BLACKFOOT DROUGHT RESPONSE PLAN

Minimizing the adverse impacts of drought on fisheries and water users while aiming for the equitable distribution of water resources during low flow summers in the Blackfoot Watershed since 2000.

Revised April 2025

Blackfoot CHALLENGE

Better Rural Communities through Collaborative Conservation

Table of Contents

Blackfoot Drought Response Plan
Revised April 2025

Introduction

Drought is defined as a deficiency of precipitation over an extended period of time, usually a season or more that results in shortages of water. Drought is also a normal, recurrent feature of climate that occurs in most climatic zones.

In 2000, the Blackfoot Drought Committee was formalized to coordinate the development and implementation of a voluntary drought response effort in the Blackfoot watershed. The drought response is intended to minimize the adverse impacts of drought on fisheries resources and to aim for the equitable distribution of water resources during low flow summers.

The Blackfoot Drought Response Plan is based on the premise of "shared sacrifice for shared benefit" with the goal that all Blackfoot water users (agricultural, irrigators, outfitters, anglers, recreational users, government agencies, homeowners associations, businesses, conservation groups, and others) voluntarily agree to take actions that will result in water savings, a reduction of stress to fisheries resources, and a shared culture of stewardship during critical low flow periods. This approach was selected for several reasons:

- Drought and the management of low flows are a watershed-wide concern;
- Beneficiaries of the drought response effort include interests throughout the watershed;
- The greater benefit to maintaining river flows and sustaining the overall health of the river can only be gained by the cooperative effort of the larger community.

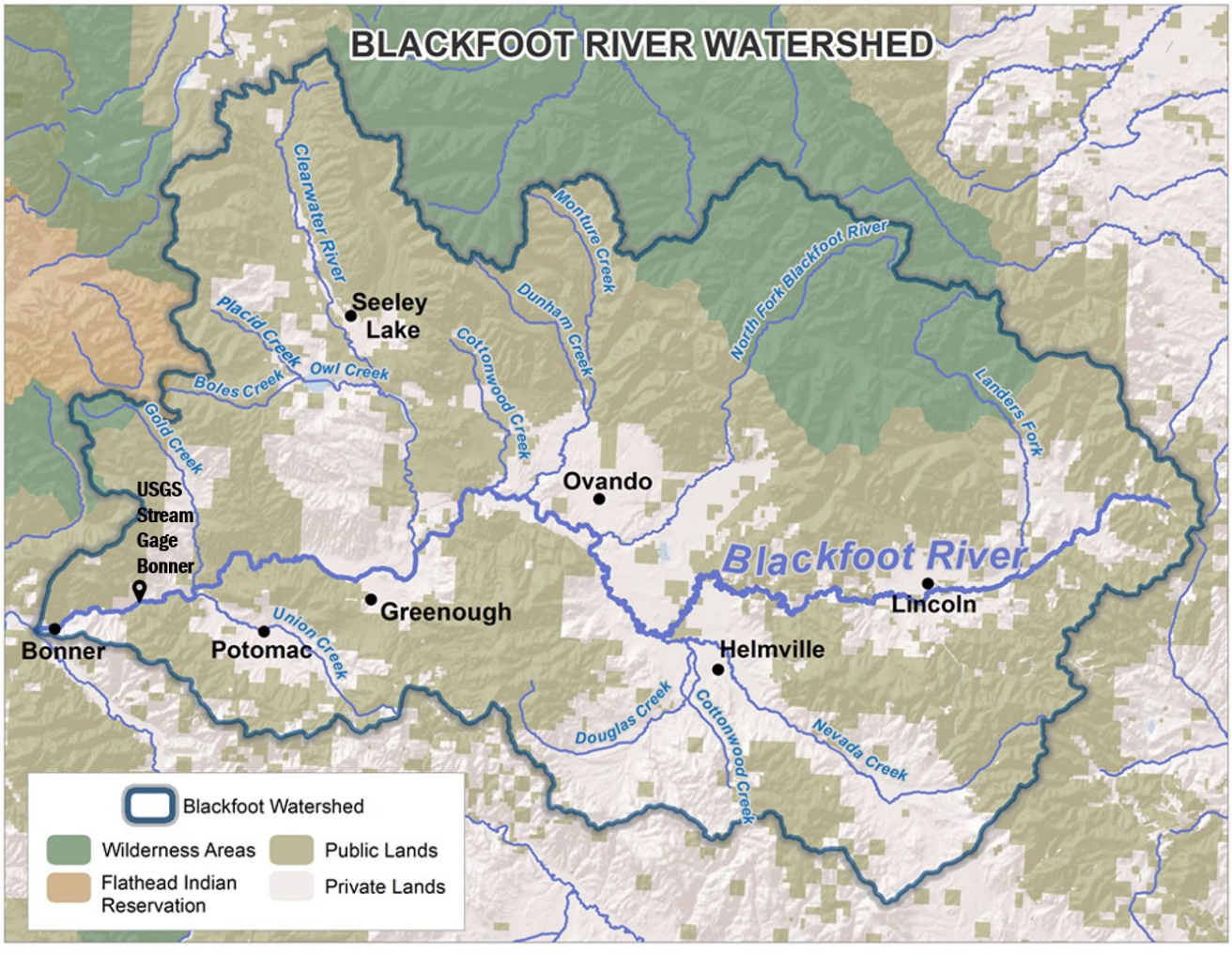
The Blackfoot Drought Plan falls into a more organized, more conservative river restoration and native fish recovery program than other basins in Montana. The Blackfoot approach offers an alternative to angling restrictions and traditional enforcement of in-stream flow rights, while engaging the stakeholders of the Blackfoot Valley in the protection and future conservation of its fisheries. Under the "shared sacrifice for shared benefit" concept, irrigators, outfitters and recreationists have a unique opportunity to have a positive impact on the future and health of the Blackfoot Watershed.

Purpose

The purpose of the Blackfoot Drought Response Plan is to minimize the adverse impacts of drought on fisheries and water users while aiming for the equitable distribution of water resources during low flow summers.

Areas Covered by the Plan

This plan covers the Blackfoot River and its tributaries from its headwaters atop the continental divide to its confluence with the Clark Fork River near Bonner, Montana.



In-stream Flow Rights on the Blackfoot River

There are two significant in-stream flow water rights on the main stem of the Blackfoot River which form the structure of this plan[1]. These rights are often referred to as the Murphy Right and the Milltown Right. Both rights are co-owned by Montana Fish, Wildlife, and Parks (MT FWP) and the Confederated Salish and Kootenai Tribes (CSKT). Both rights call for a minimum of 700 cubic feet per second (cfs) in the Blackfoot River, as measured at the Bonner gage station, during summer months in order to protect fisheries. A brief summary of each right is provided in the following sections and in Table 1. See Appendix D for a comparison of enforceable flows for each water right and Blackfoot River discharge hydrographs.

The Murphy Right

Murphy Rights are water rights for in-stream flows created under 1969 legislative authority. Flow evaluations by MT FWP in the 1960s determined that 700 cfs was the minimal in-stream flow

[1] In addition to the in-stream flow rights on the main stem of the Blackfoot River, CSKT and MT FWP also co-own a series of water rights on the Clearwater River for the purpose of maintaining recreational values in the Clearwater chain of lakes system. While these recreational water rights are not part of this plan, there is interest from the water right owners in finding a cooperative approach to managing these rights in the Clearwater basin.

needed to protect "blue-ribbon" fisheries in the Blackfoot River from severe low flows. These water rights were claimed in the Blackfoot by MT FWP as of January 6, 1971, and were asserted for the reach beginning at the river's mouth upstream to its confluence with the North Fork of the Blackfoot River. This is also known as the Murphy Right Reach. In 2015, with passage of the Confederated Salish and Kootenai Tribes – Montana Water Rights Compact (CSKT Water Compact, hereafter), the Murphy Right became co-owned by the CSKT and MT FWP.

The Milltown Right

The Milltown Water Right began as an in-stream hydropower right for electricity generation at the Milltown Dam, with a priority date of December 11, 1904 and a minimum flow rate of 2,000 cfs. Originally owned by Montana Power Company, then by Northwestern Energy, the Milltown Right transferred to the State through the Clark Fork Basin Superfund settlement in 2008. Then, when the state legislature ratified the CSKT Water Compact on April 24, 2015, CSKT and MT FWP became co-owners of the Milltown Right.

In addition to co-ownership, the Compact agreement split the Milltown Water Right into two separate and independently enforceable water rights – one for each of the Clark Fork and Blackfoot Rivers. In the Blackfoot watershed, enforceable minimum flows for the Milltown and Murphy Rights overlap at 700 cfs during late July and through August (see Table 1 below and Appendix E, Table 2 for more details). As part of the Compact, the CSKT and the State of Montana agreed to only exercise the Milltown Water Right to make call against a subset of water rights (see Table 1).

Water Rights Junior to In-stream Flow Rights

There are more than 3,500 surface water rights of record within the Blackfoot watershed. Of these water rights, 373 surface irrigation water rights are "junior"[2] to the Milltown and Murphy Rights. An additional 205 water rights with other uses are junior to the Murphy Right (see Table 1 for an accounting of all water rights susceptible to call). Although this is a voluntary plan, there are regulatory implications for water users junior to these in-stream flow rights. As part of this plan, MT FWP and the CSKT have agreed not to initiate a "call for water" under their senior water rights (Murphy and Milltown) on junior water users who follow an approved drought response plan when flows drop below 700 cfs but remain above 500 cfs, as described below. Junior water users who have not confirmed their participation through the Blackfoot Drought Committee or who do not follow their plan are subject to an in-stream flow right "call for water" by MT FWP and CSKT at or below flows of 700. See Implementation Section below for more details on how call on the Murphy and Milltown water rights is implemented.

[2] Montana water law follows the doctrine of prior appropriation, wherein, the oldest, or more senior, water right holders are entitled to their full appropriation of water before the newer, or more junior, water users can use their junior water rights. During times of shortage, the standard procedures for allocating water allow the senior water right holder to require junior water rights holders to cease use of their water until the senior right is fully fulfilled, known as a "call for water".

Table 1. Summarizes and compares water right information for the Murphy and Milltown in-stream flow water rights on the Blackfoot River.

CSKT/FWP Water Right	Water Right No.	Priority Date	Period of Use	Criteria for Call	Uses Susceptible to Call	No. of Water Rights Susceptible to Call*
Milltown Right	76M 94404-02	December 11, 1904	Year Round (700 cfs Minimum Enforceable Flow July 25 to April 5).	Call may begin after 4 out of 5 consecutive days below minimum enforceable flow. Call persists until flows are above minimum enforceable flows for 2 out of 5 consecutive days.	All surface water irrigation rights junior to December 11, 1904.	373
					All groundwater irrigation rights >100 gpm junior to December 11, 1904.	15
					All water rights junior to April 24, 2015.	410
Murphy Right	76F 98986 00	January 6, 1971	July 16-August 31 700 cfs	When drought committee Implements the Blackfoot Drought Plan. Call persists until Blackfoot Drought Committee Ceases Drought Plan Implementation.	All uses junior to January 6, 1971. Domestic and Stock Water typically not included in call.	318
	76F 98984 00		September 1-March 31 650 cfs			

*As reflected in the DNRC water rights database as of 04/08/2025

Drought: Resource, Social, and Economic Concerns

Some of the impacts of drought include reduced crop, rangeland, and forest productivity; increased fire hazard; reduced surface and groundwater levels; increased livestock and wildlife mortality; and damage to fish and wildlife habitat. In the Blackfoot, drought has also impacted the recovery and management of culturally important native fish species.

The Blackfoot River holds significant cultural, spiritual, and historical value for the Confederated Salish and Kootenai Tribes. Rivers and waterways were highways for the Tribes before the arrival of horses, and for thousands of years, the Blackfoot watershed has been a part of the vast aboriginal territories of the Tribes' people. They lived comfortably as hunters, gatherers, and fishermen, moving with the season drawing from a profound knowledge of the plants and animals.

The Tribes' place names for this region are a testament to the deep cultural and spiritual value these areas hold. Place names that are given to an area often come from creation stories, others refer to the traditional way of life and the resources that were particularly abundant within the area. Fish, especially Aáy (bull trout), was a vital staple for the Tribes' people and is referenced in more place names than any other plant or animal. For instance, the confluence of the Blackfoot and Clark Fork Rivers place name is Naaycčstm (Place of Bull Trout) and the Blackfoot River's name is Naaycčstm Swełkʷs (Bull Trout's Water).

Maintaining a cold, clean, connected, and complex environment for bull trout is essential to preserving the cultural and ecological integrity of these areas. This plan reflects our shared responsibility to protect these ecosystems that are fundamental to the Tribes and to those who depend on water and other natural resources for their livelihoods. Drought can have severe economic impacts, leading to lost income and jobs, reducing water availability for crop production and livestock, and threatening businesses that depend on outdoor recreation. Outfitters and other businesses that depend on visitors to the Blackfoot region have to deal with the consequences of declining fish populations and people seeking other areas for fishing and recreational opportunities.

The 700 cfs minimal in-stream flow value is based on the concept of the wetted-riffle (the shallow rapids of streams and rivers). Because of the flat shape of a riffle and low angle of the stream bank (in cross-section), once water pulls away from the bank it recedes across the riffle quickly. This process is accelerated at 700 cfs and below for riffles of the lower Blackfoot River.

Riffles are critical because they produce the chlorophyll (plant life) and forage (insects and small fish) that fuels the upper trophic levels (e. g. larger trout) of the ecosystem. In addition to basic river productivity, riffles provide spawning areas and habitat for juvenile trout and forage-fish alike. Entire communities – species ranging from midge to salmonfly, dace, sculpin and juvenile whitefish live in the cracks and crannies of cobbles that form the riffle. This forage base – the grocery list at the lower end of the food chain – sustains predatory species like trout as well as dependent wildlife in the upper food chain. When the wetted-width of the riffle narrows, river productivity rapidly declines and the forage base that sustains thriving trout fisheries is greatly

diminished.

As the habitat base shrinks below minimal flows, it sets in motion a series of complex biological processes. These involve increased competition within fisheries communities for food and space; restricted movements between critical habitats (e.g. spawning sites and refugia); elevated mortality (at all trophic levels) as prey is concentrated; and cold-water communities become vulnerable to temperatures stressors depending on species and location. Juvenile fish are highly vulnerable to habitat loss and related stress and are the first to undergo population-level declines.

As flows decrease, water temperature increases. With elevated water temperature, metabolic rates increase and dissolved oxygen levels decline, pollutants concentrate and coldwater trout become more susceptible to pathogens like fungal infections and whirling disease. Although all Blackfoot River trout are cold-water fish, bull trout occupy the coldest waters within the system. Unlike other trout, bulls undergo thermal stress beginning at 60-65^{o} F, above which growth and survival begin to decline. As an obligate cold-water fish, bull trout migrate from the river to cooler tributaries in response to normal summer warming. Unfortunately, many refuge habitats are less than optimal due to riparian alterations and water temperatures of 63-70^{o} F. For other trout species (cutthroat, rainbow and brown trout), temperature stress begins near 70^{o} F with growth and survival at issue between 73–77^{o} F. Depending on location, Blackfoot River temperatures of 70-78^{o} F are common for July-August and place variable levels of stress on the fish.

Shared Sacrifice for Shared Benefit

The water users who own water rights junior to the in-stream flow rights cannot by themselves solve the low flow problem. Additionally, drought and the management of low flows are a watershed-wide concern affecting everyone including junior and senior water right holders, recreationists, businesses, residents, and the plants and wildlife that depend on the river corridor.

The Blackfoot Drought Response Plan is based on participation from water users junior and senior to the in-stream flow rights who voluntarily reduce their collective water use during drought periods in order to maintain critical in-stream flows. The plan seeks as a matter of equity to include junior users, senior users, small users, and large users throughout the entire watershed.

Under the Blackfoot Drought Response Plan, water right holders junior and senior to the in-stream flow rights are asked to voluntarily reduce water use when flows reach predetermined thresholds. Prior to development of the Blackfoot Drought Response Plan, junior water users were required to stop water withdrawals if MT FWP made a “call for water” in enforcing their water right. The Blackfoot Drought Response Plan offers an alternative to traditional enforcement of the in-stream flow rights, allowing some continued use of junior water by those who voluntarily reduce their water use and offsetting this use with water contributed by senior water rights and habitat improvements made to important stream reaches.

Participation by other interests such as fishing outfitters, local residents, and the recreating public is also critical to the success of the plan. Drought, low flows, water temperatures and large

increases in angling pressure over the past 20 years, and the associated stress to fish, have compounded concerns for native fish recovery in the Blackfoot. Native fish have a high catchability and mortality rate, which is why outfitters and anglers are asked to limit fishing hours and/or alter angling techniques on the river and critical recovery streams when pre-determined temperature thresholds are reached. By taking these actions, the angling community helps to reduce stress to fish and increase chances of survival during critical low flow periods.

Even the non-angling public has a role to play during drought. Being well-informed on the impacts of drought and the actions that are being taken to lessen those impacts, being a courteous and respectful recreator as other people and wildlife seek the refuge of the river, and considering ways to give back to the river are all important roles for everyone to play during times of need.

The "shared sacrifice for shared benefit" approach distributes the impacts of drought and low flow management to all water users as opposed to a single group of water users as is the case with many traditional drought management plans. By working together under the Blackfoot Drought Plan, all water users have a unique opportunity to have positive impacts on the future and health of the Blackfoot Watershed.

Drought Response as Drought Resilience

Drought has always been and will continue to be a natural and recurring feature of Montana's climate. According to the 2017 Montana Climate Assessment[3], predicted changes to temperatures, snowpack, and runoff timing are expected to increase the frequency and duration of drought during the summer and fall months. In the Blackfoot Watershed, drought response has been enacted through this plan more often than not since the plan was created in 2000. With drought already a common occurrence in the Blackfoot Watershed, and predicted to become more frequent, building basin-wide resilience to drought is a common goal of watershed partners. According to one definition[4], resilience describes a system's capacity to absorb or resist disturbance, self-organize, and adapt to changing conditions. Through this lens, this Drought Response Plan builds drought resilience by strengthening community relationships, trust, mutual learning, and collaborative decision-making capacity during times of need. Through the implementation of this Plan, we are building a self-organized, community-wide response to drought that helps us absorb and adapt to changing conditions.

Drought resilience is also built through the restoration of ecological functions to streams and their riparian habitats, helping to sustain native trout fisheries and agricultural and recreation-based livelihoods. Restoring drought resiliency in a riverscape prone to drought and impacted by climate change, heavy riparian grazing, dewatering, and other human activities fundamentally relates to the restoration of natural, self-sustaining ecological function in tributaries, including employing fish-friendly irrigation practices. By restoring natural function

[3] Whitlock C, Cross W, Maxwell B, Silverman N, Wade AA. 2017. 2017 Montana Climate Assessment. Bozeman and Missoula MT: Montana State University and University of Montana, Montana Institute on Ecosystems. 318 p. doi:10.15788/m2ww8w.

[4] Folke, C. 2006. Resilience: The emergence of a perspective for social-ecological systems analyses. *Global Environmental Change* 13.pp 253-267

and conditions to damaged streams, essential habitats needed for more resilient fisheries are typically met because restored streams are often deeper, narrower, more shaded, and cooler, thus providing near optimal trout habitat. Beyond in-stream habitat conditions, restored streams also tend to be more connected to their floodplains, benefiting both fisheries and agricultural operations; where properly functioning floodplains help buffer against potential flooding caused by more frequent winter rain events, bolster late summer flows by raising water tables and increasing groundwater storage, increase vegetation and forage productivity along riparian areas, and protect against catastrophic wildfire.

In the Blackfoot, there is an organized and concerted effort by multiple watershed partners to recover and restore resilient native fisheries which has been active since the late 1980s. These ongoing efforts have led to the completion of hundreds of projects with more than 150 landowners to enhance in-stream habitat, increased in-stream flows, address fish passage barriers, or reduce entrainment of fish in irrigation ditches across more than 40 tributary streams of the Blackfoot River. While much of this restoration work happens outside of the specific drought response process outlined here and is completed with water users both senior and junior to in-stream flow rights, the ultimate goal is the same: maintaining a healthy river system that supports both resilient fisheries and livelihoods in the Blackfoot. This shared goal of resilient fisheries and livelihoods provides the foundation for continued and increased integration of drought resiliency and drought response efforts moving forward.

Importantly, the Blackfoot Drought Plan is a basin-wide effort. This allows the opportunity to identify and address stream reaches anywhere within the watershed where small increases in in-stream flows or long-term improvements to local habitat conditions could provide significant benefits that are less than predictably protected through a formal call for water. Through the basin-wide pooling of water resources and the strategic restoration of ecological function in tributary streams, the end goal of maintaining resilient native trout fisheries during periods of drought can be achieved.

Blackfoot Drought Committee

The Blackfoot Drought Committee is charged with the oversight and implementation of the Blackfoot Drought Response Plan and is coordinated through the Blackfoot Challenge. Its membership is comprised of local landowners, irrigators, outfitters, state and federal agencies, CSKT representatives, and members of various conservation organizations.

Oversight of the Blackfoot Drought Response Plan is a continuous process that involves monitoring drought indicators, conducting outreach, and implementation. Activities and timing of activities may change throughout the year depending on conditions and needs, but in general the following provides a more detailed description of Committee activities throughout the year:

January/February/March

- The Committee will communicate monthly (or more if needed) to monitor drought indicators such as snow pack, precipitation, soil moisture, and the Surface Water Supply Index (SWSI). These indicators help to determine when and whether low flows will occur and ultimately if the Blackfoot Drought Response will be implemented in a given year;

- At least one update (via letter and email) on conditions may be provided to Blackfoot water users during this period.

April/May

- The Committee will communicate monthly (or more if needed) to monitor drought indicators such as snow pack, precipitation, soil moisture, SWSI, and spring runoff;
- At least one update (via letter and email) on conditions is provided to Blackfoot water users during this period;
- If drought is predicted based on monitoring of conditions, the Committee will increase outreach activities. Outreach activities may include notices (letters and email) to water right holders on potential for low flows and need for the Drought Response, notices to outfitters and anglers on the potential for high water temperatures and need for the Drought Response; issuing press releases, posting of flyers, signs, and posters; personal communication with water users, and updating the Blackfoot Challenge hosted "Drought Information" web site. If necessary, the Committee may also choose to host a public meeting on drought and the need for cooperation.

June/Mid-July

- Committee meetings will increase (typically to once a week) and monitoring focus will shift to stream flows, precipitation, water temperature, and biotic conditions;
- If drought is predicted based on monitoring of indicators, water users will be contacted and asked to confirm their participation in the drought response;
- Outreach activities (letters, emails, personal communication, posters, signs, press releases, web site) continue and are updated with current information to help water users prepare for and respond to drought.

Mid July/August/September

- Drought Plan is implemented as described in the "Drought Plan Implementation" section.

October/November/December

- The Committee will host an annual year-end meeting to summarize hydrology, drought plan participation; water conserved, and outreach activities. The Committee will also discuss drought plan related issues and possible changes in approaches to drought management at the annual meeting.

Drought Plan Implementation

Stream flows are a primary indicator of drought conditions and can determine when specific actions under the Blackfoot Drought Plan will be implemented. All flow triggers described in this plan are as measured at the USGS gage station (#12340000) near Bonner, Montana. While flows will vary throughout the watershed during the year, this site is generally considered to be representative of conditions upstream with respect to biological processes and river productivity.

Water temperatures can also trigger drought response measures. Depending on the conditions of a given year, water temperature can take precedence over flows with respect to certain

drought response measures. Water temperatures can vary greatly throughout the watershed and are monitored at various locations closely aligned with specific needs of native fish in particular locations.

The Blackfoot Drought Committee utilizes these flow and temperature triggers to assess the need for and value of drought response measures. However, these are not the only factors that are considered in the decision to implement the Drought Response. The Blackfoot Drought Committee also examines other factors such as time of year, water demand, climatic conditions, weather projections and resource conditions. When all factors are considered, it is possible for stream flows and water temperatures to exceed trigger levels without the Drought Response being implemented.

The Blackfoot Drought Committee maintains internal rosters of participants and potential participants. For consumptive water users (primarily irrigators), this roster contains the participants' names, contact information, and water rights data (flow rate, priority date, and water sources). More importantly, the roster contains the participants' individual drought response plans and an estimate of water conserved and/or fisheries habitat values protected or improved. The individual drought response plans have been developed by working with the water users to identify opportunities for water conservation based on individual needs and conditions as well as fisheries values of the stream(s) in question. Drought response plans vary by participant but common water conservation strategies include pooling water rights and using them in rotation, reducing overall use, reducing instantaneous use, or shutting down. Long-term water and aquatic habitat conservation achieved through restoration projects is also an option for some participating landowners, depending on their location, water rights, and sustained project benefits. See Appendix A for explanations of drought plan actions. A roster is also maintained for non-consumptive water users (primarily fishing outfitters), which contains names and contact information. These rosters are for Committee use only and are used to track water conserved and quantify success of the Blackfoot Drought Response.

While the Blackfoot Drought Response Plan is active, the Committee will provide assistance to water users in implementing their individual drought response plans. To the extent allowed by the availability of funding and field staff, the Committee will conduct field checks during implementation of the Drought Response and reviews of at least 10 individual drought response plans each year.

Flow & Temperature Triggers

As flows near the 1,000 cubic feet per second (cfs) trigger, the Committee will:

- Contact the roster of water users. Participants are asked to confirm their participation or non-participation in the Blackfoot Drought Response via response by email, mail, or phone confirmation.
- Contact the roster of anglers and angling businesses and alert them to the potential need for angling restrictions.
- Implement outreach activities necessary to inform water users and the general public of drought conditions and the need for participation in the Drought Response.

When flows in the Blackfoot River fall to/or below 700 cfs, the Committee will:

- Upon having requested water users to implement their individual drought response plans, MT FWP and the CSKT, in consultation with the rest of the committee and in absence of extenuating circumstances, will jointly issue a "call for water" on non-participating junior water right holders in accordance with their eligibility to be called by either the Milltown In-stream Flow Right and/or the Murphy Right[5] (see Table 1).
- All calls for water will be issued in accordance with the FWP-CSKT Joint Call Protocol – see Appendix C.
- If MT FWP and the CSKT decline to issue a call for water on any water users under their in-stream flow rights, they will provide the committee with a written explanation of their decision not to issue a call.

When a "call for water" by MT FWP and/or the CSKT is made, the Committee will:

- Notify water users that the Blackfoot Drought Response is active and request implementation of their individual drought response plans.
- Confirm that junior water users with approved drought response plans are participating through response cards, personal communication, and/or field checks.
- Assess effectiveness of the Drought Response. If needed, the Committee may solicit additional voluntary reductions in water use from existing drought plan participants or from senior water users not already participating in the Drought Response.
- Contact the roster of anglers and angling businesses to alert them of the potential need for angling time and location restrictions if not already in place.
- Contact anglers and angling businesses should the Drought Committee recommend that voluntary fishing technique restrictions go into place. These may be recommended for the entire Blackfoot and all tributaries or just for specific sections of the river and streams, based on flow and temperature conditions. Particularly later in the summer, anglers are advised to make an effort to know current river flows and water temperatures so that they are prepared to observe voluntary technique restrictions. See Appendix B for suggested angling technique restrictions.
- Implement outreach activities to inform water users and the general public of drought conditions and the need for participation in the Drought Response.

If maximum daily water temperatures reach or exceed 71^{o} F for three consecutive days at Bonner:

- MT FWP will issue partial (2:00 pm – midnight) or all-day fishing restrictions on the mainstem of the Blackfoot River, depending on when high water temperatures are being reached during the day. (For example, if temperatures are exceeding 71^{o} in the morning, then angling restrictions will be all day.) The 71°F threshold in the lower Blackfoot River coincides with a lower threshold around 68 °F in the middle Blackfoot River (confluence

[5] In most circumstances, MT FWP and CSKT will implement call on both the Milltown and Murphy water rights using the more specific Milltown call initiation criteria; however, MT FWP and CSKT reserve the right to implement both these rights separately with separate call processes

of the North Fork Blackfoot River to confluence with the Clearwater River), which is the primary reach occupied by westslope cutthroat trout. Using a lower threshold at Bonner than the standard hoot owl trigger of 73°F is a conservative approach to protect native trout with lower thermal tolerances throughout areas of high fishing pressure.

As flows at Bonner approach 600 cfs, the Committee will:

- Contact the roster of anglers and angling businesses to alert them of the potential need for angling restrictions if not already in place or of the need for additional angling restrictions.
- Implement outreach activities necessary to inform water users and the general public of drought conditions and the need for participation in the Drought Response.
- Re-confirm that junior water users are participating through response cards, email, personal communication and/or field checks, including notice to ALL juniors with an accepted drought plan that MT FWP and the CSKT are likely to make call if river conditions reach 500 cfs.

If maximum daily water temperatures reach or exceed 65^{o}F for three consecutive days in the North Fork Blackfoot River, as measured at the Ovando-Helmville Road Bridge, AND Monture Creek, as measured at the DNRC stream gage:

- MT FWP will issue partial (2:00 pm – midnight) or all day fishing restrictions on all critical bull trout streams. These may include Gold Creek, Belmont Creek, Cottonwood Creek, Monture Creek, North Fork Blackfoot River below the falls, Copper Creek, Landers Fork, and Morrell Creek.
- MT FWP also monitors water temperatures in the spawning/rearing reaches of the North Fork Blackfoot River and Monture Creek. If water temperatures in these reaches reach or exceed 60^{o} F for three consecutive days, MT FWP can enact fishing restrictions (per ARM 12.5.507). In this circumstance, the Committee may recommend fishing restrictions on critical bull trout streams based on portable temperature loggers deployed in spawning/rearing areas regardless of the water temperatures observed in the lower monitoring locations.

If flows in the Blackfoot River at Bonner fall below 500 cfs, the Committee, MT FWP, and the CSKT will:

- Implement outreach activities necessary to inform water users and the general public of ongoing drought conditions and re-confirm that junior water users are participating through response cards, email, personal communication and/or field checks.
- Notify all water users whose individual drought response plan does not include a 1-to-1 trade of senior water rights for junior water rights, that MT FWP and the CSKT are making call on their junior rights. A 1-to-1 water trade occurs when a senior water user reduces or ceases the use of a senior water right by an amount that is, at minimum, equal to the flow and volume of water utilized by their junior water right.
- Consider, along with MT FWP, if fishing restrictions in addition to those already in place are necessary to protect fisheries, or are needed to be consistent with the Drought Response Plan's shared sacrifice approach to water conservation. Areas considered for

angling restrictions should include those where angling in combination with low water could affect fish survival.

Agreements Outside of the Blackfoot Drought Response Plan

In the Blackfoot, there are several cases where individual landowners have entered into agreements with an organization or agency in which management of water is described. These agreements may contain flow triggers that are similar to or the same as flow triggers described in this plan. While increasing in-stream flows is a common goal of the Blackfoot Drought Response and these agreements, they are managed separately. Enforcement of individual agreements is not dependent on implementation or non-implementation of the Blackfoot Drought Response.

In-stream Flow Rights in Non-Drought Years

There will be years where flows in the Blackfoot River are average or above average and implementation of the Blackfoot Drought Response is not necessary. However, flows below the in-stream flow trigger (700 cfs) are likely even in normal years. As such, when river flows decrease to less than 700 cfs, MT FWP and the CSKT retain the right to issue a call on the use of water rights junior to their in-stream flow rights when, in MT FWP's and the CSKT's judgment, the junior water rights owners have not implemented a drought plan offsetting the use of those junior water rights.

The Montana State Fisheries Management Plan and Regional Rivers

Unlike most areas in Montana, the Blackfoot is one of a few basins to have a developed drought management plan. The Blackfoot Drought Response Plan was designed specifically to address drought management in the Blackfoot watershed but operates in coordination with the Montana State Drought Plan and is subject to its regulations and requirements.

Other rivers in the region (Clark Fork River, Bitterroot River, and Little Blackfoot River) rely on the Montana Statewide Fisheries Management Plan[6] to dictate water use and fishing restrictions. Mandatory fishing restrictions on these rivers can have the unintended consequence of increasing angling pressure in the Blackfoot putting even more stress on the Blackfoot's water resources. The reverse is also true. The Committee will maintain close communication with MT FWP on the management of other regional rivers. If mandatory fishing restrictions are requested on other regional rivers, the Committee will meet, review conditions, and may request that mandatory fishing restrictions also be issued on the Blackfoot River and core bull trout recovery streams to protect fisheries and water resources from increased pressure. MT FWP will consider restrictions on the Blackfoot to reduce pressure only if criteria under this plan or the "State" plan are present or imminent.

Ending the Drought Response

Between early and mid-September, drought pressures and stressors to the Blackfoot's water resources usually begin to ease with cooler weather and increased precipitation. The Drought Committee, in monitoring conditions and forecasts throughout the summer will, as September

[6] https://fwp.mt.gov/conservation/fisheries-management/statewide-fisheries-management

approaches, begin to evaluate conditions and develop a recommendation to maintain, lift, or partially lift the voluntary drought response. Unlike other portions of this drought response plan, lifting of voluntary restrictions is not based on a specific flow or temperature trigger (unless flows and temperature recover to implementation triggers). Instead, the determination to maintain or lift the drought response during a given water year is an evaluation of changing water flow, water temperature, biotic conditions, climatic and soil moisture conditions, irrigation demands, angling pressure, and long-term impacts on the fishery and on the water supply.

If flows recover above the drought plan triggers after the Drought Response has been implemented and appear to be more than short duration change, the Committee will recommend lifting drought response measures. Similarly, the Committee will recommend lifting any temperature induced angling restrictions if water temperatures are below temperature triggers in bull trout recovery streams and mainstem of the Blackfoot River for three consecutive days.

While it is not impossible for flows to recover above the drought plan triggers after implementation of the Drought Response, it has proven to be very unlikely. If flows have not recovered after implementation of the Drought Response, the Drought Committee must consider the short- and long-term effects of drought and will evaluate the following conditions in its decision to lift or maintain the Drought Response.

- **Climatic Conditions:** Hot and dry weather are likely to increase water demands to maintain soil moisture, crops, and fall/winter pastures. Additionally, hot and dry weather are likely to diminish flows and increase water temperatures. If hot and dry weather persists, maintaining the Drought Response until cooler, wetter weather is predicted may be necessary;
- **Water Demands:** Voluntary irrigation measures conserve an estimated 50 to 70 cfs each year which has kept flows above the 500 cfs in most years. If irrigation demands are likely to result in flows falling below the 500 cfs drought plan trigger, maintaining the Drought Response may be necessary. If irrigation demands have declined and flows are likely to stay above the 500 cfs drought plan trigger, or are gaining or stable, lifting the Drought Response may be recommended;
- **Angling Pressure:** Stress to fish during low flows is exacerbated by angling pressure particularly in core bull trout recovery streams and critical biological areas (key spawning, rearing and staging areas, important migration corridors and areas of thermal refugia). If stress to fish from low flows and high water temperatures is likely to increase from angling pressure in these areas, maintaining the Drought Response may be necessary. If flows and water temperatures are trending towards recovery flow, are gaining or stable and temperatures are below 60^{o} F and angling is not likely to cause further fish stress, lifting the Drought Response may be recommended;
- **Social/Economic Concerns:** In general, the Drought Response will be lifted as overall conditions (flow and temperature) improve and water demands (irrigation and angling pressure) decline. When resource concerns remain elevated and/or significant impacts from lifting voluntary measures are predicted, Drought Response may be maintained well into the fall.

Blackfoot Drought Response Plan
Appendix A: Definitions for Individual Drought Response Plans

Shut down: Diversion off when drought trigger of 700 cfs reached or for a senior water right holder at some agreed to flow or management target

Water Year Shut Down: A water operation, senior or junior, that was not in use during the current irrigation season and will not be in use for the duration of the water year. This may or may not be related to low flow conditions but does result in a reduction in water demand during the current water year.

Not in Operation: A diversion and water use system, with a valid water right of record, which has not been recently utilized and will once again not be utilized during the current water year. These should be monitored to assure that when the water right is placed into operation, junior water right holders either have a drought plan or are called at the 700 cfs flow trigger.

Water Trade: A water conservation plan where an operator ceases or reduces use of a senior water right to continue use of a more water efficient junior right. The water trade would result in the real reduction in water use under the senior water right such that the quantity of water returned to the stream is at least equal in flow as the junior water right.

Water Mitigation: A water conservation plan where an operator ceases or reduces use of a senior water right to continue use of a more water efficient junior use. The water trade would result in a real reduction in water use under the senior water right. The quantity of water is not equal in flow or consumption to that diverted under the junior right, however, other factors, such as the source of the senior water, the stream and habitat protected by the returned senior water are of high value and mitigate the use of the junior water rights. FWP biologists will help define the level of habitat mitigation.

Reduced Use: For a senior, it is an operator adjusted or modified use of their diversion and water use pattern that results in a notable reduction in water demand. For a junior user, it is an operator adjusted or modified use of their diversion and water use pattern that results in a notable reduction in water demand developed before or at the trigger flow of 700 cfs but where all diversion and use of the junior right ceases at a minimum flow of 500 cfs.

Long-Term Conservation: A situation where land and stream restoration efforts have mitigated the use of a water right during drought AND improved fisheries habitat value. These long-term conservation projects allow for flexible solutions to address low flow, temperature and habitat concerns on priority trout streams and may be approved by FWP and CSKT as an acceptable strategy for an individual drought plan.

Water Pool / Water Bank: A water conservation plan where a junior operator has an agreement with a senior water right holder to cease or reduce use of their senior water right. This reduction in use of the senior water will allow the operator of the junior to continue use of a more water-efficient junior system. The water trade would result in the real reduction in water use under the senior water right such that the quantity of water returned to the stream is at least equal in flow.

Blackfoot Drought Response Plan
Appendix B: Voluntary Angling Technique Restrictions

How Anglers Can Help

During low river flows and high-water temperatures, anglers play an important role in protecting our fisheries. The first step is always staying aware of the current habitat conditions. When drought hits, consider fishing less drought-affected waters, using cooler stretches of river or starting earlier to avoid rising temperatures. As drought conditions stress native fish, a few changes in technique can also make a big difference.

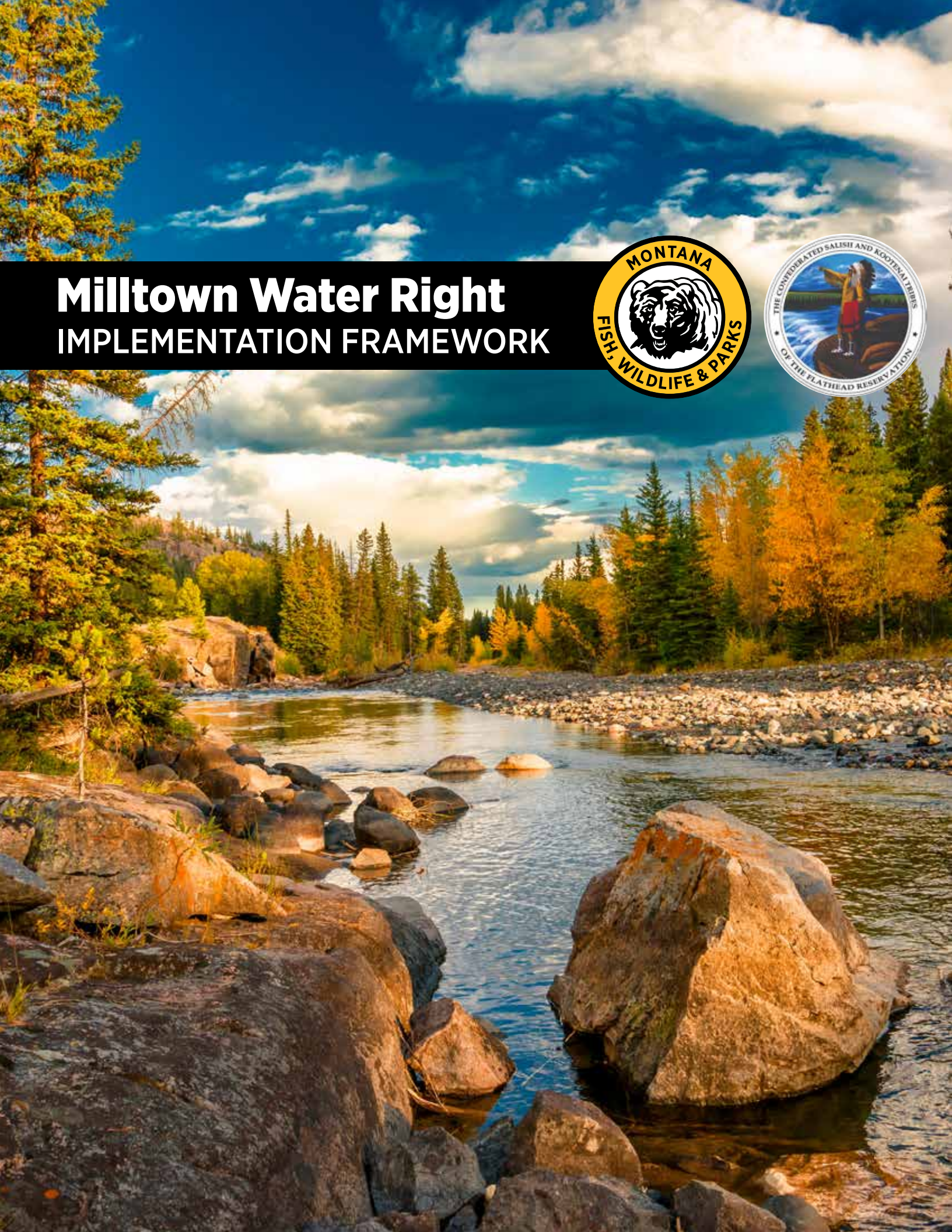
Anglers should consider the following to give fish the best possible chance to survive:

- **Artificial lures** are preferred over bait to reduce deep hooking and catch and release mortality.
- **Single hooks** are preferred over treble or multiple hooks because they are easier and quicker to remove.
- **Barbless hooks** are recommended over barbed hooks because they are easier to remove and reduce release time.
- **Heavier gear** is preferred over lighter gear because it makes it easier to land fish.
- **Rubber or neoprene nets** are preferable because they are less likely than nylon nets to catch hooks, which increases release time.

To ensure a released fish has the best chance for survival:

- **Land the fish quickly** and do not play it to total exhaustion.
- **Keep the fish in water** as much as possible when handling and removing the hook.
- **Remove the hook gently**. Do not squeeze the fish or put your fingers in its gills. There are release devices available from most sporting goods / fishing stores to assist you.
- **Set the hook quickly** to avoid deep hooking the fish. If the fish is deeply hooked and must be released by regulation, cut the line inside the mouth opening. Do not yank the hook out, as some fish will survive with hooks in them. Anglers should strongly consider keeping fish deeply hooked if allowed by regulations on that water body.
- **Release the fish only after it has gained its equilibrium**. If necessary, gently hold the fish upright in the current facing upstream and move it slowly back and forth.
- **Release the fish in quiet water** close to the area where it was hooked.
- **When drought hits, consider fishing less** drought-affected waters, using cooler stretches of river or starting earlier to avoid rising temperatures.

Milltown Water Right
IMPLEMENTATION FRAMEWORK



PURPOSE OF THE MILLTOWN WATER RIGHTS AND ENFORCEABLE FLOW RATES

INTRODUCTION AND PURPOSE OF THIS FRAMEWORK

For around 100 years, until its removal in 2008, the Milltown Dam generated power for the Bonner lumber mill and surrounding communities. In 2008, as part of the Clark Fork River Basin Superfund Settlement, the water right associated with the dam was acquired by the State of Montana. Parties to the settlement intended that the State of Montana would use the Milltown water right to restore Clark Fork River Basin fisheries and enhance recreational opportunities along the river corridor.

When the 2015 Montana Legislature ratified the Water Rights Compact between the Confederated Salish and Kootenai Tribes (CSKT) and the State of Montana **("the Compact", Mont. Code Ann. §§ 85-20-1901, et seq.)**, the Milltown Water Right was changed from a privately owned hydropower right to a publicly held instream fishery right. For ease of enforcement, the original water right was divided into two separate rights: water right **76M 94404-01**, for the Upper Clark Fork River Basin (not including the Blackfoot River), and water right **76M 94404-02**, which is specific to the Blackfoot River Basin. Pursuant to the Compact, both rights are now co-owned by Montana Fish, Wildlife & Parks (FWP) and CSKT and both rights are enforceable on April 24, 2025.

This Implementation Framework provides basic information on the Milltown Water Rights recognized by the Compact, informs water right holders and the public about what to expect once the rights become enforceable and what water management options may be available. FWP and CSKT plan to engage with water users to develop water management and drought plans. Much of the information applies to both the Upper Clark Fork and Blackfoot drainages, but the focus is on the Upper Clark Fork. As noted below, in the Blackfoot CSKT and FWP intend to continue to work with the Blackfoot Challenge within the framework of its Drought Management Plan.

The purpose of the Milltown Water Rights is maintenance and enhancement of fish habitat in the Upper Clark Fork and Blackfoot rivers. Though adequate flow is important year-round, and the Compact recognizes minimum flows year-round, the most critical time is typically July through September when flows are at their lowest and water temperatures are higher. The combination of low flow and high stream temperatures can stress fish populations in the short term and have negative long-term impacts. Maintaining minimum flow levels during this period is critical to sustain the fisheries.

Pursuant to Mont. Code Ann. § 85-20-1901 Art. III(D)(5), enforcement of the Milltown Water Right is triggered if flows fall below the minimums described in Appendix 31 of the Compact. The Compact recognizes the following minimum flows during late summer:

- **500 cubic feet per second (cfs) from August 3rd to September 26th on the Clark Fork River above Turah;**
- **700 cfs from July 25th through April 5th of the following year on the Blackfoot River at Bonner.**

Measurements for the Clark Fork River portion of the Milltown Water Right (76M 94404-01) are taken at the Clark Fork River at Turah Bridge Gage **(USGS Gage #12334550)**. Measurements for the Blackfoot River portion of the Milltown Water Right **(76M 94404-02)** are taken at the Blackfoot River at Bonner Gage **(USGS Gage #12340000)**. Both rights have a priority date of December 11, 1904.

JUNIOR WATER RIGHTS SUBJECT TO A POTENTIAL CALL

Under Montana water law, a downstream water user with a senior water right that is not being fully met may demand that an upstream water user with a junior right cease using that right. This demand is known as a water right call.

Under the Compact, water rights in the following categories are potentially subject to call:

- **Surface water irrigation rights with a priority date between December 11, 1904, and April 24, 2015;**
- **Groundwater irrigation rights exceeding 100 gpm with a priority date between December 11, 1904, and April, 24, 2015;**
- **Any water right with a priority date junior to April 24, 2015.**

NUMBER OF WATER RIGHTS JUNIOR TO THE MILLTOWN WATER RIGHTS

BASIN	PRIORITY DATES		TOTALS
	Dec 11, 1904-April 24, 2015	April 25, 2015-Present Day	
76E ROCK CREEK	154	49	203
76F BLACKFOOT	384	366	750
76G UPPER CLARK FORK	851	706	1557
76GJ FLINT CREEK	164	168	332
TOTALS	1553	1289	2842

Table 1: Water Rights Junior to the Milltown Water Right by Basin and Priority Dates.
Source: DNRC Water Rights Query System.

Table [1] shows the number of water rights junior to the Milltown Water Rights by basin and priority date, not including stock or domestic claims without priority dates or claims filed under H.B. 110.[1]

The Upper Clark Fork Basin was legislatively closed to new water right appropriations on April 14, 1995. Accordingly, most in-basin water rights with priority dates junior to April 24, 2015, are groundwater certificates filed as exempt wells under **Mont. Code Ann. § 85-2-306.** These rights are limited to 35 gpm or less, not to exceed 10 acre-feet per year. These rights, if used for domestic or stock purposes are unlikely to be called.

Of the [384] irrigation water rights identified in the Blackfoot Basin, [112] have already been subject to call under FWP's Murphy Right.[2]

LIKELIHOOD OF CALL

The historical record (Table 2, below) indicates that flows in the Upper Clark Fork rarely fall below minimum enforceable flow levels before August of a given calendar year. FWP and CSKT will monitor minimum enforceable flows throughout spring runoff and irrigation seasons, but the critical late summer period is most likely to require enforcement if flow drops below minimum levels. During low flow events, FWP and CSKT will encourage water conservation efforts aimed at minimizing stress to fish populations.

In the Upper Clark Fork, a call may be initiated on junior water rights if flows fall below the minimum enforceable flow during four out of five consecutive days. A call will be terminated once flows rise above the minimum enforceable flow rate for two out of five consecutive days. Table 2 shows the number of days in which call criteria were met between April 1st and October 31st of each year from 1985-2022. **(For more detail see Appendix 1.)**

	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
TOTAL DAYS BELOW MIN.	25	17	27	98	306	268	49
TOTAL DAYS (1985-2022)	1140	1178	1140	1178	1178	1140	1178
PERCENT DAYS BELOW MIN.	2.19	1.44	2.37	8.32	25.98	23.51	4.16

Table 2: Total number of days with flows below required minimum (i.e., meeting Upper Clark Fork call criteria) at the USGS Clark Fork River at Turah gage for years 1985-2022.

[1] H.B.110, passed by the Montana Legislature in 2017 provided Montana water users an opportunity to file claims on the use of domestic and stock water that had previously been exempt from a filing requirement. The deadline to file was June 30, 2019.

[2] A law passed in the late 1960s authorized FWP to file instream flow rights on blue-ribbon trout streams. Named for the sponsor of the legislations, FWP's "Murphy Right" on the Blackfoot River has a priority date of January 6, 1971. Minimum flows range throughout the year but are set at 700 cfs between July 15th and August 31st, then reduced to 650 cfs from September 1st through the end of the year.

ENFORCEMENT PROTOCOLS

FWP and CSKT recognize that several of the tributaries present unique circumstances, and a one size fits all approach may not be appropriate to meet CSKT and FWP's objectives of maintaining and ultimately improving the fishery resource. In the long term, CSKT and FWP anticipate working with individual water users or groups of water users on alternatives to the following protocol. As explained below, those alternatives may include greater use of water commissioners or development of individual or sub-basin water management plans. That could substitute for or reduce the likelihood of call. In the short term, as a starting point for enforcement, CSKT and FWP have developed the following protocol:

BLACKFOOT RIVER BASIN

CSKT and FWP intend to continue to work within the framework of the Blackfoot Challenge Drought Management Plan, where individual water users have developed their own management plans. Following one's individual plan shields a junior water right user from call of their junior rights or delays that call until flows in the Blackfoot River are well below the enforceable level of the Murphy Right.

UPPER CLARK FORK RIVER BASIN

FWP/CSKT JOINT CALL PROTOCOL FOR THE MILLTOWN WATER RIGHT IN THE UPPER CLARK FORK

This joint call protocol sets forth steps FWP and CSKT will take to coordinate efforts when making call in the Upper Clark Fork Basin. This protocol recognizes CSKT and FWP's respective rights to independently make call as set forth in the Compact, **Mont. Code Ann. § 85-20-1901(D)(5)**. However, through this protocol CSKT and FWP will make all reasonable efforts to ensure a unified approach to calling junior water rights.

This protocol is broken into five steps, each described in turn.

1 ANALYZE UPPER CLARK FORK BASIN RIGHTS

FWP and CSKT water staff will first review water rights in the Upper Clark and determine those legally eligible for call. In practice, not all eligible junior rights are likely to be called because some water rights have a more significant impact on stream flows than others. Additionally, some junior rights may be eliminated from consideration for call for reasons that include, but are not limited to, the following:

- **COMMUNITY WATER MANAGEMENT AGREEMENTS:** In some basins, watershed groups or community-based organizations have implemented water management or community drought response plans that take effect under low flow conditions. While no local water management agreements currently exist in the Upper Clark Fork, FWP and CSKT hope to establish water management agreements with junior water users in the Upper Clark Fork Basin. These water management agreements would include criteria that, if satisfied, would shield water right holders from call or potentially delay a call.

- **WATER COMMISSIONERS:** Under some circumstances, junior water rights will not be called while those rights are under administration by a court-appointed water commissioner. According to the Montana Water Court, the Upper Clark Fork Basin includes seven water distribution projects that are administered by five water commissioners. FWP and CSKT will not call junior water users that are within the jurisdiction of a water commissioner if FWP and CSKT have engaged in discussions with that water commissioner to ensure that the Milltown Water Right is being factored into the commissioners' determination of use priority. FWP and CSKT may make presentations about how the Milltown Water Right should be factored into water management decisions during DNRC Water Commissioner Training.

CIRCUMSTANCES WITH LIMITED CONNECTION TO RIVERS AND STREAMS: As noted above, CSKT and FWP will evaluate junior water rights to determine whether cessation of use would provide any benefit to the watershed. FWP staff may use aerial photographs to assess whether a call would result in water from a given right contributing to instream flow. Local fisheries biologists will be consulted for additional input. For example, a right for a pond on a small stream that is rarely flowing during late summer is very unlikely to be called.

An example of a circumstance where call may not be warranted is illustrated here in Figures 3 and 4. (An example from outside the Upper Clark Fork was chosen to ensure that no water user from inside the basin was singled out.) The point of diversion for the water right – marked with a red dot on both figures – is Sheep Creek (flowing from right to left) which is technically a tributary to the Beaverhead River. However, as shown in the Fig. 3 topographic map and the Fig. 4 aerial photograph, it is not only difficult to see the stream under current conditions, but it does not reach the Beaverhead River. The former path of the stream is now covered by fields with center pivots. Even if the stream did flow across the irrigated fields, it would be intercepted by East Bench Canal which is shown prominently on the left side of the maps. Because it is highly unlikely that cessation of this right would result in additional water reaching the Beaverhead River, it would not be designated for call to boost Beaverhead River flows.

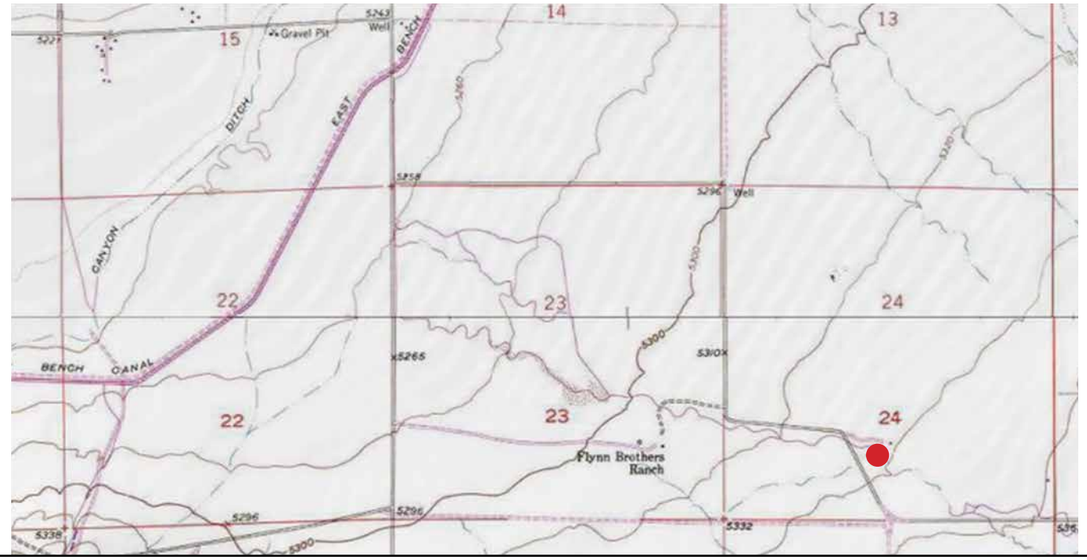


Fig.3: Topographic map with junior water right diversion (red dot) on Sheep Creek above East Bench Canal

Fig.4: Aerial photograph showing same area as in Fig. 3

2 STREAMFLOW MONITORING

Each year, when high flows begin to recede, FWP and CSKT Water Program staff will monitor the Clark Fork at Turah Gage **(USGS No. 12234550)** and compare the real-time data against the Milltown Water Right minimum enforceable level. This monitoring will be accomplished through the use of an FWP-created application that assesses current streamflow conditions in relation to FWP's instream flow water rights. The application can also help identify junior rights implicated by low flow conditions and map the location of those rights.[3]

3 CONSULTATION AND CALL RECOMMENDATION

As noted above, calls may be made if average daily flows fall below the minimum enforceable level for four days in a consecutive five-day period. Once average daily flows in the Upper Clark Fork have fallen below the minimum enforceable flow for four out of five consecutive days (and weather forecasts indicate that stream conditions will not improve), FWP and CSKT Water Program staff will make a final determination of which water rights are eligible for call based on the considerations described above, and then follow the procedure described here:

- FWP's Water Program manager will contact and consult with the Fisheries Division administrator and/or designated division staff, the regional fisheries manager, and area fisheries management biologist. The Fisheries Division Administrator or designee will direct regional staff to prepare a statement or brief report on the potential fishery benefit of that call. If the report prepared by Fisheries supports the call, Fisheries and the Water Program Staff will jointly submit the call recommendation to the Director's Office.

- CSKT Water Program staff will provide their legal staff and Tribal Council with the call recommendation.

4 FINAL CALL RECOMMENDATION AND REVIEW BY DIRECTOR'S OFFICE AND TRIBAL COUNCIL

If approved by FWP's Director and CSKT's Tribal Council, a call letter will be sent to affected junior water users. Because many water users hold both junior and senior water rights, the letters will clearly indicate which water rights are being called. The letter will provide the water right holder the option to mitigate their water use instead of simply shutting off.[4]

5 EVALUATION AND REVISIONS

At the conclusion of each season in which a call is made in the Upper Clark Fork in accordance with this protocol, representatives from FWP and CSKT will meet to evaluate the call process and determine whether revisions need to be made. Suggested revisions to this protocol will be provided to FWP and CSKT leadership for review and approval.

[3] Currently, FWP's Instream Flow Application is only available to FWP staff on an internal website. In the future, FWP plans to coordinate with CSKT on the development of a joint, public-facing web application for purposes of administering the Milltown Water Right.

[4] Often, when a call letter is sent, water users contact FWP to inform the agency of actions they have taken to reduce usage or to discuss the nature of their water use and whether it is impacting streamflow. Information from these interactions provides valuable data on whether to include those rights in future water right calls. It can also lead to development of individual water management or mitigation plans.

LONG TERM WATER MANAGEMENT OPTIONS

As noted, the protocol described above is proposed as a starting point. Possible alternatives to making call are discussed here.

1 WATER COMMISSIONERS

Under FWP's existing Call Protocol an important consideration when evaluating potential for call is whether a water commissioner has been appointed in the subject basin. The process for appointing a water commissioner is set forth in **Mont. Code Ann. § 85-5-101**. Water commissioners may be appointed if there is a demonstrated need, which can be established by basin water right owners filing a petition with the district court. Although commissioners are often appointed to administer water usage on smaller streams, there are basin-wide enforcement projects that utilize water commissioners in several Montana river basins including the Musselshell and Teton.

Under this alternative, FWP and CSKT would work with water users to petition local district courts to appoint one or more water commissioners in the Upper Clark Fork.

2 SUBBASIN WATER MANAGEMENT PLANS

Under this alternative, CSKT and FWP would work with water users in a basin or sub-basin to develop stream flow and temperature objectives for an individual stream reach or tributary. At the same time, CSKT and FWP would work with individuals or groups of water users in those subbasins to develop water management plans and projects with the goal of improving stream flow and habitat conditions. If flow and temperature objectives are met, participating water users in that sub-basin would be excused from call or call would be delayed. CSKT and FWP note that there may be no specific time frame to accomplish a water management plan. However, until the water management plan objectives, as established through a collaborative process, have been met, junior water right users may be susceptible to call.

An important step in this process is establishing flow and temperature objectives for a given subbasin. One tool for this effort would be the minimum flows identified in FWPs Wetted Perimeter studies from the 1970s and '80s. Wetted Perimeter studies measure available fish habitat at a stream's riffle section under different flow conditions. This approach identifies both a minimum flow that achieves fish habitat objectives, and a sub-minimum flow rate at which habitat outcomes significantly decline.

Water users may meet these agreed upon targets through a combination of approaches. Reaching a target may be as simple as water users identifying water use priorities and agreeing to cut back on diversions of both senior and junior water. Successful implementation may also involve greater use of technology –such as soil moisture measuring devices and changes in management– to ensure soils absorb adequate moisture early in the season when water is more plentiful.

OTHER APPROACHES TO SUB-BASIN WATER MANAGEMENT PLANS

The following are examples of alternative approaches to apply in a tributary water management plan. These approaches are not exclusive.

NATURAL WATER STORAGE

Traditionally, 'water storage' has meant confining water behind a human-made dam structure. Recently, high expense, lack of suitable locations, and extensive mitigation requirements have rendered the building of new, large-scale reservoirs unlikely. However, some water is naturally stored in riparian areas, floodplains, and wetlands. There, the land absorbs water during spring run-off and holds it in the shallow aquifer. The water is then slowly released back to the river over the drier summer months.

This process occurs naturally in intact river systems where a river can access its floodplain. On land where stream-floodplain connectivity has been compromised, restoration projects that reconnect the floodplain and regenerate riparian vegetation can reestablish natural storage as a viable water management procedure. Wetlands adjacent to creeks can also be restored using approaches like beaver dam analog structures which have the potential to promote the same water-storing functionality as the floodplain.

These natural storage solutions are relatively inexpensive to implement and maintain compared to traditional reservoir infrastructure. Implementing these nature-based strategies may enhance late-season streamflows in the Clark Fork tributaries and the main stem, as well as provide broader ecological services, such as providing wildlife habitat, protecting water quality, and mitigating flood events.

Importantly, these natural storage approaches are site-dependent because of local differences in soils and topography. Depending on the site, return flows may go to the main stem of the Clark Fork instead of contributing to specific tributaries.

Irrigation practices such as use of unlined ditches or flood irrigation can function similarly to floodplains and wetlands in the sense that unconsumed water is temporarily stored in a shallow aquifer and often returns to surface water sources. However, statutory restrictions on periods of diversion and beneficial uses can limit these practices' viability as a water storage strategy in Montana. For example, water may not be diverted outside of the period of diversion established by the right. Furthermore, water must be diverted for the use listed on the right (e.g., irrigation). It is also important to note that the broader benefits to riparian and wetland habitat associated with natural water storage are often not achieved unless the riparian buffer or floodplain are concurrently preserved or restored.

Note: ***Natural water storage projects, proposed changes in irrigation practice, water conveyance, wetland restoration or mitigation project must be carefully evaluated to determine if water right changes or new water rights are needed and compliance with Montana water law.***

VOLUNTARY WATER LEASING

Some water right owners have the option of entering into a lease agreement with a non-governmental organization (NGO) or state agency as a strategy for leaving more water instream. These agreements are negotiated with the landowner and they vary in scope. Typically, irrigators choose to lease one or more water rights for all or part of the irrigation season. The beneficial use of the water right may be temporarily changed to instream flow as part of the agreement, but it must go through the standard water right change process, which includes a technical assessment of historic use. Water right holders (irrigators) may choose to negotiate an agreement directly with an NGO and may choose to divert less water for irrigation without changing the beneficial use on the right. However, failing to change the purpose of a water right may result in those irrigators forfeiting their right to make call on upstream junior users.

ASSESS AND SUPPORT WATER STORAGE OPPORTUNITIES

1. NRDP Efforts to Examine Storage in the Racetrack Creek Subbasin

In 2022, the Upper Clark Fork Streamflow Group identified a series of existing headwaters storage facilities with the potential to increase storage capacity. The specific sites that were selected were in the Upper Racetrack Subbasin and included facilities located on Albicaulis, Alpine, Bowman (Upper, Middle, and Lower), Big Pozega, and Little Pozega Lakes. Montana's Natural Resource Damage Program (NRDP) contracted with Hydrometrics to study the possibility of restoring these storage projects. Of the sites studied, Big and Little Pozega were identified as having the greatest potential for restoration. NRDP intends to further evaluate the feasibility and benefits of reconstructing these storage facilities.[5] Similar efforts to assess headwaters storage options in other subbasins may be pursued if resources allow.

2. Silver Lake Pilot Studies

In 2017, 2019, and again in 2021, Montana Trout Unlimited and NRDP negotiated terms with Butte-Silver Bow County to release water from Silver Lake into Warm Spring Creek. These releases were intended to determine the efficacy of providing colder water and increased flows to Upper Clark Fork tributaries.

In 2017 these releases took place between August 31 and September 13 for a total of 900 acre-feet. In 2019, these releases took place between August 6 and August 27 for a total of 1,571 acre-feet. In 2021, the release occurred between August 2 and September 20 for a total of 3,120 acre-feet.

These releases resulted in a marked improvement in flows and temperatures in the Upper Clark Fork with measurable flow and temperatures effects as far downstream as Deer Lodge on the mainstem Clark Fork River.

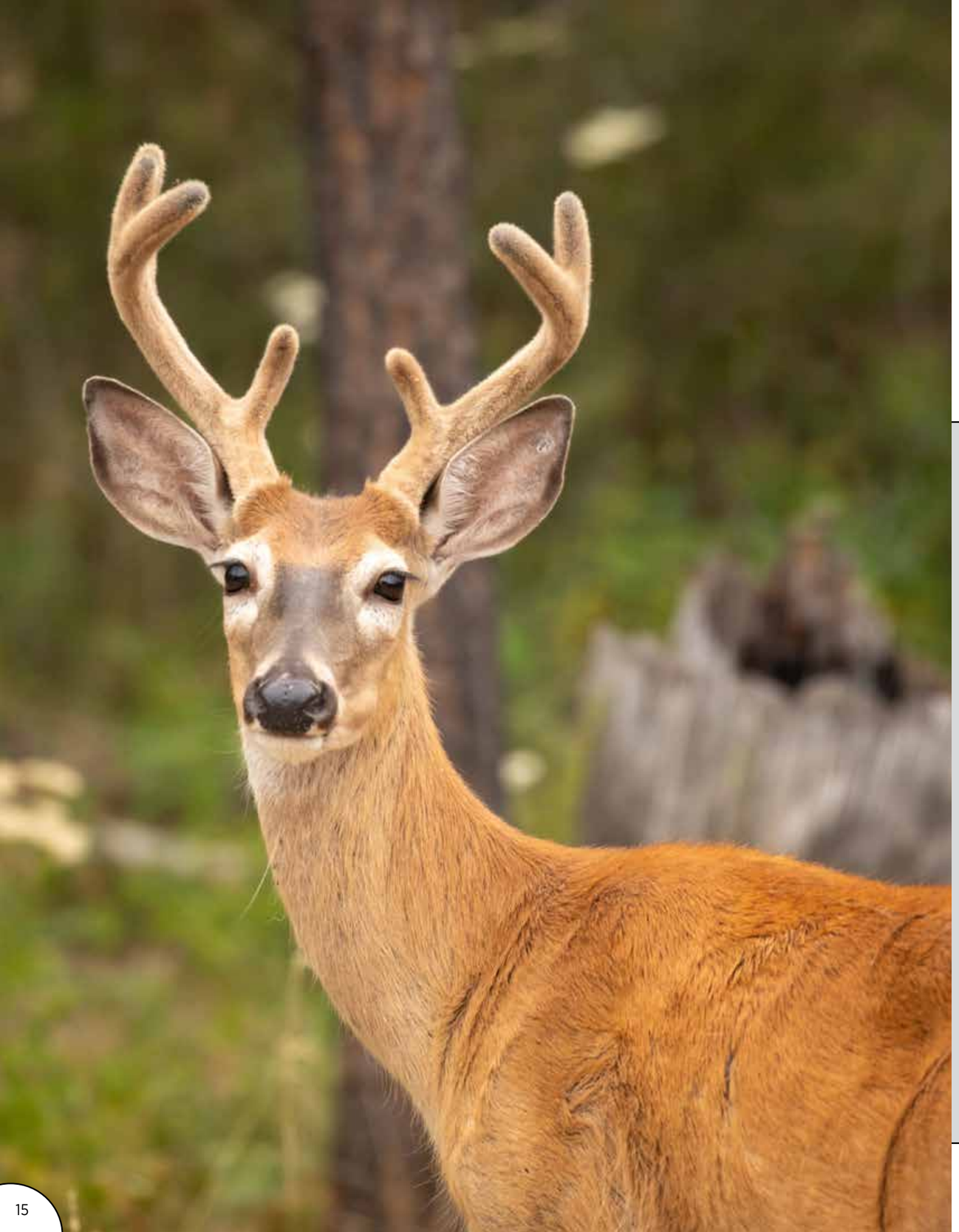
CONCLUSION AND NEXT STEPS

CSKT and FWP sincerely appreciate your review of this document, and we look forward to engaging with water users. As noted above, the Compact acknowledges that each entity is entitled to administer the Milltown Water Rights as they see fit. However, FWP and CSKT developed this Framework with the goal of making joint decisions on enforcement of the Milltown Water Rights. Joint administration will be more effective and will provide the individual water user with more predictable outcomes.

The Implementation Framework is a starting point – one that we believe is important to have. However, we look forward to discussions with water users about possible alternatives for individuals, tributary watersheds or sub-basins. We encourage you to tell us if you are interested in discussing water management and drought response and share any ideas you have.

Read more online

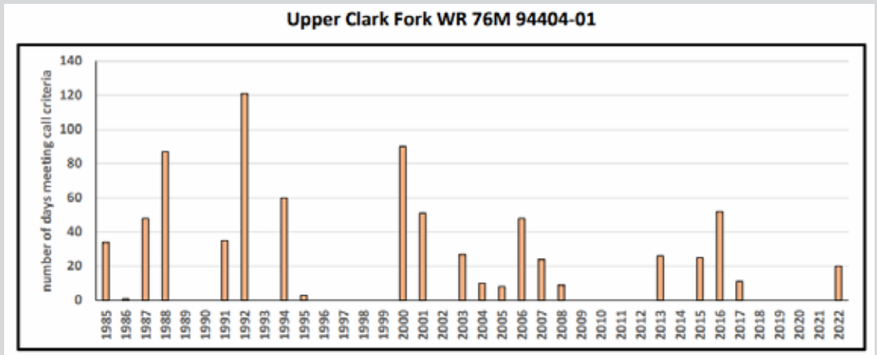
[5] Upper Streamflow Group meeting on May 10, 2023, Presentation Titled, "Headwater Storage Update". Brian Bartkowiak. Montana Natural Resource Damage Program.



APPENDIX 1

Graph and table showing the number of days that met call criteria between April 1st and October 31st of each year for the 1985 – 2022 Period.[6]

UPPER CLARK FORK
WR 76M 94404-01



year	# days call	cumulative water, in af, to offset call	Rank driest to wettest	year	# days call	cumulative water, in af, to offset call	Rank driest to wettest	year	# days call	cumulative water, in af, to offset call	Rank driest to wettest
1985	34	6062	9	1998	0	0	34	2011	0	0	38
1986	1	154	21	1999	0	0	24	2012	0	0	17
1987	48	1847	5	2000	90	14366	2	2013	26	2181	8
1988	87	13566	3	2001	51	3867	12	2014	0	0	27
1989	0	0	13	2002	0	0	20	2015	25	2140	7
1990	0	0	16	2003	27	918	14	2016	52	3552	6
1991	35	1842	18	2004	10	716	10	2017	11	322	26
1992	121	16926	1	2005	8	95	22	2018	0	0	36
1993	0	0	28	2006	48	4754	11	2019	0	0	25
1994	60	8222	4	2007	24	827	19	2020	0	0	25
1995	3	73	30	2008	9	24	33	2021	0	0	15
1996	0	0	32	2009	0	0	29	2022	20	1138	23
1997	0	0	37	2010	0	69	31				

Figure and Table illustrating number of days meeting call criteria for April 1 - October 31, 1985 thru 2022 period

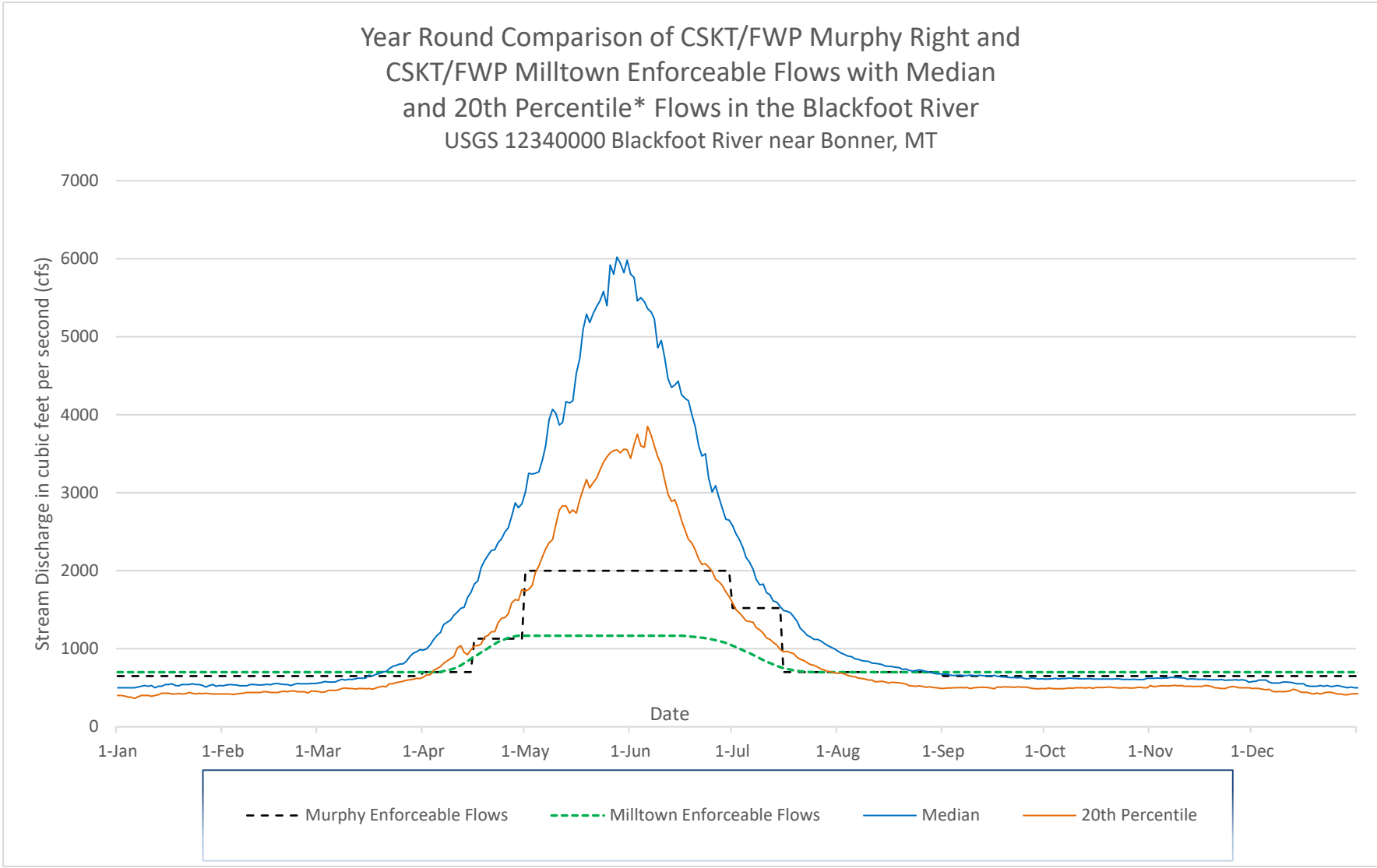
Upper Clark Fork water right abstract 76M 94404-01

Clark Fork River at Turah (USGS gage 12334550)

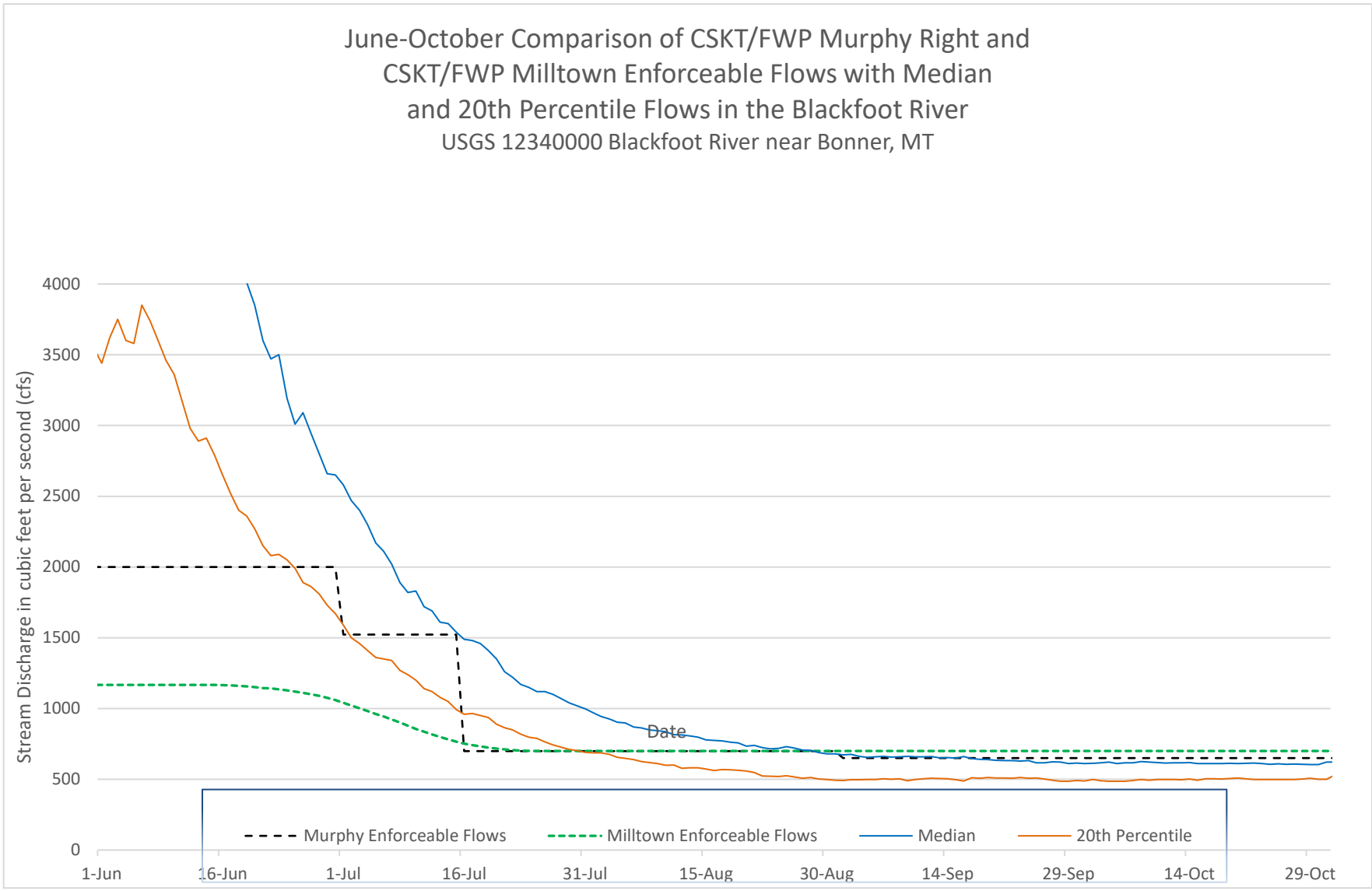
[6] Graph and Table developed by Seth Makepeace of the CSKT and presented to the Watershed Restoration Coalition (WRC) on April 11, 2023.

MILLTOWN WATER RIGHT

IMPLEMENTATION FRAMEWORK



*The 20th percentile represents the flow where 20% of flows in the period of record are below this level and 80% are above it. The median flow is the same as the 50th percentile, where 50% of flows on record are above and 50% are below this level.


June-October Comparison of CSKT/FWP Murphy Right and
CSKT/FWP Milltown Enforceable Flows with Median
and 20th Percentile Flows in the Blackfoot River
USGS 12340000 Blackfoot River near Bonner, MT
Stream Discharge in cubic feet per second (cfs)
4000
3500
3000
2500
2000
1500
1000
500
0
1-Jun
16-Jun
1-Jul
16-Jul
31-Jul
15-Aug
30-Aug
14-Sep
29-Sep
14-Oct
29-Oct
Date
Murphy Enforceable Flows
Milltown Enforceable Flows
Median
20th Percentile

Blackfoot Drought Response Plan

Appendix E: 76M 94404-01 and 76M 94404-02 Technical Documentation (*Appendix 31 from the CSKT Water Compact*)

By way of the water rights compact entered into by the Confederated Salish & Kootenai Tribes, the State of Montana, and the United States of America, the former Milltown Dam water right, 76M 94404-00, is hereby split and changed, creating two separate active and enforceable water rights: 76M 94404-01, with a place of use along the reach of the Clark Fork River starting just above the confluence of the Clark Fork and Blackfoot Rivers extending upstream along the Clark Fork River to the confluence of the Clark Fork River and Allen Creek; and 76M 94404-02, with a place of use along the reach of the Blackfoot River starting just above the confluence of the Clark Fork and Blackfoot Rivers and extending along the Blackfoot River upstream to the confluence of the Blackfoot River and the East Fork of Twin Creek. The designation of a place of use of these water rights is a designation for purposes of measurement of the enforceable levels and is not a geographic limitation on the location of junior water rights against whom this right may be enforced.

These water rights maintain the original priority date of December 11, 1904.

The purpose of these water rights is the maintenance and enhancement of fish habitat.

For any analysis of the legal availability of water in basins 76F (Blackfoot River), 76G (Clark Fork above Blackfoot River), 76E (Rock Creek, Tributary to the Clark Fork River), and 76GJ (Flint Creek), these water rights shall be considered conjoined at a combined flow rate of 2,000 CFS for every day of the year, as measured downstream of the confluence of the Clark Fork and Blackfoot Rivers at the location of USGS Gage #12340500 above Missoula (46°52’38.06” N, 113°55’54.99” W, NAD83) (NWNWNW SEC 19 T13N R18W).

These water rights shall not be exercised in conjunction with any artificial diversion.

The ability to enforce these water rights shall be suspended for a period of 10 years from the date the ratification by the Montana legislature of the water rights compact entered into by the Confederated Salish & Kootenai Tribes, the State of Montana, and the United States of America, becomes effective under state law.

The enforceable levels of these water rights take the form of static distributions of unique daily flow values, one each for every day of the year for each water right. Call may be initiated on the day following a five-consecutive-day-period where four out of five average daily river flows fall below their respective daily enforceable flow values; call may persist until such time as two average daily flows of the previous five-consecutive-day-period are in excess of their respective daily enforceable flow values.

The details of each water right are described as follows:

Water Right 76M 94404-01: The owners of these water rights shall be entitled to make a call,

in accordance with state law, to enforce water right number 94404-01 only against junior water rights in basins 76G (Clark Fork above Blackfoot River), 76E (Rock Creek, Tributary to the Clark Fork River). and 76GJ (Flint Creek), that:

1) Have a priority date earlier than the date on which the ratification by the Montana Legislature of the water rights compact entered into by the Confederated Salish and Kootenai Tribes, the State of Montana, and the United States of America takes effect under state law (April 24, 2015), have a purpose of irrigation and whose source of supply is surface water;
2) Have a priority date earlier than the date on which the ratification by the Montanan Legislature of the water rights compact entered into by the Confederated Salish and Kootenai Tribes, the State of Montana, and the United States of America takes effect under state law (April 24, 2015), and have a purpose of irrigation, whose source of supply is groundwater and whose flow rate is greater than 100 gallons per minute; or
3) Have a priority date later than the date on which the ratification by the Montana Legislature of the water rights compact entered into by the Confederated Salish and Kootenai Tribes, the State of Montana, and the United States of America takes effect under state law (April 24, 2015).

Enforceable levels of water right 76M 94404-01 shall be measured at USGS gage #12334550 on the mainstem of the Clark Fork River at Turah Bridge, Montana (46°49'33.28" N, 113°48'50.51", NAD83) (SWNWSW SEC 1 T12N R18W), unless that USGS gage is discontinued or otherwise rendered nonfunctional at which point measurements shall be taken either at this same location or at a point downstream on the Clark Fork River as near as reasonably practicable to just above, but not below, the confluence of the Clark Fork and Blackfoot Rivers. The enforceable static individual daily flow values are described in Table 1.

Water Right 76M 94404-02: The owners of these water rights shall be entitled to make a call, in accordance with state law, to enforce water right number 94404-02 only against junior water rights in basin 76F (Blackfoot River), that:

1) Have a priority date earlier than the date on which the ratification by the Montana Legislature of the water rights compact entered into by the Confederated Salish and Kootenai Tribes, the State of Montana, and the United States of America takes effect under state law (April 24, 2015), have a purpose of irrigation and whose source of supply is surface water;
2) Have a priority date earlier than the date on which the ratification by the Montanan Legislature of the water rights compact entered into by the Confederated Salish and Kootenai Tribes, the State of Montana, and the United States of America takes effect under state law (April 24, 2015), and have a purpose of irrigation, whose source of supply is groundwater and whose flow rate is greater than 100 gallons per minute; or
3) Have a priority date later than the date on which the ratification by the Montana

Legislature of the water rights compact entered into by the Confederated Salish and Kootenai Tribes, the State of Montana, and the United States of America takes effect under state law (April 24, 2015).

Enforceable levels of water right 76M 94404-02 shall be measured at the USGS gage #12340000 near Bonner, Montana (46°53'57.88" N, 113°45'22.75", NAD83) (SESENW SEC 9 T13N R17W), unless that USGS gage is discontinued or otherwise rendered nonfunctional at which point measurements shall be taken either at this same location or at a point downstream on the Blackfoot River as near as reasonably practicable to just above, but not below, the confluence of the Clark Fork and Blackfoot Rivers. The enforceable static individual daily flow values are described in Table 2.

Appendix E, Table 1

Enforceable Daily Flows for 76M 94404-01 on the Clark Fork @ Turah Bridge, MT												
	Month											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	500	515	561	727	833	833	735	503	500	512	654	560
2	500	518	568	731	833	833	727	501	500	516	655	553
3	500	521	573	733	833	833	718	500	500	521	655	550
4	500	524	582	734	833	833	710	500	500	527	656	547
5	500	522	592	736	833	833	707	500	500	534	657	544
6	500	520	602	741	833	833	705	500	500	540	657	542
7	500	520	611	744	833	833	703	500	500	548	658	538
8	500	520	618	747	833	833	702	500	500	556	659	534
9	500	519	627	752	833	833	699	500	500	566	659	529
10	500	518	633	760	833	833	695	500	500	577	660	524
11	500	518	641	768	833	833	689	500	500	587	659	520
12	500	519	651	775	833	833	680	500	500	597	659	516
13	500	520	660	780	833	833	672	500	500	607	656	513
14	503	524	667	785	833	833	663	500	500	617	654	511
15	503	527	669	791	833	833	653	500	500	625	651	509
16	503	527	673	796	833	833	644	500	500	631	645	509
17	503	527	676	801	833	832	635	500	500	636	639	509
18	503	526	676	804	833	831	622	500	500	641	633	509
19	506	524	678	807	833	828	610	500	500	645	629	509
20	509	524	681	812	833	822	598	500	500	649	625	508
21	509	520	682	818	833	815	588	500	500	652	621	507
22	509	522	685	822	833	808	573	500	500	654	617	506
23	509	523	687	824	833	799	559	500	500	656	613	503
24	511	523	689	827	833	790	546	500	500	657	608	500
25	511	524	692	831	833	782	535	500	500	658	603	500
26	511	527	695	833	833	775	526	500	500	656	596	500
27	511	534	701	833	833	767	519	500	501	655	589	500
28	513	542	706	833	833	759	514	500	502	655	583	500
29	514	552	710	833	833	749	511	500	505	654	575	500
30	514		715	833	833	741	507	500	508	654	568	500
31	514		720		833		504	500		654		500

Appendix E, Table 2

Enforceable Daily Flows for 76M 94404-02 on the Blackfoot @ Bonner, MT												
	Month											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	700	700	700	700	1,167	1,167	1,041	700	700	700	700	700
2	700	700	700	700	1,167	1,167	1,022	700	700	700	700	700
3	700	700	700	700	1,167	1,167	1,001	700	700	700	700	700
4	700	700	700	700	1,167	1,167	982	700	700	700	700	700
5	700	700	700	700	1,167	1,167	961	700	700	700	700	700
6	700	700	700	704	1,167	1,167	943	700	700	700	700	700
7	700	700	700	713	1,167	1,167	923	700	700	700	700	700
8	700	700	700	723	1,167	1,167	902	700	700	700	700	700
9	700	700	700	733	1,167	1,167	878	700	700	700	700	700
10	700	700	700	747	1,167	1,167	856	700	700	700	700	700
11	700	700	700	765	1,167	1,167	836	700	700	700	700	700
12	700	700	700	788	1,167	1,167	817	700	700	700	700	700
13	700	700	700	815	1,167	1,167	799	700	700	700	700	700
14	700	700	700	843	1,167	1,167	782	700	700	700	700	700
15	700	700	700	870	1,167	1,167	766	700	700	700	700	700
16	700	700	700	898	1,167	1,166	752	700	700	700	700	700
17	700	700	700	925	1,167	1,164	741	700	700	700	700	700
18	700	700	700	953	1,167	1,161	732	700	700	700	700	700
19	700	700	700	980	1,167	1,156	723	700	700	700	700	700
20	700	700	700	1,008	1,167	1,151	717	700	700	700	700	700
21	700	700	700	1,035	1,167	1,145	711	700	700	700	700	700
22	700	700	700	1,062	1,167	1,142	707	700	700	700	700	700
23	700	700	700	1,086	1,167	1,136	703	700	700	700	700	700
24	700	700	700	1,104	1,167	1,129	701	700	700	700	700	700
25	700	700	700	1,122	1,167	1,120	700	700	700	700	700	700
26	700	700	700	1,139	1,167	1,111	700	700	700	700	700	700
27	700	700	700	1,153	1,167	1,101	700	700	700	700	700	700
28	700	700	700	1,162	1,167	1,089	700	700	700	700	700	700
29	700	700	700	1,166	1,167	1,075	700	700	700	700	700	700
30	700		700	1,167	1,167	1,059	700	700	700	700	700	700
31	700		700		1,167		700	700		700		700