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*Abstract*

*Colorado water users rely on the doctrine of prior appropriations to utilize and manage their collective water rights for beneficial use. This doctrine guarantees senior water rights holders their entire appropriation, regardless of whether this means flow is available for junior water right holders in times of water scarcity. While Colorado water law strictly defines access to water rights, water users have employed many types of agreements to distribute water in times of scarcity. Respondents to the Drought & Water Supply Assessment were surveyed to determine what cooperative agreements they use and /or need to manage water supply during drought.*

**Introduction**

Colorado’s water users rely on the doctrine of prior appropriations to utilize and manage their collective water rights for beneficial use. The “first in time, first in right” principle guarantees those with the most senior rights their entire right as long as there is water available in the system to meet it. More junior rights, therefore, can be “shut out” of water in times of water scarcity in order to protect the more senior rights from injury.

In the courtroom, this doctrine that protects the property rights of water users is inflexible and unyielding. In administration of the state’s waters, this doctrine provides strict guidance and definition to the State Engineer’s Office (SEO). In practice, however, Colorado water users have repeatedly demonstrated their ability to cooperate with their neighbors and share this most valuable resource during times of water scarcity within the vigilant Colorado water laws. The Division 6 SEO representing the Yampa and White Rivers has not once had to administer water rights, which is a testament to the consistency of the streamflow in this region of the state, as well as the flexibility and cooperative nature of its water users.

There are in fact, many types of cooperative agreements that Colorado’s water users have utilized or considered for implementation. The most prevalent cooperative agreements in use, or being evaluated for statewide use, are identified and defined in Table 16-1.

**Use of and Need for Cooperative Agreements**

This portion of the assessment asked Colorado’s water users to identify the types of cooperative agreements that they need to support their operations. Figure 16-1 presents the listing of cooperative agreements that the survey participants were asked to

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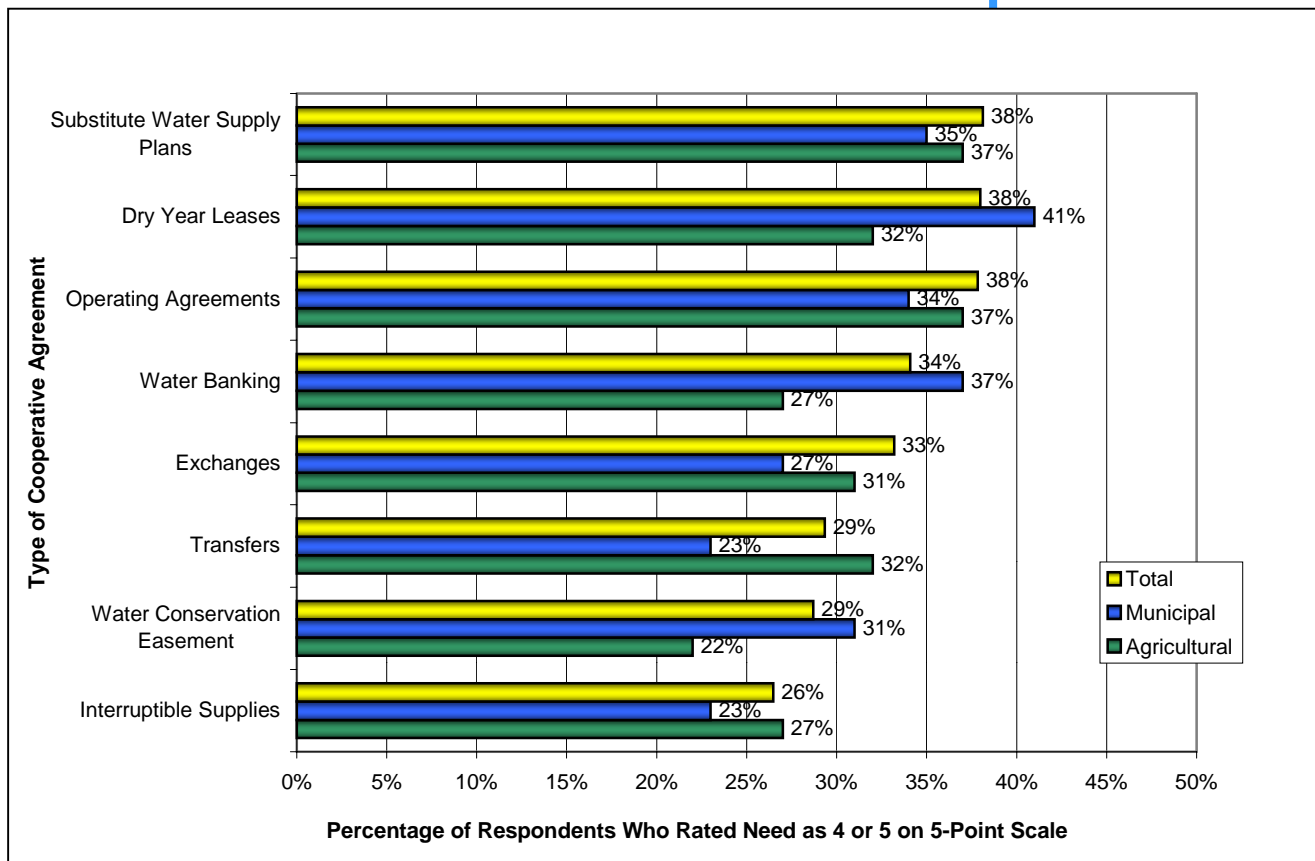
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rate, with an indication of the level of need or use for each type that they reported.

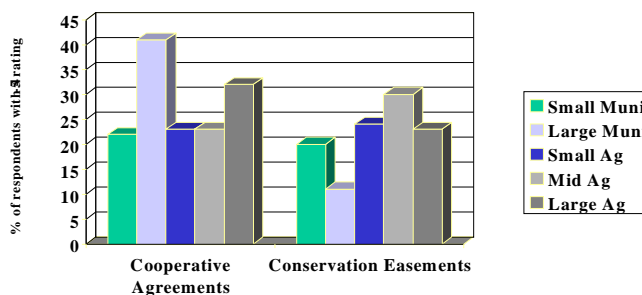
**Figure 16-1: Need for Cooperative Agreements during Periods of Drought**



It can be seen from this Figure 16-1 that a large number of Colorado water users rely on temporary methods to manage their water supplies – through either substitute supply plans (the most popular), dry year leases, water banking, and interruptible water supply plans. In addition, operating agreements and water transfers are used to manage water supply, which can be based on either temporary or permanent agreements.

As indicated in Figure 16-2, larger water users employ cooperative agreements more often than small users. In fact, over 40% of large municipalities (i.e. those larger than 10,000 in population) and over 30% of large agricultural entities (i.e. those with over 3,200 acres irrigated) utilize some form of cooperative agreement. It therefore appears that the larger water users either have more need or more

**Figure 16-2: Use of Cooperative Agreements and Conservation Easements**



resources to develop and use cooperative agreements. If smaller entities are not using cooperative agreements because they lack the resources to do so, then the state may want to evaluate the benefit of providing the needed resources to the smaller water users, both for municipal and agricultural applications.

Other issues that surfaced through the assessment and its analysis regarding the use of cooperative agreements are as follows:

- It would be valuable to evaluate the trend of the use of cooperative agreements to determine if the number of agreements is growing and whether or not that trend will continue.

**Table 16-1: Summary of Prevalent Cooperative Agreements in Colorado**

| Permanent | Temporary | Type of Cooperative Agreement | Description/Definition   |
|-----------|-----------|-------------------------------|--|
|           | ✓         | Dry Year Leases               | Allows municipalities to buy (lease) water from farmers and ranchers during period of drought.   |
|           | ✓         | Interruptible Supplies        | Allows cities to contract with agricultural water users for water in times of declared drought without having to permanently buy the water rights (which could “dry up” future agricultural uses).   |
|           | ✓         | Substitute Water Supply Plans | A “temporary” legal water supply administered by the SEO, prior to a Plan for Augmentation decreed in Water Court, that allows junior diverters to put to beneficial use an amount of water equivalent to the amount supplies in substitute water to a senior priority.  |
|           | ✓         | Water Banking                 | Water owners with surplus water deposit their excess supplies to be reimbursed as the bank leases the water to other users.  |
| ✓         | ✓         | Operating Agreements          | A business agreement between one or more entities that define operational cooperations, coordination, and/or any other agreed upon terms and conditions relating to shared or coordinated water use.   |
| ✓         | ✓         | Transfers                     | Transfer of water, from one party with surplus water to another party with temporary or ongoing water needs.   |
| ✓         |           | Augmentation Plan             | A method for a junior divertor to obtain water supplies through terms and conditions approved by water court that protects senior water rights from depletions. Typically Augmentation Plans involve storing junior water when in priority and releasing the water when a senior call occurs, purchasing stored waters from federal entities or others to release when a call occurs, or purchasing senior irrigation water rights and changing the use of those rights (type, place or time of use, point of diversion, etc.) to off-set the junior users injury to the stream. |
| ✓         |           | Exchanges                     | A process by which water, under certain conditions, may be diverted out-of-priority at one point by replacing it with an equal quantity of water at another point.   |
| ✓         |           | Water Conservation Easement   | A legal, perpetual agreement, typically between a landowner and a government entity that contains permanent restrictions on water use.   |

- Cooperative agreements provide the short-term flexibility that many agricultural and municipal entities need to manage and mitigate drought. The state may need to look for methods to help promote their expanded use.
- The state may need to improve the cooperative agreement review and approval process to make it more accessible to water users, especially if the demand increases.

**Discussion**

Cooperative agreements play an important role in the management of Colorado's water supply. Five different types of cooperative agreements are used, or would be used, by at least one of three water users. Four of 10 large municipalities utilize cooperative agreements to manage their water supply, as do three of 10 agricultural water users. Cooperative agreements allow for system flexibility within the prior appropriations doctrine of the state, and as such support drought mitigation and management activities. The state may need to evaluate methods to improve the applicability and use of the cooperative agreements to increase their use, and address administrative issues, if any exist, that may limit small water users from utilizing these valuable and flexible tools.