6.4 ALTERNATIVE AGRICULTURAL TRANSFERS

GOAL

Colorado's Water Plan will respect property rights and the contributions of the agricultural industry by maximizing options for alternatives to permanent agricultural dry-up.

Background

Agriculture uses the largest amount of water in Colorado and is the economic backbone for many rural communities. It supports important environmental attributes, strengthens Colorado's food security, and upholds our state's cultural identity. There are approximately 66.3 million acres of land in Colorado, of which 10.6 million acres are cropland.[289] Global, national, and state population growth will place additional pressure on our food sources, which means that the long-term economic viability of agriculture is strong.[290] Local economies in rural areas depend 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. Agriculture is an important contributor to Colorado's economy as a whole, which Chapter 5 further discusses.

Respect the contributions of the agricultural industry by maximizing options to permanent buy-and-dry. Achievement of a sharing goal of 50,000 acre-feet could serve up to 350,000 people annually.

Pressures at state, national, and international levels threaten to reduce agricultural lands in the short term. Future municipal water demands contribute to an increasing pressure to transfer agricultural water rights to help satisfy urban demands and other non-agricultural water needs across the state.[291]

Agricultural interests are concerned about the possibility of drying up more agricultural lands in the future.[292] If Colorado continues down its current path, the South Platte River Basin could lose up to one-third of today's irrigated land by 2050.[293] The Arkansas River Basin could lose another 17 percent of its total.[294] The main-stem watershed area of the Colorado River Basin could also lose another 29 percent of its irrigated lands.[295] Reduction of irrigated lands can be measured as actual acres lost, but can also be measured in economic terms based on a reduction of crops that are irrigated before the water transfer.

The SWSI estimates that by 2050, Colorado may lose 500,000 to 700,000 acres of currently irrigated farmland in order to meet municipal growth demands. The IBCC and basin roundtables conclude that the current status-quo path of buy-and-dry is not the best path for Colorado. Across the state, water stakeholders want 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—while identifying solutions to provide water for municipal needs. As numerous groups, including the Colorado Agricultural Water Alliance and the IBCC, have indicated, a variety of alternative options have the potential to appreciably decrease the projected permanent losses of irrigated acres in Colorado.

These options, referred to as ATMs, do not limit the choice of private water-rights owners to permanently sell their water rights. ATMs offer voluntary, not mandatory, tools that enable both farmers and water users to depart from the status quo. In addition, ATMs can support the environment, recreation, industry, and groundwater sustainability and, through the creation of

water-banks, reduce demands on a water system. ATMs are agile enough to focus on reducing net-profit loss or, on the other hand, to help protect higher-value crops for economic benefits.

The Low-and-No-Regrets scenario planning, which Section 6.1 discusses, indicates that the minimum goal of water needed from ATMs to meet the planning outlook is approximately 50,000 acre-feet. This amount would reduce permanent transfer of agricultural water rights, but would still result in agricultural dry-up. Currently, ATMs are more expensive and legally burdensome than traditional buy-and-dry approaches that permanently transfer water rights, making it difficult to obtain the estimated amount of water from existing alternatives. There are many creative and cutting-edge alternatives (as Table 6.4-1 shows) that can help decrease permanent reductions in irrigated acreage.

Goals of ATM Programs

Short-term or long-term temporary water-transfer alternatives provide options that address concerns about permanent agricultural buy-and-dry. Program goals related to ATMs are aimed at specific objectives for various regions across Colorado. It is highly unlikely that any one concept will be universally accepted in every basin. Rather than a one-size-fits-all approach, we understand that a variety of alternatives will be needed to meet specific needs. The goal of alternative water transfers is to benefit the agricultural community, as well as cities and towns that are seeking viable sources of water supply to keep up with demands. The State has learned important information about developing, evaluating, and monitoring ATMs from pilot and demonstration projects, but has more to learn to fully understand the potential of ATMs.

TABLE 6.4-1 TYPES OF ALTERNATIVE TRANSFER METHODS PROMOTED IN COLORADO

Rotational fallowing – Rotational fallowing keeps land in irrigated production mode while systematically fallowing specific plots. A rotation occurs to systematically fallow each plot in successive crop seasons. It allows leased water to become a base supply for a municipality, while keeping most the farming operation in production. It also works very well for drought supply, drought recovery, and conjunctive use. Revegetation protection, erosion control, and weed control of the fallowed plots are important considerations for this type of ATM.
Interruptible supply agreements – This type of ATM is between non-agricultural water users and farmers, shareholders, or a ditch company. Water is temporarily transferred from agricultural use to another use, such as municipal. Farms are fallowed during specific periods of time, and water is leased to the end-user based on the historical consumptive use portion of the water right. These arrangements are made through contractual agreements that satisfy the authorizing statutes. This could also include water conservation easements. See examples below. Revegetation protection, erosion control, and weed control are important considerations for this type of ATM.
Municipal-agricultural water-use sharing – This concept embodies a complex array of options based on continued farming operations for all lands associated with the sharing arrangement. Methods are used to reduce the consumptive use of crops, which makes water available for municipalities by sharing the historic consumptive use amount. Two main sub-categories are continued farming and deficit irrigation. In deficit irrigation, crop-watering is strategically limited to save water for other uses. Plants are typically stressed, but production and crop yield still occur. Revegetation protection, erosion control, and weed control are important considerations for this type of ATM.
Water cooperatives – Although there are a number of ways a water cooperative could work, only one concept has been tested in Colorado. This concept identifies periodic excess water supplies that can be used for optimization in the system. It includes use of surplus augmentation water and other supplies. The framework for moving water from one use to another involves mutually beneficial transactions that work within the existing system of water rights so that no injury occurs.[296] The Lower South Platte Cooperative is a current working example of this type of ATM.
Water banks – A water bank acts as an intermediary or broker based on water supply arrangements with owners of certain water rights. The bank could help avoid or endure a compact curtailment, for example.[297] Irrigators would be paid to reduce their consumptive uses, which could trigger fallowing of agricultural lands or deficit irrigation practices on a temporary basis. The saved water could be banked in a reservoir for later release into the system. This approach is being regularly discussed and studied in the Colorado River Basin. Revegetation protection, erosion control, and weed control are important considerations for this type of ATM.
Flex markets – These ATMs are defined as voluntary agreements between municipal and industrial water users, agricultural water users, and environmental/conservation water users.[298] The idea is to change the use of a senior irrigation right to include multiple end uses in addition to irrigation. These markets establish trading platforms to help provide water used by all participants. The goal of this approach is to allow part of the senior right to be used by cities and towns and for environmental purposes based on contractual arrangements. The economic benefit of the senior water right is kept in place by maintaining enough agricultural water to sustain robust farming operations. Revegetation protection, erosion control, and weed control are important considerations for this type of ATM.

Hay field along Highway 131 near Steamboat Springs. Photo M. Nager.

To achieve widespread implementation of ATMs across the state, researchers need to build a deeper understanding of their challenges and opportunities. To do so, Colorado needs more data and measurements on the outcomes from actual case studies. Researchers need to collect more information to be able to quantify results and inform decisions. In addition, there are significant legal, technical, and financial barriers to implementing ATMs. An in-depth look at existing ATMs and future project models will help identify program constraints and how to address them. There is potential for tremendous local, statewide, and regional benefits, but stakeholders need further information to expand their knowledge and ability to implement projects.

Potential Impediments to ATM Success

The execution of ATMs at this time can be difficult, or sometimes impractical, due to institutional, legal, financial, and court-related barriers, as well as the type of operation. For example, rotational fallowing would not work on an established orchard, since the trees would not survive without water during a growing season. Some legal impediments include long-standing water court procedures that change water rights, and legal requirements for ATM applications to prevent injury to other water rights. New and creative ATM ideas face many challenges because they do not fit into the historic way of handling water rights.

Other obstacles to success include irrigators' concern regarding the outcome of historic consumptive-use analyses and the potential for expanded uses of changed water rights. Cities and towns wonder if temporary supplies will actually be available when needed over the long haul.[299] Another impediment is the lack of necessary infrastructure for water transfers and the inability to form agreements, depending on the seniority of water rights or productivity of the lands involved.[300] Transaction costs tend to be relatively high, which can discourage potential water transfers. In addition, Colorado needs to assess fair and effective pricing for farmers and water suppliers, and the ability of farmers to invest ATM revenues back into their operations. To avoid the problem of where and how to store ATM water, Colorado needs to better understand and define the infrastructure that may be needed. Infrastructure improvements, expanded reservoir operations, or reservoir re-operations may bring needed utility and agility for storing ATM water. The CWCB believes that it would also be helpful to provide a means to support prioritization of research, as well as investments into technology systems such as automated delivery techniques.

Colorado's Water Plan encourages all interested parties to openly and constructively find ways to adapt to changing times. Colorado's Water Plan recognizes that water-sharing agreements between municipalities and agricultural interests for water transactions, such as the sale or lease of surplus water and use of excess return flows, can be important tools for moving forward to meet supply gaps. To alleviate water supply pressures, stakeholders need to find solutions to reduce barriers to implementing ATMs for enhanced success. The strength of Colorado's agriculture is its diversity. A full mandate of ATMs across all sectors is not the answer, whereas creative options and solutions can apply to feasible situations. Municipalities and agricultural interests can achieve successes and overcome barriers using creativity at the grass-roots level—which then could generate momentum at the ditch and basin levels.

Examples of ATMs

A variety of existing examples demonstrate ways in which ATMs work in Colorado, including:

- *Morgan Ditch Company & Xcel Energy* formed a voluntary lease arrangement in the South Platte River Basin. For more than 20 years, a separate water company that the Morgan Ditch Company developed has provided firm-yield supply to Xcel Energy's Pawnee power station. The power station is conveniently located near the ditch system on the eastern plains south of Brush, which enables several options for physically delivering the water to the power station. While a traditional water court process helped codify the legal ability to transfer water from agricultural use to industrial use, the arrangement has built-in agility to handle wet, average, and dry years. The dry-year deliveries typically involve temporary dry-up (fallowing) of sufficient farmland under the ditch to meet delivery requirements to Xcel. This also means that remaining farmland is fully irrigated with senior direct flows or senior reservoir rights. In those cases, the system does not operate in a deficit-irrigation mode to apply water to all lands during the really dry years. The mutually beneficial agreement is desirable in the eyes of those in the system, and has a proven track record of success. This is an example of ways in which industrial interests and farmers can continue to operate.
- *City of Thornton* formed a short-term lease and temporary substitute supply plan to provide emergency water to the Platte River Power Authority.
- *Lower Arkansas Valley Water Conservancy District* provided an economic and engineering analysis of the Lower Arkansas Valley Super Ditch Company (Super Ditch). The Super Ditch allows irrigators under a group of ditch companies to collectively lease agricultural water for other uses, including municipal use. The Super Ditch acts as a negotiating entity for irrigators that are interested in leasing water for temporary use by cities, towns, water districts, and other users.[301] The farmers still retain ownership of their water, keeping farms in operation for agricultural sustainability.

HAROLD GRIFFITH

SOUTH PLATTE RIVER BASIN

Harold was a dairy farmer for 50 years in Morgan County. He served on numerous boards supporting agriculture and pioneering temporary agricultural leases to support municipal and industrial interests. These lease agreements, now known as a form of alternative transfer methods, were ahead of their time and speak volumes about Harold's leadership and lasting legacy. Harold is pictured in his corn field near the Xcel Energy Pawnee Generating Station in Fort Morgan, which has a lease agreement with the Morgan Ditch Company.

When it comes to challenges, I believe that we are sometimes our own worst enemy by creating our own roadblocks. Being involved in the water court system and negotiating agreements, I knows it is a slow process, but perseverance and belief in the task at hand sees you through and makes a huge difference for the future of a community...

CONTINUED AT END OF CHAPTER

PROFILE

- *The Water Bank Working Group* consists of the Colorado River Water Conservation District, the Southwest Water Conservation District, the Front Range Water Council, the Nature Conservancy, the CWCB, and other interested parties. The working group is investigating the feasibility of a water-banking program within the Colorado River Basin. In the short term, the water bank could operate as part of the demand-management component of the State's contingency plan to prevent Lake Powell from dropping below critical levels. In the long term, a water bank could help prevent shortages under the Colorado River Compact and help Colorado water users during regional shortages. The Water Bank Working Group engages with agricultural users to gauge interest in participating in the program, and to identify potential costs or compensation for involvement. The "Colorado River Water Bank Feasibility Study," which the Water Bank Working Group crafted and released, with consulting firm assistance, in March 2012, details potential uses for such a program, as well as potential sources of supply. The preliminary study modeled the potential frequency of situations in which a water bank would be useful. The study examined several scenarios that showed water-bank annual-use estimates and an estimate of the number of irrigators willing to participate. The CWCB is examining additional studies about the water bank.
- *City of Aurora & Rocky Ford Ditch* partnered for a creative water-transfer arrangement to allow continued farming. Aurora invested to help purchase highly efficient irrigation equipment (e.g. drip or sprinkler technology) for farming operations. Farmers also received augmentation water from Aurora to supply new wells for irrigation rather than using water directly from the Rocky Ford Ditch. Several farmers have maintained strong agricultural production by using augmentation supplies for depletions from the well use on their farm. The farmers have reduced their consumptive use by switching to crops that need less water. This arrangement still maintains a healthy agricultural operation. For successful outcomes, municipalities offer strong financial commitments, and the farmers offer willingness and agility to modify their traditional practices.
- *City of Aurora & Rocky Ford Highline Canal* partnered for a water-leasing agreement in 2004 and 2005. Farmers under the Rocky Ford Highline Canal directly leased water to the City

The Catlin Canal pilot project is an excellent example of an alternative agricultural transfer. Courtesy of the Lower Arkansas Valley Water Conservancy District.

Once farmed, certain plots of land are systematically fallowed to provide temporary water that is leased to municipalities. The fallowed plot can be planted with non-irrigated vegetation to prevent blowing soils.

of Aurora. Reaching an agreement required a substantial amount of time and included complex contracts between the city, individual farmers, and the canal company. It also required approval of a substitute water supply plan from the Division of Water Resources at that time. Nevertheless, newer statutory authorizations for interruptible water supply agreements assist in the implementation of these types of ATMs. Intermittent leases of this nature fill a specific need, including drought relief and the recovery of reservoir levels following drought. They could also supplement base water supplies during dry periods.

- *Ducks Unlimited* partnered with Aurora Water and Colorado Corn Growers Association to develop augmentation ponds that support waterfowl.
- *Metropolitan Water District of Southern California & Palo Verde Irrigation District* agreed to a land-fallowing, crop-rotation, and water supply program.[302] They began the 35-year agreement for voluntary water transfers in 2004 to help to meet California's urban water demands through a mutually beneficial partnership. The program is designed to supply 25,000 to 118,000 acre-feet annually by temporarily drying up 7 to 28 percent of the irrigated farmland in the Palo Verde Valley.[303]
- *The Lower Arkansas Valley Water Conservancy District and Super Ditch, LLC* submitted a pilot project proposal, followed by a full application to the CWCB in 2014, which the CWCB ultimately approved. The pilot began during the 2015 irrigation season and involves temporary transfers of water from certain agricultural lands on the Catlin Canal system to the communities of Fowler, Fountain, and Security. This project will assist in helping the CWCB learn from an actual ATM implementation in the basin.

ATM Grant Program Overview

Colorado's Water Plan encourages alternatives to permanent dry-up. One way that Colorado continues to address ATMs is through the CWCB's long-standing grant program. The ATM grant program assists in developing and implementing creative alternatives to the traditional purchase and permanent transfer of agricultural water.

Colorado Senate Bill 07-122 (a CWCB Projects Bill) authorized the ATM grant program, which applies to a wide array of issues related to lease fallowing, pilot projects, flex market studies, demonstration efforts, and other alternatives for a variety of beneficial uses of agricultural water supplies. The CWCB has awarded nearly two dozen grants, ranging from about $8,000 to almost $500,000 each. Colorado Senate Bill 07-122 initially funded the program with a total of $4 million, and, through Colorado House Bill 14-1333 (also a CWCB Projects Bill), approved an additional $750,000 in funding. CWCB is making available detailed summaries of the program and awarded grants.[304]

ATM Related Existing Legislation

Colorado's Water Plan recognizes the need to increase agility within Colorado's system of water law, while respecting individual property rights. ATMs could provide a viable option for municipal water providers now and in the future, and the key to their success is the development of methods that meet the needs and respect the property rights of the agricultural water-rights owners. ATMs can also provide long-term security and financial practicality to urban water providers.

Irrigating the cornfields near Xcel Energy's Pawnee power station. This site is a great example of an ATM project at work in Colorado. The project is further explained within the text of this chapter.

State legislation influences the availability of tools necessary to further facilitate ATMs. This section of the water plan discusses one important legislative bill related to a fallowing-leasing pilot program. Colorado House Bill 13-1130 (HB13-1130 or C.R.S. 37-92-309) enacted legislation for Interruptible Water Supply Agreements, and the associated statute supplemented or amended previous authorizations. The legislation allows for a temporary change of an absolute water right for a new use once the DWR approves it.[305] The statute does not require the arrangements to go through a typical water court process. Table 6.4-1, page 6-116, includes a general description of this type of ATM.

Colorado House Bill 13-1248 (HB13-1248 or C.R.S. 37-60-115), which Governor Hickenlooper signed into law on May 13, 2013, authorized the Fallowing-Leasing Pilot Program. It allows for a pilot program to test the usefulness of fallowing-leasing as an alternative to permanent agricultural buy-and-dry.[306] The pilot program may include up to 10 separate pilot projects statewide; however, no more than three are allowed in any single river basin. Each pilot can operate for up to 10 years in duration.

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.[307] The General Assembly designated the CWCB as the appropriate state agency to test the efficacy of implementing fallowing-leasing.

HB13- 1248 charged the CWCB, working in consultation with the DWR, to establish "criteria and guidelines" for the application, selection, and approval process for pilot projects. In accordance with the legislative directive, the cooperation and collaboration of the CWCB, DWR, and the public resulted in the development of a set of criteria and guidelines. These criteria and guidelines assist the CWCB and interested parties in fulfilling the spirit and intent of HB13-1248.[308]

HB13-1248 allows fallowing-leasing pilot projects to be tested in an effort to overcome challenges, and to develop and demonstrate opportunities for temporary agriculture-to-municipal water transfers.

The Lower Arkansas Valley Water Conservancy District and the Lower Arkansas Valley Super Ditch Company, Inc. formally submitted a proposal to the CWCB's staff on July 14, 2014 for a fallowing-leasing pilot project under the auspices of HB13-1248 and the CWCB's Criteria and Guidelines for the Fallowing-Leasing Pilot Projects. At its September 2014 board meeting, the CWCB approved the proposal to move forward on the full application. The sponors then submitted an application, which calls for transfers of certain shares of agricultural water from farmland irrigated by the Catlin Canal (in Otero County) for temporary municipal uses by the Town of Fowler, the City of Fountain, and the Security Water District. The project proponents aim to implement the pilot operation beginning in the 2015 irrigation season (the "Examples of ATMs" section above also explains this).

More recently, the governor signed Senate Bill 15-198 into law, expanding upon the authorities in HB13-1248. The pilot program may now include temporary transfers from agriculture to agriculture, agriculture to the environment, agriculture to industry, and agriculture to recreation.

BIPs

The basins submitted their final BIPs to the CWCB in April 2015, and provided valuable information regarding their plans for agricultural needs. These needs are summarized below.

The Arkansas Basin Roundtable has three goals associated with ATMs. First is to "Develop collaborative solutions between municipal and agricultural users of water, particularly in drought conditions" by continuing the ATM process of engineering, public policy, and pilot projects.[309] Second is to "Provide increasing quantities of augmentation water for increased farm efficiencies" by establishing long-term sources of augmentation water through leasing, water banks, or interruptible supply agreements.[310] Third is to "Develop a viable rotational fallow and/or leasing program between agriculture and municipal interests to address drought and provide risk management for agriculture" by: 1) Completing the ongoing technical studies and engineering to facilitate temporary transfers; 2) defining and quantifying potential third-party effects on shareholders within a ditch system that are engaged in a fallow program, by providing funding in support of an economic study; and 3) minimizing permanent dry-up.[311]

The Arkansas Basin is working on ATM projects, and others are under development. The use of stakeholder input and current pilot project data will identify future ATM projects.[312]

The Colorado Basin Roundtable notes the difficulties associated with ATMs. The main obstacles to alternative-transfer methods are loss of income, lost market share, and the lack of expertise in farming new crops. The plan also states that stakeholders need to address problems on a broad scale as they occur in each basin across Colorado.[313]

The Gunnison Basin Roundtable does not specifically identify ATMs as a method to meet its future needs. Nevertheless, the Gunnison Basin Roundtable does state that it is committed to the voluntary preservation of agriculture. The measurable outcome for this goal is to preserve the current baseline of approximately 183,000 acres of protected agricultural land, and to expand participation in conservation easements by 5 percent by 2030.[314]

The North Platte Basin Roundtable, like the Colorado and Gunnison Basin Roundtables, does not include ATMs as a means to achieve the goals and measurable outcomes of its basin. The plan does include agricultural use for the basin: "Describe and quantify the environmental and recreational benefits of agricultural use." The measurable outcome for this goal is to complete at least two new multipurpose water projects that meet multiple needs the plan identifies, by 2025.[315]

The Rio Grande Basin Roundtable explores innovative soil health and CU reduction techniques as part of the goal to achieve groundwater sustainability. While specific water-rights transfers may not be needed as part of these practices, the techniques are similar. As stated in the BIP:

> *The amount of water available to irrigators is projected to decrease, as discussed extensively in this Plan. As such, some producers may want to explore opportunities to reduce pumping through alternative cropping rather than drying up productive farm ground. Incorporating alternative crops and farming methods that reduce consumptive water use are opportunities to maintain an economically stable future for agricultural producers but have challenges, as equipment needs and market conditions make switching to new crops complex.*

Valley producers may consider growing fewer acres of higher-value crops, such as organics. Demand for locally grown, organic food continues to rise. Assistance for growers wanted to diversify their operations, switch to organic farming altogether, or enter into grower cooperatives would be a great benefit to expanding this option. Local farmers' markets have become a major source of local foods and are now a regular summer-into-fall feature in towns throughout the Valley.

Growers can also reduce water use by incorporating green manure into their crop rotation. Green manure is a mix of crops, such as mustards, radishes, and sorghum-sudan grass, which is specifically grown to be turned into the soil. Green manures improve soil health, as discussed in Section 5.2.6: Improving Soil Health, and require less water to go than other rotational crops. While the grower would not be selling a product in these years, the improvement to their operations has been shown to pay back the investment in green manure….

There are water savings through such methods as drip irrigation that will be realized through reduced evaporation losses. In addition to more efficient water use, the subsurface irrigation system may produce a higher quality of crop with less herbicides and pesticides required. , the widespread viability of subsurface irrigation has not yet been demonstrated in the Valley.

Improved water management techniques, such as irrigation scheduling, can also boost efficiency without reducing crop yields. Finally, such practices as deficit irrigation — giving crops just enough water to produce a minimal profit — may be a noteworthy technique for water rights holders on the cusp of receiving deliveries.[316]

The South Platte/Metro Basin Roundtable identifies successful implementation of ATMs as a measurable outcome for its plan's agricultural goal.[317] The joint plan also lists minimizing traditional agricultural buy-and-dry and maximizing the use of ATMs to the extent practical as one of 11 key elements to its plan. ATMs play a key role in the South Platte/Metro's B and C portfolios for meeting approximately 30,000 acre-feet of the basin's future water demands.[318] Through the CWCB's Alternative Agricultural Water Transfer Methods Grant Program, the South Platte/Metro Basin has completed and is currently working on several ATM grants, and lists one of these projects as a new IPP. The plan lists several recommendations for overcoming ATM barriers associated with water court and transaction costs:

- Development of special review procedures to facilitate ATM agreements.
- Adoption of presumptive CU procedures.
- Determination of historical CU for a canal or ditch system.
- Development of specific methodologies for measuring, calculating, and monitoring CU water transferred through ATM projects. (The Arkansas Basin is developing an "Administrative Tool" to calculate a farm's historic CU and return flow obligations.)
- State funding of infrastructure cost.
- Pursuit of transfer of a portion of a water right.[319]

The Southwest Basin Roundtable lists as a measurable outcome the implementation of ATMs as a means to preserve agriculture while addressing other water-use needs.[320]

The Yampa/White/Green Basin Roundtable mentions ATMs as a process to achieve its goal to "Protect and encourage agricultural uses of water in the Yampa/White/Green Basin within context of private property rights." Part of this goal's purpose is not only to preserve current protected agricultural acreage, but to expand it as well. The plan specifically states that a process for this goal is to "Identify projects that propose to use at-risk water rights, alternative transfer methods, water banking, and efficiency improvements that protect and encourage continued agricultural water use."[321] The plan has not identified any specific ATMs to meet this goal.[322]

IBCC No-and-Low-Regrets Action Plan

The IBCC developed several ATM recommendations as part of the No-and-Low-Regrets Action Plan, as Table 6.4-2 (page 6-125) summarizes.[323]

Additional details regarding IBCC low-and-no-regrets information pertaining to alternative agricultural-transfer methods are available in the latest version of the IBCC No-and-Low-Regrets Action Plan.

TABLE 6.4-2 NO-AND-LOW-REGRETS ALTERNATIVE TRANSFER METHOD ACTIONS

COMPLETED AND ONGOING ACTIONS	POTENTIAL FUTURE ACTIONS
• Implement ATM Grant Program • Support CWCB and IBCC	1. Develop an Incentives Program a. Financial incentives b. Streamlined approval processes c. Selective and systematic considerations (encourage maintaining or increasing highly productive lands) 2. Establish ATM Demonstration Projects a. Overlay-district or authority b. Storage and other infrastructure c. Multipurpose objectives d. Adequate measurement and monitoring 3. Establish Basin Goals and Track Ongoing Progress 4. Implement ATM Program 5. Analyze Infrastructure Needs for Storage of ATM Water

ACTIONS

The CWCB should consider the following options or action steps to help ensure attainment of alternatives to permanent farmland dry-up:

1. Monitor current and future legislation necessary for the implementation of ATMs, including enhanced sharing opportunities and system agilit
2. Encourage funding grants that focus on implementing on-the-ground ATM projects, data collection, agile administration practices, ATM affordability, basin-specific ATM projects, and infrastructure modernization.
3. Support appropriate fallowing-leasing pilot projects, such as the Catlin Canal pilot project, by responding to and processing applications in a timely manner under House Bill 13-1248 (C.R.S 37-60-115). The ATM grant program could further support these projects. To proactively cultivate these projects, the CWCB will work with partners or co-sponsors to organize and conduct regional workshops. These events will enable stakeholders to share lessons learned on actual ATM projects, and to garner additional interest by discussing program benefits.
4. Encourage adaptive strategies that capture a "learning by doing" concept for pilot programs and other on-the-ground ATM applications.
5. Continue to provide ATM leadership as well as technical and financial support to basin roundtables during the development of their BIPs.
6. Assess quantitative information related to agricultural dry-up in SWSI 2016, including evaluating lessons learned and monitoring the effects of ATMs in reducing permanent agricultural dry-up.
7. Explore financial incentives through a stakeholder process as part of the funding Section 9.2 describes. These incentives or grants could include new and ongoing revenue streams and tax incentives at the local and state level.
8. Work with the South Platte, Metro, and Arkansas Basin Roundtables to explore a WSRA or an ATM grant, with municipal and agricultural stakeholders that could lead to the formation of one or more pilot regional water sharing cooperatives. The mission of a cooperative would be to facilitate water-sharing arrangements. The cooperative could include ways to determine initial start-up costs necessary to reach stated goals. For instance, methods may include acquiring funding needed to reduce barriers associated with the high transaction costs of water-rights transfers, and working through water court to make a water right more agile.
9. Continue collaborating with water users to develop tools and models that can be used as an approved common baseline for water court litigants and parties. Administrative change cases could rely upon these for conservative yet streamlined estimates of consumptive use, return flows, and injury.

10. Seek to help stakeholders understand the benefits and social barriers of ATMs and how they can function under existing and future law

11. Interact with the Colorado water community and decision makers to consider the following options in support of ATM goals:

    - Continue to monitor basin-level work and explore options to develop agility in the use of certain agricultural water rights for multiple purposes.
    - Implement tools Senate Bill 15-198 (C.R.S. 37-60-115) provides that broaden pilot-project end uses House Bill 13-1248 (C.R.S. 37-60-115) sets forth. Such pilot projects could demonstrate agricultural transfers that meet environmental, recreational, industrial, or compact needs in addition to urban needs. The CWCB will encourage pilot projects to test the latest concepts or meet multiple benefits.
    - Reduce barriers, such as high transaction costs associated with water-rights transfers and water-rights accounting uncertainties, through continued exploration of pilot projects and other voluntary transactions that demonstrate a streamlined approach or provide financial support.
    - After a thorough outreach and stakeholder process, consider legislation to protect existing municipal, transferred water-rights owners that choose to undergo the court process to demand that their permanent agricultural transfers operate as ATMs. Such legislation could help ensure that a water-rights owner could revert to its previously adopted stipulations, if the water court process for an ATM option yields an unfavorable outcome.
    - Strengthen recognition for new types of legal beneficial uses, such as leased or agile-use water.
    - Identify and develop a request for a multi-basin WSRA grant through the basin roundtables. The goals of a potential grant would be to compile ATM data, identify actions to encourage irrigators to enter agreements, analyze barriers, and increase program awareness.
    - Research benefits and challenges of "buy and supply," which could preserve local irrigated agriculture and associated benefits. The concept of "buy and supply" is that M&I water users purchase irrigated lands with associated water rights, establish a conservation easement for future farming, and then supply a full amount of water for a certain number of years within a 10-year period. The M&I user could then receive water supply in the remaining non-farming years.
    - Explore the possibility of third parties providing assistance in funding ATMs to ensure that farmers are appropriately compensated and that water suppliers pay a reasonable incremental cost for firm yield. In this case, the third party would essentially assist in the effort to uphold the value of continued viable agriculture.
    - Support research into the benefits and challenges of temporary rotational "idling" of crops, deficit irrigation, and split-season irrigation.
    - Incorporate improved water-use data into decision-making processes in a way that reduces uncertainty for water managers, and develop basin-specific models for use in water court cases to help reduce transaction costs.