

Water Management in Arizona, Colorado, Idaho, and Washington -- A Comparison

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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 that are analyzed were chosen because of the various factors affecting each of them and their similarities and differences with regard to water management. This paper serves as a summary with citations to the more lengthy documents.

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.¹

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 ground water resources were diminishing and created the 1980 Groundwater Management Code. The Legislature enacted the Code to relieve the problem of ground water 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 ground water resources to most effectively meet the changing needs of the state; and
- to offset Arizona's use of ground water through renewable water supply development.²

¹State of Arizona, Department of Water Resources, Annual Report, July 1, 2006

²State of Arizona, Department of Water Resources, Annual Report, July 1, 2006

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, ground water 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 ground water 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 ground water 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 ground water 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 ground water 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 ground water 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.³ 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 ground water resources. The water management agency has stated that additional opportunities must be pursued to substitute renewable or imported supplies in place of mined ground water.

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

³State of Arizona, Department of Water Resources, Annual Report, July 1, 2006

established in 1957 with the passage of the Colorado Ground Water Law of 1957. After 1969 surface water and ground water 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.⁴

Some priorities on major stream systems in Colorado date back to the 1850's and according to the Colorado Division of Water Resources most of the stream systems have been over-appropriated since the 1890's.⁵ 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.⁶

Ground water 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.⁷ The following types of wells are considered exempt wells:

- Household use only wells;
- Domestic and livestock wells with certain conditions;

⁴"Guide to Colorado Well Permits, Water Rights, and Water Administration," State of Colorado, Department of Natural Resources, Division of Water Resources, March 2006

⁵www.water.state.co.us/wateramin/prior.asp

⁶www.water.state.co.us/wateramin/prior.asp

⁷"Guide to Colorado Well Permits, Water Rights, and Water Administration," State of Colorado, Department of Natural Resources, Division of Water Resources, March 2006

- 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.⁸

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". Ground water within these basins is considered "designated ground water". Designated ground water is ground water which, in its natural course, is not available to or required for the fulfillment of decreed surface rights, or ground water 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. Ground water 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.⁹ 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);

⁸"Guide to Colorado Well Permits, Water Rights, and Water Administration," State of Colorado, Department of Natural Resources, Division of Water Resources, March 2006

⁹Statement from Mr. Phillip Rassier, Expanded Natural Resources Interim Committee Meeting Minutes, Idaho Legislature, April 9, 2004

- 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 over 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."¹⁰ This issue is currently subject to litigation that involves a curtailment order on ground water withdrawals because of a call made by senior surface water appropriators. 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.¹¹

¹⁰Statement from Mr. Phillip Rassier, Expanded Natural Resources Interim Committee Meeting Minutes, Idaho Legislature, April 9, 2004

¹¹Expanded Natural Resources Interim Committee Meeting Minutes, Idaho Legislature, April 9, 2004

Washington

In the state of Washington, the Washington Department of Ecology manages the state's water resources. Similar to the other western states that have been discussed in this paper, 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.

In Washington 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.¹²

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 ground water. 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".¹³

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

¹² Gregoire, Christine O., Pharris, & McDonald "An Introduction to Washington Water Law", January 2000.

¹³Gregoire, Christine O., Pharris, & McDonald "An Introduction to Washington Water Law", January 2000.

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."¹⁴

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 ground water 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.

Conclusion

Each of the states laws described are much more complex than could be reflected in this paper. Additional detail on any of the states can be prepared upon request of the water policy interim committee.

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¹⁴Gregoire, Christine O., Pharris, & McDonald "An Introduction to Washington Water Law", January 2000.