The Future of Irrigated Agriculture In Colorado: Great Potential, Great Vulnerability

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Every five years since 1996, the Colorado Department of Agriculture has surveyed Coloradoans about food and agriculture. What have they found? Residents generally value agriculture. That might not apply to the driver that honks incessantly behind a tractor lumbering down the road, but 95 percent of 1,000 respondents surveyed in 2016 indicated that maintaining land and water in agricultural production was "somewhat or very important." That is down about two percentage points from previous surveys, but still a strong positive response. The survey also found broad support (83%) for preserving agricultural land by using public funds to buy development rights from farmers and ranchers who want to sell them. A majority (86%) of respondents also thought open space programs should help minimize farm and ranch loss.

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of survey respondents said maintaining land and water in agricultural production is important.

This is all positive for agriculture, but it's noteworthy that during the 20-year time span over which the survey has been conducted, Colorado has lost an estimated 600,000 acres of irrigated farmland. That number is based on a comparison of irrigated acreages reported in the 1996 and 2016 Colorado Agricultural Statistics reports. That's about 938 square miles of land taken out of production – an area slightly larger than the land area of Rio Grande County in the San Luis Valley. During that time, our state's population has increased by about 1.6 million people based on U.S. Census data.

According to the state water plan, Colorado could lose another 600,000 acres (+/-) of irrigated agricultural land by the year 2050 if the status quo of 'buying and drying' irrigated farmland to supply water for growth continues. For perspective, 600,000 acres represents slightly less than one-fourth of the remaining 2.6 million acres of irrigated acreage we have left in Colorado.

If history serves as a guide, very few 'dried-up' acres will ever return to irrigated production. Yet, future generations of farmers will need more land and water – not less - to grow food for a much larger population, both in Colorado and the western U.S.

What can be done? The water plan puts forth a strategy for closing the projected 560,000 acre-feet gap between current municipal and industrial water supplies and the amount they'll need by 2050. The strategy includes conservation, storage, and ag water leasing, which is also referred to as an alternative transfer mechanism (ATM).

Most people living in a front range town or city are already aware of conservation efforts being promoted and implemented by their municipal water suppliers. Rate payers are reminded monthly of the incentive to conserve water when they receive their water bills, which increasingly include tiered rates that ratchet up with increased water use, as well as rebates for purchasing water saving devices. Denver Water, for example, reports that water use has been cut by about 20 percent over the last decade through conservation.

Planned storage projects – which include the Chatfield Reservoir Reallocation Project, Gross Reservoir Expansion, Chimney Hollow Reservoir, and the Northern Integrated Supply Project (NISP) - will

collectively add about 400,000 acre-feet of mostly wet weather storage capacity along the northern Front Range. Denver Water and other municipalities are also exploring underground storage areas where treated water can be pumped into aquifers during wet years and pumped back out in dry years.

The third objective of the water plan's 3-pronged water provision strategy is ag water leasing. The water plan puts forth a goal of 50,000 acre-feet per year to be leased from agriculture to municipal and industrial interests. The conceptual benefit of ag water leasing is two-fold: 1) it can help supply water to communities during dry years and top off storage supplies after droughts, and 2) it provides ag water right holders with a non-commodity based income that, for some, may serve as a desirable alternative to selling their water permanently. The survey conducted last year by CCA's Ag Water NetWORK found that ag water right holders preferred leasing over selling by more than a 20:1 margin when given the choice.

Canal Lining Manual, CSU Water Resources Archives.

Producer interest in ag water leasing and the success of projects such as the Catlin Canal Fallow-Lease Pilot Project and North Sterling Irrigation District's leases to Xcel Energy and BNN Energy suggest that well-managed, adequately compensated leases can provide the benefits described above.

In order for ag water leasing to become widespread it must be work for all involved parties. Ag water right holders must view leasing as a superior alternative to business as usual and/or selling their water rights. Municipalities must view leasing as a desirable way to meet a portion of their water needs, and perhaps, a means of providing broader community benefit. If part of the recognized benefit to communities – beyond just receiving water – is helping to preserve irrigated ag land for future generations, then ag water leasing may garner greater community support based on the findings of the Colorado Department of Agriculture's survey.

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