



WATER DISTRIBUTION IN MONTANA

A Guide for Water Commissioners,
Water Users and District Courts

■ This guide offers practical steps for water distribution in Montana. It includes best practices for water commissioners, district court clerks, district court judges and water users as well as useful references to Montana law and frequently asked questions.

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Introduction

Montana is unusual among western states because the state's district courts, rather than state or federal water resource agencies, are the primary authority for the distribution of water at the local level. Other states like Wyoming, for example, historically assigned water administration and distribution to the state engineer or similar state office, but Montana deliberately avoided that approach. Authority over water distribution and the resolution of water conflicts remains firmly under the command of Montana's District Courts. Day-to-day decisions regarding water delivery (except for large projects operated by the state or federal governments) are made by local irrigation districts, ditch riders, canal operators, water user associations and a variety of other groups and individuals, including water commissioners.

This guide offers basic information, examples of best practices, and references to the law as it applies to the distribution of water by water commissioners that serve under the direction of Montana's District Courts.

The history of water distribution and allocation in Montana has a long and storied past. From the Tongue River, down the Yellowstone, back up the Missouri to the Milk, over Triple Divide, up the Bitterroot, back to the Musselshell and out the Missouri again, the landscape is littered with the ghosts and skeletons of water conflicts past and present. Brian Shovers provides an informative and interesting account of the history of water allocation in Montana in the article, *Diversions, Ditches, & District Courts: Montana's Struggle to Allocate Water*; *Montana: The Magazine of Western History*, Vol. 55, No. 1 (Spring, 2005, pp 2-15, *Montana Historical Society*).

The Montana Department of Natural Resources and Conservation's (DNRC) role as it pertains to water distribution includes issuing new water right permits; authorizing changes to existing permits, claims and decreed water rights; examining pre-1973 claims; and taking action against illegal water use. DNRC is also responsible for providing training and assistance to water commissioners that distribute water at the local level. DNRC publishes and regularly updates a manual specifically for water commissioners. DNRC also provides annual trainings on the skills and requirements necessary for the effective and legal distribution of water. More importantly, DNRC offers year-round technical expertise from hydrology to planning and conflict resolution.



SECTION 1

Water Distribution in Montana

The Key Players

Contrary to popular belief, DNRC's role in day to day operations that affect water distribution and the ongoing enforcement of water rights is limited. **Montana District Courts** are the primary legal authority for resolving water right disputes and enforcing water distribution actions in Montana. DNRC plays a direct and ongoing role in supporting the work of the courts, however, DNRC's enforcement authority is generally limited to actions against illegal water use. Water court decrees, historic district court decrees, and individual water right claim disputes are all enforced through the district courts. **District court judges and clerks** facilitate the appointment of water commissioners, bill water users for the water commissioner's services, and address dissatisfied water user complaints and other issues that arise over the course of an irrigation season.



The **Montana Water Court** has exclusive jurisdiction over the adjudication of water right claims (pre-July 1, 1973 water rights) with examination and summary assistance from the DNRC's Water Resources Division Adjudication Bureau. Montana Water Court decrees are typically enforced through water commissioner appointments.

Water commissioners are private contractors appointed by a district court to measure and deliver water based upon the priority date of water rights for a specific stream, ditch, reservoir, or other watercourse under a water court and/ or district court decree. When two or more commissioners are appointed on the same water course, the judge may appoint a **chief water commissioner** to exercise direction and control over the other commissioners.

Water users are valid water right holding individuals or entities that are responsible for petitioning their district court for water commissioner appointment and for paying that commissioner for services. Water users not included on the petition that fall within the jurisdiction of the commissioner are also responsible for payment for water deliveries.

The **DNRC Water Management Bureau** provides technical, planning and organizational assistance to individual water commissioners as well as annual trainings typically held in early spring prior to the irrigation season. The water management bureau also conducts hydrologic studies and creates specific resources to aid in the distribution of water in complex stream systems.

The **DNRC Adjudication Bureau** is responsible for assisting the water court in the adjudication process for all water right claims that were put to beneficial use prior to passage of the Montana Water Use Act of 1973.



The adjudication bureau examines claims based on Montana Supreme Court rules and various water court orders. The bureau works closely with the water court for the issuance of new decrees that validate all historic claims issued by DNRC. In addition, the Bureau prepares water commissioner tabulations, known as *Red Books*, and maps for water sources under Water Court Decrees. These tabulations include both pre-1973 and post-1973 water rights.

Water Court Decree vs. District Court Decree

A decree is an official order issued by a legal authority. Water court and district court decrees both provide jurisdictional authority to water commissioners for the enforcement of water rights in Montana.

District court decrees are the result of a water rights dispute settled in district court between water users at some point in the last 140 years.

Water court decrees, issued by the Montana Water Court, are the result of adjudication. Once DNRC has examined water right claims for a river basin and resolved most extenuating issues, the water court can issue a decree, typically a temporary preliminary decree (TPD). While not final, TPDs are enforceable if water users formally request enforcement through the Montana Water Court.

Water court decrees include the following:

- ◆ Identification of all water rights in a basin for all beneficial uses including but not limited to irrigation, stock, domestic, recreation, fisheries, municipal, hydropower, marketing, and industrial.
- ◆ The water right elements including owner name, priority date, flow rate and volume, source, purpose of use, point and means of diversion (POD), period of use, and place of use as filed with the state of Montana (DNRC).

District court decrees include the following:

- ◆ Names, addresses, and water right information for the parties involved at the time of the decree.

The key difference between water court and district court decrees is that water court decrees are a product of the water rights adjudication process. The water rights adjudication process began in 1979 with a Montana Supreme Court order requiring water users who put water to beneficial use prior to 1973 file claims with DNRC describing their water use. Water

court decrees contain the most recent and most accurate information pertaining to water users and their water right claims prior to July 1, 1973. Once the decrees become enforceable, DNRC issues a *Red Book*, which includes all water right information including annual updates on any changes in ownership, point of diversion, place of use, purpose of use or place of storage. Water court decrees also give water commissioners jurisdiction over all water users for the stream or stream reach on which they have been appointed.

Conversely, a district court decree is the result of a court case between water users that identifies the individuals on a source of water, priority of claims, and amount of water claimed at that time. For example, a decree dated 1910 only gives the water commissioner jurisdiction over water users with priority dates of 1910 or earlier. The water commissioner has no authority over the junior users water rights issued after the date of the district court decree. Confusing? This scenario is all too common and offers a good illustration of the value and importance of water court decrees.

Water Commissioners

Basic Duties and Skills

A water commissioner's job is to measure and distribute water based upon the priority date of water rights for a specific stream, stream reach, ditch, reservoir, or a combination of all. Water commissioners only serve on water bodies that have decrees issued by a district court or the Montana Water Court. The knowledge and skills necessary to work effectively as a water commissioner include:

- ◆ Water rights and water law (specifically the water commissioner statutes per Montana Code Annotated 85-5)
- ◆ Seasonal and long-term behavior of streams and ditches within jurisdiction
- ◆ Irrigation operations (scheduling, system efficiencies, etc.)
- ◆ Water distribution infrastructure (headgates, measuring devices, etc.)
- ◆ Computers (spreadsheets, email, etc.)
- ◆ Basic math
- ◆ Good listening and communication
- ◆ Collaboration and mediation techniques



Appointment of Water Commissioners

Water commissioners are appointed to a stream, ditch, or reservoir at the request of water users. That appointment typically stems from distribution conflicts between water users and their desire to have water rights legally distributed by a third party. For water users to have a water commissioner on their stream, they must file a petition to their district court per Montana Code Annotated (MCA) 85-5-101. This statute requires that at least 15% of the water rights or flow rate affected must be represented on the petition. In some cases, this may only require one water user. If the petitioners meet the 15% requirement, the judge must appoint a water commissioner to distribute water based upon priority date. If the petitioners cannot make a proper showing of the 15%, the judge, at his or her discretion may still appoint a water commissioner and the water users must pay for those services.

The person appointed as a water commissioner is usually chosen by the water users and is typically someone with local knowledge who understands local water use and the associated infrastructure. This person may or may not be a water user on the stream. It's helpful to consider potential conflicts of interest that may arise when selecting a commissioner.

Once the district court appoints a water commissioner, the commissioner must take an oath to faithfully fulfill their duties and responsibilities. The district court will also require the commissioner to pay a bond, typically a nominal amount, to the district court to ensure the commitment to distribute water fairly and according to the law. The judge then issues an annual order stipulating important details like the payment amount, payment schedule, term of office, geographic jurisdiction and any specific instructions to the water commissioner and water users that pertain to distribution on the designated body of water.

If the commissioner is operating from a water court decree, they will receive a copy from the Water Court of all the water rights tabulated for that body of water including maps of points of diversion and places of use. This compilation is informally referred to as the *Red Book*. If a commissioner is using a district court decree, they typically receive a copy of the decree from the district clerk of court.

Jurisdiction and Statutory Authority

Water commissioners operate under the authority of the district court per **MCA Title 85, Chapter 5**. They are not employees of the district courts, the DNRC, or the water users. Water commissioners are private contractors and, once appointed, they are required to purchase workers' compensation insurance (**MCA 85-5-101(4)**) and attend a DNRC water commissioner training (**MCA 85-5-111(2)**).

Water commissioners are most often assigned to deliver natural flow, stored water, or both for any beneficial use that has a surface flow water right. The extent of the water commissioners' jurisdiction is defined in the order issued by the district court.

During their appointed tenure, water commissioners have the authority to:

- ◆ Access headgates and measuring devices of decreed points of diversion (**MCA 85-5-108**).
- ◆ Adjust headgates in accordance with priority and flow rate of decreed water rights (**MCA 85-5-105**).
- ◆ Shut water off based on:
 - Priority date (**MCA 85-5-201**).
 - Failure of water users to make payment (**MCA 85-5-206**).
 - Non-functioning headgates or measuring devices (**MCA 85-5-302**).
- ◆ Repair infrastructure with permission from the water user or judge (**MCA 85-5-202**).

Water commissioners do not have the authority to:

- ◆ Deliver water to non-water right holders.
- ◆ Deliver water based exclusively on use. Water delivery is based upon the water right priority date and flow rate.
- ◆ Change points of diversion, periods of use, places of use or priority dates.
- ◆ Modify the bed or banks of a stream without the appropriate permits from the appropriate authorities.



Commissioners and Communication: The Nuts and Bolts

The enforcement of water rights through the appointment of a water commissioner typically occurs on a stream where a dispute between water users has occurred. As a representative of the district court, the water commissioner's adherence to the court's direction and water law are vitally important. Good communication, objectivity and transparency between all parties is equally important. Successful water commissioners have honed their skills in listening, diplomacy and dispute resolution. During times of water shortage, those skills can help avoid strained interpersonal relationships that will challenge even the most astute and experienced water commissioners.

Communicating with Water Users

Open and positive communication with water users both individually and as a group is crucial to a water commissioner's success. This rule is especially important for handling on-farm issues like property access, headgate or flume adjustments, infrastructure repair, and payment for services.

Communication Recommendations for Water Commissioners

- ◆ Hold a pre-season meeting (individually or preferably, with all water users) to get acquainted, discuss water year predictions, the timing and logistics of water distribution, payment schedule, property access and timing issues, infrastructure requirements, and any other issues pertinent to the delivery of water in the basin.
- ◆ Inform water users how distribution will occur if the water commissioner is unable to temporarily fulfill their duties. For example, if a back-up person is used to occasionally fulfill the duties of the commissioner, make sure that all water users are aware of or have been introduced to that person.
- ◆ Establish the most effective means and schedule of communication for all parties (i.e. cell phones, landlines, emails).
- ◆ In some cases, especially situations that include the delivery of stored water, consider using a webpage that provides daily updates of reservoir levels, streamflow, and priority cutoffs. This approach has proven extremely successful for many distribution projects.

■ A LITTLE COFFEE GOES A LONG WAY

Tom Pierce has been a water commissioner on Horse Prairie and Medicine Lodge Creeks in Beaverhead County for 15 years.

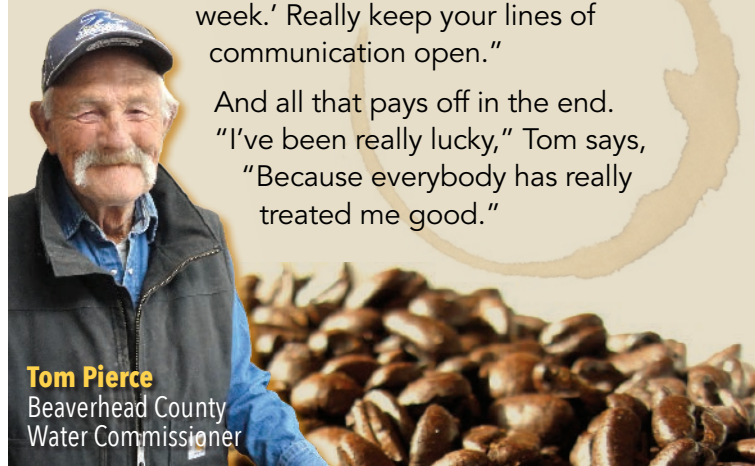
His first spring on the job, Tom called water users to a meeting at a local school house and "laid the law down right off the bat" over coffee and donuts. Tom wanted a chance to meet the water users he'd be working with face-to-face and let them know what they could expect of him and vice versa.

Even with a history of water conflict in the area, to Tom's surprise, "The next thing you know, they were all having coffee with each other."

Even now, over a decade later, Tom still calls each of the water users on his creeks each spring. And this experience translates into worthy communication advice for new water commissioners:

"Always be up front with water users," he suggests. "Even the water user with the least amount of water. You want to include them in everything you do. I tell water users, 'you can call me 24 hours a day, 7 days a week.' Really keep your lines of communication open."

And all that pays off in the end. "I've been really lucky," Tom says, "Because everybody has really treated me good."



Tom Pierce
Beaverhead County
Water Commissioner

■ DNRC and in some cases, local conservation districts and watershed groups, can help water commissioners and water user groups develop a webpage or post water distribution information on existing websites.



Communicating with the District Clerk of Court

District clerks of court are required by law to assist water commissioners in the following ways.

- ◆ Facilitation of oath and bond (**MCA 85-5-103**).
- ◆ Filing of daily water distribution records (**MCA 85-5-107**).
- ◆ Notification of each water user regarding their water commissioner bill (**MCA 85-5-204**).

In addition, clerks can offer guidance to water commissioners, especially new ones, as they may have experience working with other water commissioners. Clerks can provide a copy of the decree, a list of water users, or in the case of a water court decree, the *Red Book*. They can also be a conduit to the district judge.

Communicating with the District Court Judge

In many district courts, the water commissioners' access is limited to the clerk of court. However, some judges prefer to interact directly with water commissioners – even maintaining an open-door policy - to ensure issues are resolved and potential hearings are avoided. The commissioner should consider requesting a pre-season meeting with the district judge to clarify the judge's communication preferences, the status of the distribution effort and any points of potential conflict in the basin that season.

Dispute Resolution

Common disputes between water users and water commissioners or among water users usually result from:

- ◆ One party feeling they are not receiving their entitled water.
- ◆ Disagreements over billing.
- ◆ Improperly or unlawfully accessing private land.
- ◆ Insufficient or poorly-maintained infrastructure that precludes the water commissioner from doing their job accurately.
- ◆ Water users tampering with headgates after the water commissioner makes an adjustment.
- ◆ Neighbors wasting water or field runoff causing downgradient fields to flood.

Water commissioners can help themselves in these disputes by keeping accurate and meticulous written

records and photo documentation of their daily activities. These records provide invaluable evidence in case of a dispute.

Recourse for unhappy water users includes filing a dissatisfied water user complaint with the district court, resulting in a hearing before the judge. The judge has the option of appointing a mediator to resolve issues between the parties and avoid a court hearing. A mediator can help broker long-term solutions that are less burdensome and costly in terms of time, money and goodwill than going to court.

Best Practices for Water Commissioners

Once a water commissioner has received an appointment, taken an oath, posted a bond, received an order from the district court judge, and participated in the legally required DNRC water commissioner training, they are ready to move ahead and begin distributing water. Commissioners may find the following tips useful prior to and during the water distribution season.

- ◆ **Develop a list** of water users by priority, name, flow rate, location, and period of use from source materials such as the *Red Book* obtained from the Montana Water Court or historic decrees obtained from the district court (Appendix I).
- ◆ **Stay informed of hydrologic conditions** including snowpack and pre-season streamflow forecasts made by the Natural Resources Conservation Service (NRCS), state and federal water supply outlooks, and current streamflow conditions posted by the DNRC and the U.S. Geological Survey (USGS).
- ◆ **Contact previous water commissioners**, if possible, to glean useful insights as to point of diversion (POD) locations and access points. It is important to develop an understanding of stream hydrology, the gaining and losing reaches of a stream, haying schedules, potential conflicts, and any other nuances of day to day distribution that may be useful in carrying out duties.
- ◆ When going to the field, **always carry a field notebook, camera, shovel, hand level, staff gage or ruler, and references** such as a copy of the decree, maps, and rating tables for measuring devices.



- Throughout the season, **continually assess the condition of all headgates and measuring devices** to ensure their proper function for accurate water distribution.
- Document using notes and photographs**, where necessary, all daily activities (include time of day). This includes:
 - Daily water distribution
 - Status of infrastructure
 - Repairs or potential repairs
 - Vandalism
 - Source stream conditions (high/low flows etc.)
 - Direct guidance from the courts or DNRC
 - Conversations with or complaints from water users
- Be very clear of your duties and responsibilities and **inform water users what to expect from your actions**.
- Be a good listener.** There will be disagreements with a water user, or between two water users, and maintaining objectivity is essential in your role as a commissioner. Take notes, document the details of the conflict, listen to all sides of the issue, then apply the law accordingly.
- If you suspect water users are tampering with headgates, **post a notice citing the district court's authority on the headgates** and/or install game cameras to document the interference.

Be flexible. Within the sideboards of the law, a water commissioner must be flexible when working with multiple water users. An example of this approach is to accommodate the schedules of individual water users to coincide with their haying operations as long as senior water users are in agreement.

■ DNRC hydrologists and engineers can provide technical assistance with function of headgates and measuring devices as well as other infrastructure depending on staff availability.

District Court Clerks

Statutory Duties

District clerks of court are required by MCA 85-5 to do the following:

- File a sworn oath and a bond from the appointed water commissioner.
- Receive and house submitted water commissioner records.
- Send each water user a bill for water commissioner compensation at the pre-determined frequency specified in the judge's order.

Although not explicitly described in statute, it is good practice for the clerk of court to give the water commissioner a copy of the judge's order that clearly defines the parameters of the commissioner's duties, responsibilities, and tenure.

Assisting Water Commissioners

District clerks of court should be available throughout the season to help water commissioners, especially new water commissioners, with billing issues, setting up meetings with the judge, and obtaining copies of decrees, *Red Books* and water user contact information.

Best Practices for District Court Clerks

- Attend** the DNRC's annual spring Water Commissioner Training.
- Review and understand Montana Code Annotated 85-5** as it pertains to water commissioners and the district court.
- Establish an organized and streamlined billing system.** Formatted spreadsheets are a good option (DNRC can help with this task).
- Encourage water commissioners** to use the same standardized spreadsheet.
- Learn about the decreed streams in your district**, including landowners, irrigation practices, and key ditches.
- Contact DNRC**, the Montana Water Court, and other experienced district court clerks and judges for guidance and information on working with water commissioners.
- Be transparent** with water users in carrying out your role as district clerk. For example, maintain a master spreadsheet that accounts for all water distribution for each water commissioner and provide a copy of that spreadsheet to water users with each billing for water delivery services.



■ FROM FILING TO FIELD TRIPS

Carly Anderson plays an essential role in water distribution in Beaverhead County. As the clerk of district court, Carly carries out her well-defined statutory duties by working closely with 5-6 water commissioners each year.

As the commissioners' self-described "bookkeeper and secretary," she drafts and files petitions and the judge's orders, maintains meticulous water use records, and helps commissioners with billing throughout the season.

"Each commissioner brings their billing into me, I enter it into a spreadsheet and I notify water users how much water they've used that month and how much they owe to the water commissioner."

Ensuring smooth, accurate billing depends on regular communication with water commissioners. With a laugh, she notes "It's helpful if they know how to run a computer and can email me their records. That way, I can process their bills faster, which gets them their money faster."

As a Beaverhead County native, Carly's job is made easier by knowing the land, the water and the people.

"I grew up with an agriculture background and in Beaverhead County, and knowing where the creeks, the rivers and the ranches are has been so useful for me." Her advice for other clerks who might not have the same home-field advantage?

"We have a ton of maps in our offices as clerks of court. Get them out and look at them. Look at them with your water commissioner. If you don't know what they're talking about or want to take a tour, ask your commissioner to do that." She says with a grin. "Hop on a four-wheeler – get out there. It's really interesting and you'll learn a ton."



Carly Anderson
Beaverhead County Clerk
of District Court

"We have a ton of maps in our offices as clerks of court. Get them out and look at them. Look at them with your water commissioner...."Hop on a four-wheeler – get out there. It's really interesting and you'll learn a ton."



District Court Judges

Statutory Duties

District court judges are required by MCA 85-5 to do the following:

- ◆ Appoint water commissioners when warranted.
- ◆ Issue an order from the court that includes the commissioner's salary, commencement date, record submittal and billing frequency, worker's compensation requirement, and any other specific responsibilities of the commissioner, for example, repair authority.
- ◆ Appoint a chief water commissioner if there are two or more commissioners on a stream.
- ◆ Appoint a water mediator to address water controversies (optional).
- ◆ Set hearings to address dissatisfied water user complaints.

Best Practices for District Court Judges

- ◆ **Meet with water commissioners** prior to the irrigation season to address any potential issues. Establish how you will communicate with the water commissioner before, during, and after the season.
- ◆ **Encourage water commissioners to document all their activities** while in the field in addition to their communications with water users.
- ◆ **Consider a common-sense approach to the resolution of issues and conflicts** associated with enforcement, while operating within the bounds of water law. Historically, this approach has proven effective.
- ◆ **Consider a field trip** with the water commissioner on occasion to get a better understanding of the challenges of water distribution.
- ◆ **Consider participating in DNRC's water commissioner training course.** It provides a good overview of the water allocation process and the challenges that all commissioners must regularly address.

Water Users

Statutory Duties

Water users are required by MCA 85-5 to do the following:

- ◆ Allow water commissioners access to inspect and adjust headgates.
- ◆ Pay for and install a suitable headgate and properly functioning measuring device located at a suitable place on the ditch.
- ◆ Pay your water commissioner bill, which may include water delivered, worker's compensation insurance, training, and expenses for infrastructure repair and travel.
- ◆ Do not interfere with headgate adjustments once a commissioner is appointed unless directly instructed to do so by the water commissioner.

Contact with the District Court

Water users may contact the district court to:

- ◆ Review the daily water distribution records filed by the commissioner.
- ◆ File an objection to the water commissioner's bill.
- ◆ File a dissatisfied water user complaint against the water commissioner if conflicting issues concerning water distribution cannot be resolved.

Best Practices for Water Users

- ◆ **Work well with the water commissioner.** Be clear and communicative regarding access to your property and water use scheduling.
- ◆ **Be patient,** especially with new water commissioners.
- ◆ **Be mindful** of the fact that the water commissioner is tasked with serving all the water users on the source. Most producers have their own irrigation schedules that don't always coincide with their neighbors and the job of a water commissioner is a complex balancing act.



SECTION 2

On-the-Ground Water Distribution

Getting Started

Upon notification of appointment or potential appointment by a district court, DNRC recommends the following steps for all water commissioners. Steps required by law are noted with an asterisk:

1. ***Attend a DNRC Water Commissioner Training.** Call Montana DNRC Water Resources Division, 406-444-6601 for the training schedule and what to expect.
2. **Meet with the district clerk of court** (once petition is accepted) to:
 - ◆ ***File Oath:** To ensure faithful discharge of duties.
 - ◆ ***File Bond:** To ensure faithful discharge of duties.
 - ◆ **Obtain a copy of the order**, which outlines the term of office, payment schedule and any other stipulations put forth by the judge.
 - ◆ **Obtain a copy of the decree**, complete with a minimum of water right holder names, addresses, priority dates, flow rates, and locations of diversions.
 - ◆ **Set up a billing protocol** for payment.
3. ***Purchase Worker's Compensation insurance** (call Montana State Fund at 1-800-332-6102 with questions).
4. **Meet with previous commissioners in the area**, if possible, to gather logistical information and practical advice.
5. **Meet with water users**, either individually or as a group, to review a commissioner's duties and how to carry them out, discuss access issues and notification protocol for turning water on/off, and share contact information.
6. **Plan daily travel routes** for administering water efficiently and accurately using information from the previous water commissioner (if possible), the decree and maps.
7. **Inspect headgates and measuring devices**, once appointed, to ensure proper functioning condition and address any maintenance issues.



Daily Duties of Commissioners

Water commissioner daily duties vary throughout Montana depending on water availability, jurisdiction (e.g. stream only, ditch only, both), and whether they are delivering stored water, natural flow or both. Some commissioners begin distributing water on a set day each year (e.g. April 1), while many do not begin until water users require them to address water shortages (e.g. early July). Regardless of the start date, many water commissioners prepare themselves for the season by meeting with water users either individually or collectively to discuss expectations of the upcoming season.

Commissioners may travel daily to points of diversion (PODs) to record and adjust diversions or they may only go to PODs when adjustments are necessary. In the latter case, the assumption is made that diversionary flows remain relatively consistent between adjustments. In either case, daily distributions must be recorded.

Interaction with water users may occur daily or less often. These discussions include letting water users know when headgates will be adjusted or turned on or off, clarification on property access, infrastructure issues, and payment. The degree of interaction with district courts is dependent on the water commissioner's experience, potential conflicts with water users, potential billing issues, and the availability of water in a given year. Water commissioners may only meet with the clerk once a year when their petition is filed or may require consistent attention, especially during low water years, to resolve billing and distribution issues.

Distributing water

A water commissioner's job is to distribute water by priority date. To do this requires a good understanding of the amount of water available to deliver to water users. During high flow periods, there may be enough water available to satisfy all water rights on a stream and the commissioner can relax and watch the river flow. Low flow periods present challenges. At these times, priority water rights are fulfilled, and junior water users are restricted or shut off. As flows decline, more juniors are restricted or shut off. The order in which a commissioner makes daily adjustments to headgates is dependent on water availability, priority, and logistics. A commissioner's knowledge

of local stream conditions like return flows, tributary contributions, and natural seepage losses all factor into daily decisions regarding who receives how much water, where and when. Resources such as USGS or DNRC streamflow gages and NRCS and DNRC water supply reports are helpful, though not always available for all streams.

Assessing headgates and measuring devices

Commissioners should plan to assess the suitability of headgates and functionality of measuring devices at the beginning, middle and end of their appointed season.

■ The details of measuring device assessments are thoroughly explained at the DNRC water commissioner training and in several publications that can be provided by DNRC.

Suitable headgates are:

- ◆ Able to be closed completely,
- ◆ Sized to facilitate the range of legal diversion, and
- ◆ Able to be operated by one person.

Proper functioning measuring devices are:

- ◆ Compliant with the engineering specifications of the device,
- ◆ Suitably-sized and located for the diversion site,
- ◆ Located near the headgate,
- ◆ Level, plumb and installed properly,
- ◆ Able to accommodate the entire flow diverted, and
- ◆ Able to operate in a free-flowing condition.

Adjusting headgates

Common headgate designs include screw-gates, slide-gates, and flash boards. Headgate adjustment is required to turn water on and off and to regulate ditch flows to accommodate water availability and priority of water rights. For adjustments, the water commissioner must use the measuring device to determine how much water is in the ditch and then adjust the headgate accordingly to meet the desired flow. Depending on how far the measuring device is located from the headgate, there may be a lag time for this adjustment requiring the water commissioner to wait until flow in the measuring device is constant.



■ GETTING TO KNOW A RIVER

As the Chief Water Commissioner of the Musselshell Water Distribution Project, Peter Marchi has learned a thing or two about water – and people.

"My goal is to get a very good handle on the river," Marchi says. "That includes flow rates, being keyed into ongoing events whether it's a rainstorm, a drought situation, temperature changes or winds. You have to be totally in coordination with your river and what the river's doing that day."

Water measurement is the foundation of understanding water availability and water distribution in a system. "Measuring devices are critical. It's the proper device, installed properly, in the right location. Those are all very important factors," Marchi notes.

And the people factor? That can sometimes be the most difficult piece of the distribution puzzle, but also the most rewarding. For new water commissioners, getting to know water users is a critical first step.

"Trust is something that makes these systems work. Water users may not always agree with you, but if they trust your judgment – that you're playing by the rulebook, the tabulations – it makes a huge difference," Marchi says. "And that's something that has to be built over time. You can't expect that to be there the first day."

Marchi's last word of advice?

"You can never make everyone happy, but you can do your best."

"You can never make everyone happy, but you can do your best."

Peter Marchi

Chief Water Commissioner of
the Musselshell River Water
Distribution Project

Measuring water

A staff gage - a calibrated scale that indicates water level - is mounted on most standardized measuring devices. Staff gages have increments in feet, tenths of feet, and hundredths of feet. Each hundredth of a foot corresponds to a specific flow rate based on the size and type of measuring device. First, the water commissioner must take an accurate reading of the staff gage, then using a table, correlate the value with the size and type of measuring device to get flow rate. These tables, known as rating tables, are available online, or in various publications like the U.S. Bureau of Reclamation Water Measurement Manual (1997).

Measuring devices

The State of Montana recognizes the following standardized measuring devices as acceptable for water measurement on a decreed stream:

Ditches:

- ◆ Parshall flume
- ◆ Montana flume
- ◆ Ramp flume (Replogle)
- ◆ Cutthroat flume
- ◆ Cipoletti weir
- ◆ Rectangular weir
- ◆ V-notch weir
- ◆ Differential and Constant Head Orifice
- ◆ Weir stick



A staff gage reading at a stage of approximately 0.56 ft. The stage correlates to a flow rate using a table.

Pipelines:

- ◆ In-line meters
- ◆ Ultra-Sonic meters
- ◆ Propeller meters

Handling non-functioning infrastructure

Headgates and measuring devices can malfunction because of improper installation or post-installation damage from high flows, sediment and vegetation build-up, freeze-thaw cycles and livestock.

The water commissioner must address malfunctioning headgates or measuring devices that prevent the accurate distribution and measurement of water within the parameters of the decree by notifying the water user. In these cases, the water commissioner has a duty not to apportion or distribute water through the ditch until the infrastructure is functioning properly (MCA 85-5-302).

Keep in mind that it is the water user's responsibility to fix infrastructure issues. If it is not an emergency that affects other water users on the stream, however, the water commissioner has discretion to arrange with the water user to expediently address the issue at a later date, so long as the legal water availability remains unaffected.

In case of an emergency, commissioners have additional options. For example, if a headgate blows out, causing the ditch to divert the entire stream, the water commissioner has the option to repair or provide a temporary fix to the problem without notice or permission. In a case like this one, it is



Headgates that can be closed completely, are appropriate for the volume of the diversion, and can be operated by a single person are considered "suitable."



This flume is not functioning properly. It is choked with vegetation, out of level, and too small to capture the entirety of diverted flow.

preferable to keep open communication between the water user and landowner (if different). Expenses incurred for this kind of repair may be levied against the party whose infrastructure was repaired.

Details on troubleshooting infrastructure installation, function and other issues are described during the DNRC water commissioner training, in the DNRC Water Commissioner Training Manual and in other publications listed below.

Billing

Water commissioners are paid by the water users. Water users pay for the delivery of the water they receive and for expenses such as mileage, training, worker's compensation, and in some cases gaging equipment. While payment is divided proportionately among water users based on the percentage of water delivered, individual water users may also get billed for tasks that are specific to their operation such as infrastructure repair.

Water commissioners are responsible for tracking costs and for recording the daily distribution of water. District clerks of court are responsible for notifying water users of the amount owed to the water commissioner. In the case of ditches under corporate control, ditch companies may directly bill water users.



There is no standardized system for billing. It is a common practice, however, for clerks of court to either have the commissioners submit billing information as a spreadsheet or to transpose field notes into a formatted spreadsheet. This practice provides an easy way to track billing and provides transparent documentation for the public or district court hearings.

■ **DNRC can help develop spreadsheets for tracking water deliveries and bills. The Appendix provides an example of how to track distributions and bill water users.**

End of Season Wrap-up

The end of the season is a good time for water commissioners to assess the status of infrastructure, address access issues, and ensure proper payment for services throughout the season. It provides an opportunity for water commissioners to discuss and potentially resolve these types of pending issues with water users while they are still timely.

If there are issues with improperly functioning headgates or measuring devices or outstanding bills, water commissioners commonly notify the water user that he or she will not receive water next season until these issues have been corrected. Discussing these issues at the end of the season allows time for the water user to address them.

Similarly, water users may want to discuss the logistics of property access or timing of water distribution that did not get addressed during the season. For instance, water users might request that a commissioner use different access roads or stay out of certain fields at certain times to avoid damaging crops or disturbing livestock.



Common Challenges/FAQs for Commissioners

What is an instream flow water right and why should I care?

Instream flow water rights occur when a landowner or water right lessee changes the use of their water to instream flow. This means water that was typically diverted for another use, most often irrigation, must remain in the stream. It has the same priority date and period of use as the irrigation right, a flow rate of equal or less volume, and cannot be diverted by another user unless they have a more senior priority date. Most instream flow rights have a designated reach in the stream where they are viable. Water commissioners must treat an instream flow right in the same way as any other water right and make sure it is delivered in priority.

How do I address streams that are losing or gaining flow throughout the season?

Commissioners and water users often refer to the natural loss of flow in a stream or ditch as “shrink.” While streams and ditches often lose flow during conveyance to seepage through the channel bottom, the opposite is also true. Gains in flow due to surface and sub-surface return-flow can impact water availability throughout the season. Water commissioners must be aware of these gains and

losses to appropriately deliver water to users in priority.

In some cases, government agencies or private consultants have quantified the gains in hydrologic reports. In most cases, however, the commissioner determines how to handle gains and losses throughout the season based on water availability as water is distributed in priority. It is important for water commissioners and water users to understand that natural gains and losses are not constant. Gains and losses fluctuate during the season in response to water availability, storm events, and irrigation cycles.

How do I deal with a water user who is wasting water?

Water users commonly complain that another water user is “wasting water” due to over-irrigating, as evidenced by the presence of water in drain ditches, on neighbors’ fields, or adjacent to public roadways. Unless otherwise noted in the judge’s order, the water commissioners’ jurisdiction is at the headgate. Therefore, water wasted down a ditch is not within the commissioner’s legal purview and is up to water users to resolve. That said, water commissioners can be a helpful resource to district courts in these

disputes if they are well-informed of local operations and keep accurate distribution records. For example, the presence of water in drain ditches or along roadways may indeed be a waste of water from overirrigation or may be tailwater runoff or return flow associated with normal irrigation practices - and therefore not a waste of water. The district court, in some cases, may rely on a water commissioner’s local knowledge and impartiality to provide insight into this use of water should a dispute arise.



How do I distinguish between natural stream flow and stored water released from an on-stream reservoir?

Natural flow is the portion of water released from a reservoir that is equal to the amount flowing into the reservoir. It is determined by measuring all inflows into the reservoir with a flowmeter, streamflow gage, or some form of measuring device such as a flume or weir. Stored water is equal to the total outflow from the reservoir minus the total inflow to the reservoir. Calculating stored water requires the ability to measure reservoir outflows as well as inflows. Water stored in a reservoir and released into a stream or natural channel is not considered part of the natural flow of the stream. The commissioner must administer the stored water released to the stream channel from the reservoir separately from the natural stream flow.

The legal point of diversion (POD) for stored water is typically at the dam and water releases should be measured as close to that point as possible. A secondary point of diversion such as a headgate to a ditch off the stream is usually located downstream from the outlet. Any loss of flow resulting from seepage that occurs during the transport of stored waters between the outlet or legal POD and the secondary POD must be quantified. The diversion at the secondary POD must be reduced accordingly by the appropriate amount to account for any seepage loss. In other words, the quantity of natural flow cannot be diminished as a result of the stored water that is added and later diverted (**MCA 85-2-411**). In some cases, stored and natural flow water users may have an informal agreement to share in the carriage losses that occur during transport between the legal and secondary POD. This agreement cannot expand the limitations of the water rights involved including priority date, period of use, flow rate, point of diversion, and place of use.

What if the water user does not pay their bill?

If water users do not pay their bill, the water commissioner can shut off their water until bills are paid. It is good practice for the water commissioner to give the water user a warning in writing of the consequences resulting from the failure to pay and to inform them and the district court of a set date when water will be shut off if bills are not paid.

What if water users are re-adjusting headgates without the consent of the water commissioner?

Unless otherwise noted in the district court order, water commissioners have full jurisdiction over headgates during the period of their appointment. Water users, while allowed to access their own headgates, cannot tamper with the water commissioner's adjustments or interfere with the commissioner's duties. Interference with the water commissioner is considered contempt of court (**MCA 85-5-406**).

A commissioner may lock a headgate in place to deter interference with settings. In a situation like this, the commissioner should post a notice issued by the district court on the headgate that explains the commissioner's jurisdiction.

Is there such a thing as futile call?

Yes - If a senior appropriator makes a call for water against a junior and the outcome of the call will not result in a beneficial use of water by the senior because any water released by the junior naturally seeps into the stream bottom, then the junior could invoke the *Futile Call Doctrine*. In a case like this one, the junior has the responsibility to show that no useable water would reach the senior's point of diversion. An official determination of the *Futile Call Doctrine* falls under the jurisdiction of the district court in an evidentiary hearing. For additional information refer to *Kelly v. Teton Prairie LLC*, 2016 MT 179, 384 Mont. 174, 376 P.3d 143.

What legal authority does a water commissioner have to access private property?

Water commissioners have the legal authority to enter any property necessary to access a ditch or other source for conveying waters affected by the distribution project. They also have the authority to inspect and adjust headgates or other means of distributing water (**MCA 85-5-108**). However, for the sake of good and productive relationships, it is advisable for water commissioners to work out access routes with all affected landowners, water users or not, to minimize potential disturbance, conflict, or the disruption of daily operations.



Do water commissioners have the power of arrest?

Yes, by statute (MCA 85-5-108), a water commissioner has the power of arrest over any person that interferes with the distribution of water under the commissioner's jurisdiction. However, district judges, law enforcement and DNRC *strongly recommend using other methods* to address this issue. The *best recourse* for a water commissioner in this situation is to document everything that has transpired and, if warranted, call local law enforcement and let them handle the situation.

How do I address a submerged measuring device?

Submergence is the most common problem associated with non-functioning measuring devices like flumes and weirs. The absence of a standing wave in or below the throat section of a Parshall Flume indicates submergence. In other flumes, this condition is indicated by the lack of an obvious gradient hydraulic, and on weirs by a non-ventilated nappe or pour-over. This condition most commonly occurs due to a loss of head in a channel, if the device is installed too low in a channel, if the device is the wrong type or size for the conditions, or if there is a downstream obstruction causing water to back up to the flume.

A submerged measuring device does not provide an accurate flow rate. While it is the water user's responsibility to ensure that an accurate measuring device is present, the water commissioner can provide some knowledgeable insight and make repair recommendations. With Parshall Flumes, a second staff gage and some engineering equations can account for submergence up to a point. In most cases, actions are necessary to address measurement inaccuracies.

How do I check for submergence?

First, check to see if there is a downstream obstruction (e.g. sediment, check structure, vegetation, dead cow) backing water up and if it can be removed or altered to allow an unimpeded flow through the device. If not, often the solution is to re-set (in some cases relocate the device), typically raising it vertically to promote free flow.

Technical Resources

Montana Department of Natural Resources and Conservation. 2019. Water Commissioner Training Manual. 97 p.

Montana Department of Natural Resources and Conservation. 2018. Water Rights in Montana. 70 p.

United States Bureau of Reclamation. 1997. Water Measurement Manual.

University of Wyoming Extension. 2012. Irrigation Water Measurement: Irrigation and Pipelines. Bulletin 583R. 70 p.

Montana Code Annotated. 2017. https://leg.mt.gov/bills/mca/title_0850/chapter_0050/parts_index.html



■ APPENDIX

Getting Started

New Water Commissioner Checklist (typical order)

- ☐ Once notified of appointment or potential appointment, schedule to attend a DNRC Water Commissioner Training (call Montana DNRC Water Resources Division - 406-444-6601).
- ☐ Once the petition is accepted by the district court, meet with clerk of court to:
 - ☐ File **Oath**: To ensure faithful discharge of duties.
 - ☐ File **Bond**: To ensure faithful discharge of duties.
 - ☐ Obtain a copy of the **order** to document term of office, when to commence duties, payment schedule and any other stipulations put forth by the judge.
 - ☐ Obtain copy of the **decree**, complete with a minimum of names, addresses, priority dates, flow rates, and locations of diversions.
 - ☐ Set up a **billing** protocol for payment.
- ☐ Purchase Worker's Compensation insurance (call Montana State Fund at 1-800-332-6102 with questions).
- ☐ If taking over for another water commissioner, meet with them if possible to gather logistical information and practical advice.
- ☐ Attend DNRC Water Commissioner Training.
- ☐ Meet with water users, either individually or as a group to:
 - ☐ Clarify your duties and how you will carry them out
 - ☐ Address access issues
 - ☐ Establish notification protocol for turning water on or off
 - ☐ Exchange contact information.
- ☐ Using information from the previous water commissioner (if possible), the decree, and maps, plan daily routes for administering water efficiently and accurately.
- ☐ Upon commencement of duties, inspect headgates and measuring devices to ensure proper functioning condition.



Example: Water Diversion list from Historic Decrees or Water Court Decrees (Red Book)

Priority Order	Priority Date	Water User	Ditch	Flow Rate (Inches)	Period of Diversion
1	4/1/1888	Smith	Old Barn	50	April 15 to September 1
2	6/1/1890	Jones	Horse	110	April 15 to August 15
	6/1/1890	Smith	Old Barn	50	April 15 to August 15
3	5/15/1901	Meloy	Smitty	50	April 1 to October 15
4	5/16/1901	Roberts	Horse	15	April 1 to September 1
5	6/1/1905	Downey	D-O	40	April 15 to September 1
6	4/1/1910	McLane	Chicken	10	April 15 to September 1
7	1/1/1942	Dolan	Ginger	25	April 15 to July 21

Example: Billing Report

Judicial District #: 1st | County: Lewis & Clark | Clerk of Court: ----- | Water Commissioner: H. Cartwright | Water Body: Ponderosa Creek

July 2018	Water User Ditch	Smith Old Barn	Smith Horse	Jones Old Barn	Meloy Smitty	Roberts Horse	Downey D-O	McLane Chicken	Dolan Ginger
DATE	MILES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES
7/1									
7/2	100	50	50	110	50	15	40	10	25
7/3	100	50	50	110	50	15	40	10	25
7/4		50	50	110	50	15	40	10	25
7/5		50	50	110	50	15	40	10	25
7/6	50	50	50	110	50	15	40	10	25
7/7	50	50	50	110	50	15	40	10	25
7/8		50	50	110	50	15	40	10	25
7/9		50	50	110	50	15	40	10	25
7/10	75	50	0	110	50	15	40	10	25
7/11	75	50	0	110	50	15	40	10	25
7/12		50	0	110	50	15	40	10	25
7/13		50	0	110	50	15	40	10	25
7/14	100	50	0	110	0	15	0	0	25
7/15	100	50	0	110	0	15	0	0	25
7/16		50	0	110	0	15	0	0	25
7/17		50	0	110	0	15	0	0	25
7/18	50	50	0	110	0	15	0	0	25
7/19	50	50	0	110	0	15	0	0	25
7/20		50	0	110	0	15	0	0	25
7/21		50	0	110	0	15	0	0	25
7/22	75	50	0	0	0	15	0	0	0
7/23	75	50	0	0	0	15	0	0	0
7/24		50	0	0	0	15	0	0	0
7/25		50	0	0	0	15	0	0	0
7/26	100	50	0	0	0	15	40	0	0
7/27	100	50	0	0	0	15	40	0	0
7/28		50	0	0	0	15	40	0	0
7/29		50	0	0	0	15	40	0	0
7/30		50	0	0	0	15	40	0	0
7/31		50	0	0	0	15	40	0	0
TOTAL	1100	1500	400	2200	600	450	720	120	500



Commissioner Expenses:

DAILY WAGE:	<i>\$100 per day</i>	14 days	\$1,400
MILEAGE:	<i>\$0.50 per mile</i>	1100 miles	\$550
WORKERS COMP:	<i>\$200 per month</i>		\$200
OTHER EXPENSES (LIST):		phone, log books	\$100
TOTAL COMMISSIONER EXPENSES FOR THE MONTH:			\$2,250

Monthly Billing Summary (July 2018)

Water User	Ditch	Total Inches	Percent of Total	Monthly Bill
Smith	Old Barn	1500	23%	\$520.03
Smith	Two Horse	400	6%	\$138.67
Jones	Old Barn	2200	34%	\$762.71
Meloy	Smitty	600	9%	\$208.01
Roberts	Two Horse	450	7%	\$156.01
Downey	D-O	720	11%	\$249.61
McLane	Chicken	120	2%	\$41.60
Dolan	Ginger	500	8%	\$173.34
Total =		6490	100%	\$2,250





Lost Lake - Shonkin, MT



**Montana Department of
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