot River in the Clark Fork Basin (FWP right)
7. Chamberlain Cr., tributary to the Blackfoot River in the Clark Fork Basin
8. Pearson Cr, tributary to the Blackfoot River in the Clark Fork Basin
9. Rock Cr., tributary the upper Clark Fork River
10. Lazyman Cr., tributary to the Ruby River in the Upper Missouri Basin

Figure 1 is a table displaying all of the leases (active, terminated, or transferred) that FWP has been associated with over the life of the water-leasing project. Three of the listed leases were not renewed by FWP. A fourth lease, on Tin Cup Creek, could not be renewed a second time by FWP under the statutory provision in place at that time. However, the Montana Water Trust (now part of the Clark Fork Coalition) was able to acquire and maintain this water lease. Two leases were not perfected through obtaining a *Change of Use* and were terminated.

Other Instream Flow Protection Methods: Montana's water law currently provides several mechanisms, other than changing existing water rights to instream purposes, to protect flows or water levels. Most of these provisions were added with the passage of the Water Use Act in 1973, and therefore are relatively late in Montana's water allocation history. The other tools to create water-right or other protections for instream flow include:

- State-based *Water Reservations*.
- Water rights obtained as a result of statutory directive or authorization. (These are pre-1973 water rights and include *Murphy Rights* and *public recreational claims*.)
- Purchase or contract from new or existing water storage.

- Designation of a stream or river basin as closed to additional water-right appropriation (Closed Basin).

Water Reservations are the most common water rights for instream flow found in Montana. The Yellowstone and Missouri river basins contain all of FWP's water reservations. The water reservations developed through state-initiated, water-planning processes. Through separate processes in the Yellowstone River and Upper and Lower Missouri basins, public entities received water rights for future diversionary development and for instream-flow protection. Diversionary reservations were granted to cities, towns, Conservation Districts, and the U. S. Bureau of Reclamation. FWP, the Department of Environmental Quality and the U.S. Bureau of Land Management received reservations for stream-flow and water-level protection. Statutory authorization for such rights is found in §85-2-316 MCA.

Water rights created by statutory directive or authorization are derived from two separate acts. The 1969 legislature directed FWP to establish water rights in a specified set of rivers and streams known as "blue ribbon" streams.[3] In 1979 under Senate Bill 76 (a statute modifying Montana's general stream adjudication process), the legislature also directed FWP to file "Statements of Existing Water Right Claims" for public recreational uses (§85-2-222 MCA). The Montana Supreme Court, in a series of cases commonly referred to as the *Bean Lake* decisions, further explored these legislative requirements. Their most recent holding recognized that there could be other pre-1973, judicially recognizable, non-diversionary, instream water rights. Through the general stream adjudication proceedings, those claims are to be reviewed and decided by the Montana Water Court.

Water for instream flows is and can be purchased from existing storage facilities. FWP possess two long-standing contracts for stored water. Both are in the Bitterroot River basin and come from Painted Rocks Reservoir, a DNRC water project, and Lake Como, a storage reservoir operated by the Bitter Root Irrigation District.

The designation of a basin as "closed" to certain new appropriations of water does not create any new water rights or specifically protect an instream-flow level. However, the designation places a cap on additional depletions of water from the system, thus protecting existing water rights and maintaining the status quo water for demand and streamflow conditions. The legislative Upper Clark Fork Basin Closure was specifically crafted to protect status quo conditions and, thereby, to protect fisheries and existing water-right holders.[4]

Conclusion: FWP will continue to administer its existing leases and pursue new leases where opportunities arise. In the next two years, projects involving permanent changes to instream flow will continue to move forward. FWP will also explore other opportunities, such as the purchase of stored water to restore and supplement instream flow.

[3] §89-801 RCM (1969)
[4] §85-2-335 & 336 MCA

Figure 1

FWP Instream Flow Leasing History, as of November 2011

SOURCE	RIVER BASIN	STATUS	LESSOR	LEASE TERM/EXP.	PRIORITY OF RIGHT	QUANTITY LEASED	PERIOD OF USE
Mill Creek	Upper Yellowstone	Terminated	Mill Creek Water and Sewer District	Terminated	95 rights with various priorities	41.4 cfs	48-60 hours in August Diversion shut off after 10-day notice from FWP
Mill Creek	Upper Yellowstone	Terminated	Individual	Terminated	June 30, 1880; June 1, 1903	2.0 cfs (1880) and 4.13 cfs (1903) (salvaged water)	May 1 -October 4
Blanchard Creek	Blackfoot	Terminated	Individual	Contract rescinded 3/5/2004	May 11, 1913 (first right on stream)	3.0 cfs	April 15 -October 15
Tin Cup Creek	Bitterroot	Now held by Clark Fork Coalition	Six individuals	Met statutory limit on renewal. 5-year renewal March 28, 2005	August 1, 1883 (first right on stream)	2.28 cfs April 1-April 14 4.32 cfs April 15-April 30 4.72 cfs May 1-October 19	April 1- November 4
Cedar Creek	Upper Yellowstone	Active	US Forest Service	10 years Lease renewed Sep. 20, 2015	April 1, 1890; April 1, 1893; April 1898; April 1, 1904; April 7, 1972 (high-water rights only)	6.77 cfs May 1-July 15 6.39 cfs July 16-July 31 9.64 cfs August 1-August 31 6.39 cfs Sept 1 - October 15	May 1-October 15
Hells Canyon Creek	Jefferson	Active	Three individuals	20 years Apr. 1, 2016	December 31, 1884 (1st right on stream), August 23, 1889; August 29, 1912	1.12 cfs (salvaged water)	April 1- November 4
Mill Creek	Yellowstone	Active	Individual	Terminated	June 1, 1891	2.64 cfs (salvaged water)	May 1-October 19
Chamberlain Creek	Blackfoot	Active	Individual	10 years April 1, 2017	October 10, 1911	½ the flow up to 25 cfs	April 1 - October 31
Pearson Creek	Blackfoot	Active	Individual	10 years April 1, 2017	October 10, 1911	Up to 8 cfs	April 1 - October 31

FWP Instream Flow Leasing History, as of November 2011

SOURCE	RIVER BASIN	STATUS	LESSOR	LEASE TERM/EXP.	PRIORITY OF RIGHT	QUANTITY LEASED	PERIOD OF USE
Cottonwood Creek	Blackfoot	Active	FWP	20 years October 2016	May 1, 1884	14 cfs April, 37 cfs May 1-June 30, 32 cfs July, 9 cfs August, 6 cfs September, 9 cfs October 8 cfs November (Salvaged water)	April 1- November 4
Mol Heron Creek	Yellowstone	Active	Private ranch	20 years December 31, 2018	July 15, 1884; May 7, 1885; June 15, 1893; January 1, 1900; March 2, 1903; June 5, 1905; August 5, 1920; April 15, 1967	5.0 cfs to 27.0 cfs	April 15 - October 19
Big Creek	Yellowstone	Active	Two private ranches	20 years April 15, 2020	March 12, 1883; June 30, 1901; May 31, 1909; May 15, 1910; May 15, 1910	1.0 – 16.0 cfs (rights dedicated to a land trust in perpetuity)	April 15 - October 15
Big Creek	Yellowstone	Active	Private ranch	10 years May 1, 2019	June 30, 1873 (1st right on stream)	10.0 cfs	May 1 - November 1
Rock Creek	Upper Clark Fork of Columbia	Active	Private ranch	20 years	March 23, 1881; May 15, 1881; June 1, 1892; May 1, 1898; September 29, 1904; May 10, 1907	5.0 - 27.22 cfs	April 15 - October 31
Locke Creek	Yellowstone	Active	Private ranch	30 years; December 14, 2031	March 6, 1915	7.5 cfs	April 20 – October 24
Cedar Creek	Yellowstone	Active	FWP purchased right from private ranch	30 years: June 9, 2033	May 29, 1894 (4th right on stream; other high-priority rights already leased by FWP); June 11, 1971 (high-water right); April 7, 1972 (high-water right)	3.25 cfs 3.76 cfs (high water)	April 1 – November 4
Lazyman Creek	Ruby River	Active	Private ranch	10 years: November, 2021	April 30, 1888 (only diversionary right on source)	Up to 1.0 cfs	May 15 – October 15

FWP Instream Flow Leasing History, as of November 2011							
SOURCE	**RIVER BASIN**	**STATUS**	**LESSOR**	**LEASE TERM/EXP.**	**PRIORITY OF RIGHT**	**QUANTITY LEASED**	**PERIOD OF USE**
Trail Creek	Clearwater River	Not perfected Terminated	Resort (and) Homeowners Association	30 years: June 3, 2034	April 10, 1905 January 10, 1911	1.06 cfs 2.37 cfs plus an additional 0.5 cfs during periods of low flow	Both have periods of use: April 1 - October 31.
Hell Roaring Creek	Red Rock River	Not perfected Terminated	Private ranch	5 years from date of change authorization	May 26, 1900 October 25, 1901 September 24, 1915	8.0 cfs 4.0 cfs 6.0 cfs	May 1 – October 15 May 1 – October 15 May 1 – October 25