Report to the Governor and Legislature on the Arkansas River Water Bank Pilot Program

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Pursuant to Section 37-80.5-106(1), C.R.S., the State Engineer must submit report to legislature and Governor on or before Nov. 1, 2005.

Contextual History

The Arkansas River Water Bank Pilot Program, authorized under Section 37-80.5-106, C.R.S. (2004), received its genesis as a result of Governor Bill Owens Commission on Saving Farms, Ranches and Open Space in 2000. The 16-member commission, appointed in May of 2000, examined Colorado's land preservation efforts and identified means of protecting the state's natural landscapes to deal with the issues of growth, congestion and open space. The commission obtained input from the public across the state on a variety of ideas toward the end of protecting the farming community and open space that is so vital to the lifestyle that the citizens of Colorado enjoy. Increasing population and development have, in some areas, been seen as a threat to this aspect of Colorado's lifestyle and the commission was tasked with developing ideas that would bring a balance between competing pressures.

Within this context, water necessarily plays a vital role. As a result, the commission examined various innovative ways to balance the water needs of farms, ranches and open space with the competing needs of cities and development for the same resource. In the commission's final report to the Governor, one recommendation was to initiate pilot programs for water trading, banking and easements that provide farmers and ranchers with options to respond to changing market conditions without permanently removing water from the basin. From that recommendation, legislation (HB01-1354) was passed that resulted in the Arkansas River Water Bank Pilot Program. This legislation became effective on June 5, 2001.

The legislation required the State Engineer, in consultation with the Colorado Water Conservation Board, to develop a pilot water banking program in the Arkansas River basin. This basin was chosen as a test basin, in part, due to the hydrologic knowledge obtained and developed as part of the Kansas v. Colorado litigation. Extensive knowledge of irrigation practices, storage facilities and return flow patterns, including the existence of a ground water model, were seen as useful tools that could allow such a program to develop in a more controlled environment. Other factors favoring the use of the Arkansas River included the interest and support of the Southeastern Colorado Water Conservancy District (the District).

As originally developed, the law allowing for the creation of the pilot water bank permitted the export of banked water outside of the basin of origin. Limitations to such export were part of the law and required the rules and regulations to set forth requirements favoring in-basin use over trans-basin development. Further limitations

within the law restricted the type of water placed in the bank to storage water rights only, with no provisions for placing direct flow water rights in the bank.

The State Engineer held several public input meetings throughout the basin in the summer and fall of 2001 and negotiated with the Bureau of Reclamation to allow use of Pueblo Reservoir as one of the main vessels to place water placed in the bank for transfer in the pool. After obtaining this input, draft rules and regulations were developed in December 2001 and public hearings were held resulting in the promulgation of the Arkansas River Pilot Water Banking Rules and Regulations (effective July 1, 2002). These regulations resulted in rules to be followed by both the water bank operator and the State Engineer in the functioning of the bank. The District agreed to operate the bank and start-up funds that were part of the legislation were provided to the District for development of a web site and the infrastructure to begin business transactions.

In May 2005, the District informed the State Engineer that they no longer wished to operate the bank. Limited interest by the water users and recently passed legislation concerning substitute water supply plans were reasons provided for relinquishing their sponsorship of the program. As a result, the Upper Arkansas River Water Conservancy District began negotiations with the State Engineer and amended rules and regulations have been initiated to streamline operations of the bank and meet the needs of the water users and the Upper Arkansas Water Conservancy District in future operations.

Effectiveness of Pilot Water Banking Program

The Water Bank Pilot program incurred limited interest. Only two water users within the basin made water available for lease in the bank during the operations under the District's promotion of the bank. No transactions were consummated resulting in the use of those waters within the bank.

Some positive developments occurred during the water bank's short history. The program allows farmers and water users to examine different means of operations. During the public input phase of the rulemaking procedures, an open dialogue between water users occurred with different ideas being shared and discussed concerning the marketing and transferring water.

The water bank also created a visually transparent water market by placing the price of water available for lease directly on the Internet. The value of water has historically been negotiated in private, leading to under-value and over-value pricing. Placing prices on the bank's website provides an opportunity to develop a clearer context of real market value. A clearer, more realistic water value is helpful to water users and those involved in water resources planning and development.

Existing statutory, regulatory, or contractual constraints on the successful use of water banking in Colorado

Limitations on the type of water that can be placed in the water bank

The most significant constraint to the pilot program was limiting the type of water allowed in the program to decreed storage rights only. While reservoir storage is easier to administer and lessens concerns over maintaining historic return flow patterns and dry-up provisions, most water users in the basin do not own decreed storage rights. This in turn limited the number of water users in the market place to participate in the program.

Restricting waters placed in the water bank to in-basin use

The legislation originally allowed trans-basin transfers through the water bank. In theory, allowing external basin use of waters placed in the bank would provide an opportunity for cities along the front-range to enter into long-term dry year lease agreements. These arrangements could potentially limit the permanent transfer of water out of a basin by allowing farmers to lease their water rights to cities during times when the city is short on supplies, while continuing to allow irrigation by the farmers in the basin of origin during times of sufficient metropolitan supply. A lower fee would be paid to the farmer during years of non-use by the city, with a higher value being paid during times of shortage by the city, with the resultant dry-up of the irrigated acreage limited to only those periods.

Allowance for using the bank for trans-basin exchanges was disallowed by amending the banking provisions in 2003. Fear within the Arkansas and other river basins over the trans-basin export of water appear to have driven the removal of the allowance for export. While the fear is understandable, removal of the allowance for export also removes one of the benefits that water banking provides, i.e. keeping water in the basin of origin over the long term.

Even as originally construed with the allowance for exportation of water under the original legislation, the tenure of the pilot project (only five years existed under the program once implemented) did not allow for long-term (ten to twenty year leases) arrangements that are more attractive for municipal planning purposes. Cities require long-term yields and assurances that the supply will be there when needed, i.e., during a drought. Five-year planning windows are not adequate when developing stable water supplies.

Substitute supply plan legislation

One of the stated reasons the District pulled its sponsorship and operation of the water bank in the Arkansas River basin was due to the passage of House Bill 02-1414, which amended the Water Rights Determination and Administration Act to allow for temporary substitute water supply plans through approval by the State Engineer. See Sections 37-92-308(4) and (5), C.R.S. This act allows temporary approval of changes of water rights, augmentation plans and exchanges of water for periods of up to five years, while providing notice to water users and greater flexibility than the pilot water bank project can allow under existing legislation. Further, there are no restrictions to using only stored water in the streamlined temporary approval, and wells can be augmented. The time constraint of five years that limits the effectiveness of long-term water supply planning in the pilot water banking program also exists under HB 02-1414. As one water user stated, "There is nothing I can't do with a temporary substitute water supply plan that I can't do with the water bank and, in fact, I can do much more (than with the water bank) and it still solves my problem of getting something accomplished quickly." The passage of HB 02-1414, with its allowance for trans-basin export may have reduced the available market and eliminated many potential water transactions in the water bank. It has been suggested if the water bank could have been used to market water made available by a temporary substitute water supply plan of direct flow water rights, it may have increased use of the water bank during the drought years of 2002 and 2003.

Federal NEPA

During the planning and development stages of the water bank, it was discovered that water being stored in a federal facility (Pueblo Reservoir[*]) is subject to review specified by the National Environmental Policy Act. Any use of a federal reservoir that is outside of the uses originally contemplated during the enabling legislation places the use of the entire facility into question. This problem was solved through a cooperative effort with the Bureau of Reclamation by allowing temporary if and when contracts for the use of the facility.

Dry-up concerns

Many water users expressed concern over the potential for expanding the use of water rights placed in the water bank. In a change of water right proceeding, Colorado water law often requires dry-up of irrigated acreage to occur when transferring water to different uses or places of use in order to balance historical consumptive use of water with the consumptive use of the new use. The rules and regulations promulgated by the State Engineer addressed these concerns, however, water users continued to express concerns over this issue. A potential resolution to this problem could be amending the legislation with language

[*] The geography of the basin and existing storage facilities made Pueblo Reservoir the most likely place for temporarily storing water from the water bank.

specifically requiring appropriate dry-up, when necessary, for any water placed in the water bank.

Streamlining calculations of historical consumptive use

Owners of water rights seeking a change in use, including those seeking participation in the water bank, require a historical consumptive use analysis to ensure no expansion of use or potential injury to other existing water rights. Most storage water rights have not been the subject of previous court adjudications quantifying the historical consumptive use. The time and effort required to perform the analysis, though necessary to protect other water rights from potential injury, may have been an impediment to those storage water right owners contemplating participation in the pilot water bank.

While most storage rights have not completed a historical consumptive use analysis, some have. For these water rights, the rules are being amended to allow users who have decrees that set forth the amounts of water transferable to simply provide the decree to the Division Engineer as proof of the amount of historical consumptive use available. This should assist in streamlining quantified water being accepted for placement in the bank.

Early withdrawal penalties

It became apparent during the operation of the bank that some water users were using the advertising potential of the bank's Internet presence to draw interest in their water right. Once a potential buyer was found, the depositor would withdraw their water from the water bank and enter into a separate deal with the party in interest, thereby avoiding the payment of any administrative fees for using the bank. Therefore, appropriate early withdrawal penalties need to be developed and strictly enforced by any water bank operator to provide a disincentive to users who simply want to obtain inexpensive advertising.

Institutional constraints on the successful use of water banking in Colorado

Having the State Engineer act as an operator of the water bank

Under the initial legislation, the water bank could be operated by the State Engineer or delegated to an outside operator. It became evident that placing the regulator in the position of operating and promoting use of the water bank would be problematic due to a perceived conflict of interest by the public. Legislation passed in 2003 addressed this potential problem and only water conservancy or water conservation districts may be operators of the water bank.

Internal water district and ditch company constraints

While the legislation passed allows water conservancy and conservation districts in the operation of a water bank to act outside of their geographic boundaries when administering any water banking program (Section 37-80.5-104.5(1)(d), C.R.S.), apprehension still remains. There is a fear that any operation outside of their boundaries may raise jurisdictional and enforcement issues. Further, many ditch companies have incorporated bylaws or other internal restrictions that prevent leasing of shares outside their system.

Arkansas River Compact

While the problem never materialized, there is concern that operation of the water bank in certain situations within the Arkansas River system could cause problems under the Arkansas River Compact. The Compact generally limits water use to the 1948 level of development unless it can be shown that the new use will not deplete usable state line flows. Any future change of use, plan for augmentation, or approval of a substitute water supply plan must assure historical return flow patterns be maintained to protect the state from a compact violation. With the State and Division Engineers reviewing all potential transfers via the water bank, potential impact to any Compact provision is mitigated.

Social or economic constraints upon the successful use of water banking within Colorado

The farming and ranching community is somewhat conservative by nature and, at times, this can make new ideas difficult to sell. This fear of change is not unwarranted in that the Arkansas River basin, in particular, has seen what many view as raids on their water rights, resulting in impacts to some local economies, environments, and tax bases due to the exportation of water.

This trepidation makes it clear that any operator of a water bank needs to make multiple, ongoing marketing efforts to promote the program and provide information to potential users allaying any existing fears. Placing a web site on the Internet and waiting for customers to come to the bank is not enough to develop solid usage of the bank. Professional marketing of the program by any operator is a key to making the program more successful.

Economically, there is no incentive to use the water bank instead of more traditional marketing strategies of stored water. It appears there is not a large enough price difference between bank and traditional market values to make use of the bank an attractive alternative to obtaining value.

Another constraint inherent in the bank at this time is there is no realistic mechanism to control what a potential user of the bank may ask for their water. In one instance, a participant set the price so high that it was seen as

unreasonable within the water community. In turn, this may have discouraged some users from even looking at the bank because they believed the water would be extremely over-priced. One suggestion to cure this situation would be to allow the user to set an initial price, but if the original asking price does not bring any interest within a time specific, the bank operator can begin to lower the price (within an agreed upon range) to a level the market will bear.

Any recommended limitations upon the use of water banks within Colorado, with specific reference to the time, place, or type of use of waters made available under such recommended limitations and the length of agreements implementing the same

1. Provide incentives for water bank operators to promote the use of the water bank.
2. Modify the Interruptible Water Supply legislation, Section 37-92-309, C.R.S., and the Water Bank legislation to allow water from these agreements to be placed in a water bank.
3. Allow trans-basin exportation of water through interruptible water supply agreements as approved by the water bank operator and the Division Engineer.
4. Allow storage and direct flow water rights to be placed in the water bank after quantifying the historical consumptive use in water court if a change in use is anticipated for the water being placed in the water bank. If fallowing agreements are included in the change in use of a water right, allow the fallowed water rights to be placed in the water bank to facilitate marketing of the water.
5. Place reasonable time constraints on the length of interruptible supply lease agreements created through the water bank, a minimum of ten years is suggested.
6. Develop appropriate penalties through rules and regulations and operator requirements of depositors for early withdrawal of water from the bank if the purpose is to obtain free advertising.
7. Include mandatory dry up provisions, where necessary, as part of any legislation modifying the current water banking statutes.