

Water District Operation Manual Part III: Watermaster Handbook



Photo details: Headgate in Water District 67

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WATER RESOURCES

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IDAHO DEPARTMENT OF
WATER RESOURCES

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Part III

Watermaster Handbook

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Purpose

Water distribution following the prior appropriation doctrine is the primary objective and responsibility for all Idaho watermasters. The Idaho Department of Water Resources (Department) supervises the distribution of water within water districts, but distributing water to users and the related accounting for water delivery is accomplished by watermasters as provided in Title 42, Chapter 6, Idaho Code. While the difficulty associated with these tasks depends upon the size and complexity of the individual water district, most of the principles and concepts involved are common to all districts.

Part III of the Water District Operation Manual is intended to provide watermasters with the basic information needed to deliver water, resolve water right disputes, and manage a water district. Additional information and details about water district operations can be found in the related publications *Water District Operation Manual Part I: Introduction to Water Districts*, *Part II: Water District Administrative Processes*, *Part IV: Technical Field Guide – Measurement and Data Collection* and the *Water District Operation Manual: Appendices*.



Figure 1. Department staff, watermaster, and water user discussing a submerged orifice and related installation.

Definitions

For the purposes of both Water District Operation Manual Part I, II, III and IV, the following terms are used as defined below.

Acoustic Doppler Current Profiler (ADCP) – A measuring device which uses sound waves to measure the speed and direction of currents throughout the water column. ADCPs use a series of acoustic transducers that emit and receive signals from different directions. The instrument can be mounted directly on a stationary object, underwater, or mounted to a moving object.

Acoustic Doppler Velocimeter (ADV) – A measurement device that records instantaneous velocity components at a single point with a high frequency. An ADV measures the velocity of particles in a remote sampling volume based upon the Doppler shift, rather than measuring the velocity throughout the water column, like an ADCP. This instrument is usually mounted to a wading rod with a technician manually walking it across a transect.

Annual Volume – The amount of water measured in acre-feet diverted during a calendar year (i.e., from January 1 through December 31).

Acre-Foot (AF) – A unit commonly used for measuring the volume of water; equal to the quantity of water required to cover one acre to a depth of one foot and equal to 43,560 cubic feet of 325,851 gallons.

Aquifer – A stratum or zone below the surface of the earth capable of producing water from a well.

Beneficial Use – One (1) or more of the recognized beneficial uses of water including, but not limited to, domestic, municipal, irrigation, hydropower generation, industrial, commercial, recreation, stockwatering, and fish propagation uses for which permits to appropriate water can be issued as well as other uses which provide a benefit to the user of the water as determined by the Director. Industrial use as used for purposes of these rules includes, but is not limited to, manufacturing, mining, and processing uses of water.

Capacity Measurement (Rate of Diversion) – The maximum volume of water impounded in the

case of a storage facility or the maximum rate of diversion from the source as determined by actual measurement of the system during normal operation in accordance with the beneficial use rules, IDAPA 37.03.02.010.05 and 37.03.02.040.02.

Certified Water Right Examiner (CWRE) – A person approved to perform a beneficial use field exam, to determine the extent of application of water to beneficial use and to determine compliance with terms and conditions of the water right permit. Approved examiners include hydrographers elected pursuant to Idaho Code § 42-707 watermasters elected pursuant to Idaho Code § 42-605, Certified Water Right Examiners as defined in I.D.A.P.A 37.03.02.030 and pursuant to Idaho Code § 42-217a. Any professional engineer or geologist qualified and registered in the state of Idaho with the knowledge and experience necessary to satisfactorily complete an examination as determined by the Director shall be considered for appointment as a CWRE upon application to the Director. The Department may require and/or provide additional or more specialized training for any examiner, including in-field review or training, at the discretion of the Department, or upon request of the examiner or district.

Consumptive Use – The amount of water transpired in the process of plant growth plus the water evaporated from the soil and foliage in the area occupied by the growing plant.

Cubic Feet per Second (cfs) – A rate of flow approximately equal to four hundred forty-eight and eight-tenths (448.83) gallons per minute and equals (50) Idaho miner's inches.

24-hour cfs – A flow rate expressed in terms of one day or 24 hours. Example, a continuous diversion of 2 cfs over 20 days would equal 40 24-hour second feet.

Department – The Idaho Department of Water Resources (IDWR).

Director – The Director of the Idaho Department of Water Resources.

Diversion Structure – The structure through which water is removed from a water source for a specific purpose. A diversion structure on a natural channel may include a diversion dam or check structure in the channel.

Diversion Rate – The rate of flow diverted for beneficial use, measured over a period of time, usually measured in gallons per minute or cubic feet per second.

Doppler, Doppler Effect or Doppler Shift – The change in the frequency of a wave in relation to an observer who is moving relative to the source of the wave. This effect is named after physicist Christian Doppler.

Exchange – Water is diverted under one source with a valid water right and injected and commingled with water in another source, ditch, or natural channel in exchange for diverting an equal amount of water at a different location from the same ditch or channel containing the commingled water.

Expansion – The diversion and/or use of more water than originally allowed by a water right measured by either rate or volume. The application of water to a tract of land larger than the original tract is presumed to be an expansion.

Gaging Station – A location on a stream, canal, lake, or reservoir where systematic observations of stage and discharge are made.

Groundwater – All water under the surface of the ground as provided in Idaho Code § 42-230(a), whatever may be the geological structure in which it is standing or moving.

Head – The relative difference in the elevations of water surfaces, generally measured in feet.

Headgate (or controlling works) – Structures which are constructed to control or regulate the flow of water at a diversion in a natural channel, ditch, or canal.

Hydrograph – A plot of stage or discharge as a function of time.

Lateral – A ditch or canal that supplies water to two or more users. Lateral ditches normally divert water from a main canal or ditch which has its heading from a river or natural stream channel.

Laminar Flow – Flow in which the fluid travels smoothly or in regular paths, in contrast to turbulent flow, in which the fluid undergoes irregular fluctuations and mixing. In laminar flow, the velocity, pressure, and other flow properties at each point in the fluid remain constant. Laminar flow over a horizontal surface may be thought of as consisting of thin layers, or laminae, all parallel to each other. The fluid in contact with the horizontal surface is stationary, but all the other layers slide over each other.

License – The certificate issued by the Director in accordance with Idaho Code § 42-219, confirming the extent of diversion and beneficial use of water that has been made in conformance with the permit conditions.

Measuring Device – A generally accepted structure or apparatus used to determine the rate of flow or volume of water. Examples are weirs, meters, and flumes. Less typical devices may be accepted by the Director on a case-by-case basis.

Miner's Inch (MI) – A variable unit used to express a rate of flow of water in the Western United States. In Idaho, a miner's inch is equal to 1/50 of a cubic foot per second (cfs), or 0.02 cfs. In Idaho, one miner's inch is the duty of water, or the standard allocated flow, for each acre of irrigated land.

Natural Flow – The portion of the total flow in a stream channel which does not include storage water released from a reservoir or water from other sources, such as groundwater pumped from a well and injected into a stream, or surface water transferred to the stream from another basin. Sources of natural flow may include tributary streams, springs, return flows from irrigated fields or ditches, and underground flow or groundwater that seeps into the stream channel.

Period of Use – The time each year during which water under a given right may be beneficially used in compliance with terms of the water right.

Permit – The water right document issued by the Director authorizing the diversion and use of unappropriated public waters or reallocated trust water.

Place of Use (P.U. or POU) – The location where the beneficial use is made of the diverted water

Point of Diversion (P.D. or POD) – The location on the public source of water from which water is diverted. Examples are pump intake, headgate, well locations, and dam locations.

Prior Appropriation Doctrine – The system of water law adopted by most Western States. The basic principles of the Appropriation Doctrine are: (1) that a private right to use water can be acquired only by diverting the water and applying it to a beneficial use; (2) the first in time of beneficial use is the first in right and the right is maintained only by use.

Priority Date – The date of appropriation established when an application is filed in acceptable form, including the applicable filing fee, unless a later date is set in accordance with applicable law

Power Consumption Coefficient (PCC) – A parameter used to estimate the volume of water pumped during a period of time. It is the number of kilowatt-hours of electricity required by a system to pump one acre-foot of water.

Re-diversion – A general term is used to describe the location of any secondary point of diversion under a water right. Re-diversion as used in an exchange, is the location where a quantity of water is diverted from source B after an equal quantity of water was diverted from source A and injected into source B.

Reservoir – A lake or pond in which water is collected and controlled for some beneficial use.

Standard Meter – A portable flow meter which is used as a standard after passing annual laboratory testing to ensure the meter is capable of measuring +/- 2% of the laboratory flow. The standard meters are used to calibrate or assess accuracy of water users installed measurement device.

Stored Water – is water that is diverted to and retained within a reservoir and then released for some beneficial use. Water may be diverted to and stored in a reservoir located either within the stream channel or off the stream channel. The Department considers a storage facility as one which will not fill within 24 hours using the maximum authorized flow rate.

Source – The name of the natural water body at the point of diversion. Examples are Snake River, Smith Creek, ground water, spring, etc.

Surface Water – Rivers, streams, lakes, and springs when flowing in their natural channels as provided in Idaho Code §§ 42-101 and 42-103.

Time Clock – A device that records the cumulative operating hours of a pumping system.

Transducer – An instrument that measures pressure, load, force, or other states, and converts the reading into an electronic signal. A transmitter also converts a reading into an electronic

signal, but it then amplifies, modifies, and sends that signal to a receiver. Generally, the transducer can be the transmitter and or the receiver.

Turbulent Flow – Flow in which the fluid undergoes irregular fluctuations, or mixing, in contrast to laminar flow, in which the fluid moves in smooth paths or layers. In turbulent flow the speed of the fluid at a point is continuously undergoing changes in both magnitude and direction. The flow of wind and rivers is generally turbulent in this sense, even if the currents are gentle. The air or water swirls and eddies while its overall bulk moves along a specific direction.

Unappropriated Water – The water of the state of Idaho in streams, rivers, lakes, springs, or groundwater in excess or more than what is necessary to satisfy prior rights including minimum stream flows and rights established by law.

Water District (WD) – A district organized in accordance with the provisions of Title 42, Chapter 6, Idaho Code. The Director of the Idaho Department of Water Resources (Department) creates water districts to distribute water rights from natural water sources in accordance with water right priority dates. Water distribution in water districts is accomplished by watermasters who are elected annually by water users within the district. Watermasters are supervised by the Director of the Department.

Watermaster – The person elected or appointed pursuant to Title 42, Chapter 6, Idaho Code to distribute water in the order of priority, in a water district, to those water users entitled to its use.

Water User (or Water Right Holder) – A person, corporation, association, firm, governmental agency, or other entity who holds a valid water right authorizing the diversion and use of water for beneficial use.

Primary Watermaster Duties

The water district watermaster must distribute water by priority to those entitled to its use. This requires knowledge of the amount of water available in the source and relative priorities of the water rights among users. The instantaneous amount of water delivered is typically expressed as a rate of flow in cubic feet per second (cfs). Annual water delivery volumes are typically expressed in acre-feet (af) or acre-feet per annum (afa).

Prior to the distribution of any water, the watermaster must have a list of all water rights within the water district. The Department can provide each district or watermaster with a list of all valid water rights and permits sorted by priority date and owner. The list should include the water right number, type of water right, name of current water right holder, source of water, period of use, diversion rate allowed under each right, and location of the point of diversion for each right. It is important that the watermaster become familiar with water rights within the district since many rights often contain conditions regarding water use, delivery or administration.

Watermasters may be responsible for distribution of stored water when the owners of a reservoir use a natural channel within the boundaries of a water district for the delivery of stored water. In such cases, only the watermaster or watermaster assistants are authorized to deliver stored water to those entitled to its use.

A watermaster needs to measure and document deliveries of water and submit an annual watermaster report to the Department. This report needs to show the total volume of water delivered by the watermaster during the previous year; the volume delivered to each water user, the total expense of delivery, and the apportionment of expenses among users.

More details about the reporting requirements and duties of a watermaster can be found in the Water District Operation Manual Part II: Water District Administrative Processes.

Water Rights

A water right is the authorization to divert public waters of the state and put them to a beneficial use in accordance with the priority date and other elements of the recorded water right. All streams, rivers, lakes, springs and groundwater within the boundaries of the state are deemed public waters. A water right does not represent ownership of the water itself. When a private right for the use of public waters is established, the right to use the water becomes real property (much like property rights in land ownership). The constitution of Idaho guarantees the right to divert and appropriate unappropriated public waters subject to Idaho water laws and rules.

Owners of water rights may use water only as specified and recorded in a valid water right. Idaho is a prior appropriation state, which means “first in time is first in right”. In times of scarcity, the watermaster must deliver water according to priority of right. Owners of more senior water rights are entitled to water before those with more junior water rights.

All forms needed related to water right administrative processes as described in this section can be found at the Department website <https://idwr.idaho.gov/> > Forms > Water Rights > Water Right Forms.

Types of Water Rights

Water rights may be represented by a permit, license, or decree. Beneficial use or statutory claims are water use claims that have not been verified by the Department or adjudicated by a court and can only be delivered by the watermaster after all other permitted, licensed, and decreed rights are satisfied.

Permit

Permits begin with the submission of an application for permit to the Department. Once the application has been processed, the Department is required to post notice to allow people to file a protest to the application with the Department. If protests are filed and they cannot be

resolved, the Department must hold a hearing. If no protests are filed or protests are resolved, then the Department reviews the application to ensure that it meets the requirements of statute and rules and regulations, then a permit is issued. Once issued, the permit holder begins to develop the water right and establish beneficial use of the water. The water user has a period of up to five years to prove that the water has been put to beneficial use. The permit authorizes a specific appropriation of water and a deadline within which the appropriation must be completed. Permit holders must submit proof of beneficial use prior to the deadline of their permit.

License

A licensed water right is preceded by a water right application, water right permit, and a verification of beneficial use by the Department. After submitting the Proof of Application to Beneficial Use (Idaho Code §42-217), Department staff or a Certified Water Right Examiner conducts a field examination to confirm the extent of beneficial use at the end of the development period. The examiner makes a final recommendation, and the Department sends a notice of draft license to the permit holder before a license is issued.

Decree (or Decreed Right)

A water right decree is an official order issued by a court. A decreed water right is typically issued following a water rights adjudication process where a court judge reviews evidence to verify the merit of a water right claim and makes a final determination as to the validity of the claim. Once a water right is decreed, the parameters, elements, and any related conditions are defined in the water right record.

Water districts are created only after water rights from the water sources have been adjudicated by a court. The largest adjudication in Idaho history was the Snake River Basin Adjudication (SRBA). The SRBA began in 1987 and ended in 2014, resulting in nearly 160,000 decreed water rights within the Snake River Basin. Currently there are ongoing adjudication processes in Northern Idaho, Bear River Basin, and Kootenai River Basin.

Claims

There are two types of claims: statutory claim and notice of claim.

Statutory Claim

A statutory claim is filed with the Department to make a record of an existing beneficial use right. In 1978, a statute was enacted requiring people with beneficial use rights (other than water rights used solely for domestic purposes) to record their water rights with the Department. The purpose of the statute was to provide some means to make records of water rights for which there were previously no records. However, these records are merely affidavits of the water users, and do not result in a license, decree, or other confirmation of the water right.

Notice of a Claim

A notice of claim to a water right, or claim, is filed with the Department during a water right adjudication. When an adjudication of a particular basin is commenced, the Department is required to notify the water users of the commencement of the adjudication and of their requirement to file claims for their water rights with the Department. Adjudication staff in the Department investigate the claims and prepare a report that is filed with the court. Claimants of water rights are notified of the filing of the report, and objections to the report may be filed with the court by anyone who disagrees with the findings. If no objection is filed to a water right described in the report, then the court decrees the water right as described in the report. If an objection is filed to a water right described in the report, the court holds a hearing to resolve the objection before the water right is decreed.

Other Water Use Authorizations, including Shares

Some water users have shares or allotments of water (often mistaken for a water right) that are delivered by an irrigation organization, city, or water utility company. The water delivery entity or company is the owner of the water right(s) issued by the state and distributes portions, or shares, of the right(s) to the users within the place of use. Water users having shares of a water right are not within the jurisdiction of the Department or the watermaster but are regulated by

the entity which holds the water right. Any questions or issues with delivery of the water right at the point of diversion from the public water source are within the Department's jurisdiction under Title 42, Chapter 6, Idaho Code.

Water Right Number

To keep track of claims, decrees, statutory claims, permits, and licenses, a unique number is issued by the Department. This identification number represents the administrative basin where the water source is located, followed by the sequence number, and sometimes a suffix letter. Not all water rights have a suffix assigned; usually the suffix is added when a water right is split. Use this number to search for water right documents.

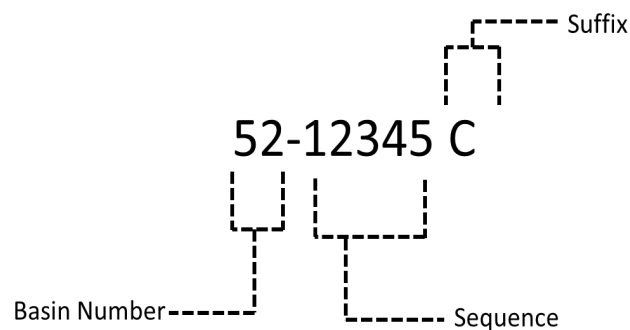


Figure 2. Breakdown of the unique water right numbering scheme.

Water Right Research

The Department maintains water right records and assists the public with water right research. Permanent water right records are stored in document files, which are backed up by microfiche and/or digital images. The Department maintains a computer database to facilitate water right research and water right reporting. That can be found on the on the Department website <https://idwr.idaho.gov/> > Water Rights > Water Rights Research: Existing Rights and New Filings > Water Right and Adjudication Search or by using the link here.

<https://research.idwr.idaho.gov/apps/waterrights/wrajssearch/wradjssearch.aspx>

This tool allows the public to search the water rights database and view the following information, when available, for each water right:

- details and proof report
- scanned documents
- GIS map representations
- pedigree history
- water supply bank details
- general provisions from court decree

When researching note that water right numbers may have changed with time as they went through various administrative processes such as adjudication and splits. Generally, the smaller the sequence numbers represent water rights with older priority dates. Contact the Distribution section at the Department for an updated list of water rights administered in your water district.

Elements of a Water Right

A water right owner has the right to use water only as described in the water right document. All water rights have the same details or basic elements, which identify:

- **Ownership:** the individual, corporation, or entity listed as the current owner (most often the property owner where the water is used);
- **Priority Date:** the month, day, and year when the water right was established, typically representing either the date water was first put to beneficial use, or the water right application filing date;
- **Source:** the surface or groundwater source where the water is being diverted from;
- **Beneficial Use:** the type of activity the water for which the water is used. Common uses include (but are not limited to) irrigation, stock water, domestic, hydropower, or municipal;
- **Period of Use:** The period during which water under a given water right can be beneficially used, also known as season of use;

- **Diversion Rate:** the maximum rate of flow, in cubic feet per second (cfs), that can be diverted from the source at any given time;
- **Volume:** the maximum amount of water (in acre feet) authorized for beneficial use;
- **Place of Use (POU):** the specific location where the water can be used. Large expanses, as with irrigation use, are described using the Public Land Survey System (PLSS) designations of township, range, section, and quarter-quarter section;
- **Point of Diversion (POD):** the location where the water is diverted from the source, generally described using the quarter-quarter section PLSS designation;
- **Conditions:** provisions or requirements that may further clarify or limit the water use or other water right elements.

Common Conditions

Most water rights have related conditions that may limit or clarify how water may be used. Some conditions are common in most water rights, such as “this water right does not grant a right to trespass on the land of another.”

Other conditions may further qualify or limit the use of water described in the water right elements, especially when multiple water rights are combined for the same beneficial use or used from the same point of diversion or place of use (i.e., combined water rights diversion rate, annual volume, and irrigation acre limit conditions).

Some conditions may limit or even expand the basic water right elements. For example, the season of use listed on a water right may expand or contract under certain circumstances as explained by water right conditions.

It is critical for watermasters to understand the elements and conditions of water rights which they must administer within their water district.

Water Right Exceptions

With very few exceptions, all use of public water sources requires a water right. Under Idaho law, water right exceptions include:

- use of wells for “domestic purposes” as defined by Idaho Code § 42-111;
- in-stream watering of livestock consistent with Idaho Code § 42-113; and
- use of water from a public water source to;
 - extinguish an existing fire consistent with Idaho Code § 42-201(3)(a);
 - forestry practices as defined by Idaho Code § 38-1303, and forest dust abatement; or
 - immediate cleanup or removal of hazardous substances or petroleum that is part of an emergency response by a state or local emergency response team consistent with Idaho Code § 42-201(3)(c)

Legal Description - Public Land Survey System

The Public Land Survey System (PLSS) is a standardized surveying method developed and used in the United States to divide property for sale. The township/ range block contains thirty-six square miles divided into one square mile sections or 640 acres. Each section is further divided into quarters and quarter-quarters (160 acres and 40 acres respectively). The legal description of the shaded area in Figure 3. would be Township 2 South, Range 3 East, Section 26, SENE (SE quarter of the NE quarter).

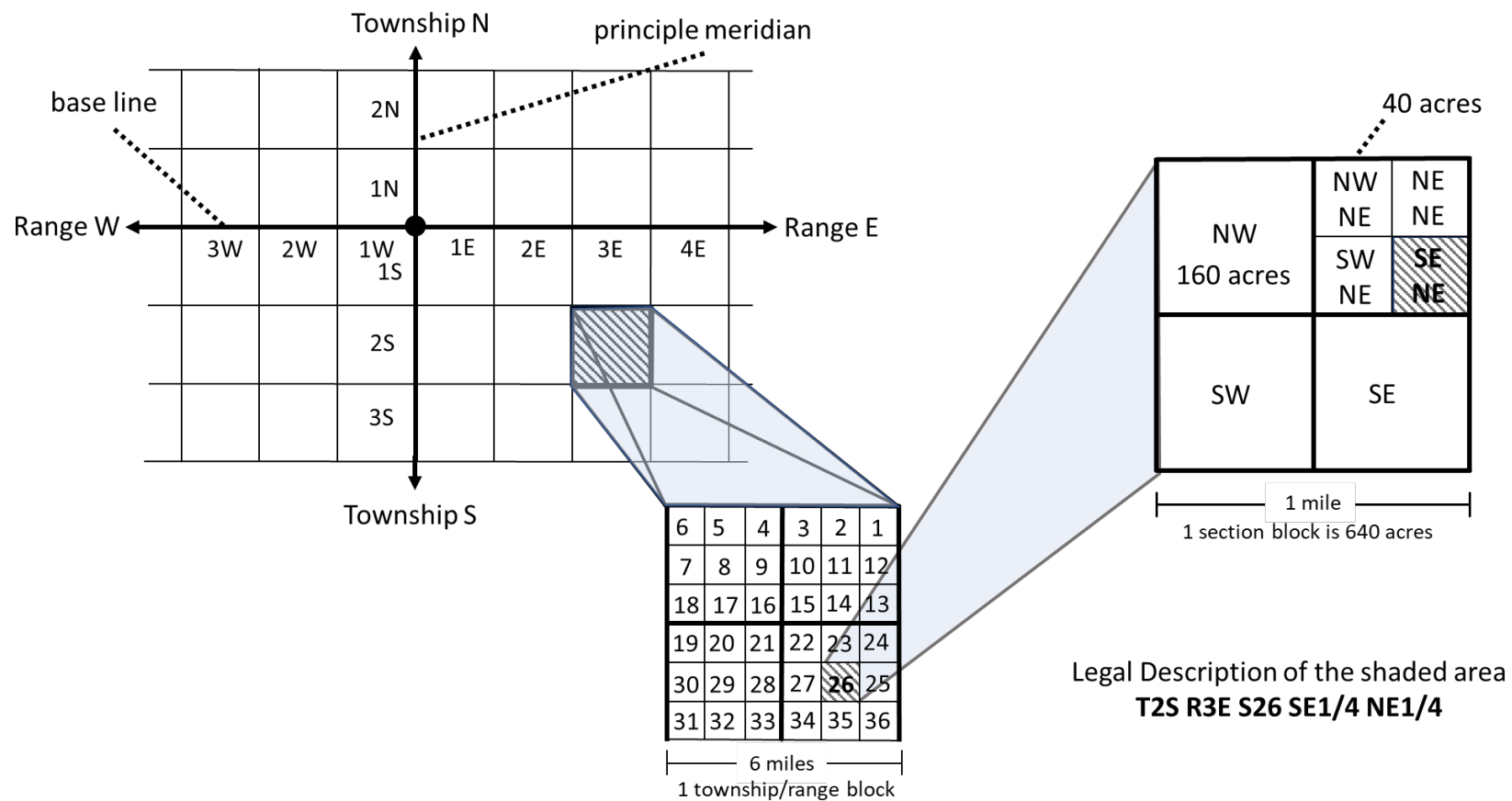


Figure 3. Schematic of the Public Land Survey System (PLSS)

Notice of Change in Water Right Ownership

The most common element of a water right that should not be ignored by water users is any change in ownership. This simple yet critical element can create administrative challenges if not up to date as the Department relies upon this information to notify water users of administrative action. Many new owners incorrectly assume that a water right ownership change automatically occurs upon the sale of a property. It is the responsibility of the new owner to file a Notice of Change of Water Right Ownership form and pay the appropriate filing fee (Idaho Code § 42-228). This form can be found on the Department website <https://idwr.idaho.gov/> > Forms> Water Rights > Ownership.

Water Right Transfers

Anytime there is a need to change the point of diversion, place of use, period of use, or nature of use, the water user must submit an Application for Transfer of Water Right (Transfer) form. An exception to the requirement to file for transfer is if the change in point of diversion is within the quarter-quarter or more specific area as described on the right. Changes through the transfer application can be made for licensed and decreed rights but making a change to a permit requires an amendment. To amend a permit, an Application for Amendment of Permit form must be submitted to the Department. This form can be found on the Department website <https://idwr.idaho.gov/> > Forms> Water Rights > Changes in Use.

Changes desired are not authorized until there is an approved transfer. The Department will reach out to the watermaster of the water district which administers the right(s) to ask for a recommendation on the application. Department staff will evaluate the application to make sure other water rights are not injured, the change does not constitute an enlargement in use of the original right, the change is consistent with the conservation of water resources within the state of Idaho and is in the local public interest as defined in Idaho Code § 42-202B. Additionally, staff will evaluate the change will not adversely affect the local economy of the watershed or local area within which the source of water for the proposed use originates.

Forfeiture and Abandonment

It is important to continue putting water to beneficial use at least once every five years to avoid forfeiture or abandonment concerns. During the processing of a water right application for transfer, or a water supply bank agreement, the Department has the responsibility to verify that the water right has been put to beneficial use within the last five years. This evaluation is done to prevent possible injury to other water right owners (Idaho Code §§ 42-222 and 42-223). Outside of the processes mentioned here, the Department does not make determinations about forfeiture and abandonment. Such complaints must be addressed by a local court of jurisdiction.

Water Right Exchanges

Under the provisions of Idaho Code § 42-240, any person holding a surface water right may apply to exchange water authorized to be diverted under the right with the same or a different source. Surface water right holders may also apply to exchange the use of water authorized for diversion under one or more other valid water rights from the same source or a different surface water source. If the application proposes an exchange with another water right, the application needs to have a written agreement between the person proposing the exchange and each person or organization owning rights to water with whom the exchange is proposed to be made. The Application for Exchange of Water form can be found on the on the Department website <https://idwr.idaho.gov/> > Forms > Water Rights > Changes in Use.

The exchange will be approved in whole or part, or upon conditions, provided no other water rights are injured. The exchange must: not constitute an enlargement of the original right or rights, be consistent with the conservation of water resources within the state of Idaho, is in the local public interest as defined in Idaho Code § 42-202B, and will not adversely affect the local economy of the watershed or local area within which the source of water for the proposed use originates. The exchange is authorized in accordance with the conditions set forth by the Director only after the application for exchange is approved and received by the applicant and watermaster.

Temporary Changes to Water Rights

Drought Declaration

Idaho Code § 42-222A, authorizes the Department to declare drought emergencies for designated areas, by an Order from the Governor. A drought declaration Order authorizes the Director of the Department to “allow temporary changes to the use of water rights,” which can lessen the impacts of drought on water supplies and water use. After a drought declaration is issued, temporary changes may be authorized for a change in point of diversion, place of use, or beneficial use type, or temporary exchanges of water. These changes last through the season and expire on December 31st.

Temporary Approval

Any person, association or corporation intending to use the waters of any natural streams, springs or seepage waters, lakes or ground water, or other public waters in the state of Idaho, for a minor use of short duration may apply to the Department for temporary approval (Idaho Code § 42-202A). To request a temporary transfer, water users must file a Temporary Change Application form with the Department. This form can be found on the on the Department website <https://idwr.idaho.gov/> > Forms> Water Rights > Changes in Use.

Upon completion of the application form and payment of the filing fee the Director will confirm that the temporary approval can be properly administered, other sources of water are not available, approval is in the public interest, and that the temporary approval will not injure public values associated with the water source or any other water right. The Department will request comments and recommendations from the watermaster to address any local concerns before granting temporary approval. The Director may issue temporary approval with conditions determined to be necessary to protect other water rights and the public interest.

Water Supply Bank

The Water Supply Bank (Bank) is a water exchange program operated by the Idaho Water Resource Board (Board) through the Director. The Water Supply Bank works in association with water districts and IWRB-appointed local rental pool committees, to facilitate the acquisition and voluntary exchange of water rights, for new and supplemental water uses.

The Bank is administered by staff at the State Office, while rental pools are administered by water district staff and a rental pool committee. The rental pool committee is often made up of the local water district advisory committee members. Both the Bank and the various rental pools are administered pursuant to Idaho Code §§ 42-1761 through 42-1766 and I.D.A.P.A 37.0.03 -Water Supply Bank Rules.

Rental and Lease Applications

Department staff at the State Office review applications to lease and rent water rights year-round. Rental applications are prioritized for processing between November through March. Applications are typically processed within 30-60 days, so water users should submit their lease and/or rental applications one to two months in advance of the intended start of their use, or non-use, of water. If all or a portion of a water right is not being used, it may be leased to the water supply bank to allow another water user to rent the right for use on a temporary basis. The lessor will receive payment only if the right is rented.

Leasing a right to the water supply bank is one method of protecting a right against forfeiture due to non-use. While a water right is in the bank, forfeiture provisions for non-use, pursuant to Idaho Code § 42-222(2) are stayed.

Rental and Lease Applications can be found on the Department website <https://idwr.idaho.gov/> > Forms > Water Supply Bank > Forms.

Rental Pools

There are currently six rental pools in Idaho. They are: Water District 01– Upper Snake River (upstream of Milner Dam near Burley), Water District 63 -- Boise River, Water District 65 – Payette River, Water District 65K – Payette River on Lake Fork Creek, and Water District 74 – Lemhi River. The Shoshone-Bannock Tribes operate their own Water Supply Bank for the lease of Tribal water stored in Upper Snake River reservoirs. Water users looking to lease their water rights to regional rental pools should contact the water district watermasters responsible for rental pool administration.

More information can be found on the Department website <https://idwr.idaho.gov/> > Idaho Water Resource Board > Idaho Water Resource Board Programs > Water Supply Bank > Water Supply Bank Administration.

Distribution of Water

Measuring devices are necessary to determine the amount of water being delivered. The watermaster must record and report the total volume of water delivered to both the individual water users and the entire water district. These delivered volumes must be recorded by the watermaster when preparing the required annual watermaster report and distribution of assessments to the water users.

When availability of water within the district becomes insufficient to fully satisfy all water rights being called for, the watermaster must regulate and deliver water consistent with the elements and conditions of each water right or group of water rights. Knowing the authorized diversion rate(s), how much water is available for delivery, and relative priorities of the water rights is essential to the proper distribution of water in a water district.

Authorized Water Rights and Diversion Rate

Each point of diversion has one or more associated water rights authorized to divert. Each of those water rights may have specific limited conditions or multiple points of diversion. Determining what that total authorized rate is and how it may change within a season can be challenging. Distribution staff at the Department will work with you to analyze and determine that authorized rate and identify specific conditions that may affect how the watermaster distributes the water.

Natural Flow and Priority Determination

The term natural flow refers to the actual flow of the stream which does not include storage water released from a reservoir, surface water injected into the stream, or groundwater pumped from a well and injected into the stream.

To determine natural flow available for distribution, watermasters will often need to know the discharge or flow at a particular point on the stream. It is the duty of those using water in any district to place acceptable systems or devices to measure the flow of water (Idaho Code § 42-703). Depending on location, watermasters may use existing gaging stations to determine the available natural flow of the stream.

The natural flow available determines which water rights are in priority. If there is not enough water available to satisfy all the water rights, then the oldest (or senior) water rights are satisfied first, in order of priority date, until there is no water available for delivery. The junior water right holders get curtailed until the senior water rights are satisfied. See Figures 4-7 for examples of how to deliver water by priority. Ultimately, it is the responsibility of the watermaster to accurately determine the amount of natural flow available and distribute the water accordingly with relationship to priority dates.

Some water districts such as water district 65 (Payette River and Tributaries) and water district 01 (Upper Snake River) utilize a complex water right accounting program developed by the Department to determine available natural flow, water right priority cuts, and quantify water use including storage.

Published gaging stations with interactive maps are made available by the

- USGS National Water Information System <https://waterdata.usgs.gov/id/nwis/rt> and
- Idaho Power Company
<https://idastream.idahopower.com/Data/Map/Parameter/Flow/Statistic/LATEST%20Flow/Interval/Latest>.

Examples of Natural Flow Delivery

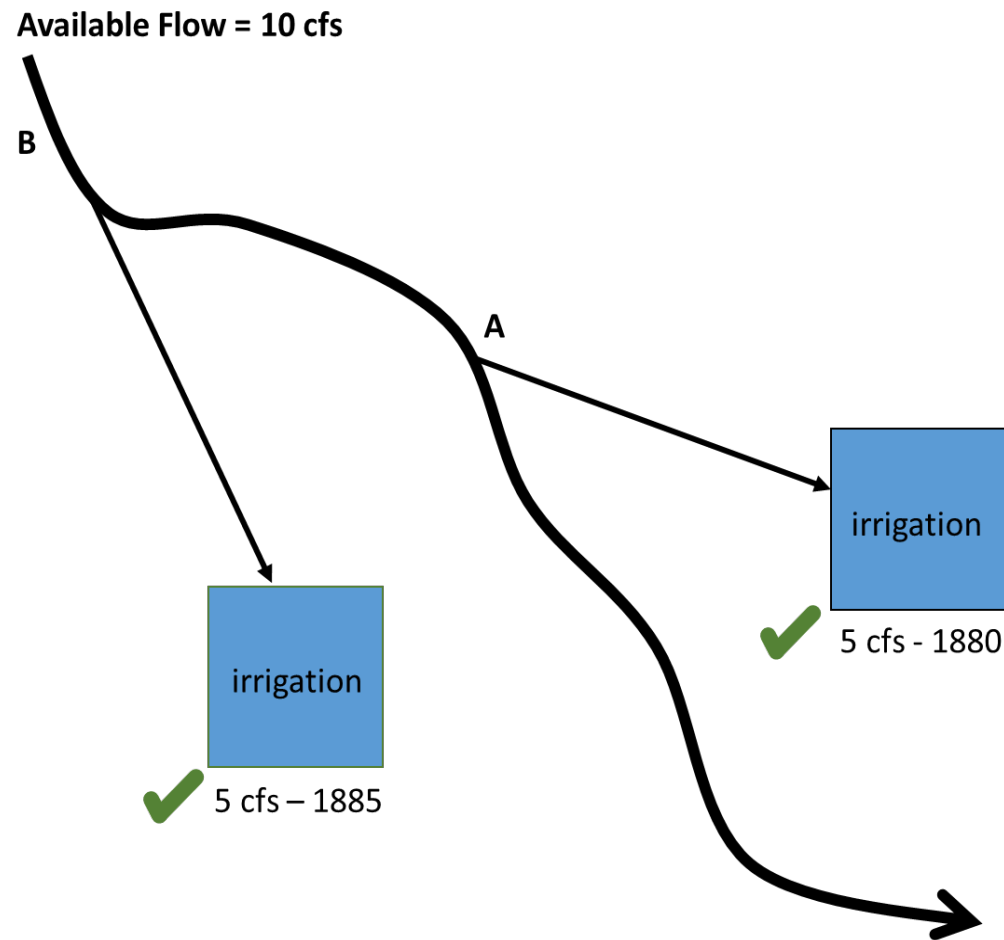


Figure 4. Schematic of an idealized system determining which water rights are in priority. In this example there is 10 cfs of natural flow available. In this case, both water rights would receive their water in full.

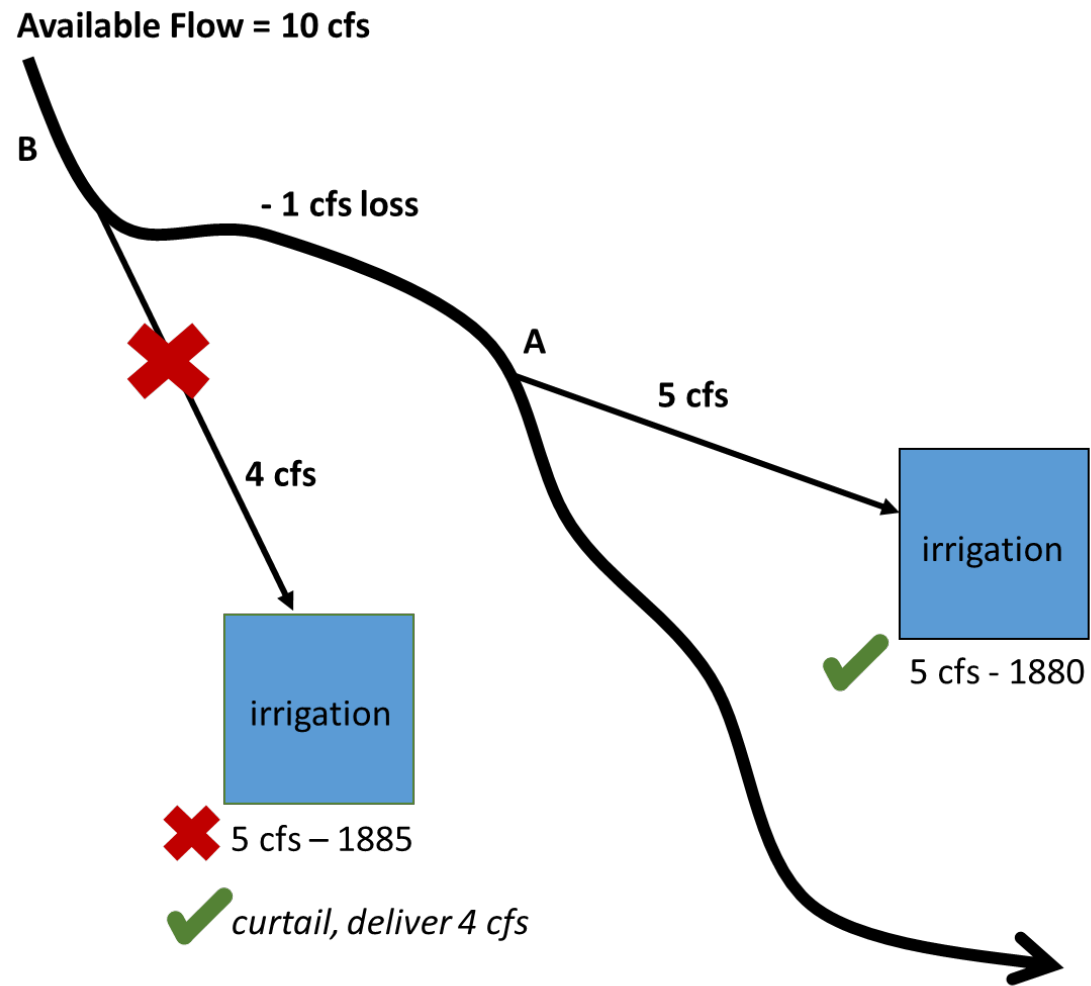


Figure 5. Schematic of an idealized system determining which water rights are in priority. In this example there is 10 cfs of natural flow with a reach that is known to have 1 cfs loss, making 9 cfs of available flow for delivery. In this case the 1885 right is curtailed by 1 cfs or until the 1880 right is fulfilled.

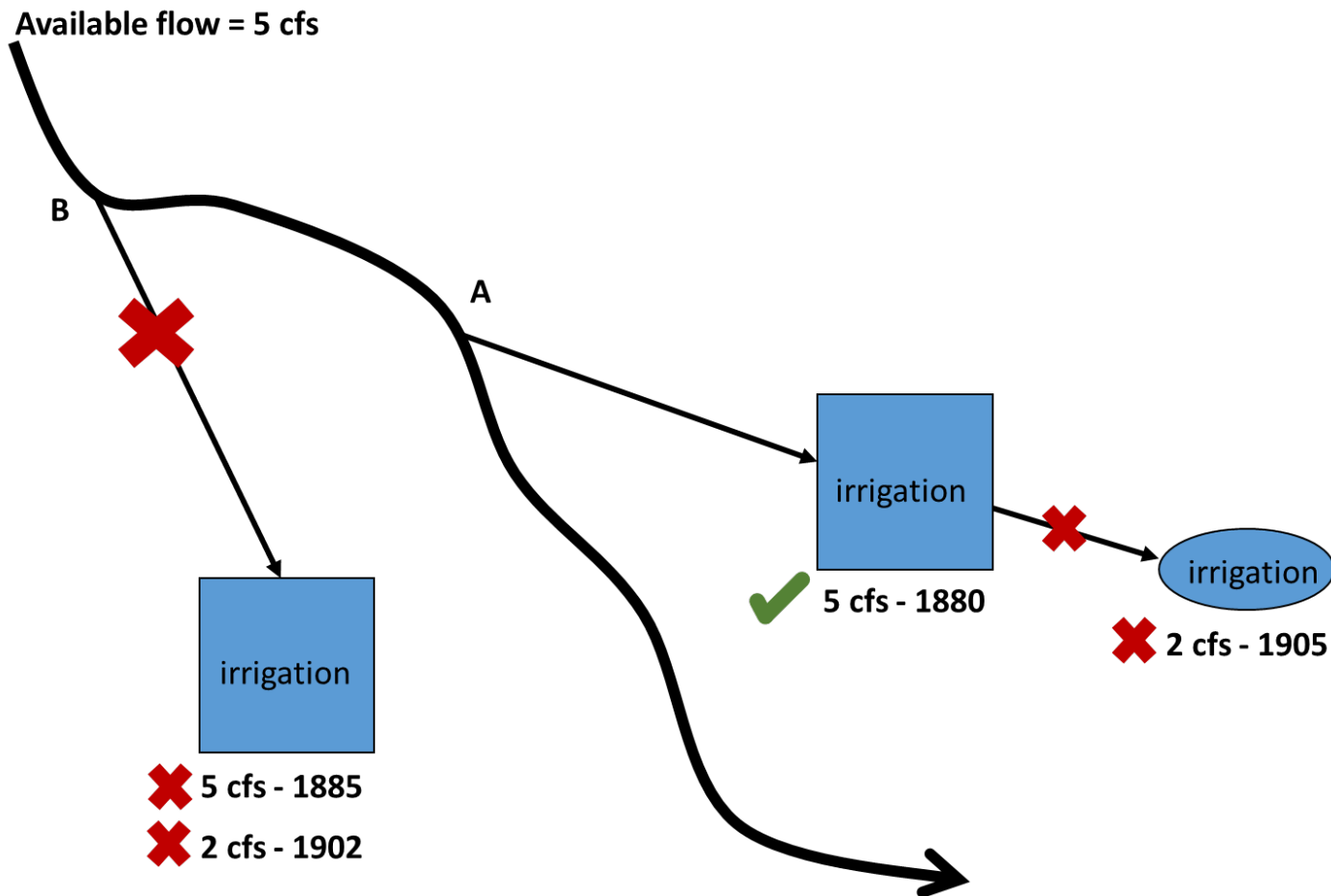


Figure 6. Schematic of an idealized system determining which water rights are in priority. In this example there is 5 cfs of natural flow available for delivery. In this case the 1885, 1902, and 1905 rights are curtailed until the 5 cfs 1880 right is fulfilled.

Delivery of Stored Water

Watermasters are also often responsible for distribution of storage water rights and are authorized to deliver the stored water to those entitled to its use. When the owners of a reservoir need to use a natural channel within a water district for the delivery of stored water, they need to provide the watermaster with: the date proposed to discharge the water, the volume in acre feet, and in cubic feet per second at the point of discharge, and the people and ditches entitled to its use (Idaho Code § 42-801).

Storage rights are generally filled according to priority. Where there are multiple reservoirs on one stream or river system, the senior storage rights should be satisfied ahead of junior storage rights, but it is often preferable to just allow the reservoirs to fill naturally and adjust later. Diversion of water to storage during the storage period should not interfere with earlier priority natural flow rights. Reservoirs are allowed to be filled to the maximum annual volume as specified in the water right(s) only once during an irrigation season unless otherwise determined by the Director.

For an instream reservoir, which impounds water on a natural channel, the person or organization using the reservoir is required to place a measuring device above the reservoir (Idaho Code § 42-702). The water right(s) that authorize the storage of water usually requires the installation of a measurement device below the reservoir either because of a measurement order or specific conditions on the right(s). This means that for reservoirs which impound water in the natural channel and delivery of the storage water is the responsibility of the watermaster, measurement may be required both upstream and downstream. These measurement requirements are necessary to account for reservoir inflows and outflows and distinguish storage water from the natural flow of a channel.

Futile Call Determination

If there is a water shortage and the watermaster determines that reducing upstream water rights junior to a priority date will not make water available to fill the downstream senior rights, this is deemed a futile effort. A futile call may be the result of seepage loss, evaporation, or other conditions beyond the control of the appropriators. The Department encourages watermasters to coordinate with all affected water users and seek consultation from the water district advisory committee and the Department when making a futile call determination.

It is important to record deliveries and document stream flows, as well as record observations about the beneficial use of water occurring under any senior water rights being called for and potentially affected by a futile call. Documentation of deliveries and stream flows will be helpful to justify any futile call determination. The Department provides the following general framework and guidance to watermasters when addressing a futile call:

1. Watermasters must make a good faith effort to deliver the senior rights (and curtail junior rights) before making any futile call determination. The determination of whether the flow received by the senior user is a useable amount can be difficult because of factors such as the variance in stream flow during the day, co-mingling of water from other sources for use by the holder of the senior right, ditch losses, or other factors.
2. When the watermaster determines a futile call, the available water can then be delivered in accordance with priority of the upstream junior rights. If the senior user does not agree that the call is futile, consult with the water district advisory committee prior to contacting the Department. Other than Water District 34, an Order or notice from the Department is not necessary in most cases to deliver water based on a futile call.
3. The junior water right user or users benefiting from any futile call have the responsibility to provide the necessary check structures, head gates and measuring devices for diversion of the water. Water diverted to junior priority water rights under a futile call must be beneficially used. Only decreed or licensed water rights or permits should be delivered.

4. Senior right holders cannot call for delivery of stockwater unless stockwater is listed as a beneficial use on the water right(s). Although a water right is not required to water livestock directly from a stream, a user cannot call for delivery of instream stock water unless a valid instream stockwater right exists that defines the priority date, flow rate and location of the instream livestock use. Likewise, junior priority right holders, once curtailed, cannot insist on the continued delivery of stock water even if livestock watering is listed as a beneficial use under their junior right(s).

For additional guidance regarding watermaster determination of a futile call please refer to Appendix C, C4.

Watermaster Delivery Instructions

When issues arise in a water district about the interpretation of how to properly distribute water, the Department may review and investigate the diversion(s), water right(s), or delivery method(s) in question. Department staff may develop written instructions to clarify duties or rules to assist the watermaster. If there are questions about how to properly administer water in your water district, please contact your local Distribution staff.

Lateral Water Users

When three (3) or more parties each have land with water rights from the same point of delivery which is conveyed to their respective premises for any distance through the same lateral(s) or distributing ditch(es) that are not operated and maintained by an irrigation district, canal company or other water delivery organization, such parties shall be members of and shall constitute a water users' association known as a Lateral Water Users' Association.

These associations meet annually, elect a lateral manager, chairman, vice-chairman and a secretary-treasurer. The authority of the lateral manager is set forth in Idaho Code §§ 42-907 and 42-910. Each lateral water user is entitled to one (1) vote in person, for each inch and a fractional

vote for each fraction of an inch of water which such water user is entitled to receive from such laterals, and a corporation shall vote by one (1) of its officers designated by it.

At the annual meeting the association can adopt rules and regulations for the management of the lateral or laterals or distributing ditch or ditches and the delivery of water therefrom as they deem best, and may, by majority vote, if it is in the best interests of the association, combine one (1) or more laterals and abandon laterals not in use, and do any and all things not in conflict with the laws of this state (Idaho Code § 42-1301).

Lateral Water Users should, before April first of each year select a manager to be responsible for distributing water in the lateral for the next season. If the users are unable to select a manager for said lateral, the watermaster of the water district shall, on the written demand of any one or more of the said parties, appoint a manager for said lateral. If lateral users are still not able to elect a manager, they can petition the Department to appoint a manager (Idaho Code § 42-1308). The watermaster has implied jurisdiction over the lateral manager. ***Before exercising any authority to appoint a lateral manager the watermaster should first contact the Department.***

Complaints and issues regarding delivery of water in laterals and canals are often a civil matter. The Department does not have jurisdiction over civil matters but to assist with understanding the governance, the statutes pertaining to canals and laterals are compiled and published by the Department. The current statutes regarding canals and laterals can be found on the Department website <https://idwr.idaho.gov/> > Water Rights > Water Rights Overview >Water Districts > Water District Operation Manual.

For more information and guidance on how to determine whether an issue is jurisdictional please refer to the Departmental Jurisdiction section beginning on Page 34.

Requirement to Control and Measure

Headgates and Controlling Works

All appropriators or users of any public waters of the state must install and maintain suitable and lockable headgates and controlling works at the point where water is diverted (Idaho Code § 42-701). The Department has authority to determine the suitability of headgates and controlling works. The watermaster or watermaster assistants appointed by the Department are the only people authorized to set, adjust, lock, or unlock these required devices.

The watermaster may lock headgates or controlling works to ensure that they remain shut or are properly set. Although it is not uncommon for the owners of these controlling works to adjust such devices in coordination with, or at the direction of the watermaster, the watermaster is authorized to assume exclusive control over headgates or controlling works in the water district. The watermaster may post a notice at any headgate or diversion structure which notifies the user that the diversion has been regulated and that any person who changes or tampers with a headgate may be charged with a misdemeanor (Idaho Code §§ 18-4303 through 18-4305, and Idaho Code § 42-802). These notices may be obtained from the Department, but you may print or copy the cards yourself using Appendix F.

The watermaster may refuse to deliver water if a water user neglects or refuses to construct or maintain headgates, controlling works, measuring devices, does not have an approved variance, or has not communicated a plan to begin and diligently pursue to completion the construction or installation of the required device or devices. Upon receiving ten (10) days' notice from the watermaster or Department then the watermaster may shut off and refuse to deliver at the point of diversion until the user remedies the defects which exist. The Department is ultimately responsible for enforcing the requirement to install and maintain headgates and controlling works pursuant to Idaho Code § 42-1701(B). For more information on watermaster refusal of delivery, please refer to page 35 -36 of this document.

Measurement Orders

Since the Director is authorized to adopt rules and regulations for the distribution of water as necessary to carry out the laws in accordance with priorities, the Department can implement a measuring device order. When a measurement order (Order) is issued by the Director, each appropriator is required to construct and install a measuring device at the authorized water right point of diversion.

Measurement requirements are established when the Director issues an Order to water district water users. This Order is a requirement to install and maintain functioning measuring devices on open channel and closed conduit diversions. The Order might specify that smaller water rights with specific uses, or even specific priority dates, may be excluded from the requirement to measure but are still administered and assessed by the watermaster. It is important for the watermaster to be familiar with the specifics of the Order for their water district.

Once an Order is issued users must follow and comply with the requirements by the date issued in the Order. The Department works directly with water districts to implement measurement requirements within the state. The implementation of a measurement order begins with developing a measurement method that is appropriate for each diversion whether it be closed conduit or open channel system. According to Idaho Code § 42-701, when required by the Director, appropriators are required to construct and maintain a measuring device at a practical location. Users who neglect or refuse to construct or maintain measuring devices may be shut off and refused the delivery of water. Failure to comply with the measurement order is an enforceable violation by the Department (Idaho Code § 42-701 (3)).

If there are compliance issues with the installation of measuring devices and/or controlling works, the watermaster should contact the Distribution Section who will work with the watermaster to improve compliance with Idaho law, or any Department issued Order.

Annual Reporting

Refer to the Water District Operation Manual Part II: Administrative Processes pages 12-17 for more details on all the required documents and reports that water district officials must prepare and submit each year to the Department.

This section details the requirements for a complete watermaster report, how to collect and record pertinent information, and how to prepare and submit the report. Templates for watermaster annual documents can be found in Appendix E as well as the Department website: <https://idwr.idaho.gov/> > Forms > Watermaster and Water District.

Reports of Watermasters

1. Prepare the report
 - Before the expiration of the appointment for the current year
2. Include in the report
 - Total volume of water delivered
 - Volume delivered to each water user
 - Total expense of delivery
 - Apportionment of expenses among users
 - All debits and credits to be carried over to the following year
 - Number of days the watermaster and watermaster assistants have worked
 - Records of stream flow the watermaster used or made
 - Other information that might be necessary, as requested by the Director
3. Submit the report
 - Send via email or physical mail to the closest regional office. You can also electronically file any .pdf document by sending a to file@idwr.idaho.gov.
 - Regional staff will file and post the documents to the specific district on the Department website: <https://idwr.idaho.gov/> > Water Rights > Water District > Active Districts > District Name > Documents.

Diversions Inventory

When making inventory of diversions in a water district it is important to collect the basic information. Physical location, diversion name, type of diversion, authorized water rights and diversion rate, and measurement device type and condition of installation are the most important details to collect. There are many ways to record and communicate this information. This topic is discussed in more detail in Part IV: Technical Field Guide – Measurement and Data Collection.

Metal Tag

Each point of diversion that is subject to measurement and reporting requirements should have a metal identification tag provided by the Department. The metal tag should be attached to the most permanent structure that can be found at or near the point of diversion, such as a utility pole, electric panel support pole, exposed well casing, or a mainline pipe near a well head. Make sure to record and report the metal tag number for the diversion in the annual report submitted to the Department.

Global Positioning System (GPS)

The data standard for Idaho in which all GPS coordinates should be collected is North American Datum 1983 (NAD83). The projection Idaho Transverse Mercator (IDTM83) uses is NAD83. It is important to know which datum your GPS unit is set to as most are set to a default WGS84 datum. This can affect the way that spatial information appears on maps. Locations and position or location units are in degrees decimal minutes (dd°mm.mmm) or decimal degrees (dd°ddddddd).

Departmental Jurisdiction

Generally, the statutes that govern the jurisdiction of the Department are contained within Title 42 Irrigation and Drainage – Water Rights and Reclamation (Title 42, Idaho Code.) and the Idaho Administrative Code 37 (IDAPA 37.01.01-37.03.12). Specifically, Department jurisdiction is defined in Idaho Code § 42-351, which provides that the Director may commence and pursue enforcement actions pursuant to Idaho Code § 42-1701B, or may seek injunctive relief in connection with unauthorized diversion or non-compliance with the terms of existing water rights. Other issues not contained within these statutes or administrative rules are considered civil and not within the jurisdiction of the Department.

The following are examples of non-jurisdictional issues:

- Trespass, rights-of-way, and easement issues
- Conveyance issues down ditches, laterals, or pipelines that are beyond the water right point of diversion such as blocked ditches, poorly maintained ditches, change of ditches, flooding, etc.
- Property damage due to irrigation/water use management practices
- Irrigation District or Canal/Ditch Company issues including delivery disputes, inadequate delivery of ditch shares, ditch interference, rotation problems, etc.

The Department takes consistent, fair, and assertive enforcement actions when managing non-compliant activities pursuant to Idaho Code § 42-1701B. Enforcement actions may begin with a complaint, a routine compliance check, or an inspection. The Department's role is to investigate activities, educate individuals on necessary authorizations, issue formal administrative actions as necessary, and work with individuals to achieve legal compliance. Please refer to Appendix C, C3 regarding enforcement policies for use, storage, or diversion of water without a valid water right or required authorization.

Complaints and Violations

As a watermaster, you may receive a variety of complaints from water users or want to make a complaint against water users. For a watermaster, it may be hard at first to separate those complaints and issues that you can deal with and those you cannot.

Complaints, compliance issues, and violations that a watermaster can deal with may look like:

- Excess use of water beyond limits of water right
- Use of water without a valid water right
- Diversion or use of water in a location that does not match the authorized water right
- No headgate or controlling works
- Headgate that is not lockable or controllable
- Changing of headgate settings without watermaster approval
- Cutting of locks on headgate settings
- Lack of power to a flowmeter with continued pumping and diversion of water
- No measurement device (as defined in Measurement Order)
- Unauthorized stream channel alteration

Additional guidance that may help with determining whether a complaint regarding ponds or domestic and stockwater uses is valid in Appendix C, C5 and C6.

Watermaster Refusal of Delivery

The watermaster is authorized to close the headgate of a water user for a variety of reasons; but there are two main reasons to know about. The most common occurrence, which is seasonal, is the curtailment of junior water rights due to a shortage. The other reason for a watermaster to refuse delivery is illegal use or an enforcement issue.

This authority is applicable after the watermaster has been appointed by the Director of the Department. When a water user is diverting without authorization or when a party is diverting water without a right, the watermaster should immediately close the headgate. Unauthorized

uses associated with the place of use, point of diversion and/or wasting of water are better handled by first consulting the Department.

Unauthorized changing of a headgate is a misdemeanor. Under Idaho Code § 18-4309, the watermaster has the authority to file a complaint against anyone tampering with a headgate. In cases where the watermaster has set a headgate and is concerned with potential tampering, the watermaster should post a notice on the headgate warning that the headgate has been regulated and that tampering with the headgate is a misdemeanor. Notices in the form of bright orange postcards are available from the Department.

If annual assessments are not paid, the watermaster can refuse delivery of water only if such a provision is adopted at the annual water users meeting in the resolutions. Districts may also seek civil action to collect delinquent payments. The watermaster does not have the authority to use force to make a water user comply. Legal means are available to obtain compliance.

Entry onto Private Land

The Department manages various programs that require entry upon private land to conduct inspections, make investigations, collect data, and administer the delivery of water. Individuals (collectively referred to as staff) that are authorized by statute to make *reasonable* entry upon any land in the state for the purposes noted above are:

- the Director and/or employees of the Department;
- any watermaster and any watermaster assistants appointed by the Department pursuant to Title 42, Chapter 6, Idaho Code; and
- any hydrographer or any hydrographer's assistant appointed by the Department pursuant to Title 42, Chapter 7, Idaho Code.

For more details and guidance regarding entry upon private land please refer to Appendix C, C1.

Authority Regarding Control of Beavers

Watermasters are not authorized or empowered to kill beavers, physically remove them, or destroy beaver dams. The removal of beavers and beaver dams is governed by a process specifically set out by Idaho Code § 36-1107. Idaho Department of Fish and Game (IDFG) employees have immunity from liability for damage claims which may arise from the removal or destruction of dams or houses of fur bearing animals. Watermasters appointed by the Department and Department staff do not have this immunity protection and should not physically undertake removal of fur bearing animals, their dams, or houses. Please refer to Appendix C, C2 for details and guidance from the Department and IDFG on how to handle beaver complaints involving water rights.