

5. Water Management

DRAFT 5.7: Alternative Agricultural-To-Urban Transfer Methods


NOTE: This draft section will be modified and supplemented upon receipt of the draft Basin Implementation Plans from the Basin Roundtables and additional work completed by the IBCC. This draft was developed based on IBCC and Colorado Ag-Water Alliance (CAWA) work to date.

Background

As history has demonstrated, and as can be predicted based on Colorado's projected population growth, pressure will remain for transferring agricultural water rights to help satisfy urban demands and other non-agricultural water needs across the state. However, the continued high pace of permanent removal of water from agricultural lands will negatively impact our economy, food security, environment, and cultural identity. Currently, agriculture is a large employer across Colorado's agricultural and food industry, supporting about 500,000 jobs in Colorado. Financial indicators such as agricultural product sales also demonstrate the economic importance of irrigated agriculture. Many of Colorado's counties are highly dependent on agriculture. In over half of Colorado's counties, one in every ten jobs is tied to the agriculture and food industry, and in 13 of Colorado's 64 counties, one in every three jobs is tied to the agriculture and food industry. Economic analyses indicate that an increasing global, national, and state population will place additional pressure on our food sources. Local economies in rural areas depend heavily on wholesale, retail, banking, and support services related to agricultural production. When farmers stay in agriculture, cash flow related to their operations can increase the vitality of their communities.

Of concern are projections that show that the current rate of permanent dry-up of irrigated agriculture, (commonly referred to as "buy-and-dry"), will significantly reduce irrigated acreage and could negatively impact surrounding local communities and economies. For example, one projection shows the South Platte River Basin losing 40 percent of today's irrigated land by 2050 if recent buy-and-dry rates continue.

Fortunately, water leaders have recognized the pitfalls of continued buy-and-dry and are pursuing a variety of alternative options. These options, commonly referred to as "alternative transfer methods" or "ATMs," will not limit the prerogative of private water right owners to permanently sell their water rights. ATMs seek to offer easily-accessible tools for both farmers and urban water providers to voluntarily depart from the status quo.



Minimum ATM
Water Needed:
50,000 AF
Could Serve
350,000 people
Statewide

Scenario planning (see section 5.1) indicates that a minimum amount of water needed from ATMs is approximately 50,000 acre feet, or enough water to serve as many as 350,000 people. We will have difficulty realizing this amount of water from existing alternatives because they are currently more expensive and legally burdensome than traditional buy-and-dry approaches. However, there are a number of creative and cutting edge alternatives being implemented and tested: water banks, rotational fallowing, interruptible supply agreements, lease/purchase arrangements, deficit irrigation, and crop-type changes can all play a role in reducing long-term reductions in irrigated acreage.

The Statewide Water Supply Initiative estimates that by 2050, Colorado may lose 500,000 to 700,000 acres of currently irrigated farmland to meet municipal growth demands. The IBCC and Basin Roundtables have concluded that the status quo path of continued buy-and-dry is not the best path for Colorado. There is a widespread desire to minimize buy-and-dry in a way that respects property rights, recognizes the importance of agriculture in Colorado, and supports a sustainable agricultural industry coupled with identifying solutions to provide water for municipal needs. As indicated by numerous groups, including the Colorado Agricultural Water Alliance and the Interbasin Compact Committee, ATMs have the potential to appreciably impact the projected permanent losses of irrigated acres.

Examples of Alternative Transfer Methods in Progress

One example of an ATM program in progress, funded through the grant program, is the Lower Arkansas Valley Water Conservancy District's effort to provide for continued economic and engineering analyses of the Super Ditch Company, which would provide a means for irrigators under a group of ditch companies to collectively lease agricultural water for other uses, including municipal use. The South Platte Co-Op is another key example of where ATM work is being employed in Colorado.

Alternative Agricultural Transfer Methods Grant Program Overview

Colorado is a leader in the West for incentivizing and encouraging alternatives to permanent dry-up. One way Colorado continues to move forward is through the CWCB's long-standing grant program related to Alternative Agricultural Transfer Methods, commonly known as the "ATM" program. As authorized in SB07-122, nearly two dozen grants from the program have been approved by the CWCB Board and awarded thus far, which range from approximately \$8,000 to almost half a million dollars. The grants address a wide array of issues related to lease fallowing, pilot projects, flex market studies, demonstration efforts, and other alternatives for the multiple beneficial uses of agricultural water supplies that are in harmony with program guidelines. A total of \$4 million was previously authorized for the ATM program, with an additional \$750,000 requested in the CWCB 2014/2015 Projects Bill (HB14-1333). A detailed report on the program and awarded grants is available from the CWCB.

The purpose of the ATM Program is to assist in developing and implementing creative alternatives to the traditional purchase and permanent transfer of agricultural water away for agricultural lands. These alternative methods could include but are not limited to interruptible supply agreements, long-term rotational fallowing agreements, water banks, deficit/partial irrigation practices, alternate cropping types or a combination of any of these potential methods.

Any private or public entity that can contract with the state and that can demonstrate a need for a project as well as the real potential to test and demonstrate the applicability and practicality of an ATM is eligible to apply for funds. Approved projects should provide usable and transferable information that will increase the water community's understanding of how to successfully design

transfer programs that provide a long-term, reliable water supply while sustaining meaningful agricultural production and local agricultural economies.

Examples of activities that qualify for funding from the ATM grant program include:

- Demonstration or pilot projects;
- Technical analyses of transferable consumptive use;
- Identification and examination of administrative and legal considerations or issues related to alternative agricultural water transfers;
- Technical, logistical and/or legal analysis/work to define and organize the institutional framework necessary to implement an alternative transfer method(s);
- Technical, logistical and/or legal analyses of water supply delivery options. This may include conceptual solutions and the feasibility of implementing those real or conceptual solutions for the delivery of water to the new use; and
- Assist in addressing potential third party concerns

Types of Alternative Transfer Methods

The following list summarizes eight (8) basic categories of ATMs being discussed or utilized in Colorado:

- Rotational Fallowing
- Interruptible Supply
- Deficit Irrigation
- Water Coop
- Water Bank
- Water Conservation Easement
- HB 13-1248
- Flex water marketing

ATM Related Legislation

NOTE: This draft section will be modified and supplemented based upon updated legislative bills that may be signed into law as part of the 2014 legislative session.

Recent legislation that has passed or is being considered can influence the availability of tools necessary for, or to further facilitate, the implementation of alternative transfer methods. This section reviews topics such as the following-leasing pilot program and flex markets.

Fallowing-Leasing Pilot Program

The Fallowing-Leasing Pilot Program Bill (HB13-1248) was signed into law by the Governor on May 13, 2013, and authorizes the CWCB to administer a pilot program to test the efficacy of fallowing-leasing as an alternative to permanent agricultural buy-and-dry. The pilot program may consist of the selection of up to ten separate pilot projects, each lasting up to ten years in duration, to test the practice of fallowing irrigated agricultural land and leasing the associated water rights for temporary municipal use.

HB13-1248 charged the Board, in consultation with the State Engineer, to establish “Criteria and Guidelines” for the application, selection, and approval process for pilot projects. A set of criteria and guidelines was developed through the cooperation and collaboration of the CWCB, the State Engineer’s Office, and the public in accordance with that legislative directive.

Year One		Year Two		Year Three		Year Four	
Plot 1	Plot 2	Plot 1	Plot 2	Plot 1	Plot 2	Plot 1	Plot 2
Plot 3	Plot 4	Plot 3	Plot 4	Plot 3	Plot 4	Plot 3	Plot 4

Figure 2 Rotational Fallowing: In this example, one plot out of four is fallowed every year, providing a base level of supplies to a municipality. The fallowed plot could still be farmed with a dry-land crop, such as wheat.

There is a recognized need to look for ways to increase flexibility within Colorado's system of water law, while respecting individual property rights. While there is much work to be done, alternative water transfers may very well provide a viable option for municipal water providers in the not-so-distant future. Through HB13-1248, "fallowing-leasing" pilot projects can be tested in an effort to overcome challenges and to develop and demonstrate opportunities for temporary agriculture-to-municipal water transfers.

In HB13-1248, the Colorado General Assembly declared its commitment to develop and implement programs to advance various agricultural transfer methods as alternatives to permanent agricultural dry-up. It further stated that Colorado needs to evaluate whether fallowing-leasing is a practical alternative to traditional "buy and dry" methods. The General Assembly designated the CWCB as the appropriate state agency to test the efficacy of implementing fallowing-leasing.

Overview of the Inaugural Pilot Project Application

In December 2013, the CWCB received the first official application for a pilot project under the umbrella of HB13-1248 and the related Criteria and Guidelines document adopted by the CWCB in November 2013. Represented by the law firm Berg-Hill-Greenleaf & Ruscitti, LLP, a joint application from the Lower Arkansas Valley Water Conservancy District (Lower Ark) and the Lower Arkansas Valley Super Ditch Company, Inc. (Super Ditch) was submitted. The pilot project essentially proposed to use water available from certain shares of the High Line Canal Company for temporary municipal uses by the Town of Fowler. Fowler is a small incorporated community located along the Arkansas River in northwestern Otero County. The proposal became known as the Fowler Pilot Project.

The Fowler Pilot Project was voluntarily withdrawn by the applicants through an official letter transmitted to the CWCB on March 4, 2014. In the letter, it was stated that "... Lower Ark and Super Ditch believe that they have learned a great deal from this inaugural experience, and will give full consideration to the comments submitted on the Fowler Pilot Project as we continue efforts to develop a viable fallowing-leasing pilot project under the C.R.S. 37-60-115(8). In fact, this work has already begun and Lower Ark and Super Ditch are committed to propose a pilot project proposal for 2015 for submittal in the coming months" (Nichols, P. and Martinsson, L., 2014).

Given the 5-year window of opportunity for putting forward pilot project applications to the CWCB as allowed by HB13-1248, it is highly likely that multiple submittals will materialize in the coming years originating from one or more river basin areas.

Flex Marketing

The proposed *Flexible Water Markets Bill* (HB14-1026) is for an Act concerning the authorization of flexible water markets. It states that under the anti-speculation doctrine, current water court

proceedings governing an application to change the beneficial use of an irrigation water right require the applicant to designate a specific alternative beneficial use and use location at the time of the application (Colorado General Assembly, 2014).

Draft HB14-1026 creates a more flexible change-in-use system by allowing an applicant who seeks to implement fallowing, regulated deficit irrigation, reduced consumptive use cropping, or other alternatives to the permanent dry-up of irrigated lands to apply for a change in use to any beneficial use, without designating the specific beneficial use to which the water will eventually be applied.

The first part of the bill defines "flex use" to mean an application of the fully consumptive portion of water that has been subject to a water right change-in-use proceeding to any beneficial use. It also redefines appropriation "to exclude flex use from the anti-speculation doctrine. The remaining parts of the bill describe the procedures for obtaining a flex use change-in-use decree and a flex use substitute water supply plan.

During the 2014 session, HB14-1026 was not passed by the General Assembly. It will very likely be an issue taken up by the Interim Water Committee in the future.

Interbasin Compact Committee Low and No Regrets Action Plan

ATM recommendations from the IBCC's low and no regrets planning work are summarized below from the draft "Action Plan" (IBCC, 2013 Draft).

Recommendation #1 - Develop an incentives program:

Financial incentives can assist greatly with offsetting the high cost of implementation for ATM projects. Potential funding sources may include local, state, or federal partnerships, tax incentives, and various revenue streams. Funding mechanisms can play an important role in the mutually beneficial aspects of keeping water and land in agricultural while simultaneously affording urban areas to achieve their water supply goals.

Streamlined approval processes will reduce the burdens and costs associated with short-term leasing of agricultural water for other purposes. These types of water transfers are a vital aspect of drought resistance and dry-year water supplies.

Customized incentive programs that are selective and systematic hold good promise for helping to preserve highly prized agricultural areas. This system could work for encouraging higher value crop type production in top rated lands, and for encouraging more ATM activities in the lower value lands. Additional study is required to evaluate the potential benefits and impacts of this recommendation.

In terms of carrying out the first recommendation with targeted actions and tactics, the IBCC suggests increased education, implementation or pre-approval of interruptible water supply agreements through several mechanisms. First, HB13-1130 concerning the extended operation of interruptible water supply agreements can be used. This legislation allows the state engineer to approve up to three ten year periods where interruptible supply agreements can be implemented in three years for each period. Second, implementation of historical use acreage determinations can be accomplished through SB13-74. This legislation resolves the ambiguities in some pre-1937 water right decrees regarding the place of use of irrigation water. Lastly, further exploration of additional legislation may be needed. Funding will be further explored in section 6.1.

Recommendation #2 - Establish ATM demonstration projects:

New authorities or overlay districts could potentially be created to facilitate agreements and operations of large-scale ATM projects. It could also generate reliable and stable revenue streams for the benefit of further work.

Permanent storage facilities will be an integral part of this facet of the Action Plan, which could also have clear benefits for many other forms of water management across the state. Appurtenant infrastructure will also be required to physically handle the movement of water to and from the appropriate locations.

The concept of multi-purpose projects is not new. The benefits have been documented and realized in such a way that environmental and recreational factors can be included alongside municipal, agricultural, compact compliance, and other water uses. Pilot projects could help to broaden our understanding for these types of opportunities.

Measuring and monitoring activities will naturally assist in the evaluation of the effectiveness of various demonstration and pilot projects. Baselines can be established for comparison purposes, and work in multiple basins will allow for a more accurate understanding of nuances within specific geographic areas.

The IBCC recommends that immediate next steps for the second recommendation include development of the Basin Implementation Plans, development of regional templates and tools, exploration of administrative obstacles, and additional studies.

Recommendation #3 - Establish basin goals and track ongoing progress:

Basin goals can be established through proper channels by working with the IBCC and Basin Roundtable processes. Several documents and tools have been created that will aid in first steps for goal setting.

The main IBCC action item is to immediately use the Basin Implementation Plans to establish goals, measurable outcomes, and approaches.

Recommendation #4 - Implement the ATM program:

Each municipal water system and ditch company is unique. Agreements should be promoted and facilitated for the shared benefit of irrigators and municipal water providers.

Demonstration and pilot projects should be supported to determine the efficacy of new methods and concepts through ATM grant programs.

Conservation easements properly coupled with interruptible water supply agreements should continue to be used as a vital tool as part of the suite of alternative transfer methods.

ATM studies in various basins will be supported so that local viewpoints are taken into account, especially so that overall acceptability by farmers, ranchers, and environmental groups is adequately considered.

Additional details regarding IBCC low and no regrets information pertaining to alternative agricultural transfer methods can be found in the latest version of IBCC Action Plan document.

Basin Implementation Plans

NOTE: This draft section will be modified and supplemented upon receipt of the draft Basin Implementation Plans from the Basin Roundtables and additional work completed by the IBCC.

The Basin Implementation Plans have yet to be submitted by the Basin Roundtables, and are expected in July of 2014. It is expected that several of them will specifically address some of the IBCC recommendations mentioned above and indicate ways to implement alternative agricultural transfer methods. This section will be updated with their work.

Next Steps

The logical next steps related to alternative transfer methods are:

- Track current and future legislation necessary for the implementation of ATMs;
- Respond to and process applications for fallowing-leasing pilot projects (CWCB);
- Monitor the positive effects of ATMs in terms of reducing permanent dry-up;
- Continue to encourage specific programs which study, evaluate, and implement practical and worthwhile efforts to curb the status quo impact of permanent agricultural transfers;
- Support existing and future incentive programs, and related IBCC recommendations (low/no regrets) for this topic; and
- Assess quantitative information related to agricultural dry-up in the next version of SWSI.

References:

Colorado General Assembly (2013). HB-13-1248, *A Bill for an Act Concerning Statewide Lease-Fallowing Pilot Projects*. Retrieved from: www.leg.state.co.us

Colorado General Assembly (2014, Draft). HB14-1026. *A Bill for an Act Concerning the Authorization of Flexible Water Markets*, retrieved from: www.leg.state.co.us

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Inter-Basin Compact Committee (IBCC) (2013, Draft). *Low and No Regrets Action Plan, Section 1, Minimize Statewide Agricultural Acres Transferred (per Basin Goals) and Implement Agricultural Sharing Projects*.

Nichols, P. & Martinsson, L. (March 4, 2014), Letter to CWCB Re: *HB13-1248 Fowler Pilot Project Proposal and Application for Contemporaneous Selection and Approval*.