

Collaborative Water Sharing Agreements 2025 Update Report





Executive Summary

For the past 20 years, the Colorado Water Conservation Board (CWCB) has been evaluating, funding, and advocating for projects that provide for water sharing among water users in a way that is voluntary and compensated, and effectively reduces the permanent loss of irrigated farms. Historically, these types of water sharing projects were referred to as Alternative Water Transfer Methods or ATMs. Since 2022, the CWCB has changed the terminology of water sharing agreements from ATMs to **Collaborative Water Sharing Agreements** or **CWSAs**. The recent 2023 Water Plan builds upon past efforts and continues to advance water sharing as an important water management objective. The purpose of this report is to provide an update on CWSAs since 2020 as a companion to a prior 2020 Status Report on ATMs. This 2025 update includes the following information:

- The evolution of terminology from ATMs to CWSAs and revisiting the definition of CWSAs;
- An updated inventory of CWSAs in Colorado and a tabulation of metrics to track progress on CWSAs;
- How the 2023 Water Plan builds on previous work and offers next steps on CWSAs; and
- An update of recommendations to advance CWSAs in Colorado.

Updated Inventory. An updated 2025 inventory of CWSAs identified 28 water sharing projects with a combined contract volume of 66,100 acre-feet per year. Of this total, there are 21 currently active CWSA projects which have a contract volume of about 30,300 acre-feet per year. The inventory of CWSAs has indicated some notable trends:

- There is sustained interest in developing CWSAs in the Lower Arkansas River Basin.
- CWSAs have become a useful tool for meeting environmental water demands.
- There has been a lack of interest in developing CWSAs in the Northern Front Range region.
- Most CWSAs are structured as interruptible water supply agreements or option contracts.

Water Sharing in the 2023 Water Plan. In the 2023 Water Plan, the CWCB has re-centered around the goal of keeping agriculture in production with a variety of strategies. CWSAs are listed as one of 19 tools that the state has available to deal with water challenges and risks. More specifically, the 2023 Water Plan identifies various CWCB agency actions that will be taken related to CWSAs and the underlying objective of minimizing the loss of agricultural lands and maintaining a robust agricultural sector in Colorado. The 2023 Water Plan implementation phase is underway, and CWCB staff are actively working to complete the identified actions.

Updated Recommendations

The 2020 Status Report provides a series of recommendations in the three categories of funding, policy, and education & outreach. These 2020 recommendations remain valid and should be incorporated as part of the CWCB strategy on CWSAs. The 2025 review and update of CWSAs identified several additional recommendations that CWCB could take to better understand, promote the use of, and support implementation of CWSAs, as listed below:

- Support local government efforts in the preservation of agricultural lands and ditch systems, including
 the use of ditch systems for non-potable uses, promoting local land conservation actions, supporting
 long-term leases of municipal water supplies to agriculture, and providing examples of local restrictions
 on long-distance water transfers.
- Further develop resources to assist water users exploring CWSA solutions, including collaboration with the Division of Water Resources (DWR) to develop a checklist of common requirements for CWSAs, updating beginner guides, providing a more seamless connection between DWR and CWCB websites, and building staff knowledge to offer direct assistance to interested stakeholders.
- Incorporate and develop connections between watershed health efforts and CWSAs
- Consider agricultural water infrastructure needs paired with water sharing agreements.





Introduction

Background & Purpose

For the past 20 years, the Colorado Water Conservation Board (CWCB) has been evaluating, funding, and advocating for projects that provide for water sharing among water users in a way that reduces the permanent loss of irrigated farms. Historically, these types of water sharing projects were referred to as **Alternative Water Transfer Methods** or **ATMs**. The CWCB started to include ATMs in its water planning in 2004 and created a grant program specifically for ATM research and development in 2007. This grant program has provided about \$8 million since its inception to help advance ATMs in Colorado¹. The 2015 Colorado Water Plan set a target of sharing at least 50,000 acre-feet of agricultural water using ATMs by 2030. In 2020, the CWCB released a Status Report² on ATMs that provided a progress report on achieving ATM goals and also provided a set of recommendations for expanding the adoption of ATMs in Colorado.

Since 2022, the CWCB has changed the terminology of water sharing agreements from ATMs to **Collaborative Water Sharing Agreements** or **CWSAs**³. The recent 2023 Water Plan⁴ builds upon past efforts and continues to advance water sharing as an important water management objective. The 2023 Water Plan calls out the loss of agricultural lands as a challenge and risk, and promotes CWSAs as an important tool for meeting future water needs without the detrimental effects of permanent dry up of agricultural lands. The 2023 Water Plan recognizes that there are multiple methods to conserving agricultural lands and CWSA adoption is one important initiative among many efforts. The 2023 Water Plan presents a broad approach to protecting 100,000 acres of agricultural lands statewide⁵.

Since the release of the 2023 Water Plan, the CWCB continues to work with water users to advance CWSAs and related objectives. The purpose of this report is to provide an update on CWSAs since 2020 as a companion to the prior 2020 Status Report. This 2025 update includes the following information:

- A brief discussion on the evolution of terminology from ATMs to CWSAs and revisiting the definition of CWSAs from past work;
- An updated inventory of CWSAs in Colorado and a tabulation of metrics that were proposed in 2020 to track progress on advancing CWSAs;
- A summary of how the 2023 Water Plan builds on previous work and what the 2023 Water Plan offers as the next steps on CWSAs; and
- A review and update of the recommendations provided in the 2020 Status Report to advance CWSAs.

Change in Terminology: ATMs to CWSAs

The terminology that has been used to describe water sharing agreements in Colorado started with a 2004-2005 Technical Advisory Group tasked with exploring "Alternative Agricultural Water Transfer Methods to Traditional Purchase and Transfer". As the name suggests, this group was focused on reducing the extent of agricultural lands that would be permanently fallowed (idled and not irrigated) to support a transfer of water to municipal use. The group's findings were incorporated into the 2007 State Water Supply Initiative (SWSI), the 2010 SWSI update, and then rolled-up into the 2015 Water Plan.

⁵ See 2023 Water Plan pg. 192. Colorado Vision for Robust Agriculture.



¹ Listing of past grant awards under ATM program provided by CWCB in January 2023.

² https://dnrweblink.state.co.us/CWCB/0/edoc/212963/ATM%20Status%20Report.pdf

³ https://cwcb.colorado.gov/focus-areas/supply/collaborative-water-sharing-agreements

⁴ https://cwcb.colorado.gov/colorado-water-plan



Since the introduction of ATMs, the tools and purposes for which water users employ water sharing practices has grown beyond just mitigating buy and dry resulting from municipal water transfers. In 2021, based on feedback that CWCB received from stakeholders, the *WaterNow Alliance* surveyed the Colorado water community to assess views on the term "Alternative Transfer Methods" or ATMs. The survey results showed a desire for a more comprehensive term, such as "Collaborative Water Sharing Agreements" or CWSAs, that would encapsulate all water sharing strategies used by the water community. The survey confirmed that the term ATMs had become associated most prominently with only agriculture to municipal water transfers focused on the Front Range region of Colorado. Following the survey, the CWCB decided to adopt CWSAs as the preferred term to reflect the full range of tools, locations, and purposes of water sharing projects in Colorado. This shift to using the term CWSA is reflected in the 2023 Water Plan.

Revisiting the Definition of CWSAs

The 2023 Water Plan describes CWSAs as "innovative and flexible water use agreements between two or more users, typically involving agriculture, municipal, or environmental users. CWSAs provide a temporary, voluntary, and compensated alternative approach to the buy and dry method". While the terms voluntary, temporary and compensated reflect the traditional tenets of water sharing under a CWSA, this update report recognizes that a variety of agreement structures can be employed to conduct water sharing and acknowledges that the details of CWSAs can vary from these core tenets. Each party's participation in a CWSA is voluntary and the end goal is to keep agriculture in production, and maintain the economic vitality of rural communities. The details of how parties are compensated⁶ and the duration of the agreement under a CWSA are expected to vary and may include some permanent loss of irrigation on agricultural lands. Water sharing agreements often reduce the permanent dry-up of irrigated land by utilizing methods such as temporary fallowing programs, water management changes, and technological improvements to provide a water supply in months or years when there is an acute demand for water transfers.

The 2020 Status Report provided a set of required and preferred criteria for defining CWSAs. These criteria intend to distinguish CWSAs from other water transactions that regularly occur in Colorado. The 2020 criteria are still generally applicable and are aligned with the description of CWSAs in the 2023 Water Plan. The past four years have highlighted the following considerations that may adjust the definition criteria of CWSAs in the future:

- Can a CWSA include the permanent loss of irrigated land? In the 2023 Water Plan, CWSAs are defined as temporary. In the 2020 Status Report definition criteria, CWSAs must reduce the permanent dry-up of irrigated lands. Contrary to these definitions, there may be instances where water sharing agreements do result in the permanent loss of some farmland but also avoid the likely loss of even more farmland if the agreement were not in place⁷. It is recognized that permanent water sharing agreements are more attractive to municipal water users and that some CWSA projects have failed to progress due to lack of permanency. Municipalities are responsible for securing reliable water supplies for their customers in perpetuity and therefore they often need a degree of permanence to utilize CWSAs in place of buy and dry practices.
- Should CWSAs include water transfers that do not involve agriculture? The 2023 Water Plan description of CWSAs does not require an agricultural water user as one of the parties but does describe an alternative approach to buy and dry. Similarly, the 2020 Status Report definition criteria are focused on agricultural benefits. There may be instances where a municipal water user enters into a water sharing agreement for environmental benefits⁸. The original impetus for CWCB investments in CWSAs was to reduce the permanent dry up of agricultural lands due to water transfers. Since then,

⁸ Colorado Water Trust Poudre Flows Project that leverages municipal water supply for a unique augmentation plan on the Cache la Poudre River. https://coloradowatertrust.org/projects/cache-la-poudre-poudre-flows-project/



⁶ The party leasing their water under a CWSA is typically compensated based on mutually agreed-upon lease terms

⁷ The Colorado Spring Utilities'(CSU) partnership with two farmers, the Wertz brothers, in Bent County is an example of a permanent water-sharing agreement. https://www.csu.org/Pages/AgWaterSharing.aspx



CWCB has broadened its definition and objectives around CWSAs such that agricultural water users may not be directly involved in the water sharing agreement.

Updated Progress Report

Updated Inventory of CWSAs

The 2020 Status Report provided an inventory of CWSAs in Colorado and found 16 projects with a combined contract volume of 30,600 acre-feet per year. **Table 1** provides an updated inventory⁹ and identifies 28 projects with a combined contract volume of 66,100 acre-feet per year. A significant portion of the inventoried CWSAs are currently in development or have been completed and are no longer active. There are 21 currently active CWSA projects which have a contract volume of about 30,300 acre-feet per year. As noted in the 2020 Status Report, this inventory of CWSAs does not include any projects providing water for system conservation in the Colorado River Basin. **Figure 1** provides a graphical summary of the characteristics of these known CWSAs, such as location, contract type, purpose, and term. The charts in **Figure 1** indicate that: (1) a significant volume of new CWSAs may come online in the near future, (2) CWSAs are predominantly serving municipal demands, followed by industrial and environmental uses, (3) a variety of methods are being implemented to create transferrable water from agricultural properties, and (4) option or intermittent water supply contracts, and dual-use water court decrees are the largest types of CWSAs by contract volume.

⁹ Similar to the previous inventory, these CWSA projects were identified based on one or more of the following research criteria: (1) labeled as an ATM or CWSA by one of the participating parties, (2) received grant funding from CWCB, or (3) cited as an ATM or CWSA example in reports and studies. Information was collected from CWCB, online searches, and direct outreach. During review of this report, it was noted that additional water sharing agreements and managed water transfers likely exist outside of this inventory but should be included in the broadened definition of CWSAs. In particular, water agreements that preceded ATM support from CWCB and agreements to support recreational benefits have not been included in this inventory. This report was not able to inventory all water sharing agreements in Colorado and focused on applying methods consistent with the previous inventory and status update. While the definition of CWSAs is broad, this report is focused on the types of water sharing agreements that manage water transfers from agricultural irrigation to other uses and have a intended focus on agriculture.



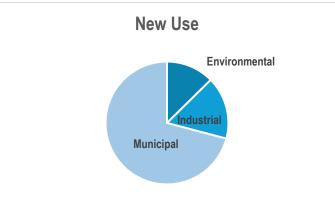
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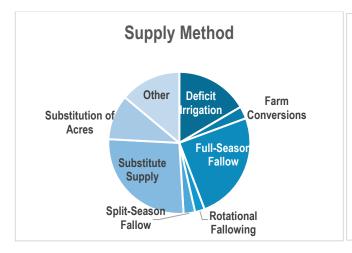


Figure 1: Graphical Summary of Characteristics for Inventoried CWSAs

Charts are organized by contract volume for each characteristic.







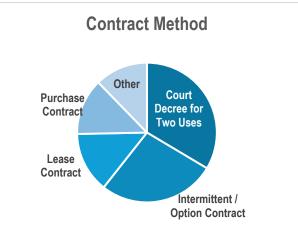






Table 1: Inventory of Collaborative Water Sharing Agreements in Colorado (1 of 2)

Basin	Project Name	New Use	Buyer	Seller	Contract Year	Term (Years)	Supply Method	Transfer Method	Contract Volume (AF/yr)
Arkansas	Catlin Canal Pilot Project	Municipal	City of Fountain, Security Water District, Town of Fowler	Lower Arkansas Valley Water Conservancy District	2014	10	Rotational Fallowing	Lease Contract (HB13-1248)	500
Arkansas	Rocky Ford Continued Farming Program (Phase II)	Municipal	City of Aurora	Rocky Ford High Line Canal Company	2007	Perpetual	Drip Conversion		1,100
Arkansas	LAWMA Project	Municipal	Colorado Springs Utilities	Arkansas River Farms LLC, Lower Arkansas Water Management Association	2018	Perpetual	Permanent Dry Up plus Sharing of Changed Water	Purchase with 5 in 10 year Option Contract	1,000
Arkansas	CSU Fallow-Leasing Pilot Project	Municipal	Colorado Springs Utilities	Lower Arkansas Valley Water Conservancy District	2018	10	Rotational Fallowing	Lease Contract (HB13-1248)	1,000
Arkansas	City of Fountain 2019 IWSA	Municipal	City of Fountain, Security Water District	Lower Arkansas Valley Water Conservancy District	2018	30	Rotational Fallowing	Lease Contract (HB13-1248)	150
Arkansas	Bessemer Project	Municipal	City of Pueblo	Bessemer Irrigating Ditch Co	2020	Perpetual	Substitution of Dry-up Acres	Purchase Contract	7,650
Arkansas	Diamond A Project	Municipal	City of Aurora	C&A Company	2023	10+	Full-Season Fallow	Option Contract	8,000
Arkansas	Arkansas Valley Water Sharing Program	Municipal	Colorado Springs Utilities	Various Irrigators (Wertz Bros., ARF, Big R, Golden)	2022	Perpetual	Permanent Dry Up of Pivot Corners	Purchase Contract	3,300
Colorado	Yost Ditch / Deep Creek	Environmental	CWCB	Coyote River LLC	2012	10	Full-Season Fallow	Option Contract	429
Colorado	Wheeler Ditch Project	Environmental	CWCB through CWT		2016	10	Non-diversion	Option Contract	146
Colorado	Cottonwood Confluence Project	Environmental	CWCB through CWT	Cottonwood Confluence, LLC	2015	10	Split-Season Fallow	Option Contract	273
Colorado	Vail Ditch Project	Environmental	CWCB through CWT	Grand County Land Co.	2021	5	Split-Season	Lease Contract	93
Colorado	Fraser River Tributaries Program	Environmental	CWCB through CWT	Various Irrigators	2016	10	Split-Season Fallow	Option Contract	Variable
Colorado	Crystal River Project	Environmental	CWCB through CWT	Cold Mountain Ranch	2018	10	Non-diversion	Option Contract	Variable
Colorado	Bunte Highline Project	Environmental	CWCB through CWT	Aspen Shorefox LLC (irrigator)	2012	10	Split-Season Fallow	Option Contract	174

Table Notes: (1) Green shading indicates project approval is pending or project is still in development. (2) Grey shading indicates project is completed and no longer active. (3) Contract Volume refers to the estimated average annual water supply contemplated and contracted in the agreement assuming the agreement is exercised at the limits defined.





Table 1: Inventory of Collaborative Water Sharing Agreements in Colorado (2 of 2)

Basin	Project Name	New Use	Buyer	Seller	Contract Year	Term (Years)	Supply Method	Transfer Method	Contract Volume (AF/yr)
							Split-Season	Purchase	
Gunnison	McKinley Ditch ATM	Environmental	CWCB	CO Water Trust	2014	Perpetual	Fallow	Contract	772
Gunnison	Coats Bros Ditch/Tomichi Creek	Environmental	CWCB through CWT and TU	Irrigator	2015	10	Split-Season Fallow	Option Contract	203
Gunnison	Tomichi Creek/Petersen Ranch	Environmental	CWCB through CWT	Petersen Ranch	2022	10	Split-Season Fallow	Option Contract	116
Rio Grande	Cactus Hill	Municipal	City of Alamosa	Cactus Hill Farm	2019	Perpetual		Lease Contract	40
Rio Grande	Alamosa River Pilot Project	Augmentation	Rio Grande WCD	Irrigators	2021	3	Rotational Fallowing	Lease Contract	Variable
South Platte	Fort Morgan-Xcel Energy	Industrial	Public Service Company of Colorado (Xcel Energy)	Fort Morgan Ditch Company	1993	40	Deficit Irrigation	Option Contract	2,500
South Platte	Point of Rocks I	Industrial	Public Service Company of Colorado (Xcel Energy)	Point of Rocks Water Company	2005	25	Deficit Irrigation	Option Contract	3,000
South Platte	Point of Rocks II	Industrial	BNN Energy	Point of Rocks Water Company	2016		Deficit Irrigation		6,800
South Platte	Little Thompson Farm ATM	Municipal	City of Broomfield	Larimer County Natural Resources Department	2017	Perpetual	Deficit Irrigation	Option Contract	56
South Platte	Water Supply & Storage Company	Municipal	Fort Collins Utilities	None	2015	Perpetual	Full-Season Fallow	Court Decree for Two Uses	1,617
South Platte	Platte Valley Water Partnership	Municipal	Parker Water & Sanitation District	Lower South Platte Water Conservancy District	2021	Perpetual	Substitute Supply	Court Decree for Two Uses	20,000
South Platte	Poudre Flows Project	Environmental	CO Water Trust	Various Municipal Utilities	2020	20	Previously Changed Rights	Donation & Agreement	6,900
Yampa	Slater Creek	Environmental	CWCB through CWT & WRA	Irrigator	2024	1	Split-Season Fallow	Option Contract	320
TOTAL				-					66,138
TOTAL ACTI	VE								30,316

Table Notes: (1) Green shading indicates project approval is pending or project is still in development. (2) Grey shading indicates project is completed and no longer active. (3) Contract Volume refers to the estimated average annual water supply contemplated and contracted in the agreement assuming the agreement is exercised at the limits defined.





Status of Metrics that Track Progress

The 2020 Status Report proposed a set of metrics to track progress on CWSAs. **Table 2** provides an update for each metric to monitor progress over the past four years and to evaluate the likelihood of achieving the stated Year 2030 objectives. The metrics in Table 2 show that significant progress has been made on CWSAs with most metrics showing a positive trend since 2020. The exceptions, those metrics that showed a decline, include:

- Irrigated Acres in Colorado. The USDA Census of Agriculture showed a loss 474,000 irrigated acres in Colorado or about 17% of the statewide total over a period of 5 years (2017-2022). This is a significant decline and raises questions about the direction of farmland preservation in Colorado. There are multiple reasons that irrigated acres decline, including land development and tighter water regulations, and there may be inaccuracies in the data due to growing conditions and reporting errors in the census; but CWSAs have been promoted as a way to allow the municipal water use sector to grow without the permanent loss of farmland. This metric indicates that this underlying goal is not being achieved despite the overall growth of CWSAs in Colorado.
- Use of Administrative Approval Mechanisms. One of the primary tools that CWCB has to advance CWSAs is to explore and promote the use of administrative approvals for changes of water use. Historically, the Colorado water court system was pointed to as a reason that water sharing agreements were not more common, and several new administrative approval mechanisms were created between 2002 and 2020 to avoid water court and hopefully spur more interest in CWSAs. Despite these efforts, it does not appear that use of these administrative tools is growing in Colorado.

Table 2: Metrics to Track Progress on CWSAs

Category	Sub- Category	Metric	Potential Data Source(s)	Estimated 2020 Value	Estimated 2025 Value	Proposed Target Value by 2030	
		Number of active CWSAs	CWSA Inventory	12	21	30	
	CWSA	Volume of active CWSAs	CWSA Inventory	20,600	30,300	50,000	
	activity	Irrigated acres involved in active CWSAs	CWSA Inventory	13,700	25,300	-	
Progress on	Avoid permanent dry-up	Irrigated acres in Colorado	USDA Census of Agriculture	2,761,173 (2017)	2,287,808 (2022)	2,000,000 or more	
CWSAs	Expand municipal interest	Number of municipal water providers with active CWSA contracts	CWSA Inventory	8	10	25	
	Target At- Risk Areas	Percent of active CWSAs in predominantly agricultural counties	CO Dept. of Revenue sales tax data & USDA Census of Agriculture	50%	75%	80%	
	Regulatory Uncertainty	Percent of active CWSA projects that utilize administrative approval mechanisms	CWSA Inventory	33%	25%	50%	
Barriers	Permanence of Municipal Demand	Percent of municipal supply portfolio that is sourced from CWSA supplies	USGS Water Use Data & CWSA Inventory	0.6%	1.4%	5.3%	
to CWSAs	Infrastructure	Number of water supply projects with capacity dedicated to CWSA supplies	-	0	1	2	
	Crop Production Impacts	Annual research dollars spent on agricultural alternatives	This metric was noted in the previous 2020 Status Report but was not clearly defined in terms of data sources and targets. No further research was done for this report.				
	Economics	Change in average net farm income	USDA Census of Agriculture	-12% (2012 to 2017)	+52% (2017 to 2022)	Positive real rate (factoring inflation)	





Context on Protecting Irrigated Farmland in Colorado

One of the original and underlying goals of advancing CWSAs in Colorado is to reduce the permanent dry-up and loss of irrigated lands due to water transfers. Water transfers represent an important piece of water management to support economic development and population growth in Colorado, but they can have detrimental economic effects on rural economies. As described in the 2020 Status Report, there are multiple factors that influence the loss of irrigated lands in Colorado. In addition to water transfers which CWSAs are targeted towards, other factors include local groundwater management policies, land development activities, and agricultural economics.

Over the past decade, Colorado has continued to see a loss of irrigated farmland. **Table 3** presents CDSS irrigated lands mapping data for different regions of the state. Most areas of Colorado have seen a loss of irrigated lands and statewide we have experienced a loss of 11% over a 10-year period 2010 to 2020. Therefore, CWSAs have applicability across Colorado in reducing the loss of irrigated farmland. The two most notable areas of irrigated land loss are the Front Range region and the Rio Grande Basin. The Front Range is estimated to have experienced a reduction in irrigated farmland due to land development (farm conversions to housing and commercial development) and water transfers. The Rio Grande Basin is estimated to have experienced a reduction in irrigated farmland in large part due to groundwater management required by statute and rules. The Front Range continues to be the focal point for CWSAs due to the elevated risk of farmland loss.

Table 3: Irrigated Acres by Region of Colorado

			ter Stressed eas	Western	
	Front	Eastern	Rio Grande	Slope & North	
Year	Range	Colorado	Basin	Platte	Statewide
2010	635,321	1,249,665	515,617	894,418	3,295,021
2015	594,525	1,177,613	514,033	916,257	3,202,428
2020	503,578	1,054,366	367,685	842,555	2,768,184
Change in Irrigated					
Acres (2010-2020)	-131,743	-195,299	-147,932	-51,863	-526,837
% Change in					
Irrigated Acres	-21%	-16%	-29%	-6%	-16%

Table Notes: (1) Front Range defined as the 12 counties directly east of the Rocky Mountains, stretching from Pueblo County to Larimer County. (2) Eastern Colorado is defined as all counties east of the Front Range. (3) Rio Grande Basin is Water Division 3. It should be noted that the Rio Grande Basin showed an increase in acreage in 2021 up to 417,260 acres but 2020 data are reported to be consistent across other regions of the state.

The role of CWSAs is to provide a functional tool for municipal water demands to grow (as a result of population growth and economic development) while minimizing the permanent loss of irrigated farmland and loss of related benefits agriculture provides (for example: ecosystem services, jobs, tax revenue, local food sources). The CWSA tools make changes to water management with the goal of sustaining irrigated farmlands. Such tools acknowledge the inherent relationship between land and water management in Colorado. Farmland preservation is a tool to conserve farmland directly which should be acknowledged can support CWSA initiatives.

Table 4 provides a summary of several land conservation program activities over the period 2019-2022 based on readily available information. Non-profit organizations and government programs, typically county or municipal, continue to protect a significant number of acres in Colorado, varying from 50,000 to 100,000 acres per year from the organizations sampled. Overall, these select





organizations have about 2 million acres protected from development through either acquisition or conservation easements. Most of this acreage is not irrigated farmland and therefore is not comparable to the acres in **Table 3**. Based on the sampled organizations¹⁰ and a statewide land conservation database¹¹, about 10% to 15% of the protected and conserved lands are irrigated farmlands. Based on available information, it seems clear that the scale and success of land conservation efforts should be recognized in determining the role and objectives of CWSAs. Particularly for county governments, there are several examples of county open space programs that are protecting lands through acquisitions and easements.

There have been and continue to be efforts to merge the land conservation and water communities, by intentionally pairing land conservation easements with CWSAs¹². One specific development has been the creation of a conservation easement specific to groundwater rights and protecting groundwater aquifer conditions¹³. CWCB has funded projects to explore this concept, including a South Platte River farm in 2017 and in the San Luis Valley in 2018. In the San Luis Valley, a pilot groundwater conservation easement was completed in 2022 to conserve water (reduce pumping) which will support the continued operation of other local farms and also benefit the hydrology of a local wildlife refuge. Further work is on this topic is already underway¹⁴ to help understand if CWSAs can serve an important role for the land conservation community¹⁵ but there is potential for CWSAs to be a useful tool for the ongoing efforts of land conservation organizations.

¹⁵ Challenges with land and water valuation have been identified: https://www.watereducationcolorado.org/publications-and-radio/headwaters-magazine/fall-2020-forever-entrusted/making-dollars-and-sense-of-conservation-easements/#/



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¹⁰ Two organizations reported farmlands separately, as shown in Table 4. These two examples indicate farmland represents 12% to 24% of the total protected acres by these conservation organizations.

¹¹ The COMap (Colorado Ownership, Management, and Protection) GIS dataset indicates 2,899,420 acres of land conservation in Colorado, of which 346,315 acres (12%) are irrigated based on CDSS irrigated lands mapping. https://cnhp.colostate.edu/projects/comap/

¹² Colorado Open Lands: https://coloradoopenlands.org/wp-content/uploads/Water-Sharing-Guide-1.pdf. AND P. Nichols, 2002, Denver Water Law Review: https://digitalcommons.du.edu/cgi/viewcontent.cgi?article=2614&context=wlr.

¹³ CWCB provided funding to assist Colorado Open Lands with Peachwood Farms groundwater conservation easement in the San Luis Valley. https://coloradoopenlands.org/water-conservation/peachwood-farms/

¹⁴ Colorado's conservation easement tax credit was recently changed to allow for certain water entities (conservation districts, conservancy districts, irrigation and ditch companies) to qualify for tax credits if they donate a conservation easement on land and water rights that they own. Colorado Open Lands recently secured CWCB funding to work with partners to explore farmland purchase and protection in the South Platte River Basin including the use of CWSAs.



Table 4: Example Land Conservation Progress & Spending in Colorado, 2019-2022

	Non-Profit Organizations			С	County Open Space Programs					
		Southern	CO		Colorado]
	Colorado	Plains Land	Cattleman's	Palmer Land	West Land	Adams	Boulder	Jefferson	Larimer	
Year	Open Lands	Trust	Land Trust	Conservancy	Trust	County	County	County	County	Total
Annual New Land	Placed into Cons	servation (acres								
2019	21,476	0	25,970					350		47,796
2020	13,894	6,600	24,831		2,000			190	1,975	49,490
2021	16,939	8,700	26,344		1,719	144		1,250	590	55,686
2022	26,256	19,700	58,700		281	170		40	2,389	107,536
Total Program	664,631	60,140	760,000	138,000	133,500		106,947	56,000	56,644	1,975,862
Agricultural Lands					16,768		26,190			
Annual Spending	on Land Conserv	ation Activities								
2019	\$19,569,025		\$16,342,500	\$562,897	\$2,867,033			\$820,000	\$6,864,000	\$47,025,455
2020	\$22,353,800		\$24,497,200	\$984,386	\$3,682,958			\$1,507,058	\$4,896,000	\$57,921,402
2021	\$27,059,200		\$38,228,600	\$899,712	\$2,457,039	\$3,877,500		\$14,958,466	\$2,505,546	\$89,986,063
2022	\$42,364,800		\$56,758,800	\$844,535	\$4,952,683	\$3,763,000		\$1,426,750	\$10,817,896	\$120,928,464

Table Notes: Data collected from the annual reports of each organization. Estimates were made in some cases.





Observed Trends with CWSA Adoption

Over the past 10 years, the adoption of CWSAs in Colorado has indicated some notable trends:

- 1. Sustained Interest in Lower Arkansas River Basin. Municipal water providers have shown consistent interest in CWSAs in the Lower Arkansas River Basin. This area was the original motivation for CWSAs in Colorado due to the local desire to avoid permanent dry-up of agricultural lands. The loss of agricultural production and the socioeconomic fallout in Crowley County is often pointed to as the best example of what CWSAs aim to avoid ¹⁶. There are 7 active CWSAs in the Lower Arkansas Basin involving some of the largest municipal water utilities in Colorado. Many of the recent CWSAs in the Lower Arkansas Basin were initiated and developed by the municipal buyer, which is a circumstance not seen in other regions of Colorado. Some of the reasons that CWSAs are popular in the Lower Arkansas River Basin are believed to include the following:
 - a. Spatial separation of agricultural water supply and municipal demand. One of the reasons that water transfers from agricultural to municipal use are so impactful in the Lower Arkansas River Basin is that the water transfers are moving water a significant distance upstream¹⁷. At the local level, land development and home building activity is not replacing the economic activity of farming and therefore water transfers have a more significant negative economic outcome on the water source areas¹⁸. As a result of this elevated impact, local irrigation companies and farmers have desired to keep farms partially in production to avoid the detrimental effects of permanent dry-up and municipal water providers have seemingly responded by adopting CWSAs as the preferred structure to allow for water transfers.
 - b. Lack of economic alternatives for agricultural land. Similar to the above point, the rural farmlands of the Lower Arkansas River Basin do not have a multitude of alternative economic uses. This impacts the present and future market value of irrigated farmlands and associated water rights 19. Unlike some other Front Range areas, agricultural producers in the Lower Arkansas Basin can commit to a CWSA for a long-term period without having to forego a substantial economic opportunity of selling their land and water rights to land developers.
 - c. Lack of local water supply options for municipal water utilities. The municipal utilities that have entered into CWSAs often lack options for new local water supplies. The areas of Colorado Springs and Fountain overlie non-tributary groundwater resources 20 but have minimal surface water resources available locally to develop for municipal supply. In addition, local groundwater quality is a concern in some areas²¹. As a result, these growing communities are looking to secure water supplies located at a significant distance from their service area.

²¹ The City of Fountain discovered PFCs in local groundwater in 2016 and since established treatment standards. https://www.watereducationcolorado.org/fresh-water-news/as-the-fountain-valley-emerges-from-a-water-crisis-the-next-big-question-is-what-comes-next/#/



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¹⁶ Example article: https://www.cpr.org/2017/05/26/crowley-county-a-poster-child-for-less-water/

¹⁷ For example, the City of Colorado Springs (buyer) is approximately 120 miles northwest of the Town of Las Animas (seller area).

¹⁸ Taylor, Young, McKean. 1993. https://watercenter.colostate.edu/wp-content/uploads/sites/91/2020/03/CR171.pdf

¹⁹ For example: search of <u>Land.com</u> listings of properties with at least 100 acres. Lower Arkansas River between Pueblo and Las Animas – 4 properties with average list price of \$2,100 per acre. Northern Colorado between Brighton and Ault – 7 properties with average list price of \$20,400 per acre.

²⁰ Denver Basin groundwater rights are allocated on the basis of a 100-year aquifer life under statute and are often viewed as a non-renewable water resource for municipal planning. https://dwr.colorado.gov/services/well-permitting/denver-basin



- d. Significant local support and grant funding. The Lower Arkansas Basin has received substantial funding under the CWCB grant program for CWSAs, totaling about \$1.75 million from 2008 to 2023²². These financial resources have allowed several projects to be evaluated, refined, and ultimately implemented. As stated in the 2020 Status Report, the unique nature of CWSAs often requires some public funding for initial concept development and implementation.
- 2. Useful tool for meeting environmental water demands. There are many CWSAs that have been developed to meet environmental demands, representing about one-third of the total active CWSAs in Colorado. These environmental CWSAs are predominantly found on the Western Slope and have largely been developed through partnerships and collaborative efforts between the Colorado Water Trust and the CWCB instream flow program²³. Throughout the Western US, market-based efforts to enhance instream flows for environmental benefit have focused on leasing water entitlements as opposed to buying water. The reasons for this include cost efficiency and the nature of the demand for water. In most instances, instream flow enhancements are not needed every year and therefore CWSAs offer a way to lease water when it is needed but to also allow continued agricultural production when the water is not needed. The available financial resources and costs of securing additional instream flows also typically motivate environmental organizations to focus on leasing water through a CWSA as opposed to exploring an outright purchase. As a result, it is likely that environmental instream flow programs and organizations will continue to utilize CWSAs as sensible and cost-effective tool to accomplish their goals.
- 3. Lack of projects in Northern Front Range. One of the areas in Colorado that has been most impacted by land development and population growth is the Northern Front Range north of Denver, in the South Platte River Basin. The CWCB has funded at least 15 projects in this region through its CWSA grant program, including a mix of early research projects and applied projects intended to build new CWSAs. As shown in Table 1, there are only 5 active CWSAs in the South Platte Basin and most of these were created prior to the 2015 Colorado Water Plan. Several efforts to create new CWSAs in this region have not found success, likely due to conditions being the opposite of what is described above for the Lower Arkansas Basin. In the Northern Front Range, municipal water utilities still have good options to buy reliable water supplies, including contract units in the Colorado-Big Thompson (CBT) project and ditch company shares, and agricultural landowners do not want to tie up their land and water assets in a CWSA if it precludes them from future participation in the open market. Based on past experience, these dynamics will have to change in order for CWSAs to find more success in the Northern Front Range region.
- 4. Focus on intermittent water supply or option contracts. The inventory in Table 1 shows a preference for structuring the transaction of a CWSA to provide intermittent water supplies to the buyer, often in the form of an option contract. While there is an ability to provide consistent annual water supply from CWSAs, most buy-side interest has shown a preference for using CWSAs to meet an intermittent demand. For municipalities, this may be a dry-year water supply or recovery from a drought period. For environmental interests, this is likely to be seasonal periods or years with low natural streamflow conditions. For other users, such as industrial, we have seen the need to be able to meet augmentation requirements if they should arise. It is likely that CWSAs will continue to find success in meeting intermittent and infrequent water demands because they are a cost-effective tool for these types of demands.

²³ CWCB Instream Flow Program. https://cwcb.colorado.gov/focus-areas/ecosystem-health/instream-flow-program



²² Listing of past grant awards under ATM program provided by CWCB in January 2023.



Current Actions to Advance CWSAs

The CWCB has continued to invest staff resources and grant program funding to advance CWSAs in Colorado. As shown in the preceding tables of this report, incremental progress is being made on growing the number and scale of CWSAs in Colorado. This section summarizes some of the current actions being taken by CWCB to continue to build on past efforts, including: (1) the inclusion of CWSAs in the 2023 Water Plan as a policy priority of the state, (2) efforts to improve the state's regulatory guidance around CWSAs, and (3) the ongoing grant funding available to assist with CWSA development and implementation.

CWSAs in the Water Plan

In the 2023 Water Plan²⁴, the CWCB has re-centered around the goal of keeping agriculture in production with a variety of strategies. CWSAs are listed as one of 19 tools that the state has available to deal with water challenges and risks. More specifically, the 2023 Water Plan identifies various CWCB agency actions that will be taken related to CWSAs and the underlying objective of minimizing the loss of agricultural lands and maintaining a robust agricultural sector in Colorado. These CWCB actions are summarized in **Table 5 (page 14)**. The 2023 Water Plan implementation phase is underway, and CWCB staff are actively working to complete the identified actions.

Water Plan Grant Funding

One of the actions that CWCB can take to directly support CWSAs in Colorado is to continue to fund pilot projects to implement CWSAs. While not all CWSAs need grant-funding support, it can be critical for the development of new concepts or to provide resources for parties to explore a mutual interest. Water Sharing Agreements is one of six specific categories of grant funding made available by CWCB²⁵. The CWCB has prepared guidelines²⁶ which provide a list of questions to help a grant applicant evaluate the suitability of a potential project for grant funding. The guidelines provide CWCB goals for projects in recognition that there are still many remaining challenges in creating CWSAs and that no water users, water conditions, or water sharing agreements will be the same. Recognizing this diversity of partners, places, and purposes, CWCB seeks to continue to support creative innovation through the Water Plan grant program.

Regulatory Guidance

For formal definitions and regulatory guidance on what can and cannot be achieved through water sharing agreements, the CWCB depends on and supports the Division of Water Resources (DWR), which is responsible for setting rules and approval processes for administration of water rights as granted to the agency through statute. Most water right changes, including those for many types of CWSAs, are administered by Colorado's water court system. Starting in 2002, the Legislature has granted DWR with the authority to approve temporary changes of water rights under specific conditions defined in statute. Some of these specific conditions include water sharing through IWSAs or pilot projects for rotational fallowing and leasing. The statutes most relevant to CWSA implementation are briefly summarized in **Table 6 (page 15)**. Some of the important definitions that are found in statute for understanding the implementation of CWSAs are listed below:

• <u>Interruptible water supply agreement</u>: an option agreement between two or more water right owners whereby:

²⁶ https://dnrweblink.state.co.us/CWCB/0/edoc/224447/WaterPlanGrantGuidelinesMay2024.pdf



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²⁴ https://cwcb.colorado.gov/colorado-water-plan

²⁵ https://cwcb.colorado.gov/funding/colorado-water-plan-grants



- (1) the owner of the loaned water right agrees that, during the term of the agreement, it will stop its use of the loaned water right for a specified length of time if the option is exercised by the borrowing water right owner in accordance with the agreement; and
- (2) the borrowing water right owner may divert the loaned water right for such owner's purposes, subject to the priority system and subject to temporary approval by the state engineer in accordance with this section.
- <u>Loaned water right</u>: any identified water right, or identified portion of a water right, specifically described in the interruptible water supply agreement.
- Rotational crop management contract: a written contract in which the owner or groups of owners of irrigation water rights agree to implement a change of the rights to a new use by foregoing irrigation of a portion of the lands historically irrigated and that provides that the water rights owner or groups of owners may rotate the lands that will not be irrigated as long as there is no injurious effect....The contract shall also provide that in the change of water right proceeding the water rights owner or groups of owners shall seek water court approval to rotate the lands that will not be irrigated as long as there is no injurious effect....
- <u>Significant water development activity</u>: any removal of water that results in the transfer of more than one thousand acre-feet of consumptive use of water per year by a single applicant or an applicant's agents.

There may be confusion among interested water users in CWSA concepts because there is not a clear relationship between the CWSA examples provided by CWCB and the specific regulatory options provided by DWR on the respective websites of each agency. The recommendations include ideas for making the connection between CWCB concepts and DWR implementation more seamless. This is one of the action items identified in the 2023 Water Plan.





Table 5: CWSA Actions in the 2023 Colorado Water Plan

lable 5. CW	SA Actions in the 2023 Action Name	Colorado Water Flam		
Category	(Section # of Water Plan)	Description	Impact on CWSA Objectives	
Direct Support for CWSAs	2.3: Expand the scale of collaborative water sharing agreements	CWCB will foster the use of CWSAs through grant making and convening conversations about CWSAs. CWCB will actively support innovative and emerging concepts while still supporting proven strategies. CWCB will expand partnerships with organizations that have local connections to water users. CWCB will develop online resources to increase public awareness.	Direct support for expansion of CWSA use in Colorado	
	2.4: Streamline collaborative water sharing agreement guidance across agencies	CWCB will work with state agencies on developing a CWSA toolbox to align and streamline guidance on CWSAs. CWCB will work with DWR to develop a means to track CWSA development and implementation.	Reduce uncertainty around CWSAs for interested water users	
	1.1: Define, benchmark, and institutionalize water saving communities	The CWCB will fund and participate in the development of a framework that includes target metrics and definitions for water saving communities.	Reduce municipal demand for new water supplies and unit demand for new homes	
	1.3: Drive enhanced water loss tracking to address future water needs	CWCB will develop a third phase of the Colorado Water Loss Initiative	Reduce municipal demand by reducing system losses	
	1.4: Strategically expand water reuse and develop a water reuse progress report	CWCB can play a key role in supporting direct potable reuse projects.	Reduce municipal demand for agricultural supplies by developing alternative new water supplies.	
Indirect Support for	1.6: Promote outdoor One Water strategies for integrated land use planning	CWCB staff will identify examples of functional projects, and develop an interactive report to help identify the practical opportunities for incorporating One Water principles.	Reduce water transfers to municipal systems and maximize alternative strategies to meet outdoor municipal demands	
Reducing the Loss of Agricultural Lands	1.7: Identify turf replacement options that support landscape change	CWCB will create a handbook that compares tools for achieving landscape transformation	Reduce municipal water demand for outdoor irrigation	
	2.5: Support the integration of robust agriculture into local government planning	CWCB will create and promote a framework to help agriculture get integrated into local government planning	Support the preservation of agricultural lands by recognizing their value	
	2.6: Assess the economic opportunities of avoided buy and dry to communities, ecosystems, and recreation	CWCB will research primary and secondary impacts of agriculture on rural vitality.	Support the preservation of agricultural lands by expanding information on the negative impacts of dry up.	
	2.8: Streamline agricultural infrastructure funding	CWCB will support agricultural producers seeking infrastructure funding	Improve the economic position of agricultural lands and provide funding for infrastructure that improves the feasibility of CWSAs.	





Table 6: Summary of Colorado Statutes Relevant to CWSAs

Statute	Title	
Statute	True	Relevance to CWSAs (8) Fallowing and leasing pilot projects are approved for
	Water de d'accepte a consenta	implementation. Allows for fallowing of up to 30% of a single irrigated
37-60-115	Water studies, rules, reports,	farm each year. Provides CWCB approval authority with review by
	definitions	DWR. Period for selecting pilot projects ended December 2023.
		Program sunsets in September 2035.
37-60-	Acquisitions of water for	Provides CWCB with up to \$1 million of annual appropriations for
123.7	instream flows	acquiring water for instream flow use
37-60-133	Minimum criteria and guidelines for agricultural water protection programs	Requires CWCB to develop criteria and guidelines for an agricultural water protection program in Water Divisions 1 and 2 for protection and monitoring of an agricultural water protection water right. Amended by SB24-197 to require CWCB to develop criteria and guidelines for this type of program in each Water Division.
37-83-105	Owner may loan agricultural water right, loans to CWCB for instream flows	Agricultural water right owner may loan all or portion of water right to another agricultural user on same stream system for up to 180 days in a calendar year, or any water right owner (including non-agricultural) may loan to CWCB for instream flow uses for up to 120 days in a calendar year.
37-92-102	Legislative declaration, basic tenets of water law	(4.5) CWCB may obtain a plan for augmentation to augment streamflow.
37-92-103	Definitions	Defines several terms used in CWSA implementation
37-92-305	Standards with respect to rulings of the referee and decisions of the water judge	(3)(c) In determining HCU for changed water rights, the water court judge shall not consider: (1) land enrolled in Federal conservation program, (2) nonuse of water in a 5 out of 10 year period due to participation in a water conservation program, pilot program, compact compliance program, or water banking program (4.5)(b) A water court may impose mitigation payments for transfer of water including: (1) transition mitigation payment equal to reduction in property tax revenues, (2) bonded indebtedness payment equal to the reduction in bond payment revenues. Mitigation payments have a default term of 30 years. Excludes changes by water districts and ditch companies and changes to new places of use of less than 20 miles. (19) Agricultural water protection water rights allow an owner to lease, loan, or trade up to 50% of HCU. Remaining 50% must remain in
37-92-308	Substitute water supply plans, special procedures for review, water adjudication cash fund, legislative declaration	agricultural use. (5) Permits DWR approval of short duration (pilot) projects or individual water leases and trades involving a change of water right or out-of-priority diversion of 5 years or less if no application has been filed with water court. (4).Permits DWR approval of the temporary operation of a plan for augmentation, rotational crop management contract, or other water right change while application has been filed with water court and prior to decree. (7) Permits DWR approval of a plan to address an emergency situation affecting public health or safety for a period of not more than 91 days. (12) Provides for DWR approval of a lease, loan, or trade of all or a portion of the HCU of a decreed agricultural water protection right
37-92-309	Interruptible water supply agreements, special review procedures, rules, water adjudication cash fund, legislative declaration, definitions	Permits DWR approval of a temporary change in point of diversion, location, and/or type of use of a water right without an adjudication from water court Limits the exercise of an IWSA to no more than 3 out of 10 years, except that an applicant can apply for two subsequent 10 year approvals (30 years total) with conditions on DWR approval.





Review of Recommendations

The 2020 Status Report provides a series of recommendations in the three categories of funding, policy, and education & outreach. These recommendations have been reviewed and remain valid and useful recommendations, and therefore should be incorporated as part of the CWCB strategy on CWSAs. The 2020 Status Report recommendations that are still relevant and actionable as part of this 2025 update are restated below in summary format but an expanded description of each recommendation is found in the 2020 Status Report.

Recommendations in the 2020 Status Report that are Still Relevant

- Funding:
 - Maintain CWSA Grant Program
 - Fund & Support Other Activities that Reduce Loss of Irrigated Lands
 - Incentivize CWSA Projects under Existing CWCB Funding Programs
 - Leverage Other Funding Sources
- Policy:
 - Reduce Regulatory Uncertainty
 - Municipal Review of Water Dedication Policies
 - State Agency Coordination, specifically between CWCB and DWR
- Education & Outreach:
 - o Expand the CWSA Website
 - Local Facilitators
 - Municipal Water Planning Resources

This 2025 review and update of CWSAs in Colorado identified several additional recommendations that CWCB could take to better understand, promote the use of, and support implementation of CWSAs. These additional recommendations are listed below:

- 1. Support local government efforts in the preservation of agricultural lands and ditch systems. The CWCB could provide funding support or educational programming support to local planning efforts at the county and municipal scale to develop more robust and specific plans for the future of agricultural lands and ditch systems in urbanizing and transitioning areas. Some of the specific ideas for local planning efforts include:
 - <u>Use of ditch systems for non- potable uses</u>. In parts of Colorado and in other parts of the Western U.S., agricultural ditch systems have transitioned to serve predominantly residential and municipal landscaping irrigation demands but the physical infrastructure and the operation of the ditch system is preserved and ditch operations can continue indefinitely.
 - <u>Local land conservation actions</u>. Governments at the municipal or county scale can define
 plans and funding for preserving and protecting agricultural lands. These plans could likely
 include CWSAs that offer a municipal benefit to participating communities. CWCB should
 continue to promote the pairing of land conservation with CWSAs as part of these efforts.
 - Support long-term leases to agriculture from municipal water supplies. The CWCB should encourage communities to think about structuring long-term agreements that provide municipal water leases to agricultural uses. This practice is done today but often in a year to year fashion that places a lot of risk on the agricultural producers. Structuring more secure option contracts or IWSAs with water rights owned by municipal water utilities could be beneficial to preserving agricultural lands that are reliant upon that water supply. These efforts may also incorporate municipal water supply gaps that could be filled by CWSAs.





- Provide examples of local restrictions on long-distance water transfers. The CWCB could provide information on existing laws regarding mitigation for significant water transfers and could also provide example information on how counties have implemented agreements that define how water transfers are conducted in order to protect the local agricultural economy. The CWCB would not be advocating for any specific local regulation but could be an information source for what county and/or municipal governments have done to protect agricultural lands as a result of water transfers.
- 2. Further develop resources to assist water users exploring CWSA solutions
 The CWCB and DWR should work to update and better cross-reference past information that was developed on ATMs to make it more clear and accessible to interested water users. Some of the specific recommendations that have come from this review include:
 - Develop a checklist or matrix of common requirements for different types of CWSAs. The CWCB and DWR should work together to first categorize CWSAs into a few prominent types and then to develop a checklist of common requirements or steps in the process. The checklist could include initial concept review, checking statutory or legal requirements, contract structure, and regulatory approval process. Similarly, a matrix table could provide an understanding of the unique objectives, pros & cons, and hurdles applicable to each type of CWSA. The nature of CWSAs is that they are flexible and unique agreements and therefore a template is probably not applicable but a checklist may provide stakeholders with new guidance on how to get started.
 - Update the DWR Beginners Guide. The DWR Beginners Guide to ATMs should be updated to
 use the new CWSA terminology and could be replaced with online resources that link to CWCB
 information.
 - <u>Update CWCB website with examples and information</u>. The CWCB website currently contains several different resources showing examples of CWSAs including a story map of 18 specific examples²⁷. The CWCB should transition this into a map and corresponding table of CWSAs implemented in Colorado. Each CWSA should contain a description of the project and links to relevant contracts or agreements. This effort would provide interested water users with a library of resources to utilize in exploring and implementing CWSAs.
 - Provide a more seamless connection between DWR and CWCB websites. In general, the CWCB website on CWSAs provides concepts, examples, and information for grant funding, while the DWR website provides specific regulatory references, guidance, and application information. The information available is consistent with the role of each agency but it is difficult to make connections and to understand how to move from CWCB concepts to the DWR regulatory process. Additional graphics, narrative, and links would be useful on each agency's website so that an average stakeholder can understand the relationship and role of each agency.
 - Build DWR and CWCB staff knowledge and offer their assistance to stakeholders. As stated above, CWSAs are often unique and it would be helpful for DWR and CWCB to have a help desk when a stakeholder is interested in exploring the use of CWSAs. This personal communication specific to a project need is expected to be more valuable than online

²⁷ https://storymaps.arcgis.com/collections/c5b82cc9f33540bcb394e05486200048



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resources in helping a water user understand necessary considerations and steps in the process.

- 3. Incorporate and develop connections between watershed health efforts and CWSAs As stated earlier in this report, CWSAs have become a useful tool for environmental interests to secure additional instream flows under certain conditions and CWSAs are well-positioned to continue to serve this need in Colorado. Improving instream flow conditions during certain low-flow periods can also improve water quality and help meet regulatory requirements. The CWCB may consider ways to incorporate the use of CWSAs as a particular tool or solution in the development of watershed plans and overall watershed health efforts. There are likely to be opportunities to improve watershed health conditions, environmental flows, and potentially recreational benefits through partnerships with agricultural landowners and water users, and CWSAs could be the platform on which water sharing agreements are defined for these partnerships.
- 4. Consider agricultural water infrastructure needs paired with water sharing agreements As agricultural ditch and reservoir systems experience changes due to land development activities and water transfers, there may be opportunities to support the remaining agricultural lands served by these systems while also providing water sharing benefits to water users outside of the service area. Agricultural ditch and reservoir companies (or districts) could consider taking proactive steps to fund needed infrastructure repairs or improvements through the inclusion of a water sharing component to the project. Funding agricultural infrastructure continues to be a state priority and does not require consideration of CWSAs but opportunities to bring additional funding and resources to capital projects in agricultural water systems should be considered.

