

Irrigation Ditches and their Operation

Fact Sheet No. 6.701

Natural Resources Series | Water



by R. Waskom, E. Marx, D. Wolfe, and G. Wallace*

Water Laws and Regulations

Current western water law originated during the California gold rush in 1848. Back then miners would divert water from streams while mining for gold. Just like the claim on a mining stake, a rule was established stating that the first miner to use the water had the first right to it. After the first miner's right was established, the second miner's right was recognized, and so on. Claims left abandoned were available to others. Miners brought this system to Colorado during the gold rush of 1859. This system became known as the Doctrine of Prior Appropriation (also called the Colorado Doctrine because it first became law in Colorado with the writing of the state constitution in 1876).

Water in Colorado is still administered according to the Doctrine of Prior Appropriation. The basis of this doctrine is the concept of first-in-time, first-in-right. Water rights are established when water is put to beneficial use. The person or organization that is beneficially using the water may request the water court to officially recognize the right by decree. This judicial process is called adjudication. In Colorado, water courts have jurisdiction over all applications for decree of absolute water rights, conditional water rights, changes of use, exchanges, and augmentation plans.

A new water user can no longer appropriate water by simply going out to the stream and digging a diversion ditch. Water projects now involve a complex process of planning, permitting, and engineering to prove that unappropriated water is available for use. If the water court approves a conditional decree, the project must be carried on with due diligence

until its completion. Otherwise, the water right is forfeited. In addition to a priority date, a water right is recorded based on the location where the water will be diverted or withdrawn, the amount to be withdrawn, and the beneficial use to which it will be put.

In Colorado, water rights are considered a private property right. Water rights can be sold or inherited and prices may vary according to supply and demand. The consumptively used portion of a water right may be transferred to another area or use with approval of the water court, with the stipulation that other water rights are not injured.

The value of a water right is based on its amount and availability. It is important to understand that the priority of water use is based on seniority. "Senior" water rights are the oldest and hence have first priority in times of shortage. Senior rights holders are entitled to receive all available water in their ditch or diversion before any junior water rights holders. During times of water shortage, a senior water right holder may place a "call on the river." When a call is established, any upstream junior right holder must stop diverting water until the senior user receives their full decreed entitlement. This call system is applicable to waters that are a natural part of the stream system.

Ditch Operations

Ditch companies and associations exist to acquire water rights, develop storage, and deliver surface water to their members for irrigation and other purposes. Early on, farmers and landowners realized that the value of their property was directly related to a common system bringing water to their land. Even today, it's the water that makes land productive, stable, and aesthetically pleasing.

Ditch companies generally own and maintain ditches from their headgates to an established point where the individual

Quick Facts

- Water rights in Colorado are considered a private property right. Water rights can be sold or inherited, and prices may vary according to supply and demand.
- Ditch companies coordinate the use, ensure proper maintenance and efficient operation of surface water irrigation systems and conveyances.
- Ditch companies have the right to enter your property to maintain the ditch and ditch banks and perform "reasonably necessary" operations.

*R. Waskom, Colorado State University Extension water resources specialist and director, Colorado Water Institute; E. Marx, former agricultural specialist, Larimer County; D. Wolfe, Office of the State Engineer; and G. Wallace, Colorado State University professor, natural resource recreation and tourism. 12/2014



landowners or lateral ditch associations manage the smaller ditch systems. Lateral ditch associations generally have by-laws and rules of cooperation in order to keep the lateral system functioning and to avoid conflicts. Ditch associations are often the basis for a sense of community among neighbors in rural areas.

Generally, if you hold shares to water rights from a ditch that runs through your property, you will have a deeded water right that entitles you to water during the irrigation season. There are also certain responsibilities associated with these rights. Water users are often expected to attend work days, annual meetings, and even serve as the ditch captain in smaller ditch associations that cannot afford a paid ditch rider. Responsibilities also include coordinating with neighbors when you wish to run water in addition to keeping the ditches that run through your property free of obstacles. Annual maintenance costs are typically shared by association members in proportion to the number of shares held.

Reservoirs and Water Conveyances

An extensive network of reservoirs and water conveyances has been developed in Colorado since the middle 19th century. In many cases, a system of reservoirs, pipes, and/or ditches had to be built to store and divert the water to where it could be used by farmers. The construction of water delivery systems was in many cases handled by a water district or a water company. The water users hold shares in the company that may be bought and sold. Depending on the company, shares may vary in amount of water and price. The amount of water stored and delivered to shareholders each year depends largely on the snowpack in the mountains and the amount of runoff in the spring. Annual fees are assessed to pay for the use of the facilities, their maintenance, and for the services of the ditch rider.

Questions and Answers

Water law and irrigation ditch management in Colorado is complex. Resolving site-specific water issues often require consultation with an attorney or engineer. This fact sheet provides general guidelines on the rules and practices that govern ditch operations in Colorado. If you have an irrigation ditch on your property or if you are in the process of purchasing a property with an irrigation ditch or creek on it, the following questions may be helpful.

Q: An irrigation ditch runs through my property but I don't use it. Am I responsible for ditch maintenance?

A: No. The ditch company and water users are responsible for ditch maintenance, but you must not damage or obstruct the ditch.

Q: Does my neighbor have the right to enter my property to access the irrigation ditch that runs through my property?

A: Yes, if your neighbor uses the ditch to deliver water to his/her property, he/she has a right-of-access to enter with the equipment needed to maintain or repair the ditch. Irrigators frequently check ditches upstream to see how they are flowing, clear debris from the ditch, or adjust flows at measuring structures that may be on your land.

Q: Does the ditch company have an easement through my property? How can I identify the width of the easement? Do I have to let them enter and tear up my property?

A: Ditch rights-of-way can be owned fee simple or by easement. When owned by fee, the ditch owner holds title to the land where the ditch runs and has absolute control. The width of a ditch owned by fee is usually described in the deed.

If the ditch runs through an easement, then the ditch owner does not own the land containing the ditch, but they do have access and use rights. The ditch owner has the right to enter your property to maintain the ditch and ditch banks and perform "reasonably necessary" operations, even if that means disturbing land within the easement. The easement is as wide as is

Deeded Water Rights

If you do not hold deeded water rights on a ditch that runs through your property, you cannot take water from the ditch in any fashion. You also must not obstruct the ditch nor deny access to the ditch owner or their representatives when they need to enter the property to perform maintenance operations. Livestock or vehicles must not cause damage to a ditch or its right-of-way.

reasonably necessary for ditch maintenance and operation. This is often determined by historic practices and is not always described in a deed.

Q: My neighbor wants to replace the earthen ditch that crosses my property with a concrete lined ditch or a pipe. Can my neighbor make the change even if I disapprove?

A: Yes. Changes that increase the efficiency of water delivery, such as installing concrete ditches or pipes, are considered reasonably necessary. The ditch owner can make these changes even if you disapprove. If they wish to move or realign the ditch, however, they must negotiate with you and receive your permission.

Q: Can I build a fence across an irrigation ditch to contain my animals?

A: As a general rule, the ditch company and water users have the right to prohibit or set conditions for fences that enter the ditch right of way or cross the ditch. Fences can hinder maintenance operations and collect trash thus clogging the ditch. You might be able to work with the ditch company for permission to build a moveable fence that can be removed during ditch maintenance.

Q: Can I use the water in the ditch that runs through my property?

A: Only if you own water rights or have leased a right to the water. The fact that the water flows through your property does not entitle you to use the water.

Q: Can I take water out of a creek that runs through my property?

A: Only if you have a decreed right to use the water and it is in priority or there is unappropriated water in your creek. The fact that the water runs through your property does not give you the blanket right to divert or use it. In most of Colorado, it is difficult to find unappropriated water.

Q: A ditch crosses my property. I don't own rights to the water, but I want to dig out an area so I will have a pond. Can I do this if the water can flow through my pond and back into the ditch?

A: No. Digging a pond constitutes an impoundment. Forcing water to flow through a pond alters the natural flow and will increase losses to seepage and evaporation, potentially injuring other water rights holders on the ditch.

Q: I bought water rights when I purchased my property but my neighbors downstream are forcing me to shut my headgate and won't let me irrigate my hay. What can I do?

A: Most likely your neighbors' water rights are senior to your right. If this is the case, your neighbors can require you to shut your headgate until they receive all the water they are entitled to. The likelihood of this occurring in any given year depends on water supply and the number of downstream users with rights senior to yours.

These situations are best worked out with your neighbors, in consultation with members of your ditch association. If you do not have such an association, you may have to talk to the water commissioner to get an official explanation. Your best solution might be to develop an irrigation schedule with your neighbors and the

ditch captain. Your neighbors are entitled to their water first, but you might be able to irrigate between their irrigation times if that does not impact other users more senior to you. If you are still in conflict with your neighbors, contact your local water commissioner to verify the call and to determine when your water might be available.

Q: What is a "call for water"?

A: In areas where water supplies do not meet all of the demands, some water rights holders in the river system may not receive enough water to fulfill their court-decreed diversion amount. Water users then may start to "call" for their water, based on the priority system of "first in time, first in right." This is done with a phone call to the local water commissioner. Water delivery to junior users may be curtailed until the senior water rights holder receives all the water he/she is entitled to receive.

Q: What are diversion records?

A: A diversion record is a record of the daily flow in cubic feet per second for a ditch or other diversion structure. Diversion records are maintained by water commissioners and kept on file at the State Engineer's Office, the division offices, and online at the Division of Water Resources Web site, dwr.colorado.gov.

Q: What is a share of water?

A: A "share" refers to an interest in a ditch company. It represents a portion of water that flows through the ditch. The amount of water represented by a share varies greatly among ditch companies and from year to year, depending on how much water is available in storage and from the current year's snowpack. You must contact the ditch company to determine how much water is typically allocated per share. Most ditch companies inform water users in the spring how much water per share will be delivered for the coming irrigation season.

Q: Why do different ditch companies have different rules?

A: Ditch companies are owned by the water users they serve. Rules of operation vary depending on the type of water rights owned, size of the company, needs, history, infrastructure, and other factors particular to each company.

Water Divisions in Colorado

South Platte River Basin
Water Division 1
810 9th Street, Suite 200
Greeley, CO 80631
Phone: (970) 352-8712
Fax: (970) 392-1816

Arkansas River Basin
Water Division 2
310 East Abriendo, Suite B
Pueblo, CO 81004
Phone: (719) 542-3368
Fax: (719) 544-0800

Rio Grande Basin
Water Division 3
301 Murphy Drive
P.O. Box 269
Alamosa, CO 81101
Phone: (719) 589-6683
Fax: (719) 589-6685

Gunnison River Basin
Water Division 4
Mailing address:
P.O. Box 456
Montrose, CO 81402
Physical address:
2730 Commercial Way
Phone: (970) 249-6622
Fax: (970) 249-8728

Colorado River Basin
Water Division 5
Mailing address:
P.O. Box 396
Glenwood Springs, CO 81602
Physical address:
202 Center Drive
Phone: (970) 945-5665
Fax: (970) 945-8741

Yampa River Basin
(White River drainage also)
Water Division 6
Mailing address:
PO Box 773450
Steamboat Springs, CO 80477

Water Use for Small Acreages

For more information on water use for small acreages, see Colorado State University Extension fact sheets:

- 6.700, [Private Wells for Home Use](#)
- 4.717, [Glossary of Water Terminology](#)

Q: How do you change water from one beneficial use to another?

A: You must apply for a “change of use” through the water court. A public notice is then published, allowing for a two-month public comment period regarding your request. After the comment period, the water referee will review your application. The water referee then makes a recommendation to the water court judge. If no protests are filed, the judge of the water court signs the decree with the new beneficial use. If a protest is filed, the matter may go to trial (if the parties cannot settle) before the judge makes a ruling. The water court’s ruling can be appealed to the Colorado Supreme Court. The process for a change in water right usually takes between four months and two years.

Q: How long must a ditch remain unused before the associated water right is declared abandoned?

A: A water right is considered abandoned if the water has not been put to beneficial use for an extended period of time, usually at least ten years. Non-use does not necessarily result in abandonment if the non-use is due to circumstances such as a lack of water availability due to a low priority right.

The division engineer submits a list of rights that are presumed to be abandoned to the water court. The owner of the water right is allowed a hearing in water court. The water court then makes a ruling regarding the abandonment.

If you are unsure about a ditch that runs through your property, contact the appropriate division engineer or check records at the county office to determine the status of the ditch prior to any activity that might be considered trespassing or destruction.

Q: How do I contact the ditch company that controls the ditch through my property?

A: First, try asking your neighbors for information regarding the ditch company or lateral association. If that is not possible, contact the water commissioner or your county’s planning department. Most ditches

are named and easily recognized by those living in the area. Contact information for many ditch companies can be found online at www.watercolorado.com or through the division engineer. Your local USDA-Natural Resources Conservation Service (NRCS) office or Colorado State University Extension office may also be able to help.

Q: What does the ditch rider do?

A: A ditch rider is hired by the ditch company to maintain the ditch and open headgates as appropriate to divert water for water deliveries in the ditch system. The ditch rider also calculates water volumes and oversees ditch operations. The ditch rider stays in close communication with the water commissioner (a.k.a. river commissioner) during the irrigation season to coordinate diversions and calls on the river. Some of the smaller mutual ditch companies use a rotating ditch captain to coordinate ditch operation and maintenance activities.

Q: What does the water commissioner (a.k.a. river commissioner) do?

A: The water commissioner operates the headgates where water is diverted from the river into ditch systems and is responsible for measuring stream flows and accounting for diversions from the river. The water commissioner reports this information to the division engineer.

Q: Who is the Division Engineer? What does he/she do?

A: A: The division engineer is responsible for administering water records, flows and diversions within a specific watershed basin. There are seven water basins and division engineers in Colorado (See sidebar.).

**Water Divisions
in Colorado
continued**

Yampa River River Basin
(White River drainage also)
Water Division 6

Physical address:
505 Anglers Drive, Suite 101
Phone: (970) 879-0272
Fax: (970) 879-1070

San Juan/Dolores River Basins
Water Division 7
160 Rockpoint Drive
Durango, CO 81301
Phone: (970) 247-1845
Fax: (970) 259-0944

See dwr.colorado.gov for more information about your water division.