

Water - Montana's Treasure

An analysis of water management in Montana

A Report to the 61st Legislature
September 2008

House Bill 304 Study
Water Policy Interim Committee

Water Policy Interim Committee
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This report is a summary of the work of the Water Policy Interim Committee. Volumes of information were presented to and reviewed by committee members. Some of that information is referenced here or included in the appendixes. All of the information, including written minutes and, in some cases, audio minutes, is available on the WPIC web site:
<http://leg.mt.gov/water>

Table of Contents

Introduction		Page: 1
Findings and Recommendations	To Be Determined	Page:
Montana Water Management Framework		Page: 3
Montana Water Law Basics		Page: 8
Legal Issues in Closed Basins		Page: 10
Water Management: Other States		Page: 15
New Law; New Terms		Page: 21
Water Supply & Sewage Disposal		Page: 24
Water Right Enforcement		Page: 26
Water Marketing & Reallocation		Page: 30
Proposed Legislation	To Be Determined	Page:

Appendices (To save paper, links to appendices are attached. Hard copies will be included in the final report).

Appendix A [WPIC Study Tasks and Responses](#)

Appendix B [House Bill 831 from the 2007 Legislature](#)

<http://data.opi.mt.gov/bills/2007/billhtml/HB0831.htm>

Appendix C [Flow chart outlining House Bill 831 permitting process](#)

http://leg.mt.gov/content/Committees/Interim/2007_2008/water_policy/staffmemos/831chart.pdf

Appendix D [Who has jurisdiction over Montana's water? Enforcement options](#)

http://leg.mt.gov/content/Committees/Interim/2007_2008/water_policy/staffmemos/watercourtguidebook.pdf

Appendix E [Costs and Uses of Community Wells vs. Single Family Wells, DEQ](#)

http://leg.mt.gov/content/Committees/Interim/2007_2008/water_policy/staffmemos/communityvssingle.pdf

Appendix F [Update on Evaluations Significance of Exempt Wells, Nicklin](#)

http://leg.mt.gov/content/Committees/Interim/2007_2008/water_policy/meetings/minutes/wpic01152008_ex08.pdf

Appendix G [Effects of Exempt Wells on Existing Water Rights, DNRC](#)

http://leg.mt.gov/content/Committees/Interim/2007_2008/water_policy/staffmemos/exemptwelleffects.pdf

Introduction

It is easy to lend mythical status to Montana's waters. From the Bitterroot to the Yellowstone and all the water in between, Montana's rivers, creeks, lakes and man-made reservoirs play a significant role in the state's history. We are as connected to the water that cuts between our mountains and through our prairies as we are to the land itself.

Because of that relationship, it is difficult to overstate the importance of water to the Treasure State. We depend on water for irrigating crops, quenching the thirst of residents and livestock, enabling industry, generating power, preserving fish and wildlife habitat, and providing a myriad of recreational opportunities.

Water - mostly its quantity and quality - is a biennial topic of debate among legislators. But it has been more than a decade since the Legislature convened an interim committee to specifically examine water policy.

The creation of the Water Policy Interim Committee was the result of several things coming to a head between 2005 and 2007.

In 2005, the Legislature approved a measure to rejuvenate water rights adjudication - the judicial process of decreeing the quantity and priority date of existing water rights in a basin.¹ That historic usage is vital for Montana to defend its use in the face of demands from other states and Canada. Final decrees also are key to settling disputes between Montana water users.

In 2006, the state Supreme Court ruled that the use of groundwater wells in the Smith River Basin was affecting senior water rights holders on the river, and the system of permitting used by the state failed to recognize the connection of groundwater and surface water. To address that situation, the 2007 Legislature passed House Bill 831 regulating groundwater appropriations in closed basins, those areas deemed off limits to some new water use permits because of overappropriation. In general, the new law requires mitigation for a new use of ground water that adversely affects a senior water right holder.

These circumstances set the stage for the passage of House Bill 304, which created the Water Policy Interim Committee. The legislation mandated the committee study a wide range of water issues in order to develop a clear policy direction and necessary legislation to guide Montana's water policy that ensures fair and reasonable use of Montana's water resources as demands on water increase while supplies remain the same or decrease.

¹ As passed in 2005, HB 22 imposed a fee on every water right in the state. Water right claims as well as provisional permits and certificates granted in the new appropriations process were required to pay the fee until the statute terminated in 2015. However, the 2007 Legislature repealed the fee provisions of HB22 and transferred \$25 million in general fund revenue to the water adjudication account to replace fee revenue and keep the process on the 2015 timeline.

The tasks assigned to the committee and a brief summary of the WPIC responses are included in **Appendix A.**

The committee met 10 times over the interim and ventured into closed basins to hear comments from some of the Montanans most affected by water management policies. In addition to Helena meetings, the WPIC held meetings in Dillon, Bozeman, Thompson Falls, Choteau, and Hamilton.

Dillon

Montana water management framework

Similar to other western states, Montana water law is based on the prior appropriation doctrine. The prior appropriation doctrine, which means first in time, first in right, evolved as western lands were developed through mining and agriculture. The eastern United States is based on a riparian doctrine which provides that property owners along the banks of a surface water source have the right to use the water that runs through or is pooled on their property. Those that aren't located along a surface water body are not entitled to water.

The riparian doctrine didn't work well in the arid western United States and the prior appropriation doctrine emerged as the predominant method of appropriating water. Settlers needed access to water for livestock, farming, and mining operations which were often not located on a surface water body and they moved the water to where they needed it. Sometimes the movement of water was extensive and it is probably safe to say that none was more extensive than the federal irrigation projects.

In Montana, a water user had only to put the water to beneficial use to have a water right. There was no requirement that the use of the water be filed. However, a water user could file the water use in the county. Some water users filed and some water users did not. Those that put water to beneficial use first have the most "senior" water rights and are therefore entitled to their share of the water first. Water is shared among users on a water source based on priority date or "first in time, first in right".

The more recent or "junior" a water right the less likely the water user will receive the water in times of low or limited water supplies. A junior water right holder receives their water only if all of the senior water rights have been fulfilled.

The Montana Constitution

In 1972, the Constitutional Convention recognized the importance of Montana's water to the future of the state and its people. The Constitution made it clear that all waters of the state are the property of the state for the use of its people. Article IX, section 3 of the Montana Constitution provides:

"Section 3. Water rights. (1) All existing rights to the use of any waters for any useful or beneficial purpose are hereby recognized and confirmed.

(2) The use of all water that is now or may hereafter be appropriated for sale, rent, distribution, or other beneficial use, the right of way over the lands of others for all ditches, drains, flumes, canals, and aqueducts necessarily used in connection therewith, and the sites for reservoirs necessary for collecting and storing water shall be held to be a public use.

(3) All surface, underground, flood, and atmospheric waters within the boundaries of the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided by law.

(4) The legislature shall provide for the administration, control, and regulation of water rights and shall establish a system of centralized records, in addition to the present system of local records."

Because not all water use was required to be filed with the state or with the county there was no way to quantify the water rights that are guaranteed through subsection (1) of Article IX, section 3.

Policy makers knew that these rights were recognized and confirmed, they just didn't know who had the right to use the water, where the water was put to beneficial use, how much water was used, when the water was used, and other important elements of a water right. The Legislature recognized this problem and initiated a statewide water adjudication to quantify all existing water rights in the state of Montana that were in effect prior to the passage of the new Constitution.²

Subsection (4) of Article IX, section 3 required the legislature to provide for the administration, control, and regulation of water rights and to establish a system of centralized records, in addition to the present system of local records.

The Department of Natural Resources and Conservation

Water in Montana is managed by the Department of Natural Resources and Conservation (DNRC). The water rights process in the Department is managed by the water rights bureau and is split into two program areas - the new appropriations program and the water adjudication program.

The new appropriations program addresses applications for state based water rights or "new" uses of water (after the 1972 Constitution) and "changes in appropriation rights" which involve changing an element of an existing water right. The adjudication program is responsible for examining claims that were filed as a part of the state wide water adjudication process, providing assistance to the Montana Water Court, maintaining the centralized water right records, and updating water right ownership records.

The DNRC also has other water management responsibilities. The other water bureaus that are within the Water Resources Division are the water management, water operations, and water projects bureaus.

The Water Management Bureau develops and analyzes policies on statewide water resource issues, represents and protects Montana's water interests in regional and international river basins, and assists local watershed groups and water users to solve water management problems by

² A more detailed description of the statewide adjudication and ancillary issues can be found in the Legislative Environmental Policy Office Publication "Montana's Water: Where is it? Who can use it? Who decides?" (2004) (<http://leg.mt.gov/css/publications/environmental/default.asp>).

providing technical support to other DNRC bureaus, the Reserved Water Rights Compact Commission, and other governmental entities.

The Water Operations Bureau administers the following programs:

- Dam Safety -- Ensures that the approximately 90 dams statewide that have the potential to cause loss of life downstream if they fail, are properly constructed, maintained, and operated.
- Floodplain Management -- Assists the 110 locally administered floodplain management programs throughout Montana in reducing the loss of life and structural property through wise floodplain development, and in reducing the loss of functional floodplains by reducing the amount of erosion of stream banks due to unwise floodplain development throughout Montana.
- Water Measurement Program -- Provides technical information and/or water measurement requirements regarding diversion from streams where chronic dewatering has caused water use disputes or severe dewatering impacts.
- Board of Water Well Contractors -- BWWC is responsible for licensing water well drillers and contractors and enforcing water well construction standards.

The Water Projects Bureau administers the operation and maintenance of state-owned water projects. These include 22 dams, with approximately 250 miles of irrigation canals and one 10 MW hydropower facility. The bureau is also responsible for dam safety of 10 dams owned by the Department of Fish, Wildlife, and Parks. Most of the DNRC projects are operated by local water users associations that use the water for irrigation. Many of the projects provide secondary recreational benefits including camping, fishing and boating.

In addition to the DNRC there are two other entities that are intimately involved with water rights and water management in the state of Montana.

The Montana Water Court

The Montana Water Court was created in 1979 and is responsible for hearing all cases regarding water use in Montana. The Chief Water Judge serves a four year term and is appointed by the Chief Justice of the Supreme Court. In addition to hearing cases related to water use, the Water Court is responsible for issuing decrees in the statewide water adjudication. The Water Court has adopted both procedural rules and claims examination rules that must be followed by DNRC when the department is examining claims filed pursuant to a Montana Supreme Court order regarding the statewide water adjudication.

There are four water divisions in Montana that were created by section 3-7-101, MCA to adjudicate existing water rights and to conduct hearings in cases certified under section 85-2-309, MCA. The water divisions boundaries are established as defined in section 3-7-102, MCA. Each water division is presided over by a water judge. These water judges are district court judges who are also designated as water judges. Because of extremely large work loads faced by district court judges most certified hearings and other water related controversies are heard by the Water Court rather than by the water division water judges. However, based on

the accelerated pace of the statewide adjudication process there is a possibility that this practice may not be able to continue because of the Water Court workload related to decree issuance and addressing all issue remarks prior to issuance of a final decree.

The Reserved Water Rights Compact Commission

The Reserved Water Rights Compact Commission was created in 1979 by the same legislation that created the Water Court. At the time, the federal government was involved in litigation on behalf of the seven reservations for their federal reserved water rights. The Commission was created in response to uncertainty about how, and in what court, the adjudication would proceed.

The Commission is a division of DNRC and is administratively attached to the department for budget purposes. The Commission's only mandate is to negotiate an equitable apportionment and division of the waters of the state between the tribes that are claiming those waters (as well as nontribal federal users) and nontribal state water users. The Commission is not separate from the adjudication process but is integral to it, and the outcome of the entire statewide adjudication process is critical to the work of the Commission.

Montana is the only state with a Compact Commission. Some other western states are involved in negotiation with the tribes and the federal government through their attorneys general or natural resources departments. Montana's process has been successful because negotiations are conducted in the context of litigation--if a tribe or federal entity chooses not to negotiate, then its reserved water rights will be litigated by the Attorney General, on behalf of the state, in Montana's Water Court.

The procedures the Commission follows are clearly spelled out in statute. The first step is to negotiate an initial settlement between the three involved parties--the state, the claimant of the reserved water right, and, if the claimant is an Indian tribe, the federal government as trustee for the tribe. Once the initial settlement is reached, and it can take many years, the compact is then ratified by the Legislature and becomes a part of the Montana statutes. Water compacts involving tribal settlements then go to Congress because of necessary authorizations and appropriations for projects or improvements. The final step in the process occurs when the compact is filed with the Water Court and is published as a decree in that water basin. At that time, the 6-month objection period begins.

The Water Court has statutory authority to approve or disapprove a compact but not to amend one, and approval is based on a consent decree standard. A consent decree standard is one where all parties consent to the decree and the decree conforms to applicable law. To date, the Legislature has approved five tribal and several federal water compacts. The Northern Cheyenne and the Rocky Boy's Compacts have gone through the entire process, and the Fort Peck Compact is in front of Congress because of concerns of downstream states over water marketing provisions, although other provisions are operational and have been approved by the Interior and Justice Departments. The Crow and Fort Belknap Compacts have been approved by the Legislature but are still waiting for federal approval and necessary legislation. The necessary federal legislation appears to be moving forward but the outcome is unknown at this time. The Blackfeet Compact,

which is still under negotiation, will be of critical importance because of the St. Mary Project located at the headwaters of the Milk River. The water moving through the St. Mary Project is so crucial to the entire Milk River Basin that there is language included in the Fort Belknap Compact that if the St. Mary Project is not maintained to current standards, then the entire Fort Belknap Compact is void. The Confederated Salish/Kootenai Compact is also still under negotiation and is of a high priority because of the permitting freeze in place on the Flathead Reservation.

The Tribes brought water rights cases before the Montana Supreme Court and won, and the Supreme Court placed a moratorium on new state water rights permits until the water rights are quantified.

A federal reserved water right is created when the federal government reserves land for an Indian tribe, thereby impliedly reserving enough water to fulfill the purposes of the reservation. The federal reserved water rights doctrine was decided in 1908, but it wasn't until the 1960s that questions arose as to what that means in terms of quantity. A federal reserved water right does not lapse from lack of utilization.

Montana Water Law Basics

In Montana, a person must have a water right prior to appropriating water and putting the water to beneficial use, unless the use falls under exemptions provided for in 85-2-306, MCA:

- A permit is not required before constructing an impoundment or pit and appropriating water for use by livestock if:
 - the maximum capacity of the impoundment or pit is less than 15 acre-feet;
 - the appropriation is less than 30 acre-feet a year;
 - the appropriation is from a source other than a perennial flowing stream; and
 - the impoundment or pit is to be constructed on and will be accessible to a parcel of land that is owned or under the control of the applicant and that is 40 acres or larger.
- Outside the boundaries of a controlled ground water area, a permit is not required before appropriating ground water by means of a well or developed spring with a maximum appropriation of 35 gallons a minute or less, not to exceed 10 acre-feet a year, except that a combined appropriation from the same source from two or more wells or developed springs exceeding this limitation requires a permit. (notice of completion must be filed with DNRC)
- An appropriator of ground water by means of a well or developed spring first put to beneficial use between January 1, 1962, and July 1, 1973, who did not file a notice of completion, as required by laws in force prior to April 14, 1981, with the county clerk and recorder is now required to file a notice of completion.

Water rights are required for both surface water appropriations and ground water appropriations. Montana law does not provide for conjunctive management or enforcement of surface water and ground water rights.

However, after the decision in *Montana Trout Unlimited v. DNRC*, 2006 MT 72 that was issued in 2006 and enactment of House Bill 831 in the 2007 session the connectivity between surface water and ground water in closed basins must be considered and plays a role in determining whether or not an application for a new ground water permit can be approved.

Closed basins are closed to certain new water appropriations. Five of the closed basins were closed by the Legislature in statute. There are also multiple subbasins and basins that have been closed administratively pursuant to 85-2-319, MCA, which can be found in the Administrative Rules of Montana under 36.12.1010 ARM - 36.12.1021 ARM.

With the passage of House Bill 831, new ground water appropriations can be made in closed basins if the applicant for the water right complies with more stringent application requirements that include a hydrogeologic assessment, and, if necessary, a mitigation or aquifer recharge plan, and ensures that a "senior" or prior surface water appropriator will not be adversely affected by the new water use.

Applying for a new ground water permit in a closed basin is complex due in part to new statutes, case law, and pending litigation on multiple issues. In general, it is more difficult to obtain an appropriation in a closed basin than in a non-closed basin.

House Bill 831 is included in **Appendix B**. A flow chart outlining the closed basin groundwater appropriation process is included in **Appendix C**.



Legal Issues in Closed Basins

Two court cases involving exempt uses in closed basins contributed to the changes passed in House Bill 831 by the 2007 Legislature.

Closed basins in Montana date back to the administration and statewide adjudication of water rights for determining the priority of post-1973 claims to water. It became clear that there were significantly more adjudicated and legitimate nonadjudicated claims to water than there was available water. The Legislature responded to this fact by enacting a moratorium on new applications in the overappropriated basins.

The Legislature enacted basin closures for the Teton River basin, sections 85-2-329 and 85-2-330, MCA, the Upper Clark Fork River basin, sections 85-2-335 through 85-2-338, MCA, the Jefferson River basin and Madison River basin, sections 85-2-340 and 85-2-341, MCA, and the Upper Missouri River basin, sections 85-2-342 and 85-2-343, MCA, and a temporary subbasin closure for Bitterroot River subbasins, section 85-2-344, MCA. In addition, section 85-2-319, MCA, provides that in a highly appropriated basin or subbasin, the Department of Natural Resources and Conservation (DNRC) may by rule reject permit applications or modify or condition permits already issued.

With certain statutory exceptions, each basin closure statute provides that the DNRC may not process or grant an application for a permit to appropriate water within the closed basin. New ground water applications represent one of the statutory exceptions. The Legislature recognized, however, that some ground water bears a close relationship with surface water and that allowing unrestricted appropriations of ground water would defeat the purpose of the basin closure laws.

Prior to the passage of HB831, each basin closure law, with the exception of the Upper Clark Fork River basin, defined ground water in a way that forbid the processing of new applications for ground water that is “immediately or directly connected” to the basin’s surface water.³

In the Upper Clark Fork River basin, an application for a groundwater permit had to be accompanied by a report prepared by a professional engineer or hydrologist addressing the hydrologic connection between the source of the ground water and surface water. The DNRC could not issue a permit to appropriate ground water in the Upper Clark Fork River basin unless the applicant proved by a preponderance of evidence, in addition to the criteria of section 85-2-311, MCA, that the source of the ground water was not a part of or substantially or directly connected to surface water.

The DNRC could issue a permit to appropriate ground water if the application included an augmentation plan and if the applicant proved by a preponderance of evidence, in addition to

³ In HB831, see revisions to sections 85-2-329(2), 85-2-340(2), and 85-2-342(2), MCA.

the criteria of section 85-2-311, MCA, that the augmentation plan provided sufficient augmentation water in amount, time, and location to replace depletions to senior water rights.

The legislative history for the basin closure statutes provides little insight with regard to the exceptions to the basin closure statutes and indicates that most of the concerns giving rise to the bills related to surface water.

The connection of ground water and surface water

A dispute arose over applications for new ground water permits in the Smith River drainage, part of the Upper Missouri River closed basin. The DNRC prepared a supplemental environmental assessment for the Smith River basin in February of 2003 and noted that the Smith River and its principal tributaries are hydrologically connected to ground water.

The supplemental environmental assessment further noted two ways that ground water pumping affects surface stream flows.

First, pumping may intercept ground water that otherwise would have entered the stream, thereby causing a reduction in surface flows. This phenomenon is called the prestream capture of tributary ground water.

Second, ground water pumping may pull surface water from the stream toward the well. The DNRC refers to this pulling as induced infiltration. The DNRC's hydrogeologist reported that a stream takes longer to recover from prestream capture of its tributary ground water than from depletion through induced infiltration.

Under the basin closure law, the DNRC had to determine whether an application for ground water included ground water that is "immediately or directly connected to surface water" for the application to qualify under the ground water exception. The Legislature did not define "immediately or directly connected to surface water" in any of the basin closure laws.

The DNRC interpreted the language to mean that a ground water well could not pull surface water directly from a stream or other source of surface water. This interpretation made no mention of the potential influence of the prestream capture of tributary ground water on surface flow.

The DNRC processed new applications before making a threshold determination that the applications fell within an exception to the Upper Missouri River basin closure law. Trout Unlimited and other interested parties initiated suit against the DNRC.

During the litigation, DNRC adopted ARM 36.12.101(33), defining "immediately or directly connected to surface water" to mean ground water "which, when pumped at the flow rate requested in the application and during the proposed period of diversion, induces surface water infiltration." The definition again ignored water diverted from streams through prestream capture of tributary ground water.

In *Montana Trout Unlimited v. Montana Department of Natural Resources and Conservation*, the Montana Supreme Court stated that the Upper Missouri River basin closure law serves, in part, to protect senior water rights holders in the Upper Missouri River basin.⁴

The Court noted that the DNRC's interpretation of "immediately or directly" indicated that the DNRC considered ground water to have an immediate or direct connection to surface water if ground water "pumped at the flow rate requested in the application and during the proposed period of diversion, induces surface water infiltration." This formal interpretation embodied in ARM 36.12.101(33) comported with the informal interpretation embodied in a letter from former Director Bud Clinch to the Meagher County Conservation District Administrator.

The DNRC's interpretation of "immediately or directly connected" failed to account for impacts to surface flow caused by the prestream capture of tributary ground water.

The Court noted that the DNRC's own hydrogeologist recognized the impact to surface flows caused by the prestream capture of tributary ground water. The Court quoted the DNRC's hydrogeologist as stating that ground water pumping produces two separate components that contribute to total streamflow depletion. The first component, ground water capture, is the interception of ground water flow tributary to the stream that ultimately reduces the hydraulic gradient near the stream and baseflow to the stream. Streamflow depletion from ground water capture usually continues after pumping ends and may require long periods of time to recover.

The second component, induced streambed infiltration, usually has less impact on streamflow depletion, and its effects dissipate soon after pumping ends.

The Court determined that the DNRC had failed to account for the direct connection between surface flows and the prestream capture of tributary ground water in its implementation of the Upper Missouri River basin closure law despite possessing a wealth of information supporting the connection.

The Court stated that the DNRC's interpretation of the Upper Missouri River basin closure law conflicted with the statute and did not provide sufficient protection to reasonably effectuate its purpose--the protection of senior water rights holders and surface flows along the Smith River basin.

⁴ 2006 MT 72, 331 Mont. 483, 133 P.3d 224 (2006). Under 85-2-308(3), MCA, individuals whose property, water rights, or interests are adversely affected by the proposed application may object. The restriction on processing applications saves appropriators the time and expense of having to defend their water rights every time a new applicant seeks to appropriate water in the basin. The Legislature provided interested parties with greater protection than the right to file objections and proceed to contested case hearings by insulating them from the burden and expense of the objection process.

The Municipal Exemption

House Bill 831 also addressed another issue that came to light in a court case: the definition of what constituted a municipal use. In addition to the ground water exception in the Upper Missouri River basin closure law there was an exception for a permit to appropriate water for domestic, municipal, or stock use.

In 2004, the DNRC proposed to define "municipal use" as "uses associated with a water system for municipalities and incorporated or unincorporated towns and cities".

During the rulemaking process, the DNRC then amended the "municipal use" definition from "uses associated with a water system for municipalities and incorporated or unincorporated towns and cities" to "water appropriated by and provided for those in and around a municipality or an unincorporated town". The agency later decided to eliminate the definition altogether.

At issue was whether or not the Legislature intended for private developers to appropriate water under the exemption.

According to the DNRC, it had issued numerous permits since 1973 with municipal use to entities that were not a town or city. The DNRC cited Mountain Water Company, a public utility that supplies water to the town of Missoula, as an example. The DNRC stated that the Legislature would have been aware of those water rights when it enacted the basin closure laws in 1991 and 1993. Therefore, DNRC believed that it was prudent to revert to the historical practice rather than enforce a rule that might be illegal.

The DNRC stated that it would propose a new rule definition, with the opportunity for public comment, after further considering legislative intent, or that the DNRC might seek clarification directly from the Legislature. The DNRC also stated that until a final determination was promulgated, the DNRC would continue to operate under its historic practice, accepting applications for municipal use from entities who are providing water for uses that are similar to a municipality such as commercial, fire protection, watering parks, and household uses.

In *Lohmeier v. State of Montana, Department of Natural Resources and Conservation*, the plaintiffs sought to have the decision to eliminate the definition of "municipal use" from rules declared invalid.⁵

Judge Dorothy McCarter stated that application of liberal definitions to any of the enumerated exceptions to the basin closure laws would clearly undermine the purpose of the laws, which is to protect the existing water rights.

Expanding the definition of "municipal use" to permit private developers in the Upper Missouri River basin to appropriate water for new subdivisions would most likely take a significant amount

⁵ Cause No. ADV-2006-454, First Judicial District (March 2007).

of water away from the already overappropriated water source, resulting in not enough water for the owners of the existing water. Judge McCarter concluded that the Legislature intended to preserve the existing water rights by closing the Upper Missouri River basin to new appropriations. She also concluded that the exceptions to the closure must be interpreted narrowly to comply with the legislative intent.

The striking of the narrowly defined term "municipal use" in order to enable the DNRC to apply a more liberal definition contravened the legislative intent and placed the existing water rights of the plaintiffs in jeopardy. The plaintiffs were granted summary judgment, which had the effect of reinstating the definition of "municipal use."⁶

This issue was addressed in HB 831 by allowing the appropriation of surface water in closed basins by or for a municipality, which is defined as an incorporated city or town organized and incorporated according to state law. However, the new law only applies to applications for an appropriation right in a closed basin filed on or after May 3, 2007. Applications for permits filed prior to that date will still be governed by the prior version of the closed basin statutes.

⁶ The DNRC has appealed Lohmeier to the Montana Supreme Court.

Water Management: Other States

As the Montana Legislature considers water law in Montana - including water management, water availability, and water rights - it is appropriate to consider the approaches taken by other western states that are subject to the prior appropriation doctrine. The states analyzed were chosen because of the various factors affecting each of them and their similarities and differences with regard to water management.

Arizona

The Arizona Department of Water Resources (ADWR) is the state agency that manages Arizona's water supply. Arizona has historically managed ground water resources and surface water resources separately. This practice is continued today. One critical piece of Arizona's surface water management is the state's allotment of Colorado River water.

In 2006 the state negotiated a preliminary agreement amongst the seven Colorado River basin states regarding modification of the operational framework for the Colorado River including preferred alternatives for conjunctive operation of Lakes Powell and Mead and shortage criteria for the lower division states and Mexico. Arizona's surface water availability and management is directly related to how the Colorado River is managed and activities of other states and countries that have a right to a portion of Colorado River water. One of Arizona's water management goals is to put all of their Colorado River allotment to use -- in some areas this includes storing portions of this water in subsurface aquifers through aquifer storage and recovery projects.

Arizona requires each new subdivision to show that there is at least a 100 year supply of water available prior to the subdivision being approved.

In the early 1980's the state legislature recognized that groundwater resources were diminishing and created the 1980 Groundwater Management Code. The Legislature enacted the Code to relieve the problem of groundwater overdraft or "mining" in parts of Arizona that were designated Active Management Areas or AMA's. The three primary goals of the Code are:

- to control the severe overdraft occurring in many parts of the state;
- to provide a means to allocate the state's limited groundwater resources to most effectively meet the changing needs of the state; and
- to offset Arizona's use of groundwater through renewable water supply development.

The level of management and regulation related to water use varies based on the area of the state and its designation. The least prohibitive and most broad level is the statewide management provisions which include well drilling and abandonment standards, well registration requirements, groundwater transportation restrictions, and, outside of an AMA, adequate water supply requirements.

The second tier of the management structure is Irrigation Non-Expansion Areas or INAs. INAs are in effect in areas where there was significant ground water overdraft but not severe enough to

warrant an AMA designation. The management object in an INA is the prevention of further declines in groundwater supplies primarily through prohibition of irrigation acreage expansion. The ADWR generally does not regulate the quantity of water used within an INA, although water users are required to file for underground storage and recovery permits, file notice of intent to drill wells and obtain notices of irrigation authority to irrigate eligible lands. Also, owners of non-exempt wells must use approved measuring devices and submit annual groundwater pumping reports.

The third tier and the most restrictive with regards to management are the "Active Management Areas" or "AMAs". AMAs are statutorily designated areas within the state that were identified based on the magnitude of the groundwater overdraft. Three of the four AMA's are directed to achieve a "safe yield" level by 2025 which means that those areas must ensure that the long-term balance between the amount of groundwater withdrawn and the amount of water naturally recharged to the aquifer through rainfall or artificially returned to the aquifer through recharge projects is maintained.

Each of the AMAs has a management plan that is developed by the state and local water users. Background information and data concerning water use patterns are contained in the management plans and help to ensure that water conservation requirements are implemented. Information gathered from annual water use reports is used to estimate the volume of groundwater withdrawals, water stored, and water recovered in an AMA. Water budgets are constructed from this data to illustrate a total supply and demand for a given year.

"Conversion to non-groundwater sources is the single most important means of achieving the management goals within the AMAs" according to the ADWR annual report. It is apparent that the state of Arizona is trying to allocate and use every available surface water resource while protecting, saving, and replenishing their groundwater resources. The water management agency has stated that additional opportunities must be pursued to substitute renewable or imported supplies in place of mined groundwater.

Colorado

The Colorado Division of Water Resources administers all water rights in the state of Colorado pursuant to the prior appropriation doctrine. A system for permitting ground water wells was established in 1957 with the passage of the Colorado Ground Water Law of 1957. After 1969 surface water and groundwater have been administered together.

In Colorado the State Engineer and the Division Engineer of the area where a water right application is submitted work with the water court for that particular division in considering applications for a new appropriation. The application is filed with the appropriate water court which then publishes it in a newspaper to serve as notice. The Division Engineer provides a recommendation to the water court regarding whether or not the application should be approved. Parties who have a concern regarding the application have an opportunity to oppose the application. If there is no opposition the water court judge makes a determination and either grants or denies the application. If the application is granted it is entered into the decree and

enforced through the use of water commissioners. If there is opposition to the application, unless the opposition can be alleviated by negotiations between the applicant and the opposing party, the case goes before the water court for trial. If any party is unhappy with the outcome of a case they can appeal the water court's decision to the Colorado Supreme Court.

Some priorities on major stream systems in Colorado date back to the 1850s. According to the Colorado Division of Water Resources, most of the stream systems have been over-appropriated since the 1890's. Surface water appropriations may still be allowed if they can be shut off when a senior water right is calling for water. The state discourages domestic surface rights without augmentation so the domestic supply does not have to be shut down if or when a call is made. For the most part, only small residential and livestock wells are allowed to be drilled without providing for protection to senior water rights.

Groundwater permitting in Colorado is broken into two types of wells -- exempt wells and nonexempt wells.

Exempt wells are limited specifically by the conditions stated on the permit when it is issued. Usually the permits limit the pumping rate to no greater than 15 gallons per minute. Except in limited cases, an exempt well permit will not be issued where either a municipality or a water district can provide water to the property and in most cases only one exempt well permit will be issued for a single lot. The following types of wells are considered exempt wells:

- Household use only wells;
- Domestic and livestock wells with certain conditions;
- Commercial wells (1/3 ac ft per year limitation);
- Unregistered existing wells -- had to be put to beneficial use prior to May 8, 1972;
- Monitoring and observation wells;
- Replacement wells; and
- Geoexchange systems.

New nonexempt wells must be located more than 600 feet from any other production well not owned by the applicant unless the State Engineer determines otherwise. Subdivision wells that are part of a subdivision created after June 1, 1972, for the most part are governed by a water court approved augmentation plan.

Colorado also has what are called "Designated Ground Water Basins" or "Designated Basins". Groundwater within these basins is considered "designated groundwater". Designated groundwater is groundwater which, in its natural course, is not available to or required for the fulfillment of decreed surface rights, or groundwater in areas not adjacent to a continuously flowing natural stream. The Colorado Ground Water Commission is a regulatory and an adjudicatory body authorized by the Colorado General Assembly to manage and control designated ground water resources within the state. Groundwater applications in these areas are not subject to water court involvement as outlined above.

Idaho

The state of Idaho is also a prior appropriation doctrine state. All surface and ground water are the property of the state whose duty it is to supervise their appropriation and allotment to those diverting the water to any beneficial use. Idaho water is managed by the Idaho Department of Water Resources (IDWR).

Idaho has five different types of water rights. These are:

- permits -- the state issues permits that allow the development of a water right;
- licenses -- issued after a water right is developed;
- statutory claims;
- beneficial use claims (Snake River Basin Adjudication); and
- decreed rights -- these rights are issued after an adjudication has been before the court and represents ownership of the water right.

There are exemptions to permitting requirements for certain ground water rights as a result of exemptions in the 1950 ground water statutes. All uses require a recorded water right except:

- domestic ground water (no more than 13,000 gpd and 1/2 acre);
- Other ground water uses (use must be within .04 cfs and 2,500 gpd); and
- Instream stock watering.

The state of Idaho has also recently completed the Snake River Basin Adjudication which was started in 1987 and addressed more than 120,000 claims. This adjudication determined all of the claims to the use of water in the Snake River Basin in Idaho. The final result is more than 120,000 decreed water rights.

In Idaho, once the water rights are decreed or licensed, the state administers or manages them through water districts and water masters. State water districts are entities of the state and the water users that hold water rights within those districts elect a water master that is approved by the department director. It is the water master's responsibility to distribute the water rights in the district pursuant to their priority dates. Outside of water districts the IDWR director may regulate and enforce water rights but it is done on a case by case basis rather than with a water master.

Idaho also provides for "conjunctive management" which is defined as the "legal and hydrologic integration of administration of the diversion and use of water under water rights from surface and ground water sources, including areas having a common ground water supply."

This issue is currently subject to litigation that involves a curtailment order on groundwater withdrawals because of a call made by senior surface water appropriators.⁷

⁷ More details regarding the curtailment order and its progress through the court system can be found at:
http://www.idwr.idaho.gov/about/issues/Curtailment_Order_Information/Curtailment_Order_Information.htm

Idaho also has different types of ground water designations. Critical ground water areas are defined as "any ground water basin, or designated part thereof, not having sufficient ground water to provide a reasonably safe supply for irrigation of cultivated lands, or other uses in the basin at the then current rates for withdrawal, or rates of withdrawal projected by consideration of valid and outstanding applications and permits, as may be determined and designated, from time to time by the director of the Idaho Department of Water Resources".

The IDWR can propose or require a management plan in these areas. There is also a "ground water management area" which is a bit less stringent than the critical ground water management area. Under both the ground water management area and the critical ground water management area the director can issue a curtailment of ground water use by some or all of the water right holders.

Washington

The Washington Department of Ecology manages the state's water resources. Similar to the other western states, the state of Washington in both its constitution and its statutes has stated that "water is a public resource held in trust for the people." Washington also functions under the prior appropriation doctrine.

All adjudications are handled by state courts and heard by a Superior Court Judge or by a water referee who hears the evidence and makes recommended findings to the court. The Department of Ecology began a general adjudication of surface water rights in the Yakima Basin in 1977. This adjudication is still pending in the Superior Court.

For surface water permit applications the Department of Ecology considers what is called the "four part" test which considers:

- (1) is there water available;
- (2) is the application for a beneficial use;
- (3) will granting the application adversely affect existing water rights; and
- (4) will granting the application be detrimental to the public interest.

Through this four part test the Department of Ecology may also consider water quality issues as a part of the public interest criteria. Based on its assessment of the four part test the Department of Ecology may grant, deny, or condition the permit. The agency's decision can be appealed to the Pollution Control Hearing's Board and from there through the court system. Interested third parties may intervene in the action at both the administrative and judicial level.

Once a permit is granted the applicant has a reasonable amount of time to "perfect" the water right through the actual appropriation of water to or for a beneficial use. If this is completed the applicant is granted a certificate for the water right outlining the actual terms of the water right including the extent and nature of the right.

In 1945, the Washington Legislature adopted a comprehensive law related to groundwater. Prior to the 1945 legislation ground water was treated differently based on case law and

different types of ground water. The courts interpreted the 1945 law to only apply to specific types of ground water but in 1973 the Washington legislature amended the definition of ground water to make it clear that the ground water law applied to all ground water not only to "percolating waters".

The 1973 ground water law made it clear that a permit was necessary before ground water could be appropriated. However, like other western states, the legislature provided exemptions to the permit requirements for certain types of uses including for the use of water reclaimed from wastewater treatment facilities and certain relatively small withdrawals including:

- water for stock water;
- lawn and/or noncommercial garden watering (may not exceed 1/4 ac);
- single or group domestic uses (may not exceed 5000 gpd); and
- industrial uses (may not exceed 5000 gpd)

In a paper prepared in 2000, the Washington Attorney General states the following with regard to exempt uses: "In recent years there is recognition that the cumulative effect of exempt withdrawals may be significant. Since there is no requirement that the amount and nature of such withdrawals be reported, the state has no precise information concerning their cumulative effect."

In addition to the "four part" test that is applied for surface water applications the Department of Ecology must also take into consideration whether or not proposal is reasonable and feasible with regard to the type of pumping that is being contemplated. The seniority of a ground water pumping right is limited to the "reasonable pumping level".

In 1985, the Legislature again passed a law related to ground water. This time the law was an effort to minimize or stop overdrafting and try to ensure future water availability. The Department of Ecology was directed to adopt groundwater areas and subareas and the Department was authorized to prioritize water use within these areas.

The ground water code also covers the use of water that is returned to the aquifer through return flows with regard to who has a right to appropriate the water. A court case that involved the Bureau of Reclamation addressed this issue with regard to whether state or federal law applied when the return flows were a result of a federal project.

New Law; New Terms

In passing House Bill 831, the 2007 Legislature clearly outlined in the preamble to the measure why it was needed. In part, it noted that there has been confusion regarding ground water issues in closed basins and the Department of Natural Resources and Conservation needed guidance from the Legislature on how to proceed. It noted the importance of protecting senior appropriators as well as preserving the quality of Montana's water.

Toward that end, legislators said ground water development in closed basins should be able to proceed as long as the applicant collects the necessary scientific information to determine if there will be an adverse effect on a prior appropriator and takes the necessary actions to mitigate or prevent any adverse effects on a prior appropriator.

In also passing House Bill 304, which created the Water Policy Interim Committee, the Legislature acknowledged that some of the provisions of HB831 would need further study as they were implemented.

Several of the study tasks dealt with new terms introduced into statute, including:

- * Aquifer injection - the use of a well to inject water directly into an aquifer system without filtration through the geologic materials overlying the aquifer system for the purpose of aquifer recharge or for an aquifer storage and recovery project.

- * Aquifer recharge - either the controlled subsurface addition of water directly to the aquifer or controlled application of water to the ground surface for the purpose of replenishing the aquifer to offset adverse effects resulting from net depletion of surface water.

- * Aquifer storage and recovery project - a project involving the use of an aquifer to temporarily store water through various means, including but not limited to injection, surface spreading and infiltration, drain fields, or another department-approved method. The stored water may be either pumped from the injection well or other wells for beneficial use or allowed to naturally drain away for a beneficial use.

- * Hydrogeologic assessment - a report for the project for or through which water will be put to beneficial use, the point of diversion, and the place of use that describes the geology, hydrogeologic environment, water quality ... and predicted net depletion, if any, including the timing of any net depletion, for surface water .. within the closed basins that are subject to an appropriation right, including but not limited to rivers, streams, irrigation canals, or drains that might be affected by the new appropriation right and any predicted water quality changes that may result.⁸

- * Mitigation - the reallocation of surface water or ground water through a change in appropriation right or other means that does not result in surface water being introduced into an aquifer through aquifer recharge to offset adverse effects resulting from net depletion of surface water.

⁸ The full definition is in 85-2-361, MCA.

In general, HB 831 allowed for new ground water appropriations in closed basins if the applicant for the water right complies with more stringent application requirements that include a hydrogeologic assessment, and, if necessary, a mitigation or aquifer recharge plan that ensures senior water rights will not be adversely affected. The law also allowed aquifer storage and recovery projects and defined those projects as a beneficial use of water.

Water Quality

Several components of the new law deal with the possible mingling of water sources through mitigation or aquifer recharge. The law requires that an aquifer recharge plan that uses sewage from a system that requires a discharge permit also must obtain a discharge permit for the aquifer recharge plan.

The minimum requirements for aquifer recharge plans under in this scenario are certain federal regulations and removal of at least 60 percent of nitrogen as measured from the raw swage load to the system; or a discharge of a total nitrogen effluent concentration of 24 mg/L or less.

In addition to those requirements, an acquirer recharge plan that uses aquifer injection must meet the more stringent of either primary drinking water standards pursuant to Title 75, chapter 6, or the nondegradation requirements pursuant to 75-5-303 at the point of discharge.

Several water quality experts appeared before WPIC and addressed current laws and possible contamination issues with introducing surface water into ground water. There also was debate about the use of individual septic systems and how they may effect water quality in large scale developments.

In September 2007, Kate Miller of the Department of Environmental Quality said an important question is how mitigation or recharge water will be used downstream and whether or not it would be safe to drink. There are concerns about pathogens and pharmaceuticals appearing in drinking water wells. Miller advocated regular screening as part of a monitoring program and that any discharges should be treated to drinking water standards.

Water Quantity

The new law requires that applications for new ground water use in a closed basin be accompanied by a hydrogeologic assessment, a scientific report that predicts if the new use would result in a net depletion of surface water in the area proposed for the use. If it is determined that a net depletion would adversely affect a senior water right, then the amount of water resulting in the adverse effect must be offset by either a plan of mitigation or aquifer recharge.

Topics addressed by experts and the committee included the requirements and accuracy of the hydrogeologic reports as well as how mitigation, aquifer recharge, and aquifer storage and recovery may work in various scenarios.

Much of the discussion of mitigation and recharge centered around how to supply water for new residential development.

In July 2007, John Westenberg of PBS&J, a natural resources consulting firm, told the committee that mitigation could be complicated because statewide adjudication is not complete and, in some cases, the decrees may not be accurate. He said most water rights are based on irrigation, and irrigation water rights are limited to a particular period of diversion and the irrigation season. How then, he said, does a water user convert an irrigation use to a year-round domestic use? Westenberg said the DNRC must be flexible in allowing the conversion of irrigation rights.

Michael E. Nicklin, a hydrologist, said there must be a clearer understanding of when a mitigation plan or aquifer recharge plan would be required. He said one should quantify the amount of evapotranspiration before the proposed use and after for a given parcel of land. If the land was irrigated, a comparison should be made to determine if there is a net increase or decrease in evapotranspiration. Nicklin said that if the projected consumptive use for the parcel would decrease, then a plan should not be required.

Jim Potts, a hydrologist with HKM Engineering, said the keys to a successful aquifer recharge system would include high quality or pretreatment of recharge water, proper soil and aquifer characteristics, monitoring and emergency backup plans.

Russell Levens, a DNRC hydrologist, said in September 2007 that it is difficult to measure the effectiveness of a mitigation or aquifer recharge because it is difficult to detect changes from the initial application or mitigation. Some effects, he said, may only be significant in times of water shortages. The best way to have effective mitigation, he said, is through an adequate hydrogeologic assessment before the new use is permitted.

Water Supply and Sewage Disposal

As some parts of Montana experienced unprecedented population growth in recent years, controversies about water supply and sewage disposal have risen to the fore - mostly in the closed basin areas of Montana and especially in areas just outside the borders of cities and towns.

Subdivisions may be served by individual wells - including those exempt from the DNRC permit process - as well as individual septic systems. Other options include building community systems that serve the development or connecting to nearby existing systems.

At the September 2007 meeting, Eric Regensburger of the DEQ said that over the last five years, three out of every four lots created in Montana are using exempt wells for a water supply. About half of those are lots of less than two acres. The concern, Regensburger said, is that there is a higher chance of contamination with high well density.

In October of 2007, Regensburger explained the options for water supply and sewage disposal systems. For lots of one acre or larger, the type of system is up to the developer as long as they comply with current laws and regulations.

Lots of less than one acre but larger than 20,000 square feet (about one-half acre) must have either a community water or wastewater system. Subdivision lots of less than 20,000 square feet must have both community water and sewage systems.⁹

Regensburger said community wells could be used on most subdivisions, but there are limiting factors, including the higher costs, especially those up-front costs, of serving larger lots. Information about the number and costs of exempt and community wells is included in **Appendix E**.

Developers are being driven to use exempt wells because the DNRC permitting process for water rights takes too long, Dustin Stewart of the Montana Building Industry Association said in October 2007. Stewart suggested that municipal annexation should be made easier to allow connections to existing systems and the legislature should consider funding for local communities to extend services to outlying subdivisions.

Glenn Oppel of the Montana Association of Realtors said exempt wells allow for affordable development in rural areas. He said a statewide policy on limiting exempt wells would not work and suggested a fast-tracking permit process for public systems.

⁹ A public water system serves 25 or more people or 15 or more connections for 60 days or more per year.

John Tubbs of the DNRC said exempt well usage is the least expensive and time consuming option. The costs of obtaining a permit could be as much as \$15,000 and a change of water use right could be \$20,000. On average, it takes the DNRC 245 days to issue a permit for a new water right, although it generally takes longer in closed basins.

Laura Ziemer of Trout Unlimited said that unlike the new law that requires some mitigation in closed basins, there is no mitigation for exempt wells. She suggested that new exempt wells be required to purchase a mitigation credit or be required to go through permitting.

Michael Nicklin, a hydrologist for the Montana Association of Realtors, explained to the WPIC in January 2008 some of his findings in the Gallatin Valley. He wrote that, "In summary, it is my conclusion that when the overall projected effects of exempt wells are properly accounted for using water budget methods that everyone in the profession of hydrology should employ, it is difficult to conceive that there would be any practical circumstance in any closed basin in Montana where future growth in exempt wells would result in any discernable, detectable, or measurable adverse impact to any prior surface water appropriator. If any such circumstance does exist it would be anomalous. It would be highly questionable to establish water policy for the entire state of Montana on the basis of an anomalous condition."

Nicklin's presentation is included in **Appendix F**.

The DNRC contends that groundwater wells have been shown to have an effect on surface water flows. The agency says exempt wells may have an impact on more senior surface water users and would be difficult to enforce a call against in a time of water shortage. A DNRC paper on the effects of exempt wells is included in **Appendix G**.

Water Right Enforcement

Mark Twain supposedly knew that a sip of whisky could quench your thirst but a grab for water would lead to fisticuffs.¹⁰

The study tasks directed the WPIC to examine enforcement of exempt wells. Those statutorily exempt wells are not monitored or metered by any state agency. Though the wells are limited to 35 gallons per minute and less than 10 acre feet a year, the reporting of excesses would likely fall to another water user.

But in addition to debate over enforcement of exempt wells, various presenters touched on aspects of water right enforcement in general.

In September 2007, Tim Hall, who at the time was the chief legal counsel for the DRNC, provided an overview of water right enforcement. While the DNRC has broad statutory authority for enforcement, disputes involving water rights issued prior to 1973 difficult unless the Water Court has issued a decree through the adjudication process.

For water use permits issued since 1973, there are a number of options if a user suspects water is being used illegally. Those range from having a neighborly discussion to formal mediation to asking for a court injunction. A summary of possible actions is included in **Appendix D**.

If a person is wasting water, using water unlawfully, preventing water from moving to another person having a prior right to use the water, or violating a provision of the Montana Water Use Act, the DNRC can investigate and file a court action.

However Hall said the DNRC does not have the resources to be a statewide water rights enforcer.

State law also allows the DNRC to work with local county attorneys, but Gallatin County Attorney Marty Lambert told the WPIC in April 2008 that his office is already overloaded with civil and criminal work. He added that water right enforcement should be consistent statewide, instead of handled differently county by county.

The WPIC also discussed a provision of the Prior Appropriation Doctrine which allows senior water rights holders to make a call for water against more junior rights. The question was how a call made by a senior surface right holder would work against a junior ground water right holder. In short, Montana does not appear to have had much experience with the impact of a call by senior surface water right holders on junior ground water right holders.

¹⁰ "Whiskey is for drinking; water is for fighting over." Many sources attribute this quote to Mark Twain, but some note that it was never verified.

Under the prior appropriation doctrine and the decision in *Montana Trout Unlimited v. Department of Natural Resources and Conservation*, a call by a senior water right holder must be enforced against junior water right holders in the order of the least priority of the junior water right holders, whether those water rights are surface water rights or ground water rights.

The state of Idaho is experiencing protracted litigation over this issue.¹¹ In its decision, the Idaho Supreme Court stated that the priority ordering of the state's version of the prior appropriation doctrine is not absolute, and that an as yet undefined reasonableness standard merits consideration when administering the use of hydrologically connected surface and ground water.

An additional factor is Article XV, section 3, of the Idaho Constitution, which gives priority to domestic water rights but requires that junior water right holders must compensate senior water right holders for any taking of their water.

In Montana, there is no prioritization among types of water rights. However, it is much easier to close a headgate on a ditch during a call by a senior appropriator than it is to shut off wells. An additional complicating factor is the legal ability to continue to develop ground water through the use of nonpermitted exempt wells, even in closed basins in which it is recognized that water is overappropriated. During a call for water by a senior appropriator, all junior water right uses are supposed to be curtailed according to their priority under sections 85-2-406(1) and 85-5-101, MCA.

It has long been established that the appropriator of water does not become the owner of water by the act of appropriation. The appropriator acquires the right of the use of the water for some useful purpose. The appropriator for one useful purpose has no preference or superior right in law to an appropriator for any other purpose. While any person is permitted to appropriate water for a useful purpose, it must be used with some regard for the rights of the public.¹²

Even though Montana does not constitutionally or statutorily prioritize water rights, a de facto priority for domestic or municipal use may exist. It does not require much imagination to foresee a

¹¹ See *American Falls Reservoir District No. 2 v. Idaho Department of Water Resources*, 2007 Opinion 40, Case No. 33249 (Id. March 5, 2007).

¹² *Fitzpatrick v. Montgomery*, 20 Mont. 181, 50 P. 416 (1897). Fitzpatrick bases this conclusion on *Basey v. Gallagher*, 20 Wall. 670 (1875), an appeal from *Gallagher v. Basey*, 1 Mont. 457 (1872), in which the United States Supreme Court said: "Water is diverted to propel machinery in flour mills and saw mills, and to irrigate land for cultivation, as well as to enable miners to work their mining claims; and in all such cases the right of the first appropriator, exercised within reasonable limits, is respected and enforced. We say within reasonable limits, for this right to water, like the right by prior occupancy to mining or agricultural land, is not unrestricted. It must be exercised with reference to the general condition of the country and the necessities of the people, and not so as to deprive a whole neighborhood or community of its use, and vest an absolute monopoly in a single individual."

potential public health crisis if junior domestic or municipal water rights were curtailed by a senior appropriator's call for water. A call for water that implicated domestic or municipal water supplies may require that the applicable government intervene to protect the public health.

State and local governments have inherent power to enact reasonable legislation for the health, safety, welfare, or morals of the public, even though the legislation is an infringement of individual rights. Police power regulations are presumed reasonable, and a clear showing is required for a finding that they are unreasonable.¹³

The police power of the state, which enables the state to pass laws for the health, safety, and general welfare of the people, must be reasonably adapted to its purpose and must injure or impair property rights only to the extent reasonably necessary to preserve the public welfare.¹⁴

Although compensation may be owed to the senior appropriator if the senior appropriator's beneficial use is curtailed to protect the public health pursuant to the police power, that issue will probably be resolved on a factually specific basis.

It is even possible that the police power of the state can be exercised even though provision for compensation to the owner of property has not been made.¹⁵

During his presentation in Choteau, Tim Hall described a decision by the Fourteenth Judicial District Court for Musselshell County involving a water purchase contract, in which the District Court ruled that the "remaining stored water level in Deadman's Basin Reservoir has reached a critical level" and that the reservoir water was needed to maintain the Musselshell River flow "to supply domestic, municipal, stock and wildlife water usage."

The District Court prohibited the irrigation of crops from the Musselshell River between August 12 and September 30, 2000, so long as the reservoir maintained its critically low level. On appeal, the Montana Supreme Court determined that the District Court simply made a priority determination regarding domestic and irrigation water consumption based on its own inclinations. In so doing, the District Court exceeded its authority to simply "fill in" a water decree with further delineations.

The Supreme Court ruled that the case was merely one of contractual interpretation and enforcement. Because the case was reversed and remanded, the Supreme Court declined to

¹³ State v. Deitchler, 201 Mont. 70, 651 P.2d 1020 (1982).

¹⁴ See In the Matter of the Adjudication of the Existing Water Rights of the Yellowstone River, 253 Mont. 167, 832 P.2d 1210 (1992), citing Yellowstone Valley Electric Cooperative v. Ostermiller, 187 Mont. 8, 608 P.2d 491 (1980).

¹⁵ Ruona v. Billings, 136 Mont. 554, 323 P.2d 29 (1958).

address the issue of whether the water right holder was entitled to compensation for a "taking" of the water for public purposes.¹⁶

¹⁶ In the Matter of the Petition of the Deadman's Basin Water Users Association to Appoint a Water Commissioner to Distribute Stored Water, 2002 MT 15, 308 Mont. 168, 40 P.3d 387 (2002).

Water Marketing and Reallocation

The Water Policy Interim Committee studied water marketing and water reallocation options available in Montana, including:

- * leasing water rights, water banking, water trading, and water sales;
- * the lease-to-sale ratio of water rights in Montana;
- * the number of market purchases that have been completed in Montana;
- * the purposes for which water trades or sales have taken place;
- * the feasibility of creating and operating a water bank in Montana; and
- * the administrative procedures and costs that would be necessary to establish and operate a water bank in Montana.

In Montana and other states, private people do not own water. But the right to use water for a beneficial use is held by individuals, corporations and other entities and water rights can be sold or leased.

Property rights are often described as a bundle of sticks associated a parcel of land. However, each stick has value independent of the bundle. While there are differences in how different rights may be marketed, a water right is one of those sticks. For the purposes of this discussion, the term water marketing covers the buying, selling, transferring, or leasing of water rights.

Water marketing is not a new debate topic in Montana. In 1984, the Legislature's Select Committee on Water Marketing published a voluminous report and several suggestions for future legislation.¹⁷

"These recommendations concern a strategy for a water policy for Montana in an interstate setting," wrote Sen. Jean Turnage, who chaired the panel. "This agenda is too important and too complex to be addressed by one interim committee or one legislative session. These issues significantly affect the future of Montana. The deliberations around them must be ongoing."

Though those words were written nearly a quarter century ago, water markets are still in their infancy, according to Water Strategist, a newsletter that analyzes water policy, marketing, finance, legislation and litigation in 17 western states.

"Water assets are not traded westwide; no indicator can measure overall activity in water markets," the newsletter said in its April 2006 edition. "The economic value of water depends upon the reliability of the underlying water right, quantity, quality, uses and the location and availability of competing sources of supply."

However, in Montana and other states, competing demands for water are driving water marketing discussions. The 2007 Legislature passed House Bill 831 regulating groundwater

¹⁷ <http://leg.mt.gov/content/publications/environmental/1984watermarketing.pdf>

appropriations in closed basins. Mitigation plans required under that statute may contain some aspect of water marketing. The strategic plan for the Water Resources Division of the Department of Natural Resources and Conservation includes the tasks of determining where water is physically and legally available for development and creating a report of what rights that might be available for sale or change.¹⁸

Water Marketing in Montana

At the suggestion of the water marketing committee, the 1985 Legislature established a water leasing program administered by the Department of Natural Resources and Conservation. The statute allows the department to acquire water through appropriation in its own name, by agreement or purchase with another water right holder or by contract for water in certain reservoirs. The water may be leased for beneficial uses.¹⁹

The statute was amended in 2007. Previously, program was limited to leasing 50,000 acre-feet. Now, the department may lease up to 1 million acre-feet of water under contract with the federal government from Fort Peck, Tiber, Canyon Ferry, Hungry Horse, Koocanusa or Yellowtail or from other reservoirs.. Of that 1 million acre feet, up to 50,000 acre feet may be leased for beneficial uses outside Montana.²⁰

Since its inception, no water has been leased under this statute.²¹

However, the 2005 Legislature passed a resolution urging the DNRC to enter into negotiations with the federal Bureau of Reclamation to determine the availability and cost of water stored behind Hungry Horse Dam in hopes that the state might contract for water and then lease it for water development in the Clark Fork River basin.²²

In 2007, the legislature appropriated \$260,000 to pay for a Hungry Horse leasing study. The DNRC, the Bureau of Reclamation and others are working on the study now.

Montana owns several of its own water projects around the state, such as Deadman's Basin Dam in Wheatland County and the Tongue River Dam in Big Horn County. The state, through DNRC's state water projects bureau, owns water rights in these projects and leases them primarily for irrigation.

¹⁸ DNRC Water Resources Division Strategic Plan 2005-2010.
http://dnrc.mt.gov/wrd/pdfs/wrd_strategicplan05.pdf

¹⁹ 85-2-141, MCA

²⁰ Senate Bill 376. <http://data.opi.mt.gov/bills/2007/billhtml/SB0376.htm>

²¹ Rich Moy, DNRC

²² <http://data.opi.mt.gov/bills/2005/billhtml/HJ0003.htm>

The bureau administers almost 2,000 water marketing contracts for nearly 300,000 acre-feet of water annually through local water user associations. Revenue from the water purchase contracts, leases of lands associated with the projects, and net revenue from hydropower generation supplements funds for state water project rehabilitation costs.²³

Other water marketing provisions in Montana law are mostly utilized by private parties, although some non-profit corporations and the Department of Fish, Wildlife and Parks also play roles.

The law allows for temporary changes in appropriation rights with department approval for 10 years, subject to 10 year renewals. In cases where new water conservation or a storage project is involved, the change may be approved for up to 30 years, again subject to 10 year renewals.²⁴

Water may be leased for up to 90 days without DNRC approval for road construction or dust abatement projects²⁵.

In 1989, in response to drought conditions that left some streams dry and killed fish, the Legislature passed a bill to allow FWP to lease consumptive water rights for instream flows for terms up to 10 years. This statute, 85-2-436, MCA underwent significant changes in the 2007 session.²⁶ Until July 1, 2019, FWP may change consumptive use appropriation rights that it holds in fee simple to instream flow purposes on up to 12 stream reaches without any time constraints. The department may enter into leases for instream flow purposes on an unlimited number of stream reaches for terms up to 10 years, with 10 year renewals. However, after June 30, 2019, the agency may not enter into new lease agreements or renew leases that expire after that date. Any change in purpose or place of use must be approved by the department and is subject to other criteria to protect the rights of other appropriators from adverse impacts.²⁷

The owner of a consumptive water right also may either convert the use of that right or lease the right for instream flow to benefit fishery resources.²⁸

²³ State Water Projects Bureau 2006 report

²⁴ 85-2-407, MCA

²⁵ 85-2-410

²⁶ Senate Bill 128. <http://data.opi.mt.gov/bills/2007/billhtml/SB0128.htm>

²⁷ The 2019 date, as well as other portions of the law, may be amended by future Legislatures.

²⁸ 85-2-408, MCA.

The lease of an existing right to FWP pursuant to 85-2-436 or the temporary change of a right under 85-2-407 or 85-2-408 does not constitute an abandonment of the right.²⁹

A water right holder also may lease or sell water saved through conservation. Lining a ditch to reduce seepage or other measures may result in this so-called "salvaged water."³⁰

Except for the temporary change for road projects and dust abatement, the appropriators in each of these changes must prove by a preponderance of evidence that the change meets several criteria, including:³¹

- * The proposed change will not adversely affect the use of the existing water rights of other persons, permitted uses or reserved uses.

- * Except for instream flow changes, the proposed means of diversion, construction, and operation of the appropriation works are adequate.

- * The proposed use of water is a beneficial use.

- * Except for instream flow changes, the applicant has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use.

- * If the change in appropriation right involves salvaged water, the proposed water-saving methods will salvage at least the amount of water asserted by the applicant. The water quality of an appropriator will not be adversely affected.

- * The ability of a discharge permit holder to satisfy effluent limitations surface water discharge permit will not be adversely affected.

Much of the leasing in Montana under these statutes has been done by three entities: Fish, Wildlife and Parks, Trout Unlimited and the Montana Water Trust.

Since it was granted the authority to lease water, FWP has signed 17 agreements for instream flow. One lease on Tin Cup Creek could not be renewed and is now held by the Montana Water Trust. Three have been terminated. Most of the leases are with private parties, but one is with a water and sewer district and one is with the Forest Service. The quantity of water leased and the cost varies. A complete history is available in Figure 2 of the 2006 leasing report. There were no new leases in 2007.³²

²⁹ 85-2-404, MCA.

³⁰ 85-2-419, MCA.

³¹ 85-2-402, MCA.

³² 2006 FWP Annual Progress Report - Water Leasing Study.

Montana Trout Unlimited holds six leases, all in the Blackfoot River Valley. The amount leased varies as does the cost per acre foot - ranging from 75 cents to more than \$25 an acre foot.³³

The Montana Water Trust, a non-profit organization founded in 2001, works with landowners on instream flow leases. The organization holds 15 leases on about 2,600 acre feet of water per year. In 2007, the Water Trust paid about \$63,000 for water.

In addition to these, the DNRC has recorded 23 change authorizations by individuals who changed a part of their water right to instream flow since 1991.³⁴

Water rights also may be sold, although unless the owner severs the right from the land it passes with the conveyance of the parcel.³⁵ Until action by the 1985 Legislature, the DNRC tracked the number of change authorizations for severed water rights. There are 70 recorded.³⁶ In 2007, the Legislature mandated that starting this July, a water right holder who severs the right from the land must alert the DNRC.³⁷

It is important to note that Montana water may be marketed for uses out of state, however there are criteria that must be met, including:³⁸

- * the proposed use must conform to permit requirements including that the water is legally available and that senior water right holders are not adversely affected.
- * the proposed out-of-state use of water is not contrary to water conservation.
- * the proposed out-of-state use of water is not otherwise detrimental to the public welfare of the citizens of Montana.

Water banking

Under the umbrella of water marketing is water banking. But water banking is a multi-faceted term as well. In general, a water bank is an institutional process that facilitates the transfer of water to new uses. In one sense, the water bank operates like a broker, bringing together buyers

³³ Trout Unlimited. Terms of Instream Flow Transactions in the Blackfoot.

³⁴ Terri McLaughlin, DNRC

³⁵ 85-2-403, MCA.

³⁶ Terri McLaughlin, DNRC

³⁷ <http://data.opi.mt.gov/bills/2007/billhtml/HB0039.htm>

³⁸ 85-2-311, MCA

and sellers. However, the institutional nature of a water bank comes with set procedures and some sort of public sanction for its actions:³⁹

Statewide water banking in Montana is not addressed in statute⁴⁰. The leasing laws the state has in place might constitute what is called a lease bank, where a single lessee solicits and temporarily obtains water from one or more lessors for a specific use, often for environmental purposes. In contrast, a water bank involves the exchange of water entitlements through the interaction of multiple sellers and multiple buyers.⁴¹

The goal of a water bank is to facilitate the transfer of water from one use to another use by bringing buyers and sellers together. Doing so may meet one or more of the following objectives:⁴²

- * Create a reliable water supply during dry years.
- * Ensure a future water supply for people, farms, and fish.
- * Promote water conservation by encouraging right holders to conserve and deposit rights into the bank.
- * Act as a market mechanism.
- * Resolve issues of inequity between groundwater and surface-water users.
- * Ensure compliance with intrastate agreements of instream flow.

Water banks may be structured in many ways, but they can be broken down into these general categories:⁴³

- * Institutional bank. This might be called a paper bank. It functions as a way to exchange water rights and other entitlements. Institutional banks are developed for areas where physical

³⁹Lawrence J. MacDonnell, "Water Banks: Untangling the Gordian Knot of Western Water."

⁴⁰ The Fort Belknap-Montana Compact, codified in Title 85, chapter 20, part 10, establishes a water bank for implementation in years of significant short term water shortage. However, the compact must still be ratified by Congress, so no water banking activity has taken place. The provisions provide for grants to purchase water, pricing alternatives and requirements, how banked water is allocated, and a clause providing that the water bank established in the compact is not intended to preclude a more comprehensive water marketing system within the Milk River Basin.

⁴¹ Clifford, Peggy; Landry, Clay; Larsen-Hayden, Andrea. "Analysis of Water Banking in Western States," Washington Department of Ecology and WestWater Research. July 2004. <http://www.ecy.wa.gov/biblio/0411011.html>

⁴² Ibid.

⁴³ Ibid.

water storage is limited or for large geographic areas. These banks also may be used for natural flow rights or a combination of natural flow and storage rights.

- * Surface storage bank. In this case, the exchange of water is backed by water stored in reservoirs or other storage facilities.

- * Groundwater bank. Groundwater banking exchange credits or entitlements for water withdrawals from an aquifer. Under conjunctive use programs, excess surface water is injected or infiltrated into the groundwater aquifer to be extracted during times of limited surface water supply. Groundwater banking programs also are being developed to provide mitigation in areas with excessive surface water withdrawals.

The entity that administers the bank will likely affect the cost to establish and administer the bank. The administration of the bank also may play a part in the level of trust and participation by water users.⁴⁴

Examples of administrative structures include:⁴⁵

- * Public - Most existing water banks are operated by a federal, state, or local governmental agency or an administrative board specifically developed to provide administrative oversight.

- * Private nonprofit - This could be a new organization comprised of representatives from stakeholder groups or a contract with an existing nonprofit.

- * Private for profit corporation - There have been limited attempts at this model.

- * Public-private partnership - In this model, a private corporation and a public entity jointly invest capital and operate the water bank.

The administrative costs also will be affected by what services a water bank chooses to offer. At the least, a water bank might aggregate water supplies from willing sellers and facilitate the sale to buyers. Other services may include:⁴⁶

- * Registry of water rights or entitlements.

- * Regulating or setting market prices.

- * Setting and implementing long-term strategic policies and daily operations.

- * Establishing whether the bank operates on a year-by-year or continual basis.

- * Determining which rights can be banked.

- * Quantifying the bankable water.

- * Specifying who can purchase or rent from the bank.

- * Setting transfer or contract terms.

- * Dealing with any regulatory agencies.

- * Resolving disputes.

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ Ibid.

Policy questions

Water marketing is a vast topic and can spur discussion on a variety of issues. But a few policy questions to consider may include:

- * Are current lease and change laws working? Are changes needed?
- * What role should the state play in water marketing?
- * Is an intermediary such as a water bank necessary?
- * Would a water bank be a statewide entity, or would it apply to specific basins?
- * Should a water bank operate year round, during a growing season or only during droughts?
- * How would a water bank protect the water rights of users who are not part of the water bank from adverse effects?

As part of a wide-ranging water study, the 2004 Environmental Quality Council studied some aspects of water banking in Montana. The EQC decided that while water banking works in some states, Montana has water marketing alternatives in place and there was no need to add more. The panel also found that Montana lacks the physical strictures needed for water banking in the state.⁴⁷

Additional information

Two publications that examine water marketing in Montana are "Private Water Leasing: A Montana Approach" is produced by Trout Unlimited.⁴⁸ and "Saving our Streams: Harnessing Water Markets," produced by Political Economy Research Center.⁴⁹

Much of the information about water banks in this report comes from the "Analysis of Water Banking in Western States," a 2004 report from the Washington Department of Ecology and WestWater Research..⁵⁰

In 2005, the Montana Water Center at Montana State University-Bozeman oversaw a student analysis of water banking in western states.⁵¹

⁴⁷ <http://leg.mt.gov/content/publications/environmental/2005waterreport.pdf>

⁴⁸

http://www.tu.org/atf/cf/%7B0D18ECB7-7347-445B-A38E-65B282BBBD8A%7D/MT_WaterReport.pdf

⁴⁹ http://www.perc.org/pdf/sos_2007.pdf

⁵⁰ <http://www.ecy.wa.gov/biblio/0411011.html>

⁵¹

http://leg.mt.gov/content/Committees/Interim/2007_2008/water_policy/staffmemos/watermarketing101.pdf

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