

Part II: Stories from the Field - Innovative Water Sharing Agreements

May 13th at 12pm



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Colorado Water
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Department of Natural Resources

Today's Speakers

Alexander Funk, Agricultural Water Resource Specialist, CWCB

Scott Lorenz, Senior Project Manager, Colorado Springs Utilities

Representative Andy Pico, House District 16

Allen Law, Executive Director, Rio Grande Headwaters Land Trust

Erich Schwiesow, Alamosa City Attorney

Carmen Farmer, Conservation Project Manager, Colorado Open Lands



Innovative Water Sharing Agreements

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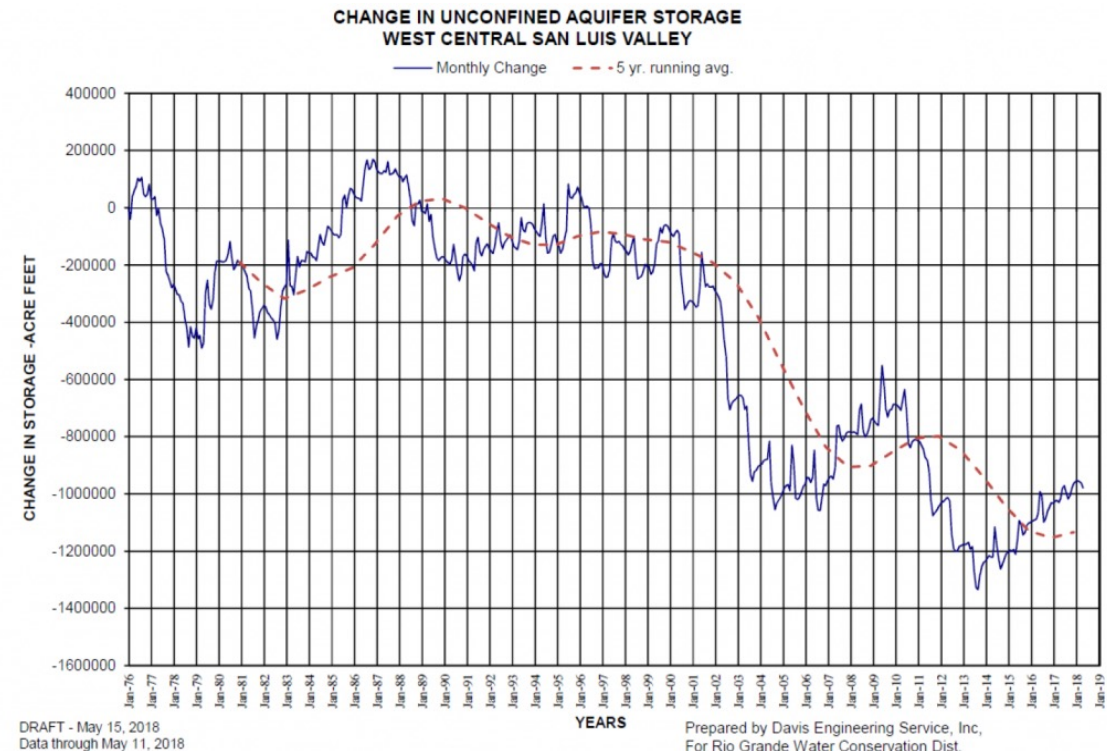
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Trends

According to state projections, water supply and demand challenges will continue to drive potential, permanent reductions in irrigated agriculture acreage in most basins

What are the key water-related drivers:

- **Planned agriculture to urban transfers** = 77,600 acres (this could increase depending water supply development)
- **Urbanization** = 152,400 acres (5% of current acreage)
- **Groundwater sustainability** =
 - Rio Grande Basin upwards of 81,000 acre-reduction
 - Republican Basin upwards of 135,420 acre-reduction
 - 20% of groundwater irrigated production in South Platte Basin due to limited augmentation supply





Are there alternative solutions?

Alternative Transfer Methods, or Water Sharing Agreements

- **Basic components of most ATMs:**
 - Traditionally an agricultural water user with historical consumptive use
 - An interested party (e.g. a municipal water providers) in a position to pay for the use of water for near or longer term purposes
 - Legal transfer structure and approval for the transfer, e.g. statutory, water court, and/or State Engineer processes
 - Appropriate infrastructure to store and deliver water
 - Agreed upon price for the transferred water



Polling Question





SOURCES OF WATER

ATM agreements require agricultural water users to temporarily reduce their use to free up water for transfer. Strategies for doing this include, but are not limited to:

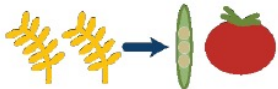
TEMPORARY FALLOWING



ROTATIONAL FALLOWING



CROP SWITCHING



DEFICIT IRRIGATION



TRANSFER STRUCTURES

ATM agreements require a legal structure to govern the exchange of water between participating parties. These are contractual agreements, laying out how and when the water is shared, and can take various forms:

LEASE AGREEMENTS



SUBSTITUTE WATER SUPPLY PLANS



PURCHASE-AND-LEASE BACK



WATER BANKS



INTERRUPTIBLE WATER SUPPLY AGREEMENTS (IWSAS)



Efficiency improvements don't generate transferable water in Colorado! (most of the time)



ALTERNATIVE TRANSFER METHODS

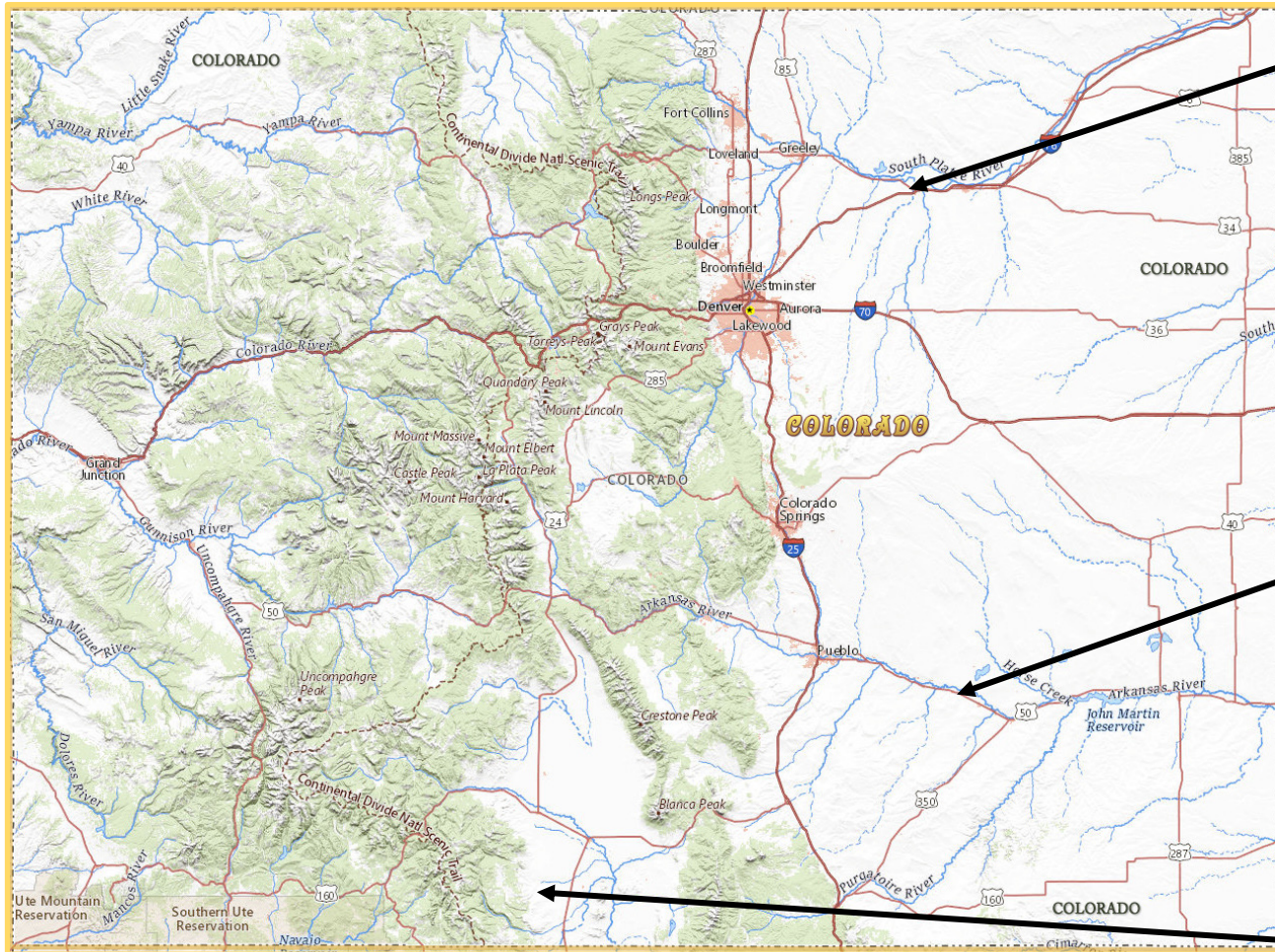
FLEXIBLE & INNOVATIVE WATER SUPPLY
ALTERNATIVES

A GUIDE FOR LOCAL LEADERS IN COLORADO



Available at:
waternow.org/project/colorado-atms

Today's Case Studies



Riverview Farm ATM

- Demo viability of ATMs while preserving farmland
- Ability to use augmentation recharge credits for lease

Co Springs Utilities Lease-Fallow Pilot

- Feasibility of rotational fallowing as alternative to permanent ag-to-muni transfers
- Approved in 2020

Cactus Hill ATM

- Use of temporary fallowing to augment city groundwater pumping
- Unique coupling of conservation easement and alternative transfer method

Today's Case Studies

	Co Springs Utilities Lease-Fallow Pilot	Cactus Hill ATM	Riverview Farm ATM
Water Source	Rotational Fallowing	Rotational Fallowing and Deficit Irrigation	Conserving Crop Rotation; Deficit Irrigation
Transfer Method	Temporary Lease (3 out of 10 for 10 years)	Perpetual Lease	TBD
Transfer Driver	Secure Water Supplies & Preventing "Buy and Dry"	Groundwater Augmentation; Farmland Preservation	Augmentation: Farmland Preservation
Year	2020-2030	Perpetual (30 year renewal)	TBD



CO Springs Utilities Lease-Fallow Pilot

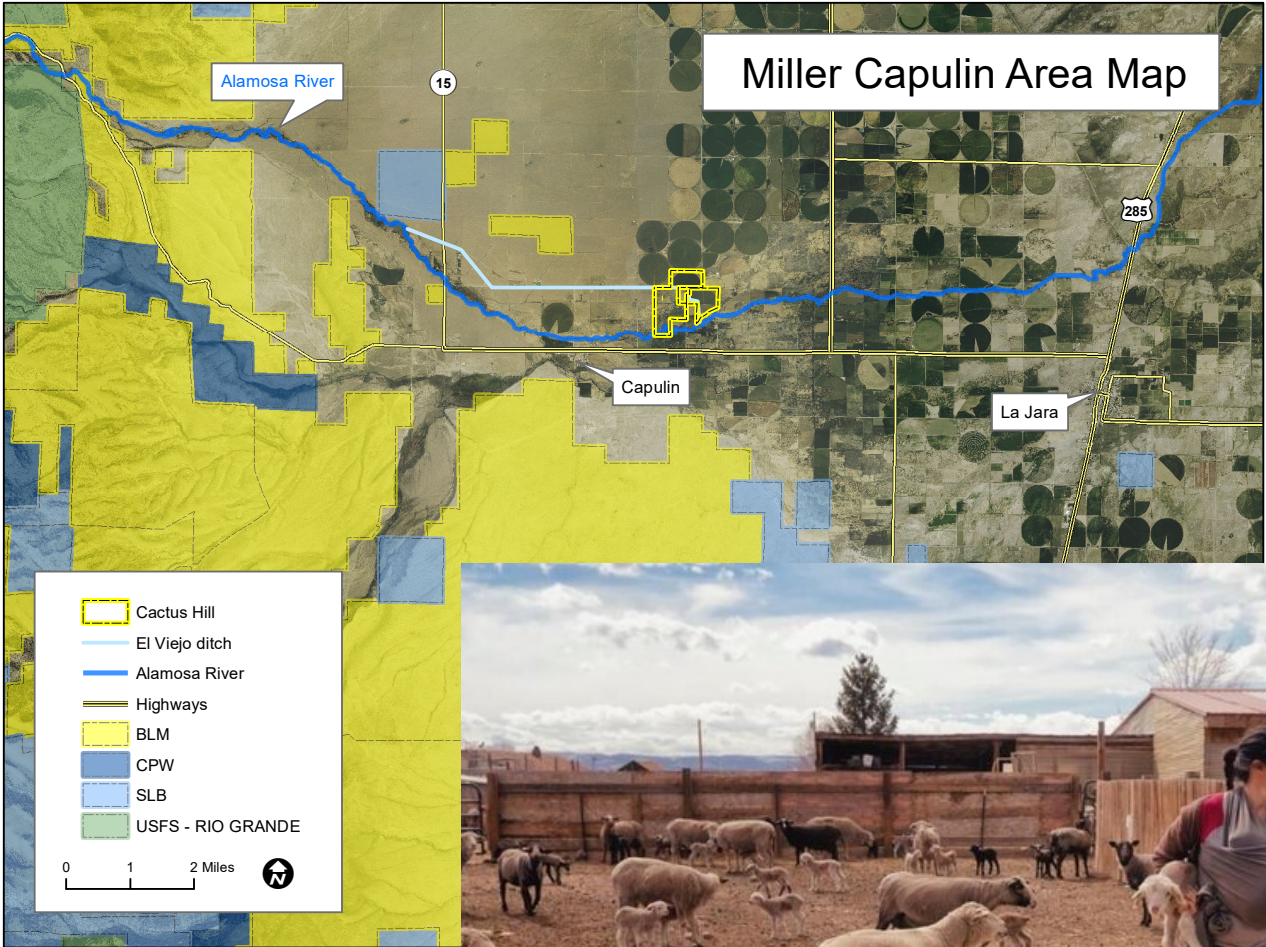
Scott Lorenz, Senior Project Manager, Colorado Springs Utilities
Representative Andy Pico, House District 16

Cactus Hill ATM

Allen Law, Rio Grande Headwaters Land Trust

Erich Schwiesow, City of Alamosa

Cactus Hill Opportunity



RiGHT

- Interested in conserving land, especially family farms and ranches
- Don't want conservation to impede...
 - Landowner success
 - New water management in SLV
 - City of Alamosa
- Do want...
 - Good land management
 - Prevent water export

Landowners

- Didn't want to sell water/land
- Needed capital for generational transfer
- Interested in conservation
- Interested in modeling new projects/strategies
- Want to minimize following
- Certainty about and input into what will happen on their land

City of Alamosa

- Need augmentation water on Alamosa River
- Wet water, high priority is ideal because reliability is essential
- Know importance of local agriculture to community and economy (3rd largest economic sector for jobs)



RiGHT's role

- Provided landowner with professional support
 - Valuation, engineering, legal, habitat/land management
- Rewrote its conservation easement language
- Added perspective from other areas of RG Basin
- Most importantly...?
 - Emotional Support!

Important Lease Terms

2.1. Lease Price. The lease price for the Property is \$XXXXXXXXXX for the Property, for the initial term and any and all renewal terms, plus an additional lease payment of \$50 per acre foot for each acre foot of consumptive use water actually used by Alamosa in any given year, paid on or before December 31 of each calendar year. The \$50 per acre foot price shall be adjusted on the tenth anniversary of this Lease in accordance with the change in U.S. Bureau of Labor Statistics Producer Price Index – All Commodities, or successor index published by the U.S. Bureau of Labor Statistics, and on every succeeding tenth anniversary thereafter.

2.3 Term and renewals. The term of this lease shall be 30 years from the date of Closing. The term shall automatically renew for an unlimited number of 30 year terms in perpetuity unless Alamosa, in its sole and unlimited discretion, gives written notice to Miller within 30 to 60 days of the end of a calendar year, that it intends to terminate the Lease at the end of the next calendar year. In the event of any such termination, no part of the Lease Price shall be refunded, and the annual lease payments shall cease after the end of the next calendar year in which the notice was given.

Right to Use Retained by Miller

The amount necessary year to year to meet the City's augmentation and/or replacement requirements on the Alamosa River is estimated to start at approximately 25 acre feet per year of historical consumptive use and to increase over the term of the lease at a rate of 1% to 2% per year to a maximum of 36 acre feet per year historical consumptive use plus 10 acre feet per year for ditch losses associated with the consumptive use. The maximum amount under this Lease is 46 acre feet per year (consumptive use plus associated ditch loss). From and after the effective date of this Lease Agreement, Miller shall retain the right to use, without charge or payment, any and all of the Water Rights not used by Alamosa for augmentation and/or replacement purposes pursuant to its contemplated augmentation and/or replacement plan in any given year under the term of this Lease. Alamosa shall notify Miller in writing at the closing of this Lease and by December 1 of each subsequent year of the estimated amount of augmentation and/or replacement necessary in the forthcoming year.

Engineering



Figure 6. Potential Dry-Up Parcels

What's Next



Win – Win – Win





Riverview Farms ATM/CE Example

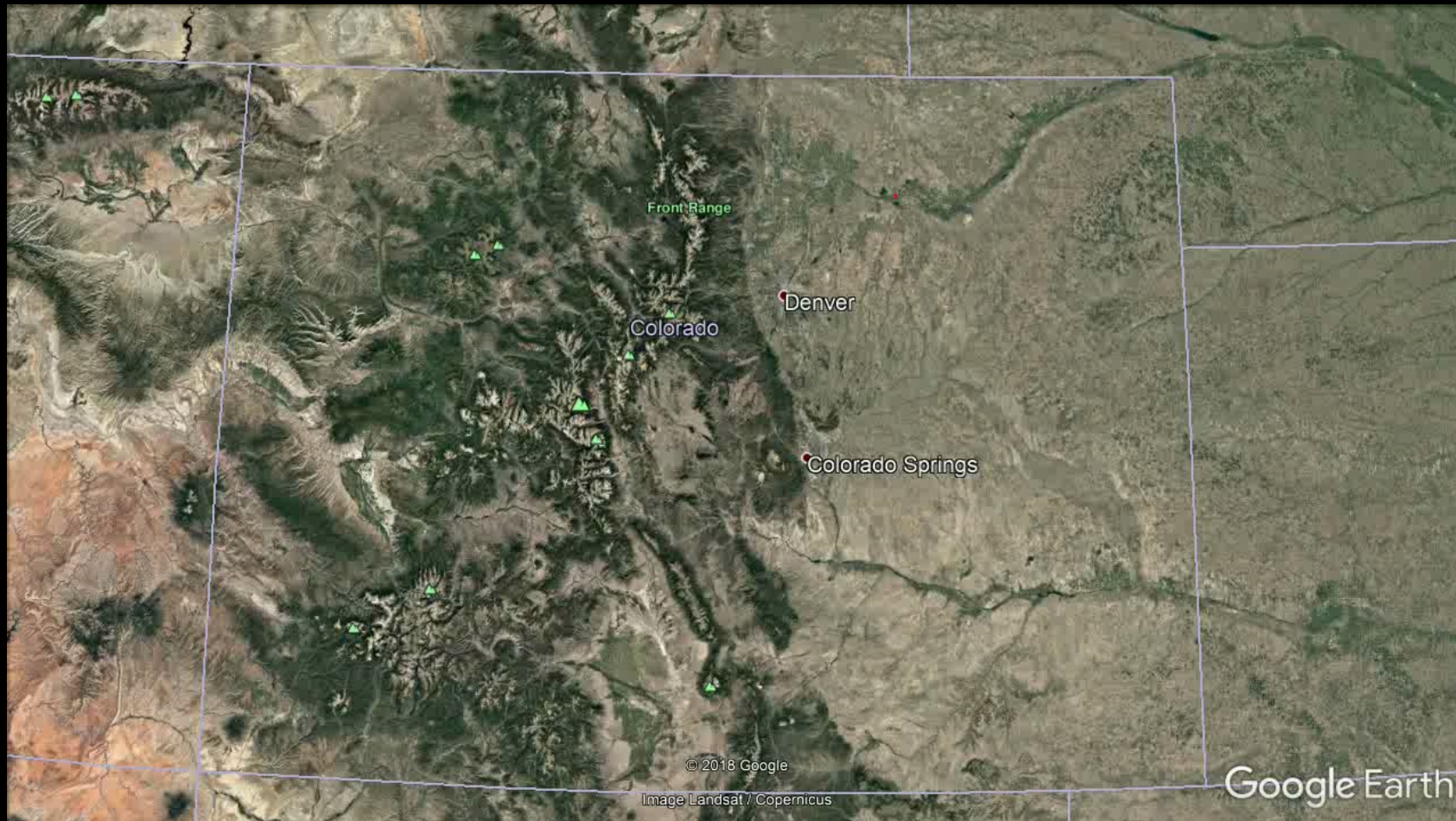
Carmen Farmer, Conservation Project Manager



Why ATM + Conservation Easement?

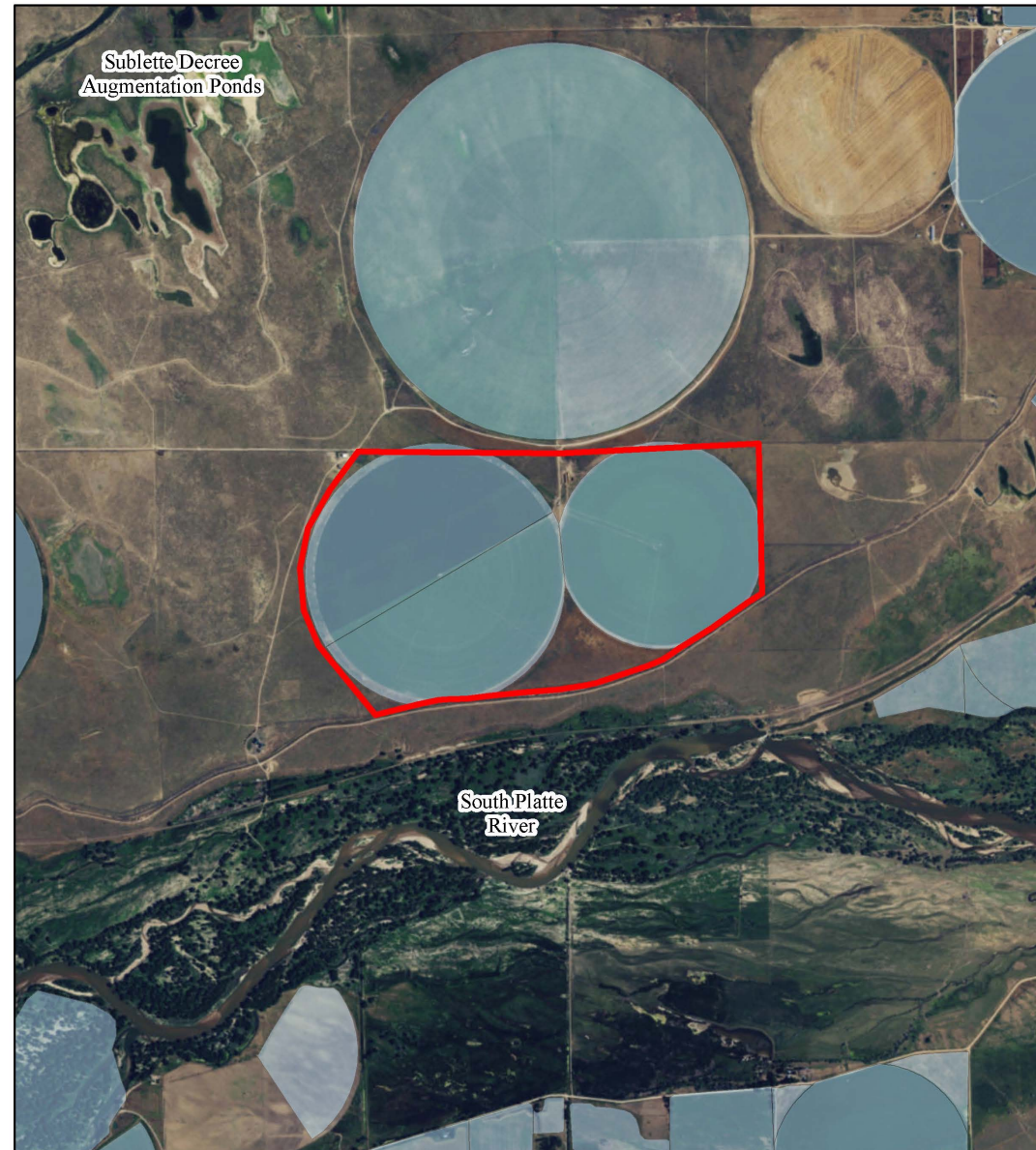
- Municipality: Secure source of water (cannot be purchased by competitor).
- Farmer: Diversification of Income and Operations.

Weld County/Golden Triangle



Water Rights

- 505 acre feet per Augmentation Plan
- Owner fills ponds in offseason and pumps groundwater during irrigation season based upon recharge from ponds.



ATM Process

- 1) Farmland Viability Analysis
- 2) Exploration of Municipal & Industrial Partners/Water Sharing Agreement
- 3) Farm & Operations Plan
- 4) Water Court/Change of Use

Farmland Viability Analysis

Determination of ATM options

- 1) Rotational fallowing.
- 2) Deficit irrigation of current cropping.
- 3) Plant a lower water consuming crop (e.g. sorghum) and lease the remaining water.



Exploration of Municipal & Industrial Interests/Water Sharing Agreement

- 1) Gauging Interest
- 2) Developing Term Sheet
- 3) Mechanism for triggering ATM
(Farm Planning)
- 4) Actual Delivery
- 5) Accounting

Farm & Operations Plan

How best to manage financial operations:

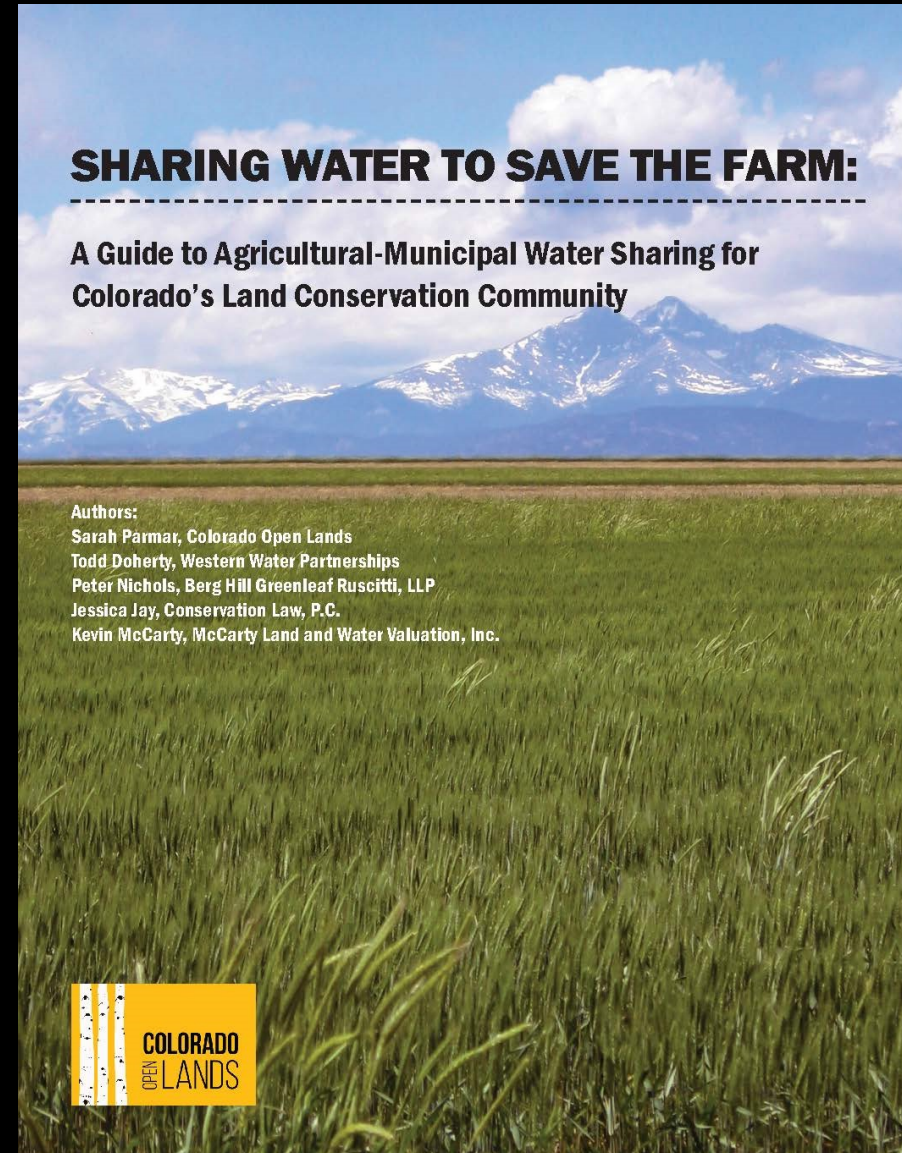
$$\begin{array}{c} \text{Farm Sales Revenues} \\ + \\ \text{ATM/Leasing Revenues} \\ \hline \end{array}$$

Long-term Financial Viability of Farm

Additional Information

Coloradoopenlands.org

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SHARING WATER TO SAVE THE FARM:

**A Guide to Agricultural-Municipal Water Sharing for
Colorado's Land Conservation Community**

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To Recap, ATMs are....

- Intended to provide an alternative approach to **address drivers of permanent reductions in irrigated land production** while sustaining agriculture and rural communities through unique water-sharing arrangements
- **Complex, unique, and tailored** to address multiple issues from drought recovery to augmentation of agricultural water supplies
- **Voluntary, opportunity for diversification of income** for producers and water right holders, mitigate socio-economic effects of traditional water transactions

2020 ATM Status Report: Where are we going next?

- **Delivery and infrastructure cost** – regional and cooperative approaches to infrastructure development and funding
- **Complex process, high transactions costs for temporary supply** – work to encourage administrative processes to streamline certain types of transactions for drought recovery
- **Permanency and risk** – transaction needs to pencil out for all parties- promising models may include coupling of conservation easements with ATM or co-ownership of water supply or land
- **Agronomic benefits and impacts** – additional research and demonstration to understand temporary fallowing and impacts to crop yield, recovery, and soil health
- **Encouraging flexibility** – recognizing alternative water-sharing approaches such as municipal rental programs



Polling Questions



A scenic view of a mountain valley. In the foreground, there is a lush green meadow with small white and yellow flowers. A clear, turquoise lake is visible in the middle ground, surrounded by dense evergreen forests. In the background, majestic mountains with patches of snow rise against a blue sky with scattered white clouds. The word "Questions?" is overlaid in the center of the image in a large, white, sans-serif font.

Questions?

Thank you

Please take the post-webinar evaluation!



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