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

NOTE

This draft report, the findings and recommendations and the included discussion draft legislation are all works in progress. At the June meeting, the WPIC went through various options for recommendations and directed staff to put those options into discussion draft form. The WPIC is seeking comment on all these documents prior to the August meeting. At that meeting , the WPIC will review the documents and the comments, debate the issues, and request changes. The report will be revised and reviewed again in September. Public comment is welcome at both meetings and at anytime in between.

TO COMMENT

Comments may be submitted by email to jkolman@mt.gov. Please put "water" in the subject line. To submit comments by mail, send to: Joe Kolman, Legislative Environmental Policy Office, P.O. Box 201704, Helena, MT 59620-1704.

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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/css/lepo/2007_2008/water_policy/default.asp

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

Appendix H: Potential Consequences of Converting From Flood to Sprinkler Irrigation

http://leg.mt.gov/content/lepo/2007_2008/water_policy/staffmemos/irrigationconversion.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 over appropriation. 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 committee was charged with studying a wide range of water issues in order to guide Montana's water policy toward ensuring fair and reasonable use of Montana's water resources as demands on water increase while supplies remain the same or decrease.

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[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.

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 providing technical support to other DNRC bureaus, the Reserved Water Rights Compact

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[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/lepo/default.asp).

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.
- Flood plain Management -- Assists the 110 locally administered Flood plain management programs throughout Montana in reducing the loss of life and structural property through wise Flood plain development, and in reducing the loss of functional flood plains by reducing the amount of erosion of stream banks due to unwise Flood plain 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 over appropriated 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 the criteria of section 85-2-311, MCA, that the augmentation plan provided sufficient

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

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.

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[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 over appropriated 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]

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[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.

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[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 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 aquifer 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.

In June 2008, Eric Regensberger of the DEQ said there are concerns about groundwater quality and subdivision development, specifically the introduction of pathogens, nitrogen, phosphorous, personal care products, and pharmaceuticals into state waters. He showed examples of problems in the area south of Butte, in Helena, the Billings area, the Bozeman area, and in Boulder.

Water Quantity

The new law requires that applications for new ground water use in a closed basin be accompanied by a hydrolgeologic 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.

John Tubbs of the DNRC said exempt well usage is the least expensive and time consuming

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

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.**

In April of 2008, the WPIC requested presentations on the Ruby Valley Groundwater Management Plan, which was commissioned by the Ruby Valley Conservation District and the Ruby Watershed Council with the goal to collect field data pertinent to management of ground water and surface water resources. The study concluded that if the goal is to protect surface water flows, water right holders, and aquatic resources, several things need to be considered, including:

- Land use change will drive water use change.
- Irrigation important to aquifer recharge and late summer river flows.
- New ground water use will impact surface flows.

In June 2008, the WPIC heard presentations from several experts on the effects of different types of irrigation.

John LaFave of the Montana Bureau of Mines and Geology said that flood irrigation return flows affect shallow groundwater. More efficient irrigation techniques, such as sprinklers and lined canals, reduce aquifer recharge, late season surface water flows and wetlands.

The DNRC presented information on the potential consequences of converting from flood irrigation to sprinklers related to the producer, water quality, water quantity and ecological conditions. (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 DNRC, 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.

Under the prior appropriation doctrine and the decision in Montana Trout Unlimited v.

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[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.

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 over appropriated. 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 potential public health crisis if junior domestic or municipal water rights were curtailed by a senior

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[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."

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

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[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).

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/lepo/1984watermarketing.pdf

appropriations in closed basins. Mitigation plans required under that statue 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.

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[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 though 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 projects[25].

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]

The lease of an existing right to FWP pursuant to 85-2-436 or the temporary change of a right

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[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.

under 85-2-407 or 85-2-408 does not constitute and 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 permitholder 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]

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]

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[29] 85-2-404, MCA.

[30] 85-2-419, MCA.

[31] 85-2-402, MCA.

[32] 2006 FWP Annual Progress Report - Water Leasing Study.

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

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

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[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

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

Statewide water banking in Montana is not addressed in statute[40]. 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 on 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 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 withdrawls 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

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[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.

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.

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?

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[44] Ibid.

[45] Ibid.

[46] Ibid.

* 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]

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[47] http://leg.mt.gov/content/publications/lepo/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/lepo/2007_2008/water_policy/staffmemos/watermarketing101.pdf

On the Road

From the outset, the Water Policy Committee wanted to hear from Montanans most affected by water issues and decided that visiting closed basins - areas where the issuance of new permits may be limited because of concerns about water quantity.

The committee held meetings in Dillon, Bozeman, Thompson Falls, Choteau, and Hamilton.

At the Dillon meeting, the committee toured the area with stops at the Clark Canyon Dam, the East Bench Irrigation Diversion, the Tash Ranch, Schuett Farms, and Cottom Farms.

At the Bozeman meeting, the WPIC toured the Upper Missouri and Gallatin Valley. Alan English, the manager of the Gallatin Local Water Quality District, provided an overview of the basins. The tour included the following sites:

- Utility Solutions - water and sewer district - water supply, sewage treatment facilities and system.
- Flying A Holdings - aquifer storage and recovery water supply system and water quality testing.
- JTL Gravel Pit - ground water to surface water, water quality issues, water right permit requirements.
- City of Manhattan - municipal water supply, sewage treatment facilities and system.

Photos from the tours are available at www.leg.mt.gov/water

WPIC Study Tasks & Responses

DRAFT -- 6/10/8
REVISED 6/30/08

Introduction

The 2007-08 Water Policy Interim Committee (WPIC) conducted a detailed study of water quantity, water quality, and water use in Montana. House Bills 304 and 831, both passed in the 2007 Legislature, defined the scope of the study. Many issues in the study related to issues in closed basins, but also could have statewide implications.

This document details how the WPIC addressed each assigned study tasks. This is only a brief outline of the issues the WPIC analyzed. More documentation, including minutes of meetings and all documents received by the committee, are available at:
http://leg.mt.gov/css/lepo/2007_2008/water_policy/default.asp

Assigned Study Tasks

1. Study Task: Review current Montana law related to mitigation, augmentation, or aquifer recharge.

WPIC Response: Reviewed staff research on HB831 issues and legal analysis of related cases. Received regular updates from the DNRC on rulemaking and implementation of HB831 provisions. Heard public comment on HB831 provisions, including presentations from applicants dealing with the new law.

Presentations in June 2008 by DNRC, the MBMG, and Dave Pruitt, an irrigator and former water commissioner on the effects of different types of irrigation.

2. Study Task: Analyze other states' laws and rules related to mitigation, augmentation, or aquifer recharge and the other states' experiences with applying and using mitigation, augmentation, and aquifer recharge.

WPIC Response: Reviewed staff comparison of water management in Arizona, Colorado, Idaho, and Washington. Panel discussion in July 2007 included presentations from DNRC, DEQ, consultants, hydrologists and attorneys involved in various aspects of water use in Montana. In September 2007, a review of aquifer storage and recovery in Washington by Linton Wildrick of the Pacific Ground Water Group. John Metesh in March 2008 presented a summary of an

aquifer storage, recovery and recharge seminar he attended.

3. Study Task: Compare mitigation, augmentation, and aquifer recharge options and alternatives for applying the concepts in Montana water law.

WPIC Response: Panel discussion in July 2007 included presentations from John Tubbs of DNRC, David Schmidt of Water Rights Solutions, hydrologist Jim Potts of HKM Engineering, and Cindy Younkin, a water rights attorney. In September 2007, Kirk Waren of the MBMG discussed the feasibility of aquifer storage and recovery in Montana. Presentation in April 2008 of the Ruby Valley Groundwater Management Plan by Kirk Engineering and Ann Schwend, the Ruby Watershed Coordinator. Presentations in June by DNRC, the MBMG, and Dave Pruitt, an irrigator and former water commissioner on the effects of different types of irrigation..

4. Study Task: Analyze water quality testing requirements to ensure that the use of mitigation, augmentation, or aquifer recharge does not adversely affect ground water quality.

WPIC Response: Panel presentations in August 2007 from Tom Reid of the DEQ, Julie DalSoglio of the EPA, John Tubbs of the DNRC, MSU geologist Steve Custer, Kate Miller of the DEQ, MSU microbiologist Tim Ford, MSU civil engineer Warren Jones, research hydrologist Gary Icopini of MBMG, John Metesh of MBMG, and Tom Patton of MBMG.
Presentation in June 2008 by Eric Regensberger of the DEQ on water quality issues.

5. Study Task: Analyze data developed to determine the type and amount of research, data, and analysis necessary to develop a scientifically defensible hydrogeologic assessment to be used in making informed decisions with regard to mitigation, augmentation, or aquifer recharge activity in Montana.

WPIC Response: Multiple presentations from the MBMG study regarding potential ground water withdrawal impacts on surface water and the adequacy of any additional recommended minimum standards and criteria for hydrogeologic assessments. Presentation in June 2008 of report commissioned by the Montana Association of Realtors.

6. Study Task: Study appropriate monitoring requirements to determine the effectiveness of mitigation, augmentation, or aquifer recharge plans.

WPIC Response: Presentations in September 2007 from Dr. William Woessner, professor of hydrology at the University of Montana, Russell Levens, a DNRC hydrologist, Kate Miller from the DEQ, and a water user, Randy Overton of RLK Hydro. Presentation on cumulative impact on water quantity in September 2007 from Mike Roberts, a DNRC surface water hydrologist, Steve Fry of Avista, a senior appropriator, and an applicant, Marc Spratt of RLK Hydro, Inc.

7. Study Task: Identify gaps in data necessary to determine appropriate locations to conduct artificial recharge of ground water.

WPIC Response: Presentations from various experts. Presentation in April 2008 of the

Ruby Valley Groundwater Management Plan by Kirk Engineering and Ann Schwend, the Ruby Watershed Coordinator. Presentations in June by DNRC, the MBMG, and Dave Pruitt, an irrigator and former water commissioner on the effects of different types of irrigation..

8. Study Task: Examine other issues related to mitigation, augmentation, or aquifer recharge in Montana to facilitate continued economic development and growth while providing reasonable protections to senior appropriators and water quality of surface and ground water resources.

WPIC Response: Panel presentations in August 2007 from attorney Russ McElyea of Moonlight Basin Ranch Moonlight Basin Ranch, Gallatin County Planner Greg Sullivan, Tim Roark, the Gallatin County director of environmental health, and Holly Franz of PPL Montana.

Multiple presentations from the MBMG study regarding potential ground water withdrawal impacts on surface water and the adequacy of any additional recommended minimum standards and criteria for hydrogeologic assessments.

Presentation in April 2008 of the Ruby Valley Groundwater Management Plan by Kirk Engineering and Ann Schwend, the Ruby Watershed Coordinator. Presentations in June by DNRC, the MBMG, and Dave Pruitt, an irrigator and former water commissioner on the effects of different types of irrigation.

9. Study Task: Study methods for the management of water to ensure compliance with closed basin law, including the artificial recharge of ground water.

WPIC Response: Reviewed staff research on the history of closed basins and legal issues, including implications of Trout Unlimited decision. Presentations in July 2007 from Rich Moy of the DNRC, Steve Kilbreath of the DEQ, consultant John Westenberg of PBS&J, hydrologist Michael Nicklin and attorney Bill Hritsco. Presentation in March 2008 from Michelle Bryan-Mudd, a UM law professor, on land use and water law.

Presentation in April 2008 of the Ruby Valley Groundwater Management Plan by Kirk Engineering and Ann Schwend, the Ruby Watershed Coordinator. Presentations in June by DNRC, the MBMG, and Dave Pruitt, an irrigator and former water commissioner on the effects of different types of irrigation.

10. Study Task: Review drinking water standards and effluent treatment standards in other jurisdictions and recommend appropriate treatment standards for the purposes of aquifer recharge and mitigation.

WPIC Response: Presentations in September from Randy Overton of RLK Hydro, Kate Miller from the DEQ.

11. Study Task: Identify research necessary, if any, to determine alternatives and options for conducting water management through artificial recharge of ground water.

WPIC Response: Presentation in August 2007 by Tom Reid of the DEQ. Presentations in September from Randy Overton of RLK Hydro, Kate Miller from the DEQ.

12. Study Task: Conduct a water quality analysis associated with storage or introduction of surface water to ground water resources.

WPIC Response: Panel presentations in August 2007 from Tom Reid of the DEQ, Julie DalSoglio of the EPA, John Tubbs of the DNRC, MSU geologist Steve Custer, Kate Miller of the DEQ, MSU microbiologist Tim Ford, MSU civil engineer Warren Jones, research hydrologist Gary Icopini of MBMG, John Metesh of MBMG, and Tom Patton of MBMG..

13. Study Task: Identify the extent to which cumulative impacts are analyzed from a water quantity and a water quality perspective and whether or not the two findings are assessed jointly and determine the appropriate level of coordination.

WPIC Response: Presentations in September 2007 from Dr. William Woessner, professor of hydrology at the University of Montana, Russell Levens, a DNRC hydrologist, Kate Miller from the DEQ and a water user, Randy Overton of RLK Hydro. Presentation on cumulative impact on water quantity in September 2007 from Mike Roberts, a DNRC surface water hydrologist, Steve Fry of Avista, a senior appropriator and an applicant, Marc Spratt of RLK Hydro, Inc.

14. Study Task: Determine an appropriate, accurate, and time-efficient process for coordinating water quality requirements with the water appropriations process.

WPIC Response: Presentations in September 2007 from Bonnie Lovelace of the DEQ, land use attorney Myra Shults, Sanders County sanitarian Barbara Woodbury, Jim Carlson, the environmental health director for Missoula County. Multiple presentations from DEQ and DNRC. Convened a work group of interested parties.

Formed a work group in 2008 of more than 20 participants that met twice in an effort to find consensus on various issues before the committee.

15. Study Task: Evaluate how the department of environmental quality and the department of natural resources and conservation issue permits that affect ground water or surface water quality and whether or not the water appropriation process and the water quality process are coordinated.

WPIC Response: Presentations in September 2007 from Bonnie Lovelace of the DEQ, land use attorney Myra Shults, Sanders County sanitarian Barbara Woodbury, Jim Carlson, the environmental health director for Missoula County. Multiple presentations from DEQ and DNRC. Convened a work group of interested parties.

Formed a work group in 2008 of more than 20 participants that met twice in an effort to find consensus on various issues before the committee.

16. Study Task: Determine if potential applicants are provided with a clear process to follow that ensures the protection of water quality and prior appropriators while allowing development in Montana.

WPIC Response: Panel presentations in August 2007 from attorney Russ McElyea of

Moonlight Basin Ranch Moonlight Basin Ranch, Gallatin County Planner Greg Sullivan, Tim Roark, the Gallatin County director of environmental health, and Holly Franz of PPL Montana. A January 2008 presentation from Lee Wolfe of East Gate Village in East Helena. Multiple presentations from DEQ and DNRC. Convened a work group of interested parties.

Presentation in June of Bostwick case in Gallatin County where DNRC was ordered to issue a permit, despite various concerns, because the agency violated time limits for reviewing the application.

Formed a work group in 2008 of more than 20 participants that met twice in an effort to find consensus on various issues before the committee.

17. Study Task: Determine the number of exempt wells in Montana and estimate of the number of exempt wells expected to be developed by 2020.

WPIC Response: Presentation in September 2007 from Curt Martin of the DNRC as well as presentations from other DNRC staff, DEQ, the Montana Association of Realtors and the Montana Building Industry Association.

18. Study Task: Determine the types of beneficial uses to which water from exempt wells is applied.

WPIC Response: September 2007 report from Curt Martin of the DNRC.

19. Study Task: Evaluate the hydrogeologic analysis necessary to determine consumptive use on a per-acre or fraction of an acre basis and on a per-use basis.

WPIC Response: October 2007 presentations by John LaFave of the Montana Bureau of Mines and Geology and Bill Uthman, a DNRC hydrogeologist.

20. Study Task: Analyze the amount of water reasonably necessary for the various beneficial uses and compare the reasonable use standard with current statutory limits, including volume, flow rate, and other criteria that the committee determines are necessary to provide for accurate and adequate measurement of water use through exempt wells.

WPIC Response: Presentations in October 2007 from Eric Regensburger of the DEQ, Larry Dolan of the DNRC and Dr. Steve Custer, professor of geology at MSU.

21. Study Task: Examine options and alternatives for enforcing statutory limitations regarding exempt well usage.

WPIC Response: October 2007 presentations from Tim Hall, DNRC legal counsel, Dustin Stewart of the Montana Building Industry Association and John Youngberg of the Montana Farm Bureau.

22. Study Task: Determine the necessity and reasons for providing a process that is exempt from the permitting.

WPIC Response: October 2007 presentations from Dustin Stewart of the Montana Building Industry Association, Glenn Oppel of the Montana Association of Realtors, John Youngberg of the Montana Farm Bureau Federation, Rich Moy of the DNRC, and Laura Ziemer of Trout Unlimited.

23. Study Task: Analyze water marketing and water reallocation options available in Montana, including the leasing water rights, water banking, water trading, and water sales; the lease-to-sale ratio of water rights; the number of market purchases completed; the purposes for which water trades or sales; the feasibility of creating and operating a water bank; and the administrative procedures and costs necessary to establish and operate a water bank.

WPIC Response: Reviewed staff research on applicable Montana laws as well as overview of water banking options. Presentations from the departments of Natural Resources and Conservation and Fish, Wildlife and Parks as well as from Property and Environment Research Center, the Montana Water Trust, Trout Unlimited, the Farm Bureau and the Bureau of Reclamation.

24. Study Task: Gather appropriate information that the committee determines is necessary to make sound and well-reasoned policy decisions to guide the management and use of Montana's ground water resource into the future.

WPIC Response: The WPIC held 10 meetings over the interim. In addition to Helena meetings , the WPIC visited Dillon, Bozeman, Thompson Falls, Choteau, and Hamilton. Each meeting included testimony from various water experts, agency personnel and interested members of the public. The WPIC addressed each study task assigned by the Legislature and delved into other areas not specifically referenced by the enabling legislation.

Formed a work group in 2008 of more than 20 participants that met twice in an effort to find consensus on various issues before the committee.

June 2008 presentation by Anna Miller of the DNRC on various funding programs available for community water and sewer systems.

Presentation in April 2008 of the Ruby Valley Groundwater Management Plan by Kirk Engineering and Ann Schwend, the Ruby Watershed Coordinator. Presentations in June by DNRC, the MBMG, and Dave Pruitt, an irrigator and former water commissioner on the effects of different types of irrigation.

25. Study Task: Present long-term goals and policy proposals for water management related to ground water resources.

WPIC Response: The WPIC held 10 meetings over the interim. In addition to Helena meetings , the WPIC visited Dillon, Bozeman, Thompson Falls, Choteau, and Hamilton. Each meeting included testimony from various water experts, agency personnel and interested members of the public. The WPIC addressed each study task assigned by the Legislature and delved into other areas not specifically referenced by the enabling legislation.

26. Study Task: Submit a report to the 61st legislature that provides clear policy direction and necessary legislation to guide Montana's water policy and that ensures fair and reasonable use of Montana's water resource as demands on water increase while supplies remain the same or decrease.

WPIC Response: Held meetings in closed basins where demands on water supplies are highest in an effort to elicit concerns about water management from those who deal with the issue daily. Reviewed research, solicited expert opinions and debated policy options throughout the interim.

Reviewed process for developing the state water plan.

Formed a subcommittee with the Environmental Quality Council to debate options for making water policy a permanent interim study issue.

Other Issues Examined

1. General Enforcement of Water Rights

WPIC Response: Presentations in April 2008 from Water Court Judge Bruce Loble, DNRC legal counsel Candy West, Sarah Bond of the attorney general's office, Gallatin County Attorney Marty Lambert and Lezlie Kinne, a water commissioner.

2. The Growing Communities Doctrine

WPIC Response: Presentations in March 2008 from Greg Petesch, WPIC attorney, Elaina Zlatnik of Mountain Water, and Candy West, DNRC legal counsel.

3. Instream Flows and Fishing Closures

WPIC Response: Presentation in January 2008 from Bill Schenk of the Department of Fish, Wildlife and Parks.

4. Opencut Mining

WPIC Response: The WPIC discussed opencut mining in April 2008 as it relates to water quality as well as permitting. The DEQ explained the ramification of recent court decisions and two residents of Gallatin County provided testimony.

60th Legislature

HOUSE BILL NO. 831

INTRODUCED BY MCNUTT, POMNICHOWSKI, COHENOUR, VAN DYK, SMALL-EASTMAN

A BILL FOR AN ACT ENTITLED: "AN ACT REVISING WATER LAWS IN CLOSED BASINS; DEFINING TERMS IN WATER USE LAWS; AMENDING REQUIREMENTS FOR AN APPLICATION TO APPROPRIATE GROUND WATER IN A CLOSED BASIN; PROVIDING THAT CERTAIN APPLICATIONS TO APPROPRIATE SURFACE WATER ARE EXEMPT FROM CLOSED BASIN REQUIREMENTS; PROVIDING REQUIREMENTS FOR HYDROGEOLOGIC ASSESSMENTS, MITIGATION PLANS, AND AQUIFER RECHARGE PLANS; PROVIDING MINIMUM WATER QUALITY STANDARDS FOR CERTAIN DISCHARGES OF EFFLUENT; ~~REQUIRING THAT PREVIOUSLY APPROVED PLANS THAT WERE NOT LOCATED IN THE CLARK FORK BASIN MUST MEET CERTAIN CRITERIA;~~ REQUIRING THAT DATA BE SUBMITTED TO THE BUREAU OF MINES AND GEOLOGY; PROVIDING FOR RULEMAKING; PROVIDING FOR A CASE STUDY AND REQUIREMENTS AND A FEE FOR PARTICIPATION IN THE CASE STUDY; ~~RECOGNIZING AND CONFIRMING EXISTING APPROPRIATION RIGHTS IN CERTAIN INSTANCES;~~ PROVIDING AN APPROPRIATION; AMENDING SECTIONS 85-2-102, 85-2-302, 85-2-311, 85-2-329, 85-2-330, 85-2-335, 85-2-336, ~~85-2-337,~~ 85-2-340, 85-2-341, 85-2-342, 85-2-343, 85-2-344, ~~85-2-402,~~ AND 85-2-506, MCA; REPEALING SECTION 85-2-337, MCA; DIRECTING THE AMENDMENT OF ARM 36.12.101 AND 36.12.120; AND PROVIDING AN IMMEDIATE EFFECTIVE DATE AND ~~APPLICABILITY DATES~~ AN APPLICABILITY DATE."

WHEREAS, it is the policy of this state to encourage the wise use of the state's water resources by making them available for appropriation and to provide wise utilization, development, and conservation of the water of the state for the maximum benefit of its people with the least possible degradation of the state's natural aquatic ecosystems; and

WHEREAS, there has been confusion regarding ground water issues in closed basins and the Department of Natural Resources and Conservation needs guidance from the Legislature on how to proceed; and

WHEREAS, the basin closure laws were passed to protect senior appropriators while the state water adjudication is ongoing; and

WHEREAS, 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; and

WHEREAS, it is critical that the Legislature develop state water policies in a way that protects the prior appropriation doctrine while at the same time protecting the quality of Montana's water and the ability to appropriate water consistent with section 85-1-101, MCA, and Article IX, section 3, of the Montana Constitution; and

WHEREAS, augmentation is statutorily authorized for the Clark Fork River Basin only; and

WHEREAS, the Department of Natural Resources and Conservation has developed administrative rules and applied augmentation through these administrative rules to all basins even though not specifically statutorily authorized; and

WHEREAS, administrative rules and rulemaking must comply with section 2-4-305, MCA, and may not engraft material not contemplated by the Legislature; and

WHEREAS, this bill provides definitions and a new procedure for mitigation and aquifer recharge.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

Section 1. Section 85-2-102, MCA, is amended to read:

"85-2-102. (Temporary) Definitions. Unless the context requires otherwise, in this chapter, the following definitions apply:

(1) "Appropriate" means:

(a) to divert, impound, or withdraw, including by stock for stock water, a quantity of water for a beneficial use;

(b) in the case of a public agency, to reserve water in accordance with 85-2-316;

(c) in the case of the department of fish, wildlife, and parks, to lease water in accordance with 85-2-436; ~~or~~

(d) temporary changes or leases for instream flow to maintain or enhance instream flow to benefit the fishery resource in accordance with 85-2-408;

(e) a use of water for aquifer recharge or mitigation as provided in [sections ~~15~~ 14 and ~~17~~ 16]; or

(f) a use of water for an aquifer storage and recovery project as provided in [section 20].

(2) "Aquifer recharge" means 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 ~~in a closed basin resulting from a new appropriation right or certain changes in an appropriation right~~.

(3) "Aquifer storage and recovery project" means 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 ~~maintenance or enhancement of the streamflow~~ A BENEFICIAL USE.

~~(2)~~(4) "Beneficial use", unless otherwise provided, means:

(a) a use of water for the benefit of the appropriator, other persons, or the public, including but not limited to agricultural, ~~(including~~ stock water~~)~~, domestic, fish and wildlife, industrial, irrigation, mining, municipal, power, and recreational uses;

(b) a use of water appropriated by the department for the state water leasing program under 85-2-141 and of water leased under a valid lease issued by the department under 85-2-141;

(c) a use of water by the department of fish, wildlife, and parks pursuant to a lease authorized under 85-2-436; ~~or~~

(d) a use of water through a temporary change in appropriation right or lease to enhance instream flow to benefit the fishery resource in accordance with 85-2-408;

(e) a use of water for aquifer recharge or mitigation as provided in [sections ~~15~~ 14 and ~~17~~ 16]; or

(f) a use of water for an aquifer storage and recovery project as provided in [section 20].

~~(3)~~(5) "Certificate" means a certificate of water right issued by the department.

~~(4)~~(6) "Change in appropriation right" means a change in the place of diversion, the place of use, the purpose of use, or the place of storage.

~~(5)~~(7) "Commission" means the fish, wildlife, and parks commission provided for in 2-15-3402.

~~(6)~~(8) "Correct and complete" means that the information required to be submitted conforms to the standard of substantial credible information and that all of the necessary parts of the form requiring the information have been filled in with the required information.

~~(7)~~(9) "Declaration" means the declaration of an existing right filed with the department under section 8, Chapter 452, Laws of 1973.

~~(8)~~(10) "Department" means the department of natural resources and conservation provided for in Title

2, chapter 15, part 33.

~~(9)~~(11) "Developed spring" means any artificial opening or excavation in the ground, however made, including any physical alteration at the point of discharge regardless of whether it results in any increase in the yield of ground water, from which ground water is sought or can be obtained or through which it flows under natural pressures or is artificially withdrawn.

~~(10)~~(12) "Existing right" or "existing water right" means a right to the use of water that would be protected under the law as it existed prior to July 1, 1973. The term includes federal non-Indian and Indian reserved water rights created under federal law and water rights created under state law.

~~(11)~~(13) "Ground water" means any water that is beneath the ground surface.

~~(12)~~(14) "Late claim" means a claim to an existing right forfeited pursuant to the conclusive presumption of abandonment under 85-2-226.

(15) "Mitigation" means 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 ~~in a closed basin resulting from a new appropriation right or certain changes in an appropriation right.~~

(16) "Municipality" means an incorporated city or town organized and incorporated under Title 7, chapter 2.

~~(13)~~(17) "Permit" means the permit to appropriate issued by the department under 85-2-301 through 85-2-303 and 85-2-306 through 85-2-314.

~~(14)~~(18) "Person" means an individual, association, partnership, corporation, state agency, political subdivision, the United States or any agency of the United States, or any other entity.

~~(15)~~(19) (a) "Political subdivision" means any county, incorporated city or town, public corporation, or district created pursuant to state law or other public body of the state empowered to appropriate water.

(b) The term does not mean a private corporation, association, or group.

~~(16)~~(20) "Salvage" means to make water available for beneficial use from an existing valid appropriation through application of water-saving methods.

~~(17)~~(21) "State water reservation" means a water right created under state law after July 1, 1973, that reserves water for existing or future beneficial uses or that maintains a minimum flow, level, or quality of water throughout the year or at periods or for defined lengths of time.

~~(18)~~(22) "Substantial credible information" means probable, believable facts sufficient to support a

reasonable legal theory upon which the department should proceed with the action requested by the person providing the information.

~~(19)~~(23) "Waste" means the unreasonable loss of water through the design or negligent operation of an appropriation or water distribution facility or the application of water to anything but a beneficial use.

~~(20)~~(24) "Water" means all water of the state, surface and subsurface, regardless of its character or manner of occurrence, including but not limited to geothermal water, diffuse surface water, and sewage effluent.

~~(21)~~(25) "Water division" means a drainage basin as defined in 3-7-102.

~~(22)~~(26) "Water judge" means a judge as provided for in Title 3, chapter 7.

~~(23)~~(27) "Water master" means a master as provided for in Title 3, chapter 7.

~~(24)~~(28) "Watercourse" means any naturally occurring stream or river from which water is diverted for beneficial uses. It does not include ditches, culverts, or other constructed waterways.

~~(25)~~(29) "Well" means any artificial opening or excavation in the ground, however made, by which ground water is sought or can be obtained or through which it flows under natural pressures or is artificially withdrawn.

(Terminates June 30, 2009--sec. 9, Ch. 123, L. 1999.)

85-2-102. (Effective July 1, 2009) Definitions. Unless the context requires otherwise, in this chapter, the following definitions apply:

(1) "Appropriate" means:

(a) to divert, impound, or withdraw, including by stock for stock water, a quantity of water for a beneficial use;

(b) in the case of a public agency, to reserve water in accordance with 85-2-316; ~~or~~

(c) temporary changes or leases for instream flow to maintain or enhance instream flow to benefit the fishery resource in accordance with 85-2-408;

(d) a use of water for aquifer recharge or mitigation as provided in [sections ~~15~~ 14 and ~~17~~ 16]; or

(e) a use of water for an aquifer storage and recovery project as provided in [section 20].

(2) "Aquifer recharge" means either 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 ~~in a closed basin resulting from a new appropriation right or certain changes in an appropriation right~~.

(3) "Aquifer storage and recovery project" means 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 ~~maintenance or enhancement of the streamflow~~ A BENEFICIAL USE.

~~(2)~~(4) "Beneficial use", unless otherwise provided, means:

(a) a use of water for the benefit of the appropriator, other persons, or the public, including but not limited to agricultural, ~~(including~~ stock water~~)~~, domestic, fish and wildlife, industrial, irrigation, mining, municipal, power, and recreational uses;

(b) a use of water appropriated by the department for the state water leasing program under 85-2-141 and of water leased under a valid lease issued by the department under 85-2-141; ~~or~~

(c) a use of water through a temporary change in appropriation right or lease to enhance instream flow to benefit the fishery resource in accordance with 85-2-408;

(d) a use of water for aquifer recharge or mitigation as provided in [sections ~~15~~ 14 and ~~17~~ 16]; or

(e) a use of water for an aquifer storage and recovery project as provided in [section 20].

~~(3)~~(5) "Certificate" means a certificate of water right issued by the department.

~~(4)~~(6) "Change in appropriation right" means a change in the place of diversion, the place of use, the purpose of use, or the place of storage.

~~(5)~~(7) "Correct and complete" means that the information required to be submitted conforms to the standard of substantial credible information and that all of the necessary parts of the form requiring the information have been filled in with the required information.

~~(6)~~(8) "Declaration" means the declaration of an existing right filed with the department under section 8, Chapter 452, Laws of 1973.

~~(7)~~(9) "Department" means the department of natural resources and conservation provided for in Title 2, chapter 15, part 33.

~~(8)~~(10) "Developed spring" means any artificial opening or excavation in the ground, however made, including any physical alteration at the point of discharge regardless of whether it results in any increase in the yield of ground water, from which ground water is sought or can be obtained or through which it flows under natural pressures or is artificially withdrawn.

~~(9)~~(11) "Existing right" or "existing water right" means a right to the use of water that would be protected under the law as it existed prior to July 1, 1973. The term includes federal non-Indian and Indian reserved water rights created under federal law and water rights created under state law.

~~(10)~~(12) "Ground water" means any water that is beneath the ground surface.

~~(11)~~(13) "Late claim" means a claim to an existing right forfeited pursuant to the conclusive presumption of abandonment under 85-2-226.

(14) "Mitigation" means 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 ~~in a closed basin resulting from a new appropriation right or certain changes in an appropriation right.~~

(15) "Municipality" means an incorporated city or town organized and incorporated under Title 7, chapter 2.

~~(12)~~(16) "Permit" means the permit to appropriate issued by the department under 85-2-301 through 85-2-303 and 85-2-306 through 85-2-314.

~~(13)~~(17) "Person" means an individual, association, partnership, corporation, state agency, political subdivision, the United States or any agency of the United States, or any other entity.

~~(14)~~(18) (a) "Political subdivision" means any county, incorporated city or town, public corporation, or district created pursuant to state law or other public body of the state empowered to appropriate water.

(b) The term does not mean a private corporation, association, or group.

~~(15)~~(19) "Salvage" means to make water available for beneficial use from an existing valid appropriation through application of water-saving methods.

~~(16)~~(20) "State water reservation" means a water right created under state law after July 1, 1973, that reserves water for existing or future beneficial uses or that maintains a minimum flow, level, or quality of water throughout the year or at periods or for defined lengths of time.

~~(17)~~(21) "Substantial credible information" means probable, believable facts sufficient to support a reasonable legal theory upon which the department should proceed with the action requested by the person providing the information.

~~(18)~~(22) "Waste" means the unreasonable loss of water through the design or negligent operation of an appropriation or water distribution facility or the application of water to anything but a beneficial use.

~~(19)~~(23) "Water" means all water of the state, surface and subsurface, regardless of its character or manner of occurrence, including but not limited to geothermal water, diffuse surface water, and sewage effluent.

~~(20)~~(24) "Water division" means a drainage basin as defined in 3-7-102.

~~(21)~~(25) "Water judge" means a judge as provided for in Title 3, chapter 7.

~~(22)~~(26) "Water master" means a master as provided for in Title 3, chapter 7.

~~(23)~~(27) "Watercourse" means any naturally occurring stream or river from which water is diverted for beneficial uses. It does not include ditches, culverts, or other constructed waterways.

~~(24)~~(28) "Well" means any artificial opening or excavation in the ground, however made, by which ground water is sought or can be obtained or through which it flows under natural pressures or is artificially withdrawn."

Section 2. Section 85-2-302, MCA, is amended to read:

"85-2-302. Application for permit. (1) Except as provided in 85-2-306 and ~~for the purpose of test wells for conducting the hydrogeologic assessment and monitoring pursuant to [sections 15 through 17 and 22]~~ [SECTION 21], a person may not appropriate water or commence construction of diversion, impoundment, withdrawal, or related distribution works except by applying for and receiving a permit from the department.

(2) The department shall adopt rules that are necessary to determine whether or not an application is correct and complete, based on the provisions applicable to issuance of a permit under this part. The rules must be adopted in compliance with Title 2, chapter 4.

(3) The application must be made on a form prescribed by the department. The department shall make the forms available through its offices.

(4) The applicant shall submit a correct and complete application. The determination of whether an application is correct and complete must be based on rules adopted under subsection (2) that are in effect at the time the application is submitted.

(5) The department shall notify the applicant of any defects in an application within 180 days. The defects must be identified by reference to the rules adopted under subsection (2). If the department does not notify the applicant of any defects within 180 days, the application must be treated as a correct and complete application.

(6) An application does not lose priority of filing because of defects if the application is corrected or completed within 30 days of the date of notification of the defects or within a further time as the department may allow, but not to exceed 90 days from the date of notification. If an application is made correct and complete after the mandated time period, but within 90 days of the date of notification of the defects, the priority date of the application is the date the application is made correct and complete.

(7) An application not corrected or completed within 90 days from the date of notification of the defects is terminated."

Section 3. Section 85-2-311, MCA, is amended to read:

"85-2-311. Criteria for issuance of permit. (1) A permit may be issued under this part prior to the adjudication of existing water rights in a source of supply. In a permit proceeding under this part, there is no presumption that an applicant for a permit cannot meet the statutory criteria of this section prior to the adjudication of existing water rights pursuant to this chapter. In making a determination under this section, the department may not alter the terms and conditions of an existing water right or an issued certificate, permit, or state water reservation. Except as provided in subsections (3) and (4), the department shall issue a permit if the applicant proves by a preponderance of evidence that the following criteria are met:

(a) (i) there is water physically available at the proposed point of diversion in the amount that the applicant seeks to appropriate; and

(ii) water can reasonably be considered legally available during the period in which the applicant seeks to appropriate, in the amount requested, based on the records of the department and other evidence provided to the department. Legal availability is determined using an analysis involving the following factors:

(A) identification of physical water availability;

(B) identification of existing legal demands on the source of supply throughout the area of potential impact by the proposed use; and

(C) analysis of the evidence on physical water availability and the existing legal demands, including but not limited to a comparison of the physical water supply at the proposed point of diversion with the existing legal demands on the supply of water.

(b) the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. In this subsection (1)(b), adverse effect must be determined based on a consideration of an applicant's plan for the exercise of the permit that demonstrates that the applicant's use of the water will be controlled so the water right of a prior appropriator will be satisfied;

(c) the proposed means of diversion, construction, and operation of the appropriation works are adequate;

(d) the proposed use of water is a beneficial use;

(e) 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;

(f) the water quality of a prior appropriator will not be adversely affected;

(g) the proposed use will be substantially in accordance with the classification of water set for the source

of supply pursuant to 75-5-301(1); and

(h) the ability of a discharge permitholder to satisfy effluent limitations of a permit issued in accordance with Title 75, chapter 5, part 4, will not be adversely affected.

(2) The applicant is required to prove that the criteria in subsections (1)(f) through (1)(h) have been met only if a valid objection is filed. A valid objection must contain substantial credible information establishing to the satisfaction of the department that the criteria in subsection (1)(f), (1)(g), or (1)(h), as applicable, may not be met. For the criteria set forth in subsection (1)(g), only the department of environmental quality or a local water quality district established under Title 7, chapter 13, part 45, may file a valid objection.

(3) The department may not issue a permit for an appropriation of 4,000 or more acre-feet of water a year and 5.5 or more cubic feet per second of water unless the applicant proves by clear and convincing evidence that:

(a) the criteria in subsection (1) are met;

(b) the proposed appropriation is a reasonable use. A finding must be based on a consideration of the following:

(i) the existing demands on the state water supply, as well as projected demands, such as reservations of water for future beneficial purposes, including municipal water supplies, irrigation systems, and minimum streamflows for the protection of existing water rights and aquatic life;

(ii) the benefits to the applicant and the state;

(iii) the effects on the quantity and quality of water for existing beneficial uses in the source of supply;

(iv) the availability and feasibility of using low-quality water for the purpose for which application has been made;

(v) the effects on private property rights by any creation of or contribution to saline seep; and

(vi) the probable significant adverse environmental impacts of the proposed use of water as determined by the department pursuant to Title 75, chapter 1, or Title 75, chapter 20.

(4) (a) The state of Montana has long recognized the importance of conserving its public waters and the necessity to maintain adequate water supplies for the state's water requirements, including requirements for federal non-Indian and Indian reserved water rights held by the United States for federal reserved lands and in trust for the various Indian tribes within the state's boundaries. Although the state of Montana also recognizes that, under appropriate conditions, the out-of-state transportation and use of its public waters are not in conflict with the public welfare of its citizens or the conservation of its waters, the criteria in this subsection (4) must be

met before out-of-state use may occur.

(b) The department may not issue a permit for the appropriation of water for withdrawal and transportation for use outside the state unless the applicant proves by clear and convincing evidence that:

(i) depending on the volume of water diverted or consumed, the applicable criteria and procedures of subsection (1) or (3) are met;

(ii) the proposed out-of-state use of water is not contrary to water conservation in Montana; and

(iii) the proposed out-of-state use of water is not otherwise detrimental to the public welfare of the citizens of Montana.

(c) In determining whether the applicant has proved by clear and convincing evidence that the requirements of subsections (4)(b)(ii) and (4)(b)(iii) are met, the department shall consider the following factors:

(i) whether there are present or projected water shortages within the state of Montana;

(ii) whether the water that is the subject of the application could feasibly be transported to alleviate water shortages within the state of Montana;

(iii) the supply and sources of water available to the applicant in the state where the applicant intends to use the water; and

(iv) the demands placed on the applicant's supply in the state where the applicant intends to use the water.

(d) When applying for a permit or a lease to withdraw and transport water for use outside the state, the applicant shall submit to and comply with the laws of the state of Montana governing the appropriation, lease, and use of water.

(5) ~~To~~ Subject to [section ~~15~~ 14], to meet the preponderance of evidence standard in this section, the applicant, in addition to other evidence demonstrating that the criteria of subsection (1) have been met, shall submit hydrologic or other evidence, including but not limited to water supply data, ~~MODELING INFORMATION,~~ field reports, and other information developed by the applicant, the department, the U.S. geological survey, or the U.S. natural resources conservation service and other specific field studies.

(6) An appropriation, diversion, impoundment, use, restraint, or attempted appropriation, diversion, impoundment, use, or restraint contrary to the provisions of this section is invalid. An officer, agent, agency, or employee of the state may not knowingly permit, aid, or assist in any manner an unauthorized appropriation, diversion, impoundment, use, or other restraint. A person or corporation may not, directly or indirectly, personally or through an agent, officer, or employee, attempt to appropriate, divert, impound, use, or otherwise restrain or

control waters within the boundaries of this state except in accordance with this section.

(7) The department may adopt rules to implement the provisions of this section.

(8) FOR AN APPLICATION FOR GROUND WATER IN A BASIN CLOSED PURSUANT TO 85-2-330, 85-2-336, 85-2-341, 85-2-343, OR 85-2-344 OR DURING THE PERIOD OF CLOSURE FOR ANY BASIN THAT IS ADMINISTRATIVELY CLOSED PURSUANT TO 85-2-319, THE APPLICANT SHALL COMPLY WITH THE PROVISIONS OF [SECTION 14] IN addition TO THE REQUIREMENTS OF THIS SECTION."

Section 4. Section 85-2-329, MCA, is amended to read:

"85-2-329. Definitions. Unless the context requires otherwise, in 85-2-330 and this section, the following definitions apply:

(1) "Application" means an application for a beneficial water use permit pursuant to 85-2-302 or a state water reservation pursuant to 85-2-316.

~~(2) "Ground water" means water that is beneath the land surface or beneath the bed of a stream, lake, reservoir, or other body of surface water and that is not immediately or directly connected to surface water.~~

~~(3)~~(2) "Nonconsumptive use" means a beneficial use of water that does not cause a reduction in the source of supply and in which substantially all of the water returns without delay to the source of supply, causing little or no disruption in stream conditions.

~~(4)~~(3) "Teton River basin" means the drainage area of the Teton River and its tributaries above the confluence of the Teton and Marias Rivers."

Section 5. Section 85-2-330, MCA, is amended to read:

"85-2-330. Basin closure -- exceptions. (1) As provided in 85-2-319 and subject to the provisions of subsection (2) of this section, the department may not ~~process or~~ grant an application for a permit to appropriate water or for a reservation to reserve water within the Teton River basin.

(2) The provisions of subsection (1) do not apply to:

(a) an application for a permit to appropriate ground water if the applicant complies with the provisions of [section ~~15~~ 14];

(b) an application for a permit to appropriate water for a nonconsumptive use;

(c) an application for a permit to appropriate water for:

(i) domestic use from surface water or pursuant to 85-2-306;; ~~municipal, or~~

(ii) stock use; or

(iii) use OF SURFACE WATER by OR FOR a municipality;

(d) an application to store water during high spring flows; ~~or~~

(e) ~~emergency~~ temporary emergency appropriations as provided for in 85-2-113(3); or

(f) an application for a permit to appropriate surface water to conduct response actions related to natural resource restoration required for:

(i) remedial actions pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601, et seq.;

(ii) aquatic resource activities carried out in compliance with and as required by the federal Clean Water Act of 1977, 33 U.S.C. 1251 through 1387; or

(iii) remedial actions taken pursuant to Title 75, chapter 10, part 7.

(3) A permit issued to conduct remedial actions or aquatic resource activities under subsection (2)(f) may not be used for dilution.

(4) A change of use authorization for changing the purpose of use may not be issued for any permit issued pursuant to subsection (2)(b), (2)(c), (2)(e), or (2)(f)."

SECTION 6. SECTION 85-2-335, MCA, IS AMENDED TO READ:

"85-2-335. Definitions. Unless the context requires otherwise, in 85-2-335, ~~through~~ 85-2-336, and 85-2-338, the following definitions apply:

(1) "Application" means an application for a beneficial water use permit pursuant to 85-2-302.

(2) "Upper Clark Fork River basin" means the drainage area of the Clark Fork River and its tributaries above Milltown dam."

Section 7. Section 85-2-336, MCA, is amended to read:

"85-2-336. Basin closure -- exception. (1) As provided in 85-2-319 and subject to the provisions of subsection (2) of this section, the department may not ~~process or~~ grant an application for a permit to appropriate water within the Upper Clark Fork River basin.

(2) The provisions of subsection (1) do not apply to:

(a) an application for a permit to appropriate ground water if the applicant complies with the provisions of [section ~~15~~ 14];

(b) ~~an application filed prior to January 1, 2000, for a permit to appropriate water to conduct response actions or remedial actions pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, or Title 75, chapter 10, part 7, at sites designated as of January 1, 1994. The total flow rates for all permits issued under this subsection (2)(b) may not exceed 10 cubic feet per second. A permit issued to conduct response actions or remedial actions may not be used for dilution and must be limited to a term not to exceed the necessary time to complete the response or remedial action, and the permit may not be transferred to any person for any purpose other than the designated response or remedial action~~ an application for a permit to appropriate surface water to conduct aquatic resource activities carried out in compliance with and as required by the federal Clean Water Act of 1977, 33 U.S.C. 1251 through 1387. A permit issued to conduct aquatic resource actions may not be used for dilution.

(c) an application for a permit to appropriate water for stock use;

(d) an application to store water; or

(e) an application for power generation at existing hydroelectric dams. The department may not approve a permit for power generation if approval results in additional consumption of water.

(3) A change of use authorization for changing the purpose of use may not be issued for any permit issued pursuant to subsection (2)(b) or (2)(c).

(4) Applications for state water reservations in the Upper Clark Fork River basin filed pursuant to 85-2-316 and pending as of May 1, 1991, have a priority date of May 1, 1991. The filing of a state water reservation application does not provide standing to object under 85-2-402.

~~(4)~~(5) The department may not process or approve applications for state water reservations in the Upper Clark Fork River basin filed pursuant to 85-2-316."

~~**Section 7.** Section 85-2-337, MCA, is amended to read:~~

~~**"85-2-337. Ground water permit applications -- report required.** (1) During the period of basin closure provided in 85-2-336(1), an applicant for a ground water permit in the Upper Clark Fork River basin shall submit a report prepared by a professional engineer or hydrologist addressing the hydrologic connection between the source of the ground water and surface water. If the applicant fails to submit the report required in this section, the application is considered defective and must be processed pursuant to 85-2-302 comply with the provisions of [section 15].~~

~~(2) Except as provided in subsection (3), the department may not issue a permit to appropriate ground~~

~~water in the Upper Clark Fork River basin unless the applicant proves by a preponderance of evidence, in addition to the criteria of 85-2-311, that the source of the ground water is not a part of or substantially or directly connected to surface water.~~

~~(3)~~(2) ~~The department may issue a permit to appropriate ground water if the application includes an augmentation plan and if the applicant proves by a preponderance of evidence, in addition to the criteria of 85-2-311, that the augmentation plan provides sufficient augmentation water in amount, time, and location to replace depletions to senior water rights~~ pursuant to [section 15]~~."~~

Section 8. Section 85-2-340, MCA, is amended to read:

"85-2-340. Definitions. Unless the context requires otherwise, in 85-2-341 and this section, the following definitions apply:

(1) "Application" means an application for a beneficial water use permit pursuant to 85-2-302 or a state water reservation pursuant to 85-2-316.

(2) "Ground water" ~~means water that is beneath the land surface or beneath the bed of a stream, lake, reservoir, or other body of surface water and that is not immediately or directly connected to surface water~~ has the meaning provided in 85-2-102.

(3) "Jefferson River basin" means the drainage area of the Jefferson River and its tributaries above the confluence of the Jefferson and Missouri Rivers.

(4) "Madison River basin" means the drainage area of the Madison River and its tributaries above the confluence of the Madison and Jefferson Rivers.

(5) "Nonconsumptive use" means a beneficial use of water that does not cause a reduction in the source of supply and in which substantially all of the water returns without delay to the source of supply, causing little or no disruption in stream conditions."

Section 9. Section 85-2-341, MCA, is amended to read:

"85-2-341. Basin closure -- exceptions. (1) As provided in 85-2-319 and subject to the provisions of subsection (2) of this section, the department may not ~~process or~~ grant an application for a permit to appropriate water or for a state water reservation to reserve water within the Jefferson River basin or Madison River basin.

(2) The provisions of subsection (1) do not apply to:

(a) an application for a permit to appropriate ground water if the applicant complies with the provisions

of [section ~~15~~ 14];

(b) an application for a permit to appropriate water for a nonconsumptive use;

(c) an application for a permit to appropriate water for:

(i) domestic use from surface water or pursuant to 85-2-306;~~; municipal; or~~

(ii) stock use; or

(iii) use OF SURFACE WATER by OR FOR a municipality;

(d) an application to store water during high spring flows; ~~or~~

(e) temporary emergency appropriations as provided for in 85-2-113(3); or

(f) an application for a permit to appropriate surface water to conduct response actions related to natural resource restoration required for:

(i) remedial actions pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601, et seq.;

(ii) aquatic resource activities carried out in compliance with and as required by the federal Clean Water Act of 1977, 33 U.S.C. 1251 through 1387; or

(iii) remedial actions taken pursuant to Title 75, chapter 10, part 7.

(3) A permit issued to conduct remedial actions or aquatic resource activities under subsection (2)(f) may not be used for dilution.

(4) A change of use authorization for changing the purpose of use may not be issued for any permit issued pursuant to subsection (2)(b), (2)(c), (2)(e), or (2)(f)."

Section 10. Section 85-2-342, MCA, is amended to read:

"85-2-342. Definitions. Unless the context requires otherwise, in 85-2-343 and this section, the following definitions apply:

(1) "Application" means an application for a beneficial water use permit pursuant to 85-2-302 or a state water reservation pursuant to 85-2-316.

~~(2) "Ground water" means water that is beneath the land surface or beneath the bed of a stream, lake, reservoir, or other body of surface water and that is not immediately or directly connected to surface water.~~

~~(3)~~(2) "Nonconsumptive use" means a beneficial use of water that does not cause a reduction in the source of supply and in which substantially all of the water returns without delay to the source of supply, causing little or no disruption in stream conditions.

~~(4)~~(3) "Upper Missouri River basin" means the drainage area of the Missouri River and its tributaries above Morony dam."

Section 11. Section 85-2-343, MCA, is amended to read:

"85-2-343. Basin closure -- exceptions. (1) As provided in 85-2-319 and subject to the provisions of subsection (2) of this section, the department may not ~~process or~~ grant an application for a permit to appropriate water or for a reservation to reserve water within the upper Missouri River basin until the final decrees have been issued in accordance with part 2 of this chapter for all of the subbasins of the upper Missouri River basin.

(2) The provisions of subsection (1) do not apply to:

(a) an application for a permit to appropriate ground water if the applicant complies with the provisions of [section ~~15~~ 14];

(b) an application for a permit to appropriate water for a nonconsumptive use;

(c) an application for a permit to appropriate water for:

(i) domestic use from surface water or pursuant to 85-2-306;; ~~municipal; or~~

(ii) stock use; or

(iii) use OF SURFACE WATER by OR FOR a municipality;

(d) an application to store water during high spring flows;

(e) an application for a permit to use water from the Muddy Creek drainage, which drains to the Sun River, if the proposed use of water will help control erosion in the Muddy Creek drainage; ~~or~~

(f) temporary emergency appropriations as provided for in 85-2-113(3); or

(g) an application for a permit to appropriate surface water to conduct response actions related to natural resource restoration required for:

(i) remedial actions pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601, et seq.;

(ii) aquatic resource activities carried out in compliance with and as required by the federal Clean Water Act of 1977, 33 U.S.C. 1251 through 1387; or

(iii) remedial actions taken pursuant to Title 75, chapter 10, part 7.

(3) A permit issued to conduct remedial actions or aquatic resource activities under subsection (2)(g) may not be used for dilution.

(4) A change of use authorization for changing the purpose of use may not be issued for any permit

issued pursuant to subsection (2)(b), (2)(c), (2)(e), (2)(f), or (2)(g)."

Section 12. Section 85-2-344, MCA, is amended to read:

"85-2-344. Bitterroot River subbasin temporary closure -- definitions -- exceptions. (1) Unless the context requires otherwise, in this section, the following definitions apply:

(a) "Application" means an application for a beneficial water use permit pursuant to 85-2-302 or a state water reservation pursuant to 85-2-316.

(b) "Bitterroot River basin" means the drainage area of the Bitterroot River and its tributaries above the confluence of the Bitterroot River and Clark Fork of the Columbia River and designated as "Basin 76H".

(c) "Bitterroot River subbasin" means one of the following hydrologically related portions of the Bitterroot River basin:

(i) the mainstem subbasin, designated as "Subbasin 76HA";

(ii) the north end subbasin, designated as "Subbasin 76HB";

(iii) the east side subbasin, designated as "Subbasin 76HC";

(iv) the southeast subbasin, designated as "Subbasin 76HD";

(v) the south end subbasin, designated as "Subbasin 76HE";

(vi) the southwest subbasin, designated as "Subbasin 76HF";

(vii) the west central subbasin, designated as "Subbasin 76HG"; or

(viii) the northwest subbasin, designated as "Subbasin 76HH".

(2) As provided in 85-2-319, the department may not ~~process or~~ grant an application for a permit to appropriate water or for a state water reservation within a Bitterroot River subbasin until the closure for the basin is terminated pursuant to subsection (3) of this section, except for:

(a) an application for a permit to appropriate ground water if the applicant complies with the provisions of [section ~~15~~ 14];

(b) an application for a permit to appropriate water for ~~a municipal water supply~~ use OF SURFACE WATER by OR FOR a municipality;

(c) temporary emergency appropriations pursuant to 85-2-113(3); ~~or~~

(d) an application to store water during high spring flow in an impoundment with a capacity of 50 acre-feet or more; or

(e) an application for a permit to appropriate surface water to conduct response actions related to natural

resource restoration required for:

(i) remedial actions pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601, et seq.;

(ii) aquatic resource activities carried out in compliance with and as required by the federal Clean Water Act of 1977, 33 U.S.C. 1251 through 1387; or

(iii) remedial actions taken pursuant to Title 75, chapter 10, part 7.

(3) A permit issued to conduct remedial actions or aquatic resource activities under subsection (2)(e) may not be used for dilution

(4) A change of use authorization for changing the purpose of use may not be issued for any permit issued pursuant to subsection (2)(b), (2)(c), or (2)(e).

~~(3)~~(5) Each Bitterroot River subbasin is closed to new appropriations and new state water reservations until 2 years after all water rights in the subbasin arising under the laws of the state are subject to an enforceable and administrable decree as provided in 85-2-406(4)."

~~**Section 13.** Section 85-2-402, MCA, is amended to read:~~

~~**"85-2-402. (Temporary) Changes in appropriation rights.** (1) The right to make a change subject to the provisions of this section in an existing water right, a permit, or a state water reservation is recognized and confirmed. In a change proceeding under this section, there is no presumption that an applicant for a change in appropriation right cannot establish lack of adverse effect prior to the adjudication of other rights in the source of supply pursuant to this chapter. Except as provided in 85-2-410 and subsections (15) and (16) of this section, an appropriator may not make a change in an appropriation right without the approval of the department or, if applicable, of the legislature. An applicant shall submit a correct and complete application.~~

~~(2) Except as provided in subsections (4) through (6), (15), and (16)~~ and subject to subsection (17), ~~the department shall approve a change in appropriation right if the appropriator proves by a preponderance of evidence that the following criteria are met:~~

~~(a) The proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued under part 3.~~

~~(b) Except for a lease authorization pursuant to 85-2-436 or a temporary change in appropriation right authorization to maintain or enhance streamflows to benefit the fishery resource pursuant to 85-2-408, the~~

~~proposed means of diversion, construction, and operation of the appropriation works are adequate.~~

~~(c) The proposed use of water is a beneficial use.~~

~~(d) Except for a lease authorization pursuant to 85-2-436 or a temporary change in appropriation right authorization pursuant to 85-2-408, 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.~~

~~(e) 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.~~

~~(f) The water quality of an appropriator will not be adversely affected.~~

~~(g) The ability of a discharge permitholder to satisfy effluent limitations of a permit issued in accordance with Title 75, chapter 5, part 4, will not be adversely affected.~~

~~(3) The applicant is required to prove that the criteria in subsections (2)(f) and (2)(g) have been met only if a valid objection is filed. A valid objection must contain substantial credible information establishing to the satisfaction of the department that the criteria in subsection (2)(f) or (2)(g), as applicable, may not be met.~~

~~(4) The department may not approve a change in purpose of use or place of use of an appropriation of 4,000 or more acre-feet of water a year and 5.5 or more cubic feet per second of water unless the appropriator proves by a preponderance of evidence that:~~

~~(a) the criteria in subsection (2) are met; and~~

~~(b) the proposed change is a reasonable use. A finding of reasonable use must be based on a consideration of:~~

~~(i) the existing demands on the state water supply, as well as projected demands for water for future beneficial purposes, including municipal water supplies, irrigation systems, and minimum streamflows for the protection of existing water rights and aquatic life;~~

~~(ii) the benefits to the applicant and the state;~~

~~(iii) the effects on the quantity and quality of water for existing uses in the source of supply;~~

~~(iv) the availability and feasibility of using low-quality water for the purpose for which application has been made;~~

~~(v) the effects on private property rights by any creation of or contribution to saline seep; and~~

~~(vi) the probable significant adverse environmental impacts of the proposed use of water as determined by the department pursuant to Title 75, chapter 1, or Title 75, chapter 20.~~

~~(5) The department may not approve a change in purpose of use or place of use for a diversion that~~

~~results in 4,000 or more acre-feet of water a year and 5.5 or more cubic feet per second of water being consumed unless:~~

~~(a) the applicant proves by clear and convincing evidence and the department finds that the criteria in subsections (2) and (4) are met; and~~

~~(b) for the withdrawal and transportation of appropriated water for out-of-state use, the department then petitions the legislature and the legislature affirms the decision of the department after one or more public hearings.~~

~~(6) The state of Montana has long recognized the importance of conserving its public waters and the necessity to maintain adequate water supplies for the state's water requirements, including requirements for federal non-Indian and Indian reserved water rights held by the United States for federal reserved lands and in trust for the various Indian tribes within the state's boundaries. Although the state of Montana also recognizes that, under appropriate conditions, the out-of-state transportation and use of its public waters are not in conflict with the public welfare of its citizens or the conservation of its waters, the following criteria must be met before out-of-state use may occur:~~

~~(a) The department and, if applicable, the legislature may not approve a change in appropriation right for the withdrawal and transportation of appropriated water for use outside the state unless the appropriator proves by clear and convincing evidence and, if applicable, the legislature approves after one or more public hearings that:~~

~~(i) depending on the volume of water diverted or consumed, the applicable criteria and procedures of subsection (2) or (4) are met;~~

~~(ii) the proposed out-of-state use of water is not contrary to water conservation in Montana; and~~

~~(iii) the proposed out-of-state use of water is not otherwise detrimental to the public welfare of the citizens of Montana.~~

~~(b) In determining whether the appropriator has proved by clear and convincing evidence that the requirements of subsections (6)(a)(ii) and (6)(a)(iii) will be met, the department and, if applicable, the legislature shall consider the following factors:~~

~~(i) whether there are present or projected water shortages within the state of Montana;~~

~~(ii) whether the water that is the subject of the proposed change in appropriation might feasibly be transported to alleviate water shortages within the state of Montana;~~

~~(iii) the supply and sources of water available to the applicant in the state where the applicant intends to~~

~~use the water; and~~

~~(iv) the demands placed on the applicant's supply in the state where the applicant intends to use the water.~~

~~(c) When applying for a change in appropriation right to withdraw and transport water for use outside the state, the applicant shall submit to and comply with the laws of the state of Montana governing the appropriation and use of water.~~

~~(7) For any application for a change in appropriation right involving 4,000 or more acre-feet of water a year and 5.5 or more cubic feet per second of water, the department shall give notice of the proposed change in accordance with 85-2-307 and shall hold one or more hearings in accordance with 85-2-309 prior to its approval or denial of the proposed change. The department shall provide notice and may hold one or more hearings upon any other proposed change in appropriation right if it determines that the proposed change might adversely affect the rights of other persons.~~

~~(8) The department or the legislature, if applicable, may approve a change in appropriation right subject to the terms, conditions, restrictions, and limitations that it considers necessary to satisfy the criteria of this section, including limitations on the time for completion of the change. The department may extend time limits specified in the change approval under the applicable criteria and procedures of 85-2-312(3).~~

~~(9) Upon actual application of water to the proposed beneficial use within the time allowed, the appropriator shall notify the department that the appropriation has been completed. The notification must contain a certified statement by a person with experience in the design, construction, or operation of appropriation works describing how the appropriation was completed.~~

~~(10) If a change in appropriation right is not completed as approved by the department or legislature or if the terms, conditions, restrictions, and limitations of the change approval are not complied with, the department may, after notice and opportunity for hearing, require the appropriator to show cause why the change approval should not be modified or revoked. If the appropriator fails to show sufficient cause, the department may modify or revoke the change approval.~~

~~(11) The original of a change approval issued by the department must be sent to the applicant, and a duplicate must be kept in the office of the department in Helena.~~

~~(12) A person holding an issued permit or change approval that has not been perfected may change the place of diversion, place of use, purpose of use, or place of storage by filing an application for change pursuant to this section.~~

~~(13) A change in appropriation right contrary to the provisions of this section is invalid. An officer, agent, agency, or employee of the state may not knowingly permit, aid, or assist in any manner an unauthorized change in appropriation right. A person or corporation may not, directly or indirectly, personally or through an agent, officer, or employee, attempt to change an appropriation right except in accordance with this section.~~

~~(14) The department may adopt rules to implement the provisions of this section.~~

~~(15) (a) An appropriator may change an appropriation right for a replacement well without the prior approval of the department if:~~

~~(i) the appropriation right is for:~~

~~(A) ground water outside the boundaries of a controlled ground water area; or~~

~~(B) ground water inside the boundaries of a controlled ground water area and if the provisions of the order declaring the controlled ground water area do not restrict such a change;~~

~~(ii) the change in appropriation right is to replace an existing well and the existing well will no longer be used;~~

~~(iii) the rate and volume of the appropriation from the replacement well are equal to or less than that of the well being replaced and do not exceed:~~

~~(A) 450 gallons a minute for a municipal well; or~~

~~(B) 35 gallons a minute and 10 acre-feet a year for all other wells;~~

~~(iv) the water from the replacement well is appropriated from the same aquifer as the water appropriated from the well being replaced; and~~

~~(v) a timely, correct and complete notice of replacement well is submitted to the department as provided in subsection (15)(b).~~

~~(b) (i) After completion of a replacement well and appropriation of ground water for a beneficial use, the appropriator shall file a notice of replacement well with the department on a form provided by the department.~~

~~(ii) The department shall review the notice of replacement well and shall issue an authorization of a change in an appropriation right if all of the criteria in subsection (15)(a) have been met and the notice is correct and complete.~~

~~(iii) The department may not issue an authorization of a change in appropriation right until a correct and complete notice of replacement well has been filed with the department. The department shall return a defective notice to the appropriator, along with a description of defects in the notice. The appropriator shall refile a corrected and completed notice of replacement well within 30 days of notification of defects or within a further~~

~~time as the department may allow, not to exceed 6 months.~~

~~(iv) If a notice of replacement well is not completed within the time allowed, the appropriator shall:~~

~~(A) cease appropriation of water from the replacement well pending approval by the department; and~~

~~(B) submit an application for a change in appropriation right to the department pursuant to subsections (1) through (3).~~

~~(c) The provisions of this subsection (15) do not apply to an appropriation right abandoned under 85-2-404.~~

~~(d) For each well that is replaced under this subsection (15), the appropriator shall follow the well abandonment procedures, standards, and rules adopted by the board of water well contractors pursuant to 37-43-202.~~

~~(e) The provisions of subsections (2), (3), (9), and (10) do not apply to a change in appropriation right that meets the requirements of subsection (15)(a).~~

~~(16) (a) An appropriator may change an appropriation right without the prior approval of the department for the purpose of constructing a redundant water supply well in a public water supply system, as defined in 75-6-102, if the redundant water supply well:~~

~~(i) withdraws water from the same ground water source as the original well; and~~

~~(ii) is required by a state or federal agency.~~

~~(b) The priority date of the redundant water supply well is the same as the priority date of the original well. Only one well may be used at one time.~~

~~(c) Within 60 days of completion of a redundant water supply well, the appropriator shall file a notice of construction of the well with the department on a form provided by the department. The department may return a defective notice of construction to the appropriator for correction and completion.~~

~~(d) The provisions of subsections (9) and (10) do not apply to a change in appropriation right that meets the requirements of this section.~~

~~(17) For an application for a change in appropriation right for ground water or to ground water in a basin closed pursuant to 85-2-330, 85-2-336, 85-2-341, 85-2-343, or 85-2-344 or during the period of closure for any basin that is administratively closed pursuant to 85-2-319, the applicant shall comply with the provisions of [section 15] in addition to the requirements of this section.~~ (Terminates June 30, 2009--sec. 9, Ch. 123, L. 1999.)

~~**85-2-402. (Effective July 1, 2009) Changes in appropriation rights.** (1) The right to make a change subject to the provisions of this section in an existing water right, a permit, or a state water reservation is~~

~~recognized and confirmed. In a change proceeding under this section, there is no presumption that an applicant for a change in appropriation right cannot establish lack of adverse effect prior to the adjudication of other rights in the source of supply pursuant to this chapter. Except as provided in 85-2-410 and subsections (15) and (16) of this section, an appropriator may not make a change in an appropriation right without the approval of the department or, if applicable, of the legislature. An applicant shall submit a correct and complete application.~~

~~(2) Except as provided in subsections (4) through (6), (15), and (16)~~ and subject to subsection (17), ~~the department shall approve a change in appropriation right if the appropriator proves by a preponderance of evidence that the following criteria are met:~~

~~(a) The proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued under part 3.~~

~~(b) Except for a temporary change in appropriation right authorization to maintain or enhance streamflows to benefit the fishery resource pursuant to 85-2-408, the proposed means of diversion, construction, and operation of the appropriation works are adequate.~~

~~(c) The proposed use of water is a beneficial use.~~

~~(d) Except for a temporary change in appropriation right authorization pursuant to 85-2-408, 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.~~

~~(e) 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.~~

~~(f) The water quality of an appropriator will not be adversely affected.~~

~~(g) The ability of a discharge permitholder to satisfy effluent limitations of a permit issued in accordance with Title 75, chapter 5, part 4, will not be adversely affected.~~

~~(3) The applicant is required to prove that the criteria in subsections (2)(f) and (2)(g) have been met only if a valid objection is filed. A valid objection must contain substantial credible information establishing to the satisfaction of the department that the criteria in subsection (2)(f) or (2)(g), as applicable, may not be met.~~

~~(4) The department may not approve a change in purpose of use or place of use of an appropriation of 4,000 or more acre-feet of water a year and 5.5 or more cubic feet per second of water unless the appropriator proves by a preponderance of evidence that:~~

~~(a) the criteria in subsection (2) are met; and~~

~~(b) the proposed change is a reasonable use. A finding of reasonable use must be based on a consideration of:~~

~~(i) the existing demands on the state water supply, as well as projected demands for water for future beneficial purposes, including municipal water supplies, irrigation systems, and minimum streamflows for the protection of existing water rights and aquatic life;~~

~~(ii) the benefits to the applicant and the state;~~

~~(iii) the effects on the quantity and quality of water for existing uses in the source of supply;~~

~~(iv) the availability and feasibility of using low-quality water for the purpose for which application has been made;~~

~~(v) the effects on private property rights by any creation of or contribution to saline seep; and~~

~~(vi) the probable significant adverse environmental impacts of the proposed use of water as determined by the department pursuant to Title 75, chapter 1, or Title 75, chapter 20.~~

~~(5) The department may not approve a change in purpose of use or place of use for a diversion that results in 4,000 or more acre-feet of water a year and 5.5 or more cubic feet per second of water being consumed unless:~~

~~(a) the applicant proves by clear and convincing evidence and the department finds that the criteria in subsections (2) and (4) are met; and~~

~~(b) for the withdrawal and transportation of appropriated water for out-of-state use, the department then petitions the legislature and the legislature affirms the decision of the department after one or more public hearings.~~

~~(6) The state of Montana has long recognized the importance of conserving its public waters and the necessity to maintain adequate water supplies for the state's water requirements, including requirements for federal non-Indian and Indian reserved water rights held by the United States for federal reserved lands and in trust for the various Indian tribes within the state's boundaries. Although the state of Montana also recognizes that, under appropriate conditions, the out-of-state transportation and use of its public waters are not in conflict with the public welfare of its citizens or the conservation of its waters, the following criteria must be met before out-of-state use may occur:~~

~~(a) The department and, if applicable, the legislature may not approve a change in appropriation right for the withdrawal and transportation of appropriated water for use outside the state unless the appropriator proves by clear and convincing evidence and, if applicable, the legislature approves after one or more public~~

~~hearings that:~~

~~(i) depending on the volume of water diverted or consumed, the applicable criteria and procedures of subsection (2) or (4) are met;~~

~~(ii) the proposed out-of-state use of water is not contrary to water conservation in Montana; and~~

~~(iii) the proposed out-of-state use of water is not otherwise detrimental to the public welfare of the citizens of Montana.~~

~~(b) In determining whether the appropriator has proved by clear and convincing evidence that the requirements of subsections (6)(a)(ii) and (6)(a)(iii) will be met, the department and, if applicable, the legislature shall consider the following factors:~~

~~(i) whether there are present or projected water shortages within the state of Montana;~~

~~(ii) whether the water that is the subject of the proposed change in appropriation might feasibly be transported to alleviate water shortages within the state of Montana;~~

~~(iii) the supply and sources of water available to the applicant in the state where the applicant intends to use the water; and~~

~~(iv) the demands placed on the applicant's supply in the state where the applicant intends to use the water.~~

~~(c) When applying for a change in appropriation right to withdraw and transport water for use outside the state, the applicant shall submit to and comply with the laws of the state of Montana governing the appropriation and use of water.~~

~~(7) For any application for a change in appropriation right involving 4,000 or more acre-feet of water a year and 5.5 or more cubic feet per second of water, the department shall give notice of the proposed change in accordance with 85-2-307 and shall hold one or more hearings in accordance with 85-2-309 prior to its approval or denial of the proposed change. The department shall provide notice and may hold one or more hearings upon any other proposed change in appropriation right if it determines that the proposed change might adversely affect the rights of other persons.~~

~~(8) The department or the legislature, if applicable, may approve a change in appropriation right subject to the terms, conditions, restrictions, and limitations that it considers necessary to satisfy the criteria of this section, including limitations on the time for completion of the change. The department may extend time limits specified in the change approval under the applicable criteria and procedures of 85-2-312(3).~~

~~(9) Upon actual application of water to the proposed beneficial use within the time allowed, the~~

~~appropriator shall notify the department that the appropriation has been completed. The notification must contain a certified statement by a person with experience in the design, construction, or operation of appropriation works describing how the appropriation was completed.~~

~~(10) If a change in appropriation right is not completed as approved by the department or legislature or if the terms, conditions, restrictions, and limitations of the change approval are not complied with, the department may, after notice and opportunity for hearing, require the appropriator to show cause why the change approval should not be modified or revoked. If the appropriator fails to show sufficient cause, the department may modify or revoke the change approval.~~

~~(11) The original of a change approval issued by the department must be sent to the applicant, and a duplicate must be kept in the office of the department in Helena.~~

~~(12) A person holding an issued permit or change approval that has not been perfected may change the place of diversion, place of use, purpose of use, or place of storage by filing an application for change pursuant to this section.~~

~~(13) A change in appropriation right contrary to the provisions of this section is invalid. An officer, agent, agency, or employee of the state may not knowingly permit, aid, or assist in any manner an unauthorized change in appropriation right. A person or corporation may not, directly or indirectly, personally or through an agent, officer, or employee, attempt to change an appropriation right except in accordance with this section.~~

~~(14) The department may adopt rules to implement the provisions of this section.~~

~~(15) (a) An appropriator may change an appropriation right for a replacement well without the prior approval of the department if:~~

~~(i) the appropriation right is for:~~

~~(A) ground water outside the boundaries of a controlled ground water area; or~~

~~(B) ground water inside the boundaries of a controlled ground water area and if the provisions of the order declaring the controlled ground water area do not restrict such a change;~~

~~(ii) the change in appropriation right is to replace an existing well and the existing well will no longer be used;~~

~~(iii) the rate and volume of the appropriation from the replacement well are equal to or less than that of the well being replaced and do not exceed:~~

~~(A) 450 gallons a minute for a municipal well; or~~

~~(B) 35 gallons a minute and 10 acre-feet a year for all other wells;~~

~~(iv) the water from the replacement well is appropriated from the same aquifer as the water appropriated from the well being replaced; and~~

~~(v) a timely, correct and complete notice of replacement well is submitted to the department as provided in subsection (15)(b).~~

~~(b) (i) After completion of a replacement well and appropriation of ground water for a beneficial use, the appropriator shall file a notice of replacement well with the department on a form provided by the department.~~

~~(ii) The department shall review the notice of replacement well and shall issue an authorization of a change in an appropriation right if all of the criteria in subsection (15)(a) have been met and the notice is correct and complete.~~

~~(iii) The department may not issue an authorization of a change in appropriation right until a correct and complete notice of replacement well has been filed with the department. The department shall return a defective notice to the appropriator, along with a description of defects in the notice. The appropriator shall refile a corrected and completed notice of replacement well within 30 days of notification of defects or within a further time as the department may allow, not to exceed 6 months.~~

~~(iv) If a notice of replacement well is not completed within the time allowed, the appropriator shall:~~

~~(A) cease appropriation of water from the replacement well pending approval by the department; and~~

~~(B) submit an application for a change in appropriation right to the department pursuant to subsections (1) through (3).~~

~~(c) The provisions of this subsection (15) do not apply to an appropriation right abandoned under 85-2-404.~~

~~(d) For each well that is replaced under this subsection (15), the appropriator shall follow the well abandonment procedures, standards, and rules adopted by the board of water well contractors pursuant to 37-43-202.~~

~~(e) The provisions of subsections (2), (3), (9), and (10) do not apply to a change in appropriation right that meets the requirements of subsection (15)(a).~~

~~(16) (a) An appropriator may change an appropriation right without the prior approval of the department for the purpose of constructing a redundant water supply well in a public water supply system, as defined in 75-6-102, if the redundant water supply well:~~

~~(i) withdraws water from the same ground water source as the original well; and~~

~~(ii) is required by a state or federal agency.~~

~~(b) The priority date of the redundant water supply well is the same as the priority date of the original well. Only one well may be used at one time.~~

~~(c) Within 60 days of completion of a redundant water supply well, the appropriator shall file a notice of construction of the well with the department on a form provided by the department. The department may return a defective notice of construction to the appropriator for correction and completion.~~

~~(d) The provisions of subsections (9) and (10) do not apply to a change in appropriation right that meets the requirements of this section.~~

~~(17) For an application for a change in appropriation right for ground water or to ground water in a basin closed pursuant to 85-2-330, 85-2-336, 85-2-341, 85-2-343, or 85-2-344 or during the period of closure for any basin that is administratively closed pursuant to 85-2-319, the applicant shall comply with the provisions of [section 15] in addition to the requirements of this section."~~

Section 13. Section 85-2-506, MCA, is amended to read:

"85-2-506. Controlled ground water areas -- designation or modification. (1) The department may designate or modify controlled ground water areas as provided in this part.

(2) Designation or modification of an area of controlled ground water use may be proposed to the department on its own motion, by petition of a state or local public health agency for identified public health risks, or by petition signed by at least 20 or one-fourth of the users, ~~(~~whichever is the lesser number~~)~~, of ground water in a ground water area in which there are alleged to be facts showing that:

(a) ~~that~~ ground water withdrawals are in excess of recharge to the aquifer or aquifers within the ground water area;

(b) ~~that~~ excessive ground water withdrawals are very likely to occur in the near future because of consistent and significant increases in withdrawals from within the ground water area;

(c) ~~that~~ significant disputes regarding priority of rights, amounts of ground water in use by appropriators, or priority of type of use are in progress within the ground water area;

(d) ~~that~~ ground water levels or pressures in the area in question are declining or have declined excessively;

(e) ~~that~~ excessive ground water withdrawals would cause contaminant migration;

(f) ~~that~~ ground water withdrawals adversely affecting ground water quality within the ground water area are occurring or are likely to occur; or

(g) ~~that~~ water quality within the ground water area is not suited for a specific beneficial use defined by ~~85-2-102(2)(a)~~ 85-2-102(4)(a).

(3) When a proposal is made, the department shall fix a time and place for a hearing, which ~~time~~ may not be less than 90 days from the making of the proposal. The place for the hearing must be within or as close as practical to the controlled ground water area.

(4) The department shall publish a notice of the hearing, setting forth:

(a) the names of the petitioners;

(b) the description by legal subdivisions (section, township, range) of all lands included in or proposed to be included in the ground water area or subarea;

(c) the purpose of the hearing; and

(d) the time and place of the hearing where any interested person may appear, either in person or by attorney, file written objections to the granting of the proposal, and be fully heard.

(5) (a) The notice of hearing must be published at least once ~~in~~ each week for 3 successive weeks not less than 30 days before the date of the hearing in a newspaper of general circulation in the county or counties in which the ground water area or subarea is located. The department shall also cause a copy of the notice, together with a copy of the petition, to be served by mail, not less than 30 days before the hearing, upon:

(i) each well driller licensed in Montana whose address is within any county in which any part of the area in question is located; ~~upon~~

(ii) each person or public agency known from an examination of the records in the department's office to be a claimant or appropriator of ground water in the area in question ~~(claimant or appropriator meaning one who diverts, impounds, or withdraws ground water and not merely one who uses or obtains ground water from another who diverts, impounds, or withdraws ground water)~~; ~~upon~~

(iii) the bureau; and ~~upon~~

(iv) the mayor or presiding officer of the governing body of each incorporated municipality located in whole or in part within the proposed ground water area.

(b) The department may also serve notice upon any other person or state or federal agency that the department feels may be interested in or affected by the proposed designation or modification of a controlled ground water area. The petition need not be served on any petitioner. A copy of the notice, together with a copy of the proposal, must be mailed to each person at the person's last-known address, and service is complete upon depositing it in the post office, postage prepaid, addressed to each person on whom it is to be served. Publication

and mailing of the notice as prescribed in this section, when completed, is considered to be sufficient notice of the hearing to all interested persons.

(c) As used in subsection (5)(a), "claimant or appropriator" means a person who diverts, impounds, or withdraws ground water and not merely a person who uses or obtains ground water from another person who diverts, impounds, or withdraws ground water."

NEW SECTION. **Section 14. Ground water appropriation right in closed basins.** (1) An application for a ground water appropriation right in a basin closed pursuant to 85-2-330, 85-2-336, 85-2-341, 85-2-343, or 85-2-344 or administratively closed pursuant to 85-2-319 ~~or an application for a change in appropriation right for an appropriation right located within a closed basin pursuant to 85-2-402(17)~~ must be accompanied by a hydrogeologic assessment that has been conducted pursuant to [section ~~16~~ 15] to predict whether the proposed appropriation right ~~or change in appropriation right~~ will result in a net depletion of surface water and must be accompanied by a plan as provided in [section ~~17~~ 16], if necessary.

(2) If the hydrogeologic assessment conducted pursuant to [section ~~16~~ 15] predicts that the proposed appropriation right ~~or change in appropriation right~~ will not result in a net depletion of surface water, the department shall proceed under the criteria provided in 85-2-311.

(3) (a) ~~(i)~~ If the hydrogeologic assessment predicts that the proposed appropriation right ~~or change in appropriation right~~ will result in a net depletion of surface water, the applicant shall ~~determine if~~ ANALYZE WHETHER the net depletion results in an adverse effect on a prior appropriator. If THE APPLICANT PROVIDES ~~SUBSTANTIAL CREDIBLE INFORMATION SHOWING THAT~~ ~~there is no adverse effect on a prior appropriator~~ A CORRECT AND COMPLETE APPLICATION ~~and the department agrees with this determination~~, the department shall proceed TO PROCESS THE APPLICATION as provided in ~~85-2-307 through 85-2-311~~ [SECTION 17].

~~(ii) If there is THE APPLICANT FAILS TO PROVIDE SUBSTANTIAL CREDIBLE INFORMATION SHOWING THE LACK OF an adverse effect on a prior appropriator FROM NET DEPLETIONS, the department may not grant the permit unless, IN ADDITION TO ALL OTHER APPLICABLE CRITERIA, the applicant complies with subsection (4).~~

(b) If the applicant has used the water for the purpose of conducting the hydrogeologic assessment, the applicant shall terminate the use of the water. Failure to terminate use of the water must result in a fine of not more than $1,000 for each day of the violation.

(4) ~~(a)~~ If the hydrogeologic assessment predicts that there will be net depletion as provided in subsection (3)(a)~~(ii)~~, THE DEPARTMENT MAY PROCEED TO PROCESS THE APPLICATION PURSUANT TO [SECTION 17] IF, IN ADDITION

TO OTHER APPLICABLE CRITERIA, the applicant ~~may receive an appropriation right if the applicant~~ complies with [section ~~17~~ 16] ~~and the department determines that the amount of net depletion that causes~~ ~~PROVES BY A PREPONDERANCE OF THE EVIDENCE THAT~~ the adverse effect ~~CAUSED BY THE NET DEPLETION~~ ~~will be offset~~.

~~(b) The department shall analyze the plan submitted pursuant to [section 17]. The department shall determine if the amount of net depletion that will result in an adverse effect will be offset. If the department determines that the amount of net depletion that will result in an adverse effect will be offset, the department shall proceed under the criteria of 85-2-307 through 85-2-311. If the amount of net depletion that the department determines will result in an adverse effect will not be offset, the department shall reject the application.~~

(5) For the purposes of [sections ~~15~~ 14 through ~~17~~ 16], the prediction of net depletion does not mean that an adverse effect on a prior appropriator will occur or if an adverse effect does occur that the entire amount of net depletion is the cause of the adverse effect. A determination of whether or not there is an adverse effect on a prior appropriator as the result of a new appropriation right ~~or a change in appropriation right~~ is a determination that must be made by the department based on the amount, location, and duration of the amount of net depletion that causes the adverse effect relative to the historic beneficial use of the appropriation right that ~~is claimed to~~ MAY be adversely affected.

~~(6) This section may not be interpreted to change the parameters of any water reservation as it was granted within any closed basin.~~

(6) THE PRIORITY DATE FOR AN APPROPRIATION RIGHT THAT IS GRANTED TO AN ENTITY WHOSE PERMIT APPLICATION WAS RETURNED AFTER APRIL 11, 2006, AND BEFORE [THE EFFECTIVE DATE OF THIS ACT] BECAUSE OF THE DEPARTMENT'S INTERPRETATION OF A COURT DECISION IS THE DATE OF THE INITIAL APPLICATION TO THE DEPARTMENT.

NEW SECTION. **Section 15. Hydrogeologic assessment -- definition -- minimum requirements.** (1) (a) For the purposes of [sections ~~15~~ 14 through ~~17~~ 16], "hydrogeologic assessment" means a report for the project for or through which water will be put to beneficial use, the point of diversion, ~~or~~ AND the place of use that describes the geology, hydrogeologic environment, ~~water balance,~~ water quality with regard to the provisions of [sections 18 and 19], and predicted net depletion, if any, including the timing of any NET depletion, for surface water within the area described in subsection (2)(a)(i) 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 ~~or change in appropriation right~~ and any predicted water quality changes that may result.

(b) In predicting net depletion of surface water from a proposed use, consideration must be given, at a

minimum, to:

~~(i) the actual amount to be diverted according to historical practice;~~

~~(ii)~~(I) the actual amount diverted for like beneficial uses;

~~(iii)~~(II) any amounts that will likely be lost in conveyance, if any, and whether any lost amounts are lost to the system through evaporation or other means or whether those amounts are returned to the system through percolation or other means; and

~~(iv)~~(III) any return flows from the proposed use, including but not limited to any treated wastewater return flows if the treated wastewater that is considered effluent meets the requirements of [sections 18 and 19].

(2) (a) A hydrogeologic assessment that will be used to predict net depletion of surface water resulting from a new appropriation right ~~or a change in appropriation right~~ must include ~~a~~ hydrogeologic DATA OR A model developed by a hydrogeologist, a qualified scientist, or a qualified licensed professional engineer that incorporates for the new appropriation ~~or the change in appropriation right~~:

(i) the area or estimated area of ground water that will be affected not to exceed the boundaries of the drainage subdivisions established by the office of water data coordination, United States geological survey, AND USED BY THE WATER COURT, UNLESS THE APPLICANT CHOOSES TO EXPAND THE BOUNDARIES;

(ii) the geology in the area identified in subsection (2)(a)(i), including stratigraphy and structure;

(iii) the parameters of the aquifer system within the area identified in subsection (2)(a)(i) to include, at a minimum, estimates for:

(A) the lateral and vertical extent of the aquifer;

(B) whether the aquifer is confined or unconfined;

(C) the effective hydraulic conductivity of the aquifer;

(D) transmissivity and storage coefficient related to the aquifer; and

(E) the estimated flow direction or directions of ground water and the rate of movement;

(iv) the locations of surface waters within the area described in subsection (2)(a)(i) that are subject to an appropriation right, including but not limited to springs, creeks, streams, or rivers that may or may not show a net depletion;

(v) evidence of water availability; and

(vi) the locations of all wells or other sources of ground water of record within the area identified in subsection (2)(a)(i).

(b) A hydrogeologic assessment must also include a water quality report that includes:

(i) the location of existing documented hazards that could be affected or exacerbated by the appropriation right ~~or change in appropriation right~~, such as areas of subsidence, along with a plan to mitigate any conditions or impacts;

~~(ii) the chemical and physical composition of the source water or waters and any water quality impacts that may occur;~~

~~(iii)~~(II) other water quality information necessary to comply with [sections 18 and 19] ~~and to determine any cumulative water quality impacts based on the impacts of the proposed appropriation right or change in appropriation and any return flow when considered in association with projects putting water to beneficial use or discharges that have been permitted since the effective date of the basin closure~~; and

~~(iv)~~(III) a description of any water treatment method that will be used at the time of any type of injection or introduction of water to the aquifer to ensure compliance with [sections 18 and 19] and the water quality laws under Title 75, chapter 5.

(3) The hydrogeologic assessment must include an analysis of whether the information required by subsection (2) predicts~~, by a preponderance of the evidence,~~ that there may be a net depletion of surface water in the area described in subsection (2)(a)(i) and the extent of the depletion, if any.

(4) ~~(a)~~ The hydrogeologic assessment, THE model IF PROVIDED, THE test well data, THE monitoring well data, and other related information must be submitted to the department. The department shall submit this information to the bureau of mines and geology.

~~(b) The bureau of mines and geology shall examine the data and provide feedback to the department regarding the scientific adequacy of the assessment. If the bureau of mines and geology has not provided a written opinion regarding the scientific adequacy of the assessment within 90 days of receiving the information from the department, the assessment must be considered scientifically adequate and the department shall proceed with its determination.~~

~~(c)~~ The bureau of mines and geology shall ensure that information submitted pursuant to this section is entered into the ground water information center database as part of the ground water assessment program.

(5) An entity that has previously conducted some type of hydrogeologic assessment may submit the information from that assessment as the hydrogeologic assessment required by this section if the information meets the criteria and requirements of this section.

NEW SECTION. **Section 16. Aquifer recharge or mitigation plans in closed basins -- minimum**

requirements. (1) An applicant whose hydrogeologic assessment conducted pursuant to [section ~~16~~ 15] predicts that there will be a net depletion of surface water ~~that will result in an adverse effect on a prior appropriator as described in [section 15-14] may~~ SHALL offset the net depletion that results in the adverse effect through a mitigation plan or an aquifer recharge plan.

(2) ~~A mitigation plan must be approved by the department prior to approving a change in appropriation right or a new appropriation right that relies on mitigation to offset net depletion of surface water.~~ A mitigation plan must include:

(a) where and how the water in the plan will be put to beneficial use;

(b) when and where, GENERALLY, water reallocated through exchange or substitution will be required;

(c) the amount of water reallocated through exchange or substitution that is required;

(d) how the proposed project or beneficial use for which the mitigation plan is required will be operated;

(e) evidence that an application for a change in appropriation right, if necessary, has been submitted;

(f) evidence of water availability; and

(g) evidence ~~that~~ OF HOW the mitigation plan will ~~be effective in offsetting~~ OFFSET the required amount of net depletion of surface water in a manner that will offset an adverse effect on a prior appropriator.

(3) ~~An aquifer recharge plan must be approved by the department prior to approving a change in appropriation right or a new appropriation right that relies on aquifer recharge to offset net depletion of surface water.~~ An aquifer recharge plan must include:

(a) evidence that the appropriate water quality related permits have been granted pursuant to Title 75, chapter 5, and pursuant to [sections 18 and 19];

(b) where and how the water in the plan will be put to beneficial use;

(c) when and where, GENERALLY, water reallocated through exchange or substitution will be required;

(d) the amount of water reallocated through exchange or substitution that is required;

(e) how the proposed project or beneficial use for which the aquifer recharge plan is required will be operated;

(f) evidence that an application for a change in appropriation right, if necessary, has been submitted;

(g) a description of the process by which water will be reintroduced to the aquifer;

(h) evidence of water availability; and

(i) evidence ~~that~~ OF HOW the aquifer recharge plan will ~~be effective in offsetting~~ OFFSET the required amount of net depletion of surface water in a manner that will offset any adverse effect on a prior appropriator.

(4) The department may not require an applicant, through a mitigation plan or an aquifer recharge plan, to provide more water than the quantity needed to offset the ~~predicted~~ ADVERSE EFFECTS ON A PRIOR APPROPRIATOR CAUSED BY THE net depletion.

(5) An appropriation right that relies on a mitigation plan or aquifer recharge plan to offset net depletion of surface water that results in an adverse effect on a prior appropriator must be issued as a conditional permit that requires that the mitigation plan or aquifer recharge plan must be exercised when the appropriation right is exercised.

NEW SECTION. **SECTION 17. PROCESS FOR COMBINING DECISIONS ON GROUND WATER PERMIT APPLICATIONS IN CLOSED BASINS.** (1) AN APPLICANT FOR A PERMIT TO APPROPRIATE GROUND WATER IN A CLOSED BASIN SHALL SUBMIT TO THE DEPARTMENT A COMBINED APPLICATION CONSISTING OF A HYDROGEOLOGIC ASSESSMENT WITH AN ANALYSIS OF NET DEPLETION, A MITIGATION PLAN OR AQUIFER RECHARGE PLAN IF REQUIRED, AN APPLICATION FOR A BENEFICIAL WATER USE PERMIT OR PERMITS, AND AN APPLICATION FOR A CHANGE IN APPROPRIATION RIGHT OR RIGHTS IF NECESSARY.

(2) THE DEPARTMENT SHALL REVIEW THE APPLICATION TO DETERMINE IF IT IS CORRECT AND COMPLETE UNDER THE PROCESS AND REQUIREMENTS OF 85-2-302.

~~(3) (A) ONCE AN APPLICATION HAS BEEN DETERMINED TO BE CORRECT AND COMPLETE, THE DEPARTMENT SHALL ISSUE A STATEMENT OF THE DEPARTMENT'S OPINION AND THE REASONS FOR ITS OPINION, INCLUDING A CRITERIA ASSESSMENT STATING WHETHER THE DEPARTMENT IS OF THE OPINION THAT THE APPLICATION SHOULD BE APPROVED, DENIED, OR APPROVED IN A MODIFIED FORM OR UPON TERMS, CONDITIONS, OR LIMITATIONS SPECIFIED BY THE DEPARTMENT. THE CRITERIA ASSESSMENT MUST BE PROVIDED TO THE APPLICANT AND MADE AVAILABLE TO THE PUBLIC PRIOR TO PUBLIC NOTICE OF THE APPLICATION. THE DEPARTMENT SHALL PREPARE A NOTICE AND PUBLISH IT AS PROVIDED UNDER 85-2-307.~~

~~(B) IF NO VALID OBJECTION IS FILED TO THE APPLICATION AND THE CRITERIA ASSESSMENT PREPARED BY THE DEPARTMENT STATES THAT THE DEPARTMENT IS OF THE OPINION THAT THE APPLICATION SHOULD BE APPROVED, THE DEPARTMENT SHALL ISSUE THE PERMIT AND A HEARING MAY NOT BE HELD.~~

~~(C) IF NO VALID OBJECTION IS FILED TO THE APPLICATION AND THE CRITERIA ASSESSMENT PREPARED BY THE DEPARTMENT STATES THAT THE DEPARTMENT IS OF THE OPINION THAT THE APPLICATION SHOULD BE DENIED OR APPROVED IN A MODIFIED FORM OR UPON TERMS, CONDITIONS, OR LIMITATIONS SPECIFIED BY THE DEPARTMENT, THE DEPARTMENT SHALL PROCEED TO PROCESS THE APPLICATION PURSUANT TO 85-2-310(2).~~

~~(D) IF A VALID OBJECTION IS FILED TO THE APPLICATION, THE DEPARTMENT SHALL PROCEED TO PROCESS THE~~

~~APPLICATION PURSUANT TO 85-2-308 THROUGH 85-2-311. IF THE APPLICANT SATISFIES THE CRITERIA OF 85-2-311 AND 85-2-402, IF NECESSARY, AND PROVES BY A PREPONDERANCE OF THE EVIDENCE THAT NET DEPLETION, IF ANY, WILL NOT ADVERSELY AFFECT A PRIOR APPROPRIATOR BASED ON THE APPLICANT'S MITIGATION PLAN OR AQUIFER RECHARGE PLAN, THE DEPARTMENT SHALL ISSUE THE PERMIT.~~

(3) (A) ONCE AN APPLICATION HAS BEEN DETERMINED TO BE CORRECT AND COMPLETE, THE DEPARTMENT SHALL PREPARE A NOTICE AND PUBLISH IT AS PROVIDED UNDER 85-2-307.

(B) IF NO VALID OBJECTION TO THE APPLICATION IS FILED AND THE APPLICANT PROVES THAT THE CRITERIA OF 85-2-311 OR 85-2-402, IF NECESSARY, HAVE BEEN SATISFIED, THE APPLICATION MUST BE GRANTED OR APPROVED IN A MODIFIED FORM OR UPON TERMS, CONDITIONS, OR LIMITATIONS SPECIFIED BY THE DEPARTMENT.

(C) IF NO VALID OBJECTION TO THE APPLICATION IS FILED AND THE APPLICANT HAS NOT PROVED THAT THE CRITERIA OF 85-2-311 OR 85-2-402, IF NECESSARY, HAVE BEEN SATISFIED, THE APPLICATION MUST BE DENIED.

(D) IF A VALID OBJECTION TO THE APPLICATION IS FILED, THE DEPARTMENT SHALL PROCEED TO PROCESS THE APPLICATION PURSUANT TO 85-2-308 THROUGH 85-2-311. IF THE APPLICANT SATISFIES THE CRITERIA OF 85-2-311 OR 85-2-402, IF NECESSARY, AND PROVES BY A PREPONDERANCE OF THE EVIDENCE THAT NET DEPLETION, IF ANY, WILL NOT ADVERSELY AFFECT A PRIOR APPROPRIATOR BASED ON THE APPLICANT'S MITIGATION PLAN OR AQUIFER RECHARGE PLAN, THE DEPARTMENT SHALL ISSUE THE PERMIT.

NEW SECTION. **Section 18. Department permit coordination -- requirements for aquifer recharge plans.** TO ENSURE THAT THE DEPARTMENT AND THE DEPARTMENT OF ENVIRONMENTAL QUALITY ARE COORDINATING THEIR RESPECTIVE PERMITTING ACTIVITIES:

(1) ~~An~~ AN applicant for a new appropriation right ~~or a change in appropriation right~~ pursuant to [section ~~15~~ 14] that involves aquifer recharge ~~or mitigation~~ shall provide the department with a copy of a relevant discharge permit if necessary~~.~~; AND

(2) ~~The~~ THE department may not grant a new appropriation right ~~or a change in appropriation right~~ pursuant to [section ~~15~~ 14] that involves aquifer recharge ~~or mitigation~~ until the discharge permit, if necessary, has been obtained and presented to the department.

NEW SECTION. **Section 19. Water quality of return flows and discharges associated with ~~mitigation plan or~~ aquifer recharge plan -- minimum requirements.** (1) A person who proposes to use sewage FROM A SYSTEM REQUIRING A WATER QUALITY PERMIT for the purposes of aquifer recharge ~~or mitigation~~ pursuant

to [section ~~17~~ 16] or plans to use sewage FROM A SYSTEM REQUIRING A WATER QUALITY PERMIT as a return flow to minimize the amount of water necessary to offset adverse effects resulting from net depletion of surface water through ~~a mitigation plan or~~ AN aquifer recharge plan pursuant to [section ~~17~~ 16] must obtain a current permit pursuant to this chapter.

(2) The minimum treatment requirements for sewage systems subject to this section are the federal requirements provided for in 40 CFR 133, and the system must meet, AT A MINIMUM, the requirements of level two treatment for the removal of nitrogen in the effluent.

(3) In addition to the minimum treatment requirements of subsection (2), sewage systems subject to this section ~~must meet the following requirements:~~

~~(a) the drinking water standards provided for in Title 75, chapter 6, at the point of discharge; and~~

~~(b) the applicable water quality standards, including the nondegradation requirements of 75-5-301 and 75-5-303 at the point of discharge~~ THAT ARE USED FOR 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.

(4) THE APPROPRIATE INTERIM LEGISLATIVE COMMITTEE SHALL REVIEW DRINKING WATER STANDARDS AND EFFLUENT TREATMENT STANDARDS IN OTHER JURISDICTIONS AND RECOMMEND APPROPRIATE TREATMENT STANDARDS FOR PURPOSES OF AQUIFER RECHARGE AND MITIGATION.

(5) FOR THE PURPOSES OF THIS SECTION, "AQUIFER INJECTION" MEANS 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.

NEW SECTION. **Section 20. Aquifer storage and recovery projects in closed basins.** (1) An aquifer storage and recovery project may be authorized in a closed basin.

(2) In addition to the criteria provided in Title 85, chapter 2, part 3, AND 85-2-402, an aquifer storage and recovery project must meet the requirements provided in [sections ~~15~~ 14 through 19].

~~NEW SECTION. **Section 21. Previously approved augmentation plans.** (1) Except as provided in 85-2-337 for the Clark Fork basin, augmentation plans, mitigation plans, or aquifer recharge plans have not been specifically statutorily authorized prior to [the effective date of this act]. Any rules for augmentation plans, mitigation plans, or aquifer recharge plans that were adopted to apply to basins other than the Clark Fork basin~~

~~were adopted without express statutory authority.~~

~~(2) (a) Any appropriation right finally issued and not in administrative or judicial review in a closed basin for ground water prior to [the effective date of this act] other than in the Clark Fork basin pursuant to 85-2-337 that is contingent on or was approved based on the terms of an augmentation plan, mitigation plan, or aquifer recharge plan must meet the requirements of [sections 15 through 22] by July 1, 2008. If the requirements are not met by July 1, 2008, the permitholder shall cease operations. Failure to cease operations must result in a daily fine not to exceed $1,000 for each day of the violation.~~

~~(b) Any appropriation right that is not finally issued or that is the subject of an administrative or judicial review in a closed basin for ground water on [the effective date of this act] other than in the Clark Fork basin pursuant to 85-2-337 that is contingent on or for which approval is based on the terms of an augmentation plan, mitigation plan, or aquifer recharge plan must meet the requirements of [sections 15 through 22].~~

~~(3) The holder of an appropriation right described in subsection (2) shall submit proof of meeting the requirements to the department for the department's approval.~~

~~(4) Once a new appropriation right or change in appropriation right that is subject to subsection (1) or (2) complies with the requirements of [sections 15 through 22], the priority date for a new appropriation right subject to this section is the date of the initial application to the department.~~

NEW SECTION. **Section 21. Aquifer testing, test well, or monitoring well data submission -- not beneficial use.** (1) All aquifer testing data and other related information from test wells, monitoring wells, or other sources that is collected for the purpose of obtaining a new appropriation right or a change in appropriation right pursuant to [sections ~~15~~ 14 through ~~17~~ 16] must be submitted to the department and the bureau of mines and geology in a form prescribed by the department and the bureau of mines and geology. The bureau of mines and geology shall ensure that information submitted pursuant to this section is entered into the ground water information center database as part of the ground water assessment program.

(2) (a) Water testing or monitoring is not a beneficial use of water requiring the filing of a permit application.

(b) A permit is not required if the intent of a person is to conduct aquifer tests, water quality tests, water level monitoring, or other testing or monitoring of a water source.

NEW SECTION. **Section 22. Rulemaking.** The department may adopt rules to implement the

provisions of [sections ~~15~~ 14 through 18 ~~and 20 through 22~~, 19, AND 20]. The rules must be oriented toward the protection of existing rights from adverse effects from net depletions caused by new appropriation rights or changes in appropriation rights in closed basins and must be consistent with and not exceed the requirements of [sections ~~15~~ 14 through 18 ~~and 20 through 22~~, 19, AND 20].

NEW SECTION. **Section 23. Closed basin case study.** (1) (a) The Montana bureau of mines and geology, provided for in 20-25-211, shall review, assess for scientific accuracy, and compile and summarize ground water studies that have been conducted in the last 20 years in closed basins or subbasins in Montana that may have a bearing on better understanding the water balance in these basins with respect to potential ground water withdrawal impacts on surface water. The bureau of mines and geology shall also study the extent to which ground water withdrawals may result in net depletion of surface water in a closed basin or in specific areas of a closed basin.

(b) After compilation of the information, the bureau of mines and geology shall present recommendations to the appropriate legislative interim committee regarding any additional studies that would help to assess the water balance in closed basins or subbasins with respect to potential ground water withdrawal impacts on surface waters.

(2) The bureau of mines and geology shall conduct a case study to gather and develop data to determine the adequacy of any additional recommended minimum standards and criteria for hydrogeologic assessments, as defined in [section ~~16~~ 15], associated with ground water withdrawals and the range of impacts of those withdrawals on surface water and ground water resources. The department of natural resources and conservation shall coordinate with the bureau of mines and geology with regard to surface water monitoring and other elements of the case study as necessary.

(3) The case study must be conducted in basins closed pursuant to sections 85-2-330, ~~85-2-337~~ 85-2-336, 85-2-341, 85-2-343, or 85-2-344. The bureau of mines and geology shall ensure that at each site involved in the case study the following, at a minimum, is accomplished to provide the necessary scientific data and information to policymakers:

(a) an appropriate number of monitoring wells are drilled or available to provide scientifically defensible data;

(b) aquifer testing and recovery testing is conducted at the site;

(c) water quality samples are collected from each pumping or primary well at the beginning of the case

study and at the end of the case study;

(d) if information or data has already been collected for the site, the information is reviewed, analyzed, and verified by the bureau of mines and geology;

(e) if the site has an established system, that the established system is monitored under its current or planned operating conditions; and

(f) any other information is collected that the bureau of mines and geology determines is necessary to determine recommendations for additional minimum standards and criteria for hydrogeologic assessments, as defined in [section ~~16~~ 15], associated with ground water withdrawals and the range of impacts those withdrawals have on surface water and ground water resources.

(4) In addition to the requirements of subsection (3), the bureau of mines and geology shall develop a system to compile existing aquifer testing data, as well as data resulting from hydrogeologic assessments, as defined in [section ~~16~~ 15], and monitoring activities.

(5) The department of natural resources and conservation shall coordinate with the bureau of mines and geology to provide surface water measurements ~~to determine impacts, if any, to surface water resources~~, AS APPROPRIATE, when a well located at a case study site is pumped.

(6) The bureau of mines and geology shall:

(a) provide updates to the appropriate legislative interim committee throughout the interim related to the progress of the review pursuant to subsection (1) and the case study pursuant to subsections (2) through (5), data trends, if any, and other information necessary to assist the legislative interim committee in developing any necessary policy recommendations;

(b) upon request, provide updates to the ground water assessment steering committee provided for in 2-15-1523; and

(c) submit a report to the appropriate legislative interim committee and the 61st legislature providing a detailed analysis of the results of the review and case study.

NEW SECTION. **Section 24. Case study -- requirements for participation -- FEE.** (1) (a) Participants in the case study that are proposing a new ground water appropriation ~~or a change in appropriation right pursuant to 85-2-402(17)~~ are subject to the requirements of [sections ~~15~~ 14 through ~~22~~ 21].

(b) Up to a maximum of 10 sites that are the result of a new appropriation or a change in appropriation right may be included in the case study provided for in [section ~~24~~ 23]. If there are more than 10 entities wishing

to participate in the case study, the bureau of mines and geology shall select participants to ensure that to the extent possible each closed basin is represented and as many different scenarios are represented as necessary to ensure a scientifically accurate analysis.

(c) If there are fewer than 10 entities wishing to participate or if there is a scenario that is not represented by case study participants that is necessary to ensure a scientifically accurate analysis, the bureau of mines and geology may request cooperation and participation from entities that hold appropriation rights for wells within closed basins.

(d) Entities that had an application pending with the department of natural resources and conservation on April 11, 2006, must be given the option to participate in the case study before the bureau accepts other requests for participation.

(2) The bureau of mines and geology, in cooperation with the appropriate legislative interim committee, shall notify each of the entities described in subsection (1)(d), in writing, of the opportunity to participate in the case study and the requirements for participation.

(3) To participate in the case study, a participant shall agree:

(a) that the use of a ground water well in accordance with an application submitted pursuant to [section ~~15~~ 14] does not grant or give the participant an appropriation right;

(b) to allow the installation of monitoring wells and shall allow access for monitoring and review purposes;

(c) if monitoring or test wells exist at the site, to allow the bureau of mines and geology access to those wells for monitoring and review purposes;

(d) to allow for the measurement of pumping at the primary pumping well, including any plumbing requirements necessary to ensure an accurate analysis of pumping records and of the impacts, if any, resulting from pumping of the well; ~~and~~

(e) that the participant is responsible for costs associated with drilling the primary pumping well, maintenance associated with the well, and other costs reasonably related to the normal operation of a pumping well in the absence of the case study; AND

(F) TO PAY A FEE OF $15.

~~NEW SECTION. **Section 26. Recognition of existing appropriation rights.** Except as provided in [section 21], an appropriation right in a closed basin prior to April 11, 2006, that was finally issued and that is not~~

~~subject to any administrative or judicial action is recognized and confirmed.~~

NEW SECTION. **Section 25. Appropriation.** There is appropriated FROM THE GENERAL FUND $500,000 to the Montana bureau of mines and geology ONLY for the biennium beginning July 1, 2007, for the purpose of conducting a case study in coordination with the department of natural resources and conservation to gather and develop data to determine minimum standards and criteria for hydrogeologic assessments, as defined in [section ~~16~~ 15], associated with ground water withdrawals and the impacts of those withdrawals on surface water and ground water resources.

NEW SECTION. **Section 26. Direction for amendment of rule.** Pursuant to 2-4-412(2), the department shall:

(1) amend ARM 36.12.101 by striking subsection (8); and

(2) amend ARM 36.12.120 by striking subsections (6) through (10).

NEW SECTION. **SECTION 27. REPEALER.** SECTION 85-2-337, MCA, IS REPEALED.

NEW SECTION. **Section 28. Codification instruction.** (1) [Sections ~~15~~ 14 through 18 and 20 through ~~23~~ 22] are intended to be codified as an integral part of Title 85, chapter 2, part 3, and the provisions of Title 85, chapter 2, part 3, apply to [sections ~~15~~ 14 through 18 and 20 through ~~23~~ 22].

(2) [Section 19] is intended to be codified as an integral part of Title 75, chapter 5, part 4, and the provisions of Title 75, chapter 5, part 4, apply to [section 19].

NEW SECTION. **Section 29. Severability.** If a part of [this act] is invalid, all valid parts that are severable from the invalid part remain in effect. If a part of [this act] is invalid in one or more of its applications, the part remains in effect in all valid applications that are severable from the invalid applications.

NEW SECTION. **Section 30. Effective date.** [This act] is effective on passage and approval.

NEW SECTION. **Section 31. Applicability ~~--retroactive applicability~~.** ~~(1) [Sections 1 through 20 and 22 through 26] apply~~ [THIS ACT] APPLIES to applications for an appropriation right ~~or change in appropriation right~~

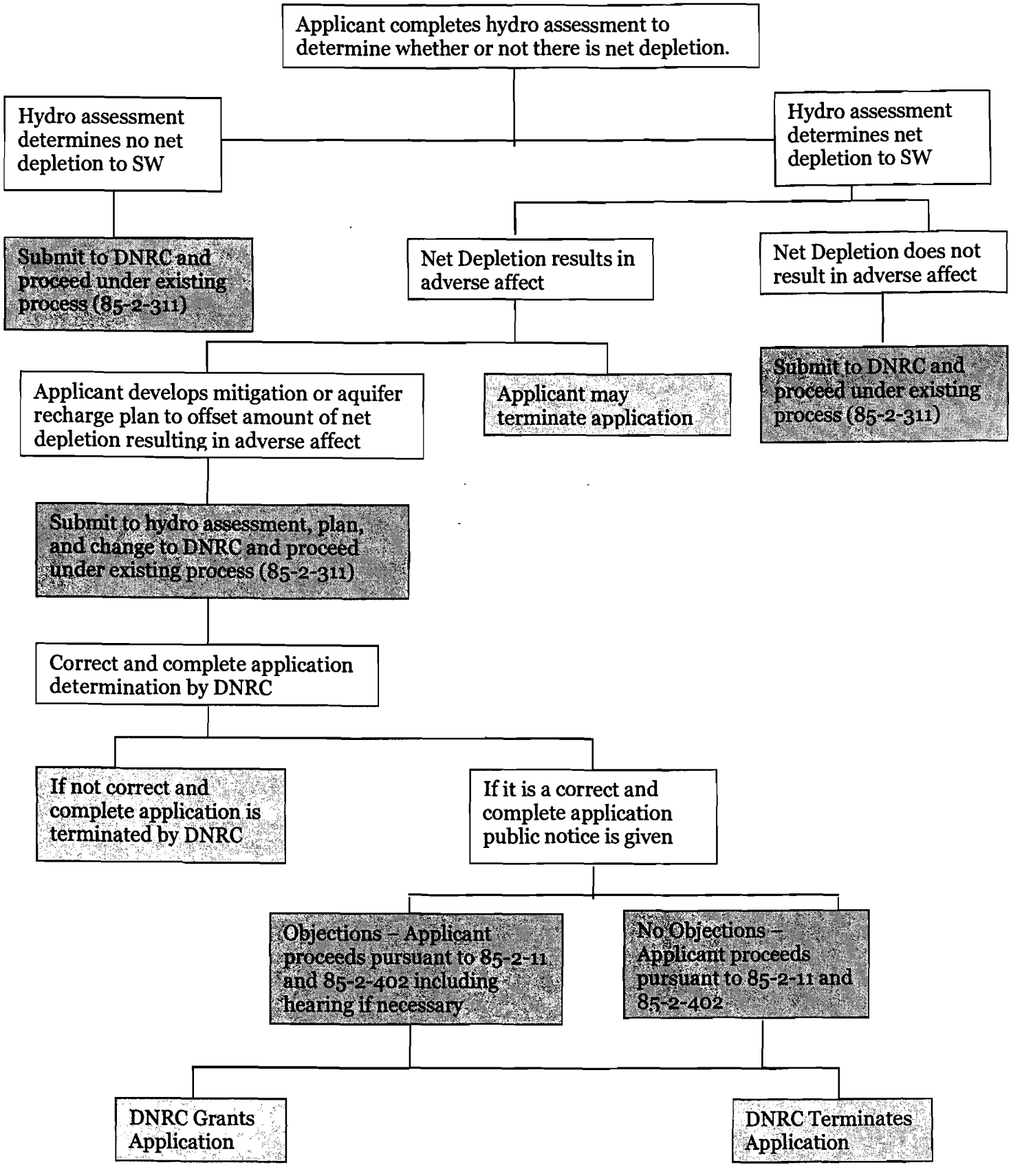
in a closed basin ~~pending or~~ filed on or after [the effective date of this act] ~~or that are in administrative or judicial proceedings on [the effective date of this act]~~.

~~(2) [Section 21] applies retroactively, within the meaning of 1-2-109, to augmentation plans, mitigation plans, or aquifer recharge plans in closed basins, other than the Clark Fork River basin, that have not been specifically statutorily authorized prior to [the effective date of this act].~~

- END -

Appendix C

HB 831 Process Flow Chart



Appendix D

WHO HAS JURISDICTION OVER MONTANA'S WATER?

The Montana Water Court has exclusive jurisdiction over the final determination of "existing water rights" (i.e. water right claims with Pre-July 1, 1973, priority dates). See § 85-2-215, MCA.

The DNRC has exclusive jurisdiction over post-July 1, 1973, water right permits and change applications. See §§ 85-2-302 and -402, MCA.

The District Courts have jurisdiction over water distribution controversies and "may grant injunctive or other relief necessary and appropriate to preserve property rights or the status quo pending issuance of the final decree." The District Court also has jurisdiction over ditch easement conflicts. See § 70-17-112, MCA.

WHAT ARE YOUR OPTIONS IF YOU GET INTO A CONTROVERSY OVER WATER?

1. First talk with the person about the problem. If you can work it out among yourselves this is obviously the best solution. If talking doesn't work, there are other options available; depending on what is the source of the problem.

2. You can file a court action in the appropriate District Court asking for a temporary restraining order and preliminary injunction. See §§ 27-19-101, 201, and 314, MCA. This will probably be the fastest way to obtain relief, but it is also the most expensive, as for most water users it will require the hiring of an attorney. This option is very formal and often polarizes the parties after one party "wins."

3. 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, then call the DNRC regional office in your area and they can assist you in filing a report in accordance with § 85-2-114, MCA.

4. A fourth option, available only to water users who claim water rights previously decreed by a District Court, is to file a petition with the District Court to have a water commissioner appointed to distribute the water. See § 85-5-101, MCA. If a water user on a previously decreed stream is dissatisfied with the method of distribution by the water commissioner, then that water user can file a written and verified complaint with the District Court and request a hearing on the matter. See § 85-5-301, MCA.

5. A fifth option is to file a petition with the District Court under § 85-5-110, MCA, to seek the appointment of a water mediator to mediate the water controversy.

6. A sixth option is to file a petition with the District Court pursuant to § 85-2-406, MCA, and request the District Court to certify the determination of the disputed existing rights involved in the controversy to the Chief Water Judge. This would likely involve water rights or streams that have not been involved in a prior District Court decree.

7. A seventh option available to water users in a basin that is subject to a Water Court issued Temporary Preliminary or Preliminary Decree, as modified after objections and hearings, is to petition the District Court to enforce the provisions of the modified water court decree in accordance with §§ 3-7-212, 85-2-231, 85-2-406 or 85-5-101, MCA.

Source: Excerpt from Montana Water Court Guidebook

Appendix E

COSTS AND USES OF COMMUNITY WELLS vs. SINGLE FAMILY WELLS

Presented:
October 24, 2007
Choteau, MT
WPIC

Presented by:
Eric Regensburger
Department of Environmental Quality
444-0916
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TOPICS

- Deciding on the appropriate type of water system for a subdivision
- Where are community wells appropriate?
- Connecting to an existing public supply
- Comparison of costs: Community vs. single family (i.e. individual) wells
- Resource impacts of high flow wells vs. multiple small flow wells

DEFINITION

- PUBLIC WATER SYSTEM
  - Serves 25 or more people or 15 or more connections for 60 days or more per year.
  - Community (e.g. town)
  - Non-transient, non-community (e.g. school)
  - Transient, non-community (e.g. restaurant)
- MULTI-USER WATER SYSTEM
  - 3 through 14 living units or commercial structures, total population cannot exceed 24
- Community = multi-user/public system (for purposes of this discussion)

WHAT IS THE APPROPRIATE WATER SYSTEM

- For lots 1 acre and larger:
  - Decision is up to the developer
  - Must meet DEQ rules and circulars
  - DEQ cannot dictate type of water system if rules are met
- For lots over 20,000 sq. feet and under 1 acre:
  - must have either community water or wastewater
- For lots 20,000 sq. feet (approx ½ acre) or less:
  - Must have both community water and wastewater

WHERE ARE COMMUNITY WELLS APPROPRIATE?

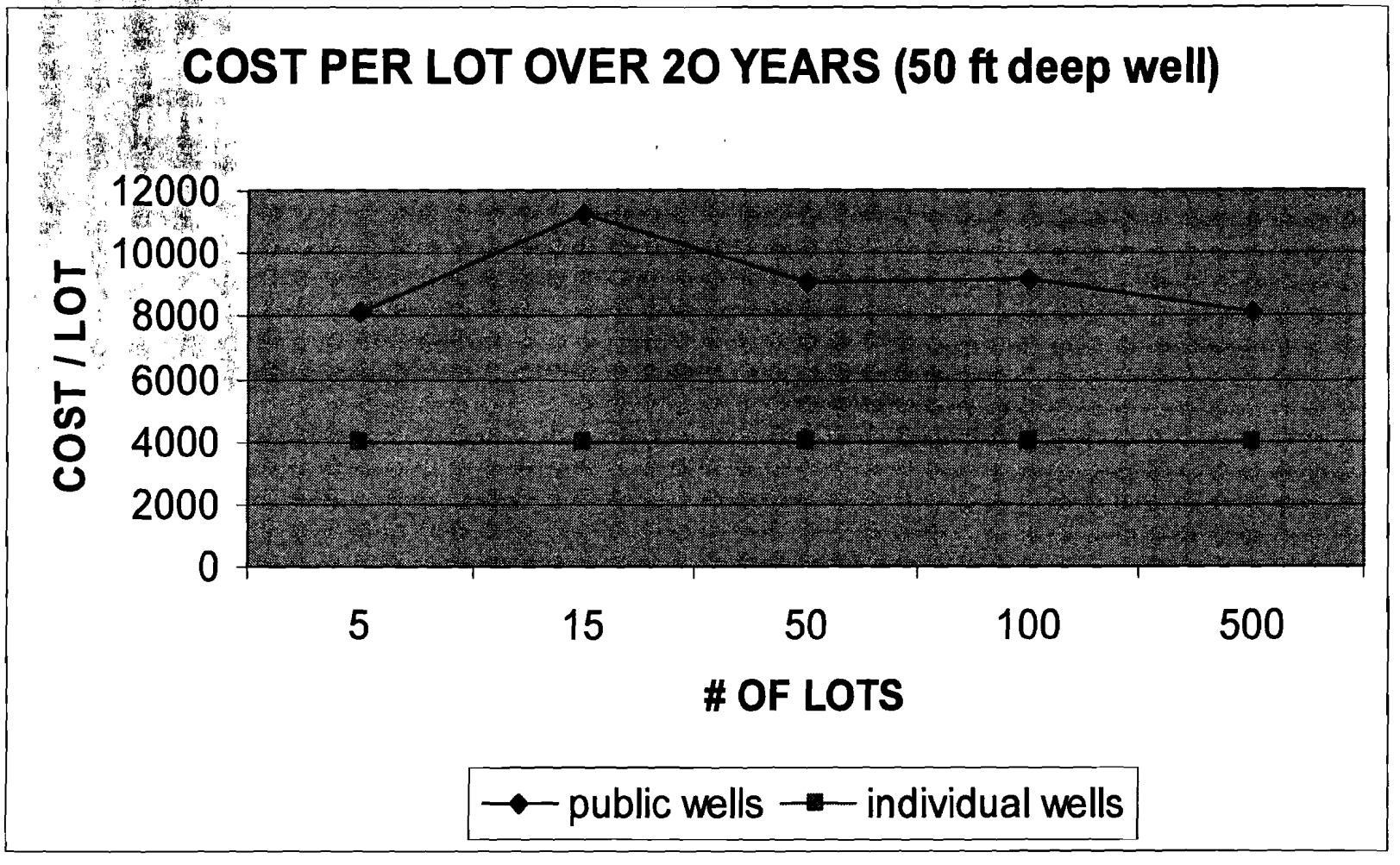
- Community wells can be used on just about any subdivision, but:
  - With larger lots, infrastructure becomes more expensive and complicated
  - Aquifer can be limiting factor (low yield wells)
  - Slow build-out of subdivision can result in water quality issues due to dead ends and stagnant water
  - Can developer afford up-front costs

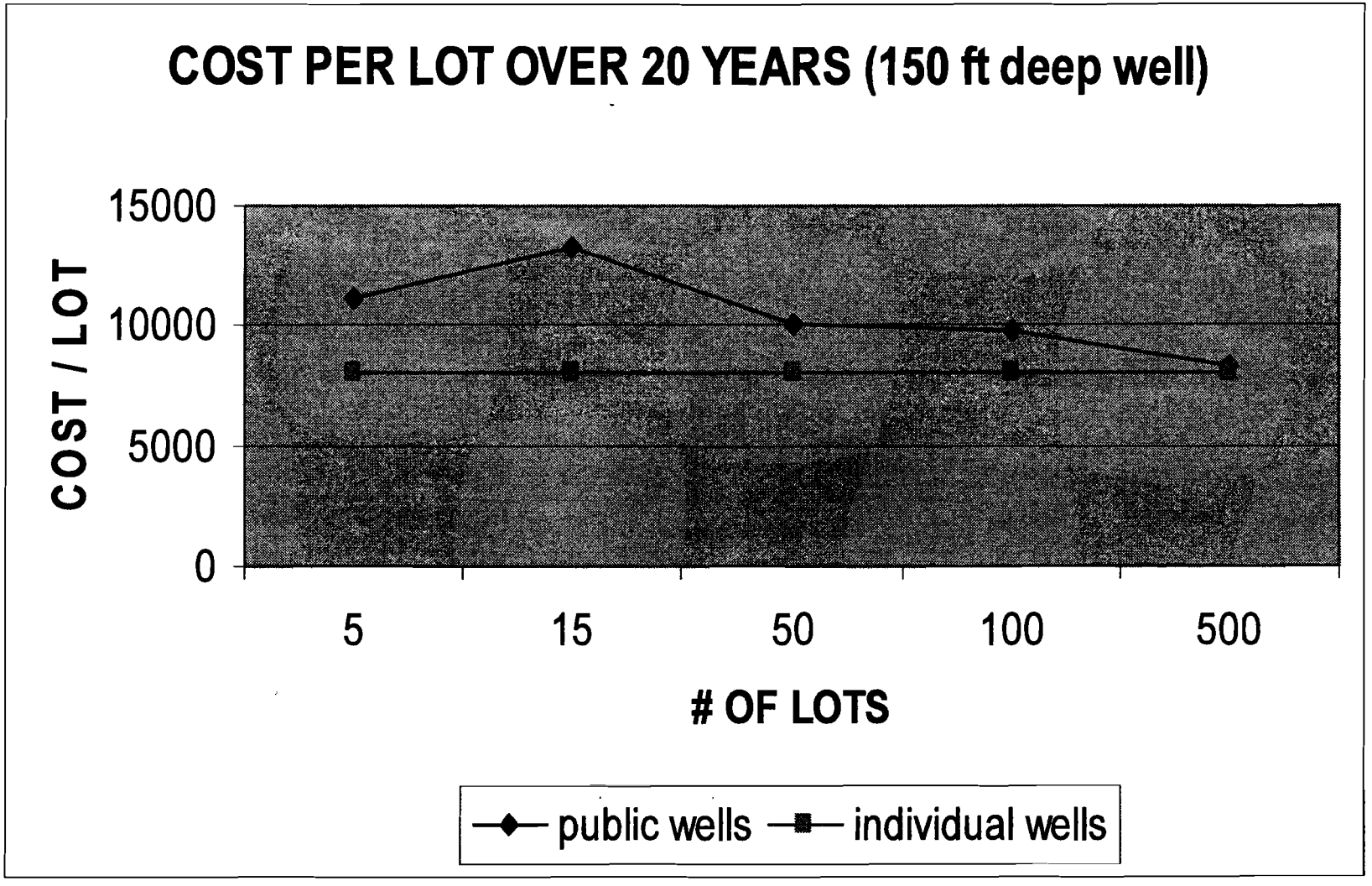
CONNECTION TO AN EXISTING PUBLIC WATER SUPPLY

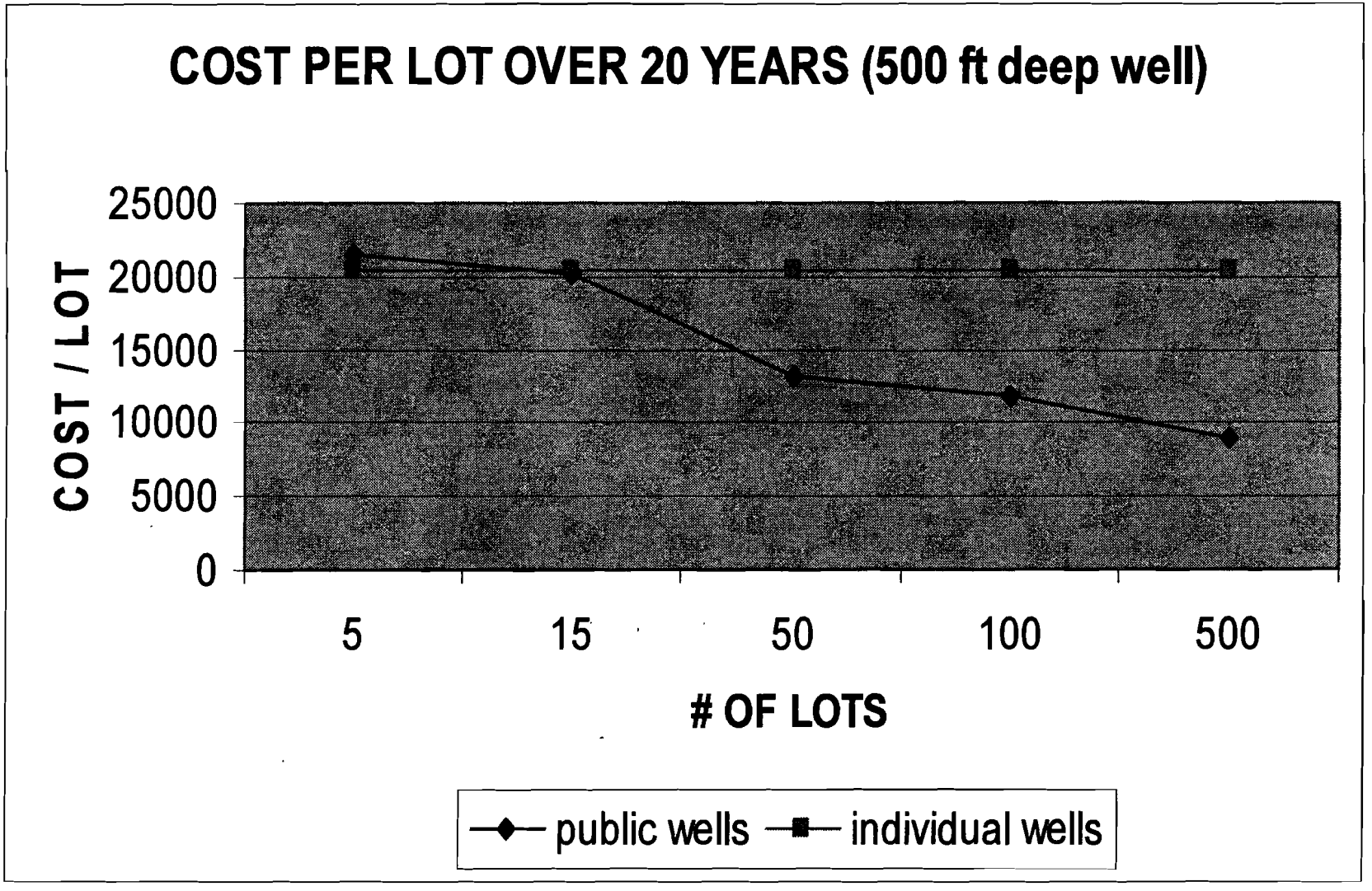
- Rules require connection to existing public system within 500 feet of a proposed subdivision, unless:
  - The cost to connect is >3x the cost as compared to an approvable on-site system;
  - Connection is limited by a physical obstruction;
  - Connection is limited by unobtainable easement; or
  - Public system wont allow connection
  - Doesn't apply to existing multi-user system
- Cost to design and build water connection is initially borne by developer
  - Up-front costs incorporated into lot prices

COSTS OF COMMUNITY vs INDIVIDUAL WELLS

		MUTLI_FAMILY / PUBLIC WATER SYSTEM										
Well Depth (feet)	# LOTS	# Wells	Drill + Pump ($150/ft)[1]	Infrastructure[2]	Monitoring + Operator (year)[3]	Total	Total (20 years)	Cost / Lot (20 Years)	# Wells	Drill + Pump ($30/ft)[4]	Monitoring + Operator	Total	Cost / Lot (20 years)
50	5	1	$7,500	$33,000	$0	$40,500	$40,500	**$8,100**	5	$20,000	$0	$20,000	**$4,000**
50	15	2	$15,000	$84,000	$3,500	$102,500	$169,000	**$11,267**	15	$60,000	$0	$60,000	**$4,000**
50	50	3	$22,500	$362,500	$3,500	$388,500	$455,000	**$9,100**	50	$200,000	$0	$200,000	**$4,000**
50	100	4	$30,000	$815,000	$3,500	$848,500	$915,000	**$9,150**	100	$400,000	$0	$400,000	**$4,000**
50	500	6	$45,000	$3,925,000	$3,500	$3,973,500	$4,040,000	**$8,080**	500	$2,000,000	$0	$2,000,000	**$4,000**
150	5	1	$22,500	$33,000	$0	$55,500	$55,500	**$11,100**	5	$40,000	$0	$40,000	**$8,000**
150	15	2	$45,000	$84,000	$3,500	$132,500	$199,000	**$13,267**	15	$120,000	$0	$120,000	**$8,000**
150	50	3	$67,500	$362,500	$3,500	$433,500	$500,000	**$10,000**	50	$400,000	$0	$400,000	**$8,000**
150	100	4	$90,000	$815,000	$3,500	$908,500	$975,000	**$9,750**	100	$800,000	$0	$800,000	**$8,000**
150	500	6	$135,000	$3,925,000	$3,500	$4,063,500	$4,130,000	**$8,260**	500	$4,000,000	$0	$4,000,000	**$8,000**
500	5	1	$75,000	$33,000	$0	$108,000	$108,000	**$21,600**	5	$102,500	$0	$102,500	**$20,500**
500	15	2	$150,000	$84,000	$3,500	$237,500	$304,000	**$20,267**	15	$307,500	$0	$307,500	**$20,500**
500	50	3	$225,000	$362,500	$3,500	$591,000	$657,500	**$13,150**	50	$1,025,000	$0	$1,025,000	**$20,500**
500	100	4	$300,000	$815,000	$3,500	$1,118,500	$1,185,000	**$11,850**	100	$2,050,000	$0	$2,050,000	**$20,500**
500	500	6	$450,000	$3,925,000	$3,500	$4,378,500	$4,445,000	**$8,890**	500	$10,250,000	$0	$10,250,000	**$20,500**


COST PER LOT OVER 20 YEARS (50 ft deep well)
COST / LOT
12000
10000
8000
6000
4000
2000
0
5
15
50
100
500
OF LOTS
public wells
individual wells


COST PER LOT OVER 20 YEARS (150 ft deep well)
COST / LOT
15000
10000
5000
0
5
15
50
100
500
OF LOTS
public wells
individual wells


COST PER LOT OVER 20 YEARS (500 ft deep well)
COST / LOT
25000
20000
15000
10000
5000
0
5
15
50
100
500
OF LOTS
public wells
individual wells

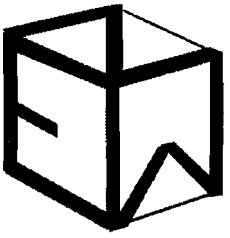
IMPACTS OF HIGH FLOW WELLS vs MULTIPLE LOW FLOW WELLS

- Amount of water use per home in community system could be reduced due to per gallon cost of water
- Distribution/location of wells can effect impacts to nearby resources (e.g. surface water)
- Using community wells often means higher density than with individual wells

Presentation
to
Water Policy Interim Committee
January 15, 2008

Update on Evaluations Significance of Exempt Wells Montana's Closed Basins

prepared by



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Update on Evaluations Significance of Exempt Wells
Montana's Closed Basins

by

Michael E. Nicklin, PhD, PE

The focus of my presentation today is to expand on the relative significance of exempt wells on stream flows from a water supply perspective. My first efforts on this issue were first defined in a study I completed in early 2007 (Nicklin Earth & Water, Inc., 2007). This presentation also uses information and interpretations that were developed by the Montana Department of Natural Resources and Conservation (DNRC) as set forth in its "Working Draft Memorandum entitled Effects of Exempt Wells on Existing Water Rights" [DNRC Memorandum]. The information presented in the DNRC Memorandum, if put in a proper perspective, actually further buttresses the conclusions that I had drawn in the Gallatin Valley study.

The original Gallatin Valley study was employed to develop a better understanding of the relative significance of ground-water extractions as they affect stream flows and also on ground-water levels. In that study, I used standard hydrologic evaluation methodology to conclude that the relative significance of exempt wells is inconsequential (de Minimus) in comparison to stream flows and irrigation demands on those stream flows. Although flow changes and below average flow in the streams of the Gallatin Valley have been observed in recent years, these changes are obviously due to climatic factors (drought).

Since the original effort, Nicklin Earth & Water, Inc. (NE&W) has conducted more detailed assessments including the following:

- Considering projected population growth using demographic projections by the Census Bureau and other means.
- Conducting preliminary ground-water model simulation efforts using a regional model that I have developed for the Gallatin Valley.
- Evaluating agricultural irrigation usage and agricultural commodity production over time in the Gallatin Valley.
- Analyzing drought implications/conditions on stream flows of the Gallatin Valley.

The focus of these efforts was to expand our previous work regarding concerns expressed by DNRC and others that the growth in the number of exempt wells will cause adverse impacts of existing water users (senior appropriators) in the valley. My preliminary assessment using the updated information leads to conclusions that are in conformance with conclusions set forth in the initial Gallatin Valley study. I also conclude that the potential for adverse impacts to existing appropriators (senior or junior) from the growth of exempt wells is highly unlikely to be a factor as far as one can

meaningfully project population growth in the future.

Some Observations and Commentary on DNRC Memorandum

Observation/Comment #1

Most of the exempt wells in the valley have tended to be clustered in the valley in areas that were historically irrigated with surface water. There are obviously some areas where exempt wells have been placed where land had not been historically irrigated. The key to properly evaluating the potential for adverse impacts in a study area is to conduct a thorough water budgeting effort. This includes addressing all the depletions (e.g., well pumping, stream diversions, etc.) and all accretions (recharge, runoff, etc.). This should be done before drawing conclusions and prior to developing water policies that may or may not be appropriate.

Observation/Comment #2

In the Gallatin Valley, the majority of exempt wells are located at significant distances from both the West Gallatin River or the East Gallatin River. The relative distance of a well from a stream is very important in quantifying the influence of a pumping well on a given stream. For example, if a given well is close and also hydraulically connected to a stream, pumping during the summer manifests its affects on flow more substantially during the irrigation season and less during the non-irrigation season. However, as the distance between a pumping well and stream increases, the interaction becomes more uniform or steady with time. The technical reasons for this are presented in a recent article in the publication Ground Water (Bredehoeft and Kendy, 2008).

In effect, pumping of a single exempt well substantially distant from a river will result in the consumed water being spread throughout the calendar year at a relatively steady rate. Hence, a well consumptively using 0.33 acre-ft of irrigation water during the irrigation season will result in about 0.14 acre-ft of water being abstracted from the stream during the irrigation season (May 1 through September 30) if the flow impacts are steady-state. In essence, an assertion that 0.34 acre-ft of water from a given well pumping in the Gallatin Valley would have been available for senior or junior surface water appropriators during the irrigation season is false.

For the Gallatin Valley, a ground-water model that I have developed addresses the distribution of the wells in the valley and aquifer system parameters. Preliminary simulations results from that effort reveal that it is appropriate to assume that a steady-state assumption for exempt well consumption effects on stream flow is a reasonable approximation in the valley. However, even this assumption probably yields results that are overly conservative simply because there are other water budget factors that need to be addressed as well.

In effect, it is inaccurate to characterize or extrapolate that the total seasonal consumptive use of irrigation water from exempt wells would have been available for surface water users during the season of irrigation.

Observation/Comment #3

In its Work Draft Memorandum, DNRC projects the potential growth of exempt wells to year 2060. Making projections of population growth and well development this far into the future is, at the very least, highly speculative. For purposes of the evaluation that follows, I will constrain the discussion to computations set forth by DNRC to the year ending 2030.

Let us examine the following statement by the DNRC:

> Depletions by exempt well use may not be discernible by basin-scale water balances or analysis of hydrographs of gross basin inflows and outflows, in part because these depletions are small relative to annual flows. In addition, records of consumption by exempt well use may be masked during periods of water shortage by curtailment of junior surface water uses.

The key word here is "may" be masked. Again, this is purely speculation on the part of DNRC as it has no definitive evidence to prove this.

In order to put DNRC's claims in another perspective I have done the following:

1) Quantified the existing number of domestic wells in the Gallatin Valley using the Montana Bureau of Mines and Geology Ground-water Information Center database. It should be noted that this database seems to provide current well number estimates that exceed the exempt well computations set forth in the DNRC memorandum.

2) Developed projected well exemption growth estimates based upon current well growth patterns and population growth estimates presented defined by the Census Bureau.

3) Utilized the relative consumptive use estimates provided by the DNRC in its memorandum.

4) Compared the increased demands using Gallatin River flow data cited in the DNRC memorandum.

5) Assessed the likelihood or lack thereof that surface water irrigators in the valley could be adversely impacted with the increase in exempt wells (from present to 2030).

6) Provided a visual perspective of the significance of the projected increase in consumptive developed DNRC with exempt well growth using graphical procedures.

Figure 1 provides a location map.

Figure 2 provides a plot showing current well growth trends (most wells are domestic - exempt). This plot provides two projections, the upper plot uses current well growth trends, the lower plot uses census-based projections.

Using DNRC consumptive values and MBMG GWIC data, the maximum impact on surface water flows as it affects irrigators during the irrigation season associated with projected exempt well growth in the Gallatin Valley by year 2030 is projected to be 1.69 cfs (68 miners inches).

Figures 3 - 7 provide self-explanatory plots using an overly simplistic assumption that the net water balance is limited to stream flows and well pumping. Again, there are obviously other water budget issues as well which further mitigate the significance of exempt wells.

All the plots show that the influence of exempt wells is de Minimus. Even if we discount other water budget factors, 68 miners inches, is not a very substantial amount of surface water for irrigation use, especially if that flow is spread throughout the valley. This 68 miners inches of flow would not be concentrated to the I-15 bridge on the West Gallatin as seems to be inferred by DNRC. This affect of the abstraction would be distributed throughout the valley (East Gallatin, West Gallatin, Gallatin, Sourdough Creek, etc.). Furthermore, there are other water budget factors at stake as well which should be accounted for including: contributions to surface water and ground-water recharge associated with runoff from impervious surfaces; reduction in plant transpiration associated with presence of impervious surfaces; reduced surface water irrigation; etc.. These factors are not accounted for in DNRC methods.

Hence, it is concluded DNRC's claim of "masking" has no basis.

In a nutshell, definitive adverse impacts from exempt wells to prior appropriators is difficult to reconcile when the facts and data are properly accounted for in the Gallatin Valley.

Additional Comparisons

The DNRC also projects/claims that there "may" be an increase of about 10,000 acre-ft of consumptive use in association with exempt wells by the year 2030 in Montana closed basins. It even goes so far as to speculate to the amount of exempt well water use by

the year 2060. This cannot be meaningfully done.

Let us put this DNRC projection of 10,000 acre-ft additional use by the year 2030 in perspective as follows:

- Not all the 10,000 acre-ft of water would have been available for irrigation use during the irrigation season simply because abstractions from exempt well pumping are spread throughout the year. If other watersheds/well conditions are reasonably comparable to those of the Gallatin Valley, this would leave about 5,000 acre-ft (as opposed to 10,000 acre-ft) of water feasibly available for the irrigation season (assumes methods defined by Bredehoeft and Kendy, 2008 are appropriate).

- The 5,000 acre-ft of "impact" to senior appropriators is spread over the entire area of all the closed basins in Montana. Furthermore, this 5,000 acre-ft would be distributed between numerous if not several hundred different streams within these closed basins.

- From an irrigator's perspective this is equivalent to dividing about 552 miners inches of flow between all the streams in the closed basins of Montana which has an area of about 23,900 square miles. The net significance on a stream by stream basis is inconsequential when considered on a practical basis. As an illustration of this point, 5,000 acre-ft of consumption equates to approximately 3,500 acre-ft of alfalfa irrigation for this entire region (see Figure 8). Again, this is a worst case scenario simply because DNRC does not take into account other water budget factors which are indeed relevant.

- Again, using DNRC's own projections, I conclude that any consequences on stream flow associated with exempt wells are de Minimus.

Summary

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.

In my review of work products that have been prepared by the Montana Bureau of Mines and Geology from their efforts involving the North Helena Valley (Madison 2006), the Bitterroot River Basin, and in their evaluations of well hydrographs statewide, it is clear that my interpretative results are by no means unique.

References

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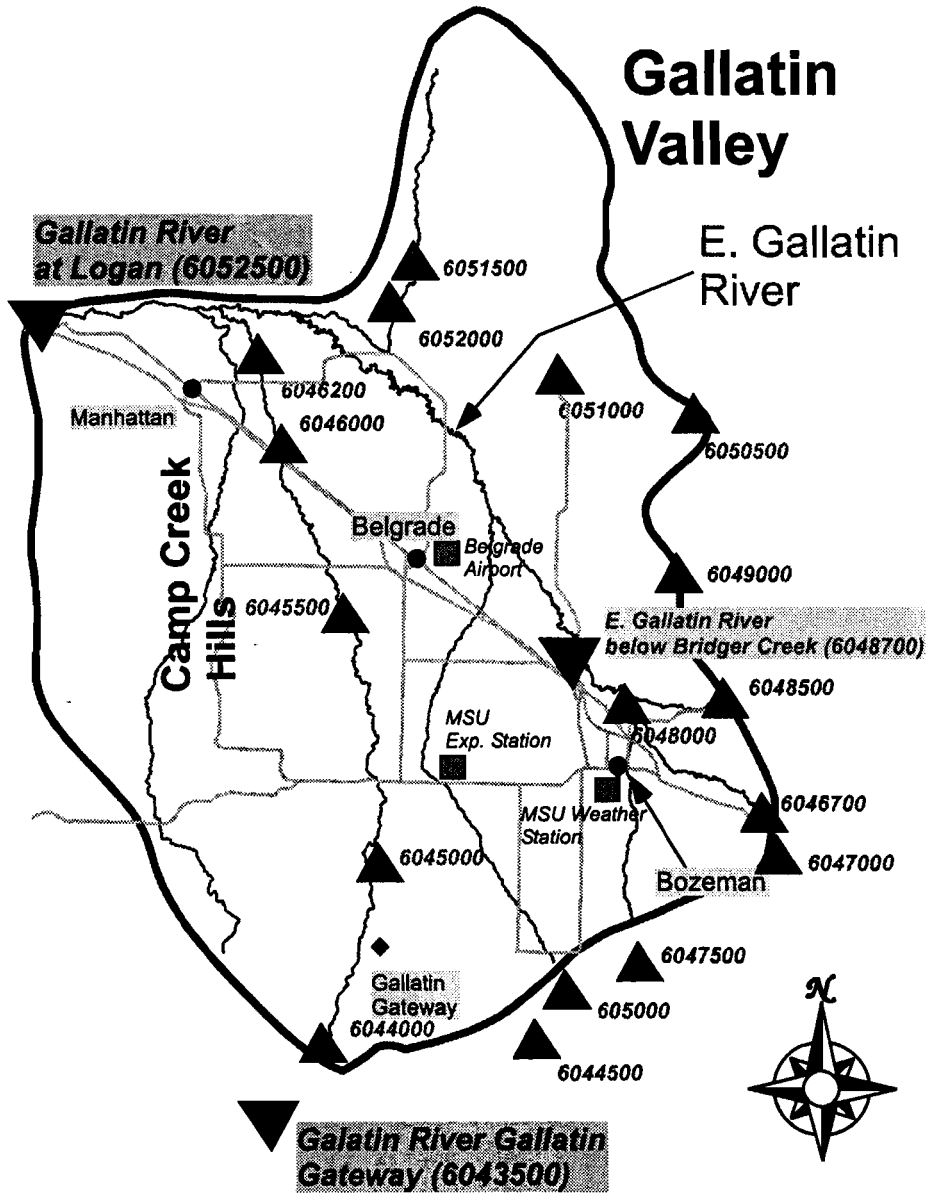

Figure 1 - Measurement Stations Gallatin Valley

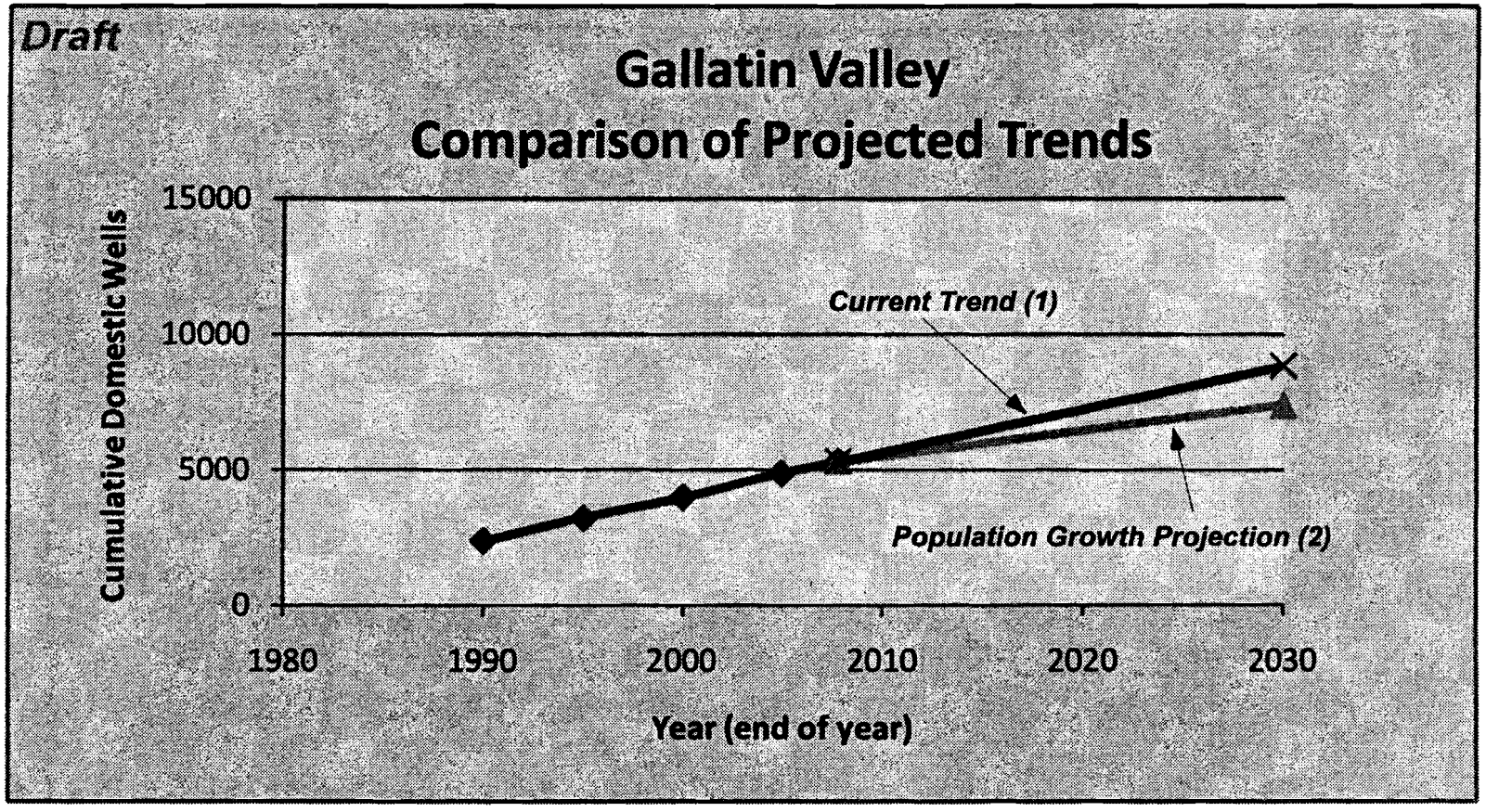

Figure 2 - Domestic well addition trends and population growth projections for Gallatin Valley.

1) ***Based upon Montana Bureau of Mines and Geology GWIC data (through 2007)***

2) ***Projections made based upon "Montana's Growth Policy Resource Book - Montana Department of Commerce Community Development Division January, 2007."***

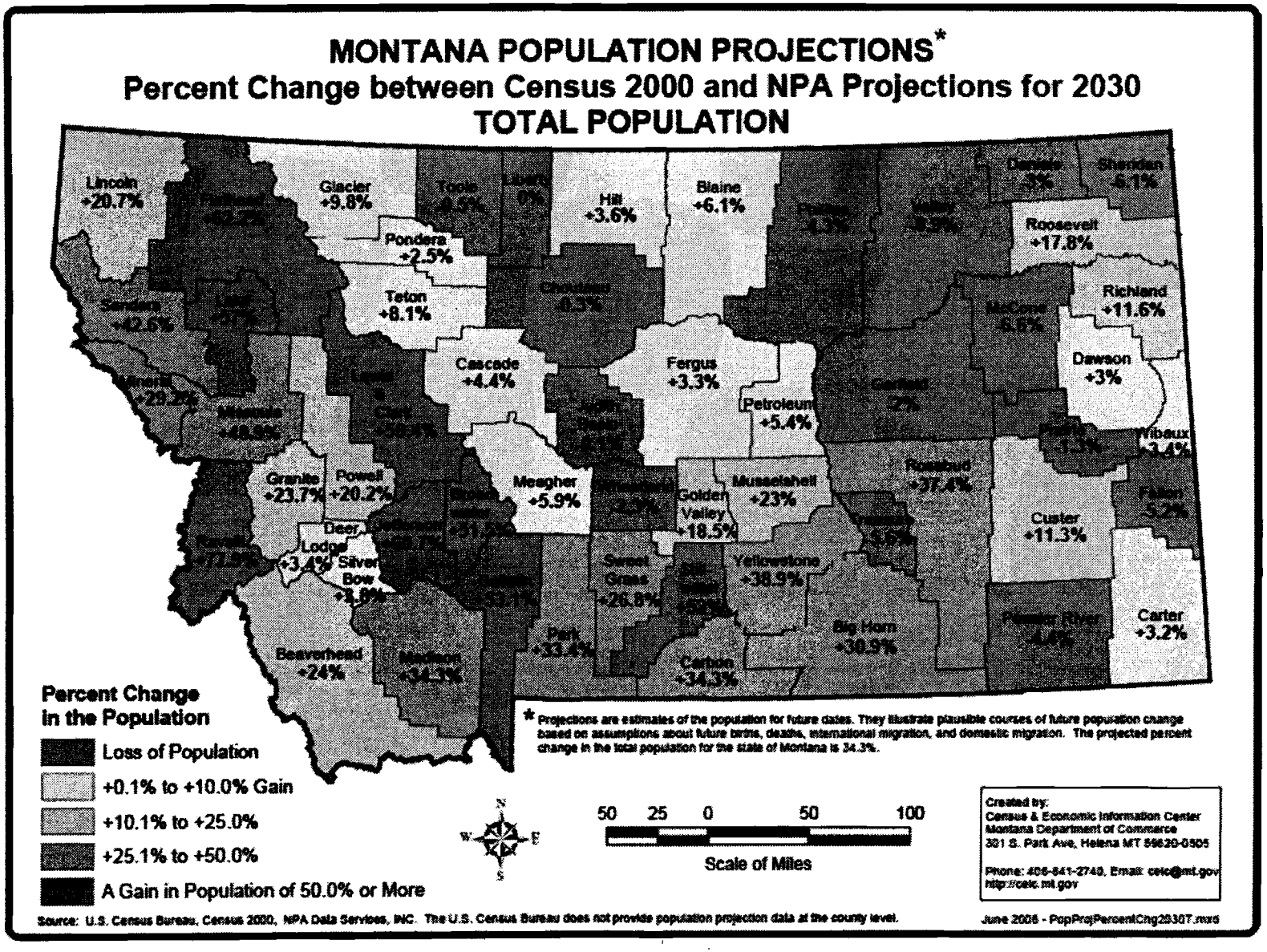

Figure 3 - Montana Growth Projections from Montana's Growth Policy Resource Book Montana Department of Commerce Community Development Division January, 2007.

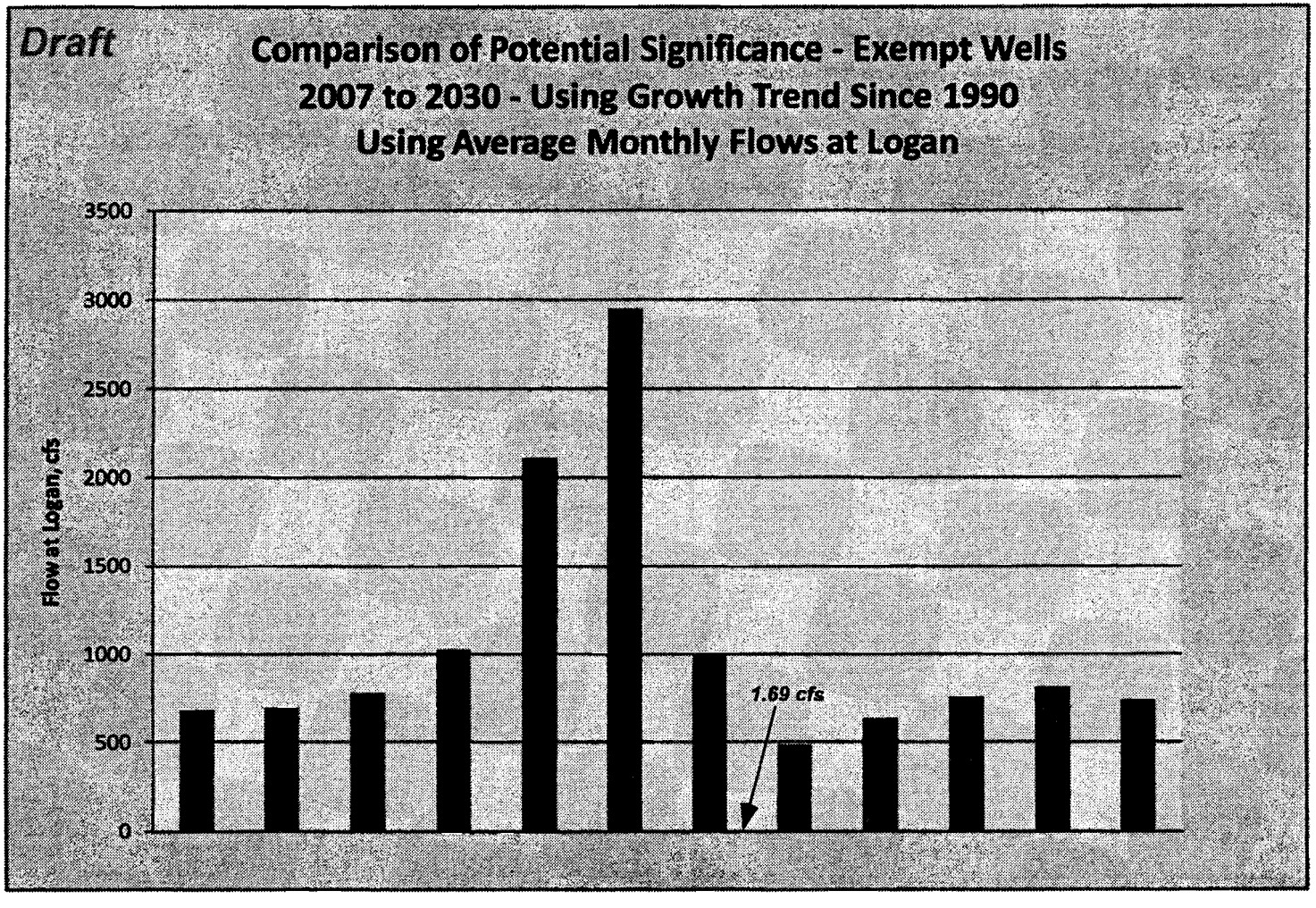

Figure 4. The 1.69 cfs shown is the calculated consumptive use associated with the growth of exempt wells from 2007 to 2030 in the Gallatin Valley. It is highly conservative as it does not include other water budget factors which would reduce the net flow rate substantially.

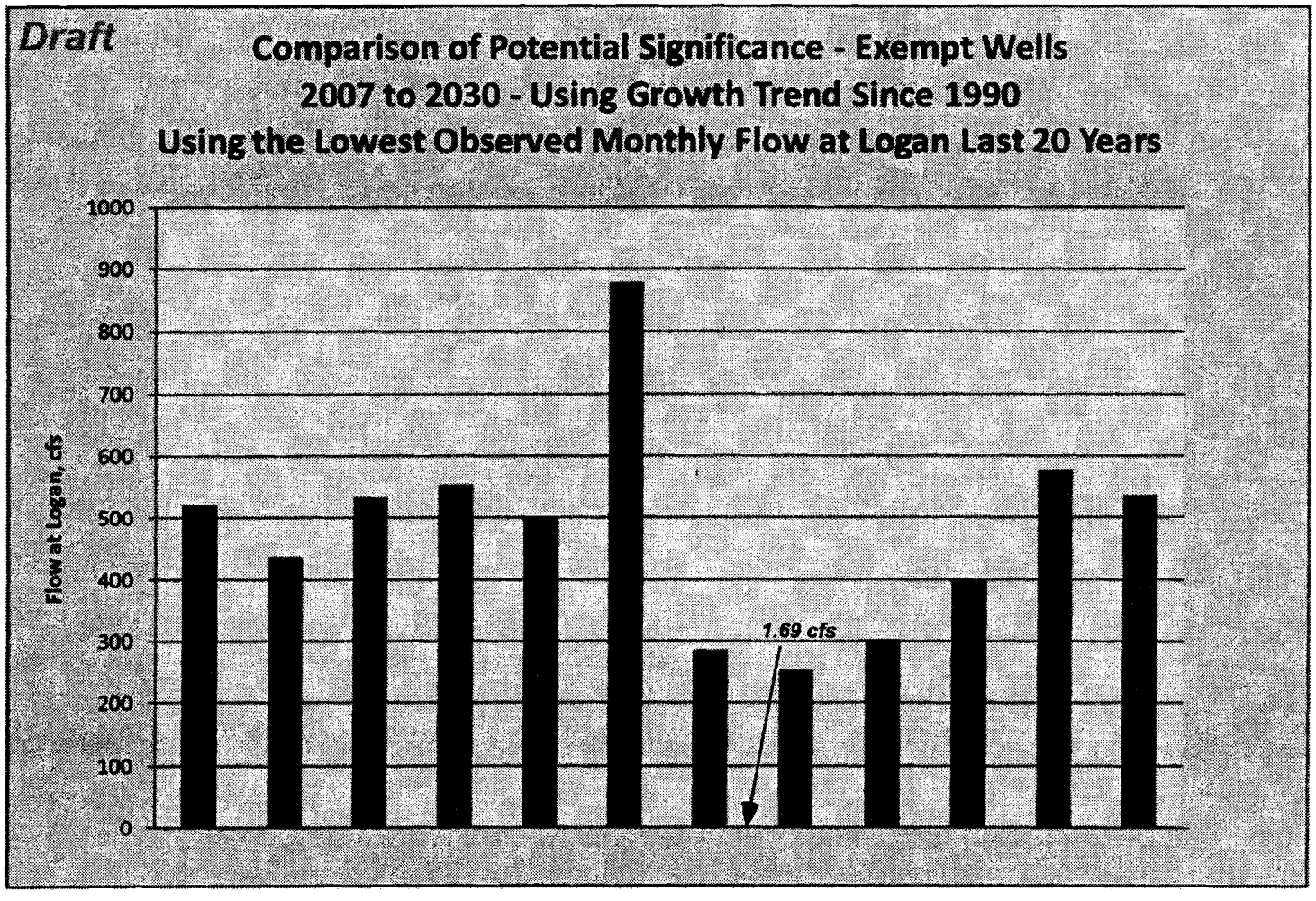

Figure 5. The 1.69 cfs shown is the calculated consumptive use associated with the growth of exempt wells from 2007 to 2030 in the Gallatin Valley. It is highly conservative as it does not include other water budget factors which would reduce the net flow rate substantially.

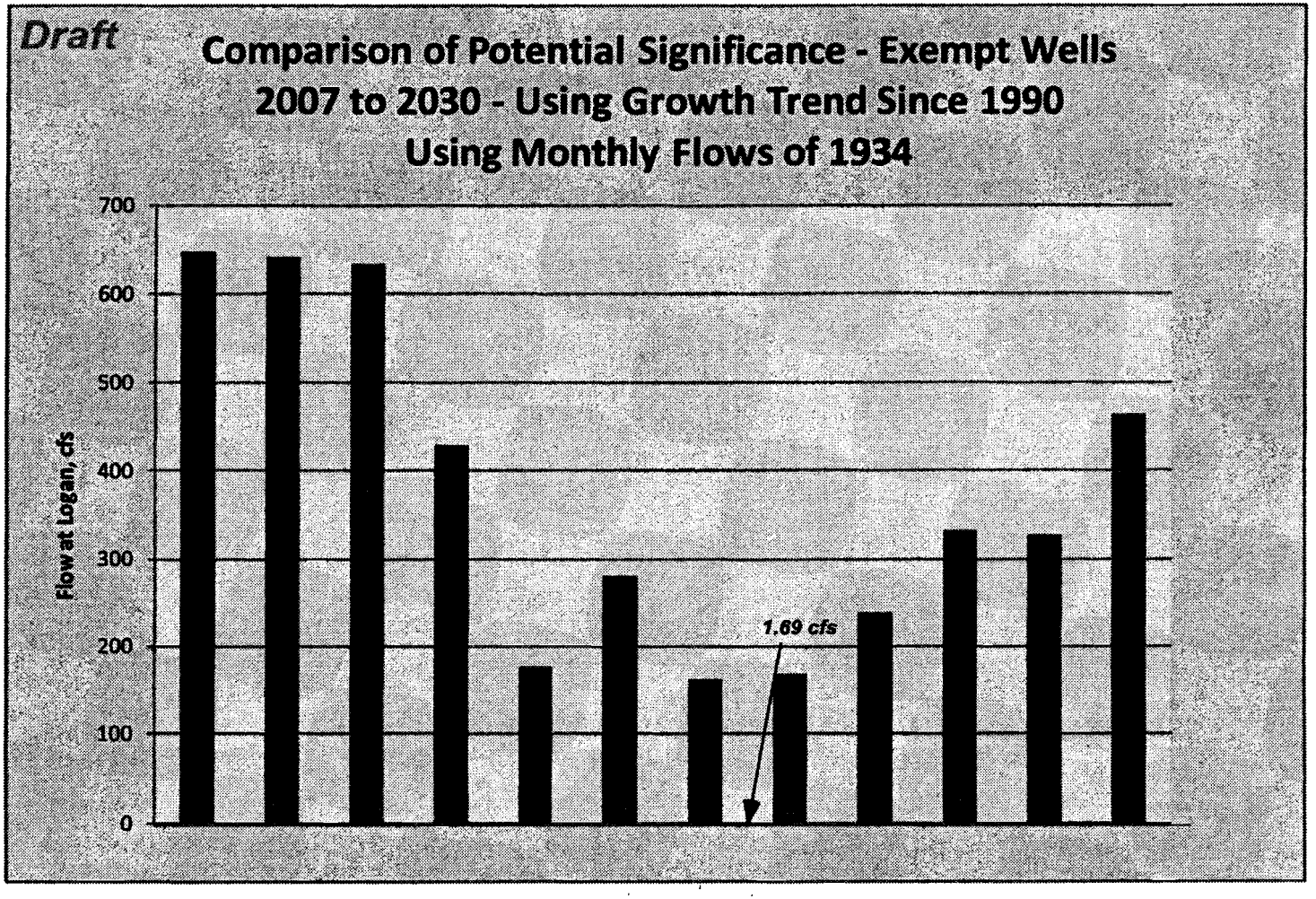

Figure 6. The 1.69 cfs shown is the calculated consumptive use associated with the growth of exempt wells from 2007 to 2030 in the Gallatin Valley. It is highly conservative as it does not include other water budget factors which would reduce the net flow rate substantially.

Figures adapted from DNRC Memorandum - Working Draft on Effects of Exempt Wells on Existing Water Rights

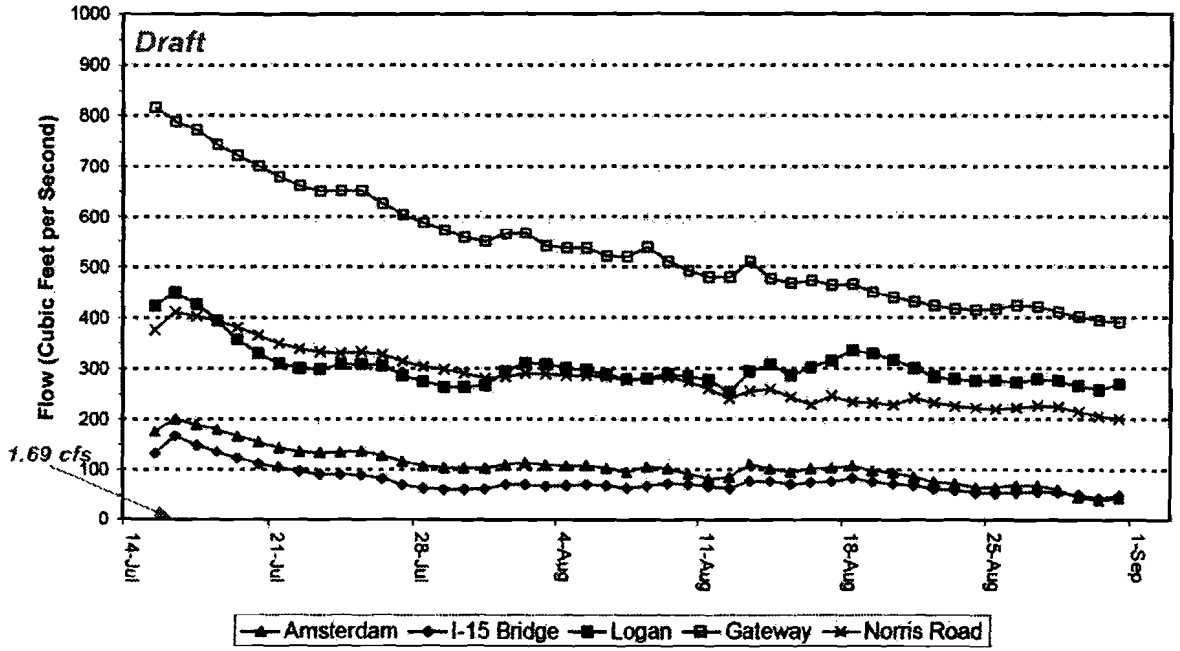

Figure 7. Figure adapted from DNRC memorandum. Note that there are other streams in the valley other than Gallatin River. Only a fraction of the exempt wells consumption in the Valley (something far less than 1.69 cfs) would be manifested at the Norris Road, I-15 Bridge, Logan and the I-15 Bridge on the West Gallatin River.

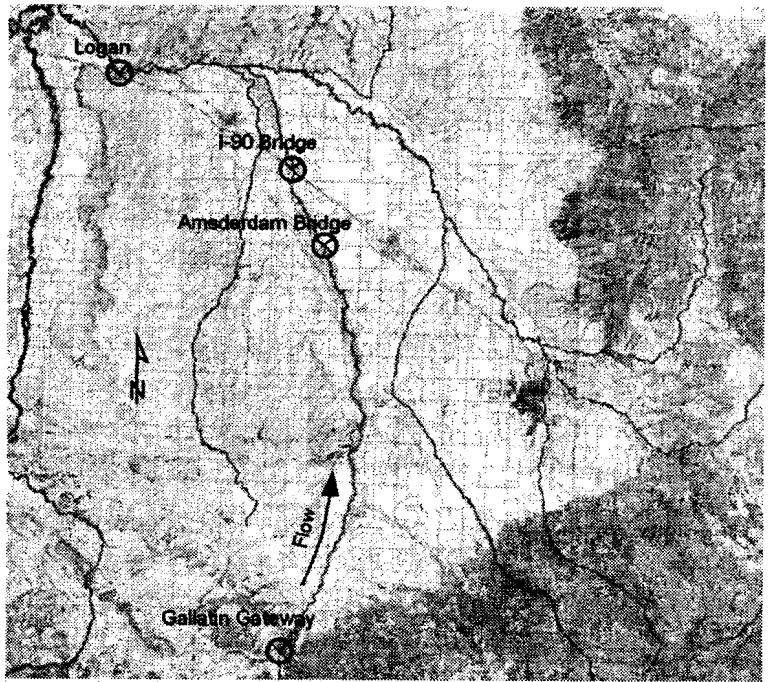

Figure 2. Locations of gauging stations on Gallatin River.

Note that the barely visible line on the horizontal axis represents the combined average flow of the increase in the number of exempt wells in the Gallatin Valley from 2007 to 2030 based upon current well development trends. Furthermore, many of the wells have been placed in areas that had been historically irrigated.

The maximum reduction in flow of 1.69 (68 miners inches) is before conducting a water budget analysis addressing all water budget factors. If all the addition and subtraction is conducted, the flow of 1.69 cfs would be further reduced.

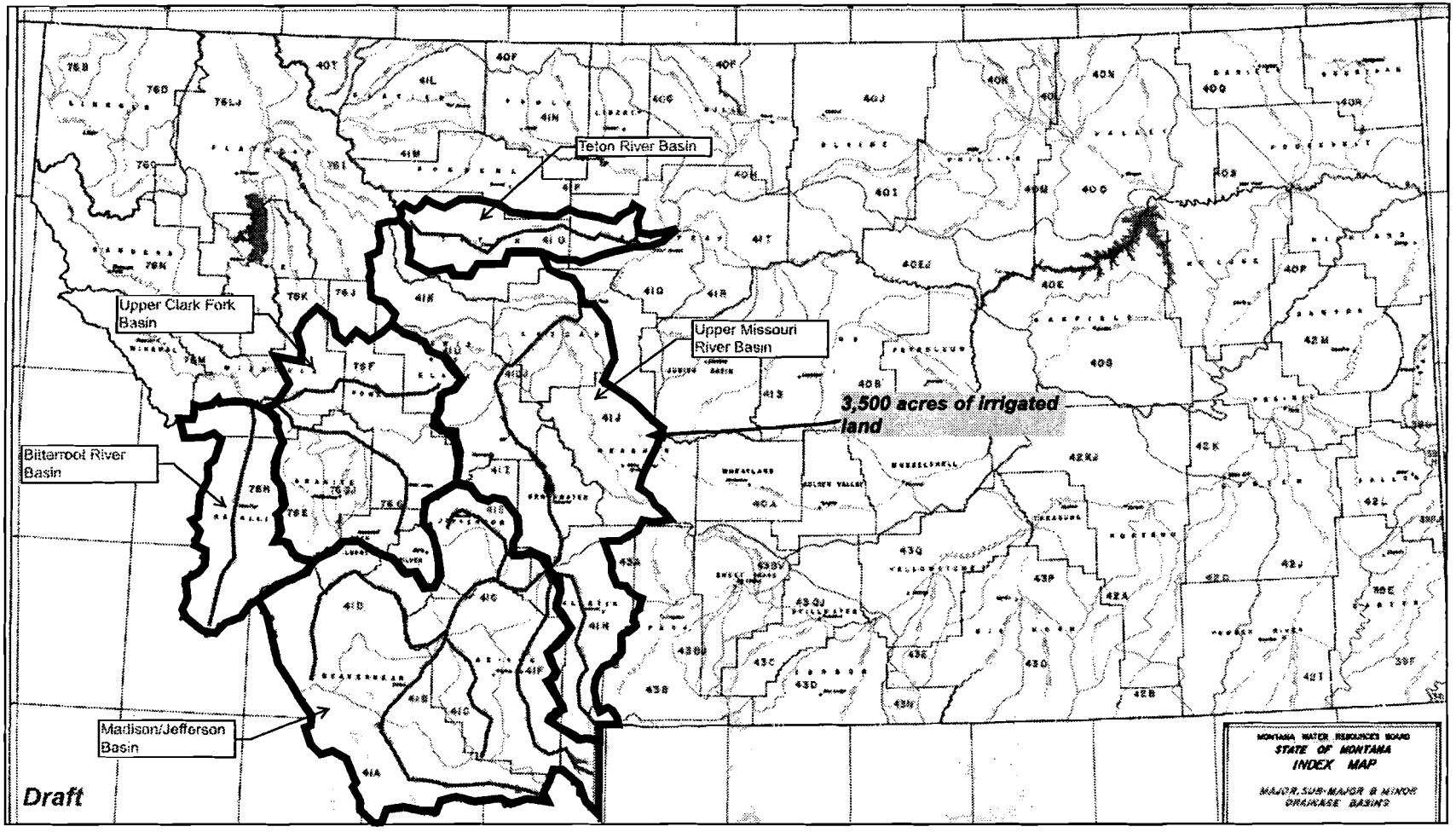

Figure 8. The illustration above presents the relative significance of growth in exempt wells using calculations performed by DNRC to 2030 and adjusting for seasonal availability of water in accordance with principles set forth in Bredehoeft and Kendy (2008). If all the water budgeting factors are carefully considered this irrigated acreage equivalent would be reduced significantly.

State Funding for Irrigation in Montana
and
Consequences of Converting from Flood to Sprinkler Irrigation

Water Policy Interim Committee
June 10, 2008

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GOVERNMENT ASSISTANCE PROGRAMS AVAILABLE TO IRRIGATORS

This is a list of financial and technical assistance programs available to private and public entities for irrigation related projects and activities. Some of the programs were established specifically for private irrigators, where others require a public or local government entity (conservation or irrigation districts, for example) to sponsor projects that ultimately will support private irrigators.

STATE ASSISTANCE PROGRAMS

Irrigation Development Grant Program
Montana Department of Natural Resources and Conservation Resource Development Bureau
www.dnrc.mt.gov/cardd/ResDevBureau/irrigation_development/irrigation_dev_grants.asp

Private Water Development Loans
Montana Department of Natural Resources and Conservation Resource Development Bureau
www.dnrc.mt.gov/cardd/ResDevBureau/private_loans.asp

Renewable Resource Grant and Loan Program
Montana Department of Natural Resources and Conservation Resource Development Bureau
www.dnrc.mt.gov/cardd/ResDevBureau/renewable_grant_program.asp

Renewable Resources Project Planning Grants
Montana Department of Natural Resources and Conservation Resource Development Bureau
www.dnrc.mt.gov/cardd/ResDevBureau/project_planning_grants.asp

Reclamation and Development Grants Program
Montana Department of Natural Resources and Conservation Resource Development Bureau
www.dnrc.mt.gov/cardd/ResDevBureau/rdgp.asp

Growth through Agriculture
Montana Department of Agriculture
agr.mt.gov/business/GTA.asp

Fisheries Restoration and Irrigation Mitigation Program for Montana
Montana Department of Fish, Wildlife and Parks
fwp.mt.gov/habitat/fisheriesrestoration.asp

Conservation District Grants (HB 223 Grant Program)
Montana Department of Natural Resources Conservation District Bureau
www.dnrc.mt.gov/cardd/loans_grants/cdloangrants.asp#HB223

FEDERAL ASSISTANCE PROGRAMS

Environmental Quality Incentives Program (EQIP)
USDA Natural Resources Conservation Service
www.nrcs.usda.gov/PROGRAMS/EQIP/

Conservation Technical Assistance Program
USDA Natural Resources Conservation Service
www.mt.nrcs.usda.gov/technical/ecs/planning

Irrigation Operation and Maintenance on Indian Lands
Branch of Irrigation, Power and Safety of Dams, Bureau of Indian Affairs
www.federalgrantswire.com/irrigation-operations-and-maintenance-on-indian-lands.html

Farm Loan Programs
US Department of Agriculture, Farm Service Agency
www.fsa.usda.gov/FSA/webapp?area=home&subject=fmlp&topic=landing

POTENTIAL CONSEQUENCES OF CONVERTING FROM FLOOD TO SPRINKLER IRRIGATION

These are potential results, not all will happen in every situation. Some may occur rarely and some may occur with every conversion. Some are basin-wide and some are limited to a producer's field. Not everyone agrees on the frequency or extent of occurrence for most of the consequences listed below.

Flood to Sprinkler Conversion Effects on the Producer and Field

Labor savings and cost reduction

- Increases ability of some family farms to remain in production
- Increases ability of some producers to earn income from off-farm employment (less demand on operator's time due to automated irrigation, fertilizer & pest control)
- Reduces application rates and cost for fertilizers and other ag chemicals (due to precision application by sprinklers)

Increases productivity, especially on a non-level field

Decreases or eliminates available water for late season irrigation to downstream users

Decreases or eliminates available groundwater for downstream domestic wells

Increases ability of producer to irrigate sloped fields

Increases options for crop diversification

Increases nutrient output per acre.

Increases ability for additional harvest
(late season low flows may be adequate for amount needed to sprinkle irrigate)

Increases ability to expand irrigated acreage with the same water supply

Increases the availability of water to downstream users of an irrigation system
(reduced amount diverted leaves more water in the ditch)

Reduces the occurrence of losing grassland to sedge where previously over-irrigated

Increases capital investment & maintenance costs

Increases energy use and costs

Flood to Sprinkler Conversion Effects on Water Quality

Reduces contributions of ag chemicals to surface and groundwater
(precision application rates apply only what the plant needs)

Reduces sedimentation to surface water by runoff of excess irrigation water

Increases late season temperatures in natural water ways
(reduced return flows result in lower instream flows and less influx of cooler ground water which cumulatively tends to increase water temperature)

Flood to Sprinkler Conversion Effects on Water Quantity

Reduces the volume of water diverted for a given field

Increases loss through plant transpiration (due to increased plant production)

Changes return flow timing to increase early season surface flows and decrease late season return flows.

Increases the potential for an irrigator to divert water from a stream during low flow stage because less water is needed to adequately irrigate a field.

Increases or decreases evaporation loss depending on conditions