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COLORADO WATER TRUST

MEMORANDUM

TO: Kelly Romero-Heaney, Water Resources Manager, City of Steamboat Springs

FROM: Colorado Water Trust

DATE: June 4, 2018

RE: Water Management Alternatives for the City of Steamboat Springs

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Introduction

The City of Steamboat Springs is leading the development of a stream management plan ("SMP") in order to further its goals to support the protection and improvement of the Yampa River. The SMP, when complete, will outline management outcomes related to river health for the reach of the Yampa River from the Chuck Lewis State Wildlife Area to the City's wastewater treatment plant ("WWTP"). As part of the SMP effort, the Colorado Water Trust was invited to conduct an analysis of potential water management alternatives for a portion of the City's water rights portfolio as selected by the City ("Identified Water Rights") that may result in streamflow restoration outcomes on the Yampa River and its tributaries. This Memorandum provides a general overview of the Colorado Water Trust's analysis and recommendations.

The Water Trust has a long-standing presence in the Yampa Valley, and its first-ever short term lease of water to the Colorado Water Conservation Board's ("CWCB") Instream Flow Program restored 4,000 acre-feet of water to the Yampa River during the drought year of 2012. The Water Trust contracted for water from a local water supplier, Upper Yampa Water Conservancy District ("UYWCD"), and made releases for instream flow use by the CWCB below the reservoir for a significant portion of the summer. The 2012 Stagecoach Reservoir releases allowed the City to re-open the river to recreation just before the July 4th weekend, supporting the local recreation economy, and restoring Yampa River streamflow to healthier levels through the summer season. The Water Trust's efforts in the Yampa River Basin have evolved over the past six years and have included five years of additional releases from Stagecoach Reservoir to the Yampa River. Releases were remarketed to downstream water users, including the City of Steamboat Springs and Tri-State Generation and Transmission. Starting in 2016, the City made releases of its own water from Stagecoach Reservoir for non-consumptive municipal use at its WWTP. In 2017, for the first time, the Water Trust and the City of Steamboat Springs conjunctively released water from Stagecoach Reservoir, resulting in increased flows through both the CWCB's instream flow ("ISF") reach and through the City of Steamboat Springs down to its WWTP. The 2018 Stream Management Plan, including the Water Trust's review of alterative water management opportunities, reflects the City's commitment to managing its water resources proactively to the benefit of the Yampa River and its tributaries.

Project Approach

Between 2017 and early 2018, the City of Steamboat Springs, along with its consultants and stakeholders, developed eight management objectives that are intended to provide measurable outcomes that help to achieve the Stream Management Plan's goals. These objectives range from protection of the Yampa River's natural flow regime, to maintaining natural forest cover in the watershed, to maintaining or improving riparian vegetation extent and condition. The Water Trust's review of the Identified Water Rights focused on providing streamflow to meet management objectives 6-8. Objectives 6-8 cover the protection of native fish populations, the promotion of a self-reproducing sport fishery, and compliance with State water quality standards and regulations.

In late 2017, the City's consultant team (Lotic Hydrological, EcoMetrics, and Acclivity Associates) completed the Yampa River Health Assessment, and the results related to compliance with State temperature standards were summarized in a February 2018 report detailing water temperature management opportunities[1] on the Yampa River ("Temperature Report"). The Temperature Report investigated the physical processes driving exceedances of water quality standards by the City, and attempted to identify management opportunities that would address these exceedances. Generally, results predict that every additional 5 cfs released from Stagecoach Reservoir will result in an estimated 0.1-0.2°C decrease in water temperature at the City's WWTP. The Temperature Report goes on to describe opportunities related to riparian shading that may increase the efficacy of any water management alternatives focused on water temperature.

The study area defined for the Water Trust's review includes Stagecoach Reservoir, the Yampa River between Stagecoach Reservoir and the City's WWTP, and the following tributaries of the Yampa River: Spring Creek, Soda Creek, Butcherknife Creek, and Walton Creek ("Study Area"). The Water Trust assessed opportunities to use the Identified Water Rights to meet flow needs outlined in the Temperature Report and flow needs related to aquatic habitat as quantified by the CWCB in its instream flow appropriations (described below). In addition, the City owns a recreational in-channel diversion ("RICD") water right decreed in 03CW86. The RICD water right may benefit from deliveries of stored water between April 15 and August 15.

The Water Trust reviewed water court decrees, agreements, engineering reports, stream gage records, and other documents including information about CWCB's ISF water rights within the Study Area. Out of this initial review, the Water Trust will provide specific recommendations regarding potential alternative management strategies to the City for the Identified Water Rights.

CWCB Instream Flow Water Rights

The CWCB is the only entity authorized to hold instream flow water rights in Colorado. The CWCB's Instream Flow Program has the ability to adjudicate instream flow water rights through either new appropriations, which create new junior instream flow water rights that preserve the natural environment to a reasonable degree, or through water right acquisitions, which allow the CWCB to

[1]EcoMetrics, Lotic Hydrological, Acclivity Associates. 2018. *Water Temperature Management Opportunities on the Yampa River*.

acquire senior water rights to rights to preserve or improve the natural environment[2]. While junior appropriations are helpful to protect against future water development, these appropriations are limited by water availability, meaning they cannot add water to a depleted stream. Water acquisitions, however, may restore flows to previously depleted streams using senior water rights. Not all water acquisitions are permanent, as more fully described in the Alternative Water Management Strategies section of this Memorandum. The process for appropriating or acquiring instream flow water rights includes determining the flows necessary to preserve and/or improve the natural environment. The Water Trust reviewed the CWCB's flow determinations as well as streamflow data to assess the timing and magnitude of any shortage to the CWCB's ISF water rights in the Study Area.

There are nine decreed instream flow water rights in the Study Area that were included in our analysis (see Table 1). Instream flow reaches are important to consider because they may allow water right owners to lease or otherwise convey water for instream flow use that can be protected through a specified reach, or because they quantify flow amounts that may be used to preserve or improve the natural environment to a reasonable degree.

Table 1. CWCB ISF Water Rights Within Study Area

Case No.	Stream	Segment	Length (miles)	Amount	Approp. Date	ISF Type
01CW0106	Yampa River	Confluence with Morrison Creek to Inlet Lake Catamount Reservoir	5.4	72.5 cfs (4/1 – 8/14) 47.5 cfs (8/15 – 3/31)	7/24/2001	Junior Appropriation
W-1303-77	Walton Creek	Headwaters to Walton Creek Campground	1.5	3 cfs (1/1 - 12/31)	9/23/1977	Junior Appropriation
W-1304-77	Walton Creek	Walton Creek Campground to Confluence with Fishhook Creek	3	5 cfs (1/1 - 12/31)	9/23/1977	Junior Appropriation
W-1311-77	Walton Creek	Confluence with Fishhook Creek to USGS Gage	3	10 cfs (1/1 - 12/31)	9/23/1977	Junior Appropriation
79CW0102	Walton Creek	USGS gage to Walton Creek Ditch	0.2	16 cfs (1/1 - 12/31)	3/14/1979	Junior Appropriation
W-1378-77	Spring Creek	Headwaters to Confluence with Water Reservoir	6	2 cfs (1/1 - 12/31)	9/23/1977	Junior Appropriation

[2] §37-92-102, C.R.S.

Case No.	Stream	Segment	Length (miles)	Amount	Approp. Date	ISF Type
W-1377-77	Spring Creek	Confluence with Water Reservoir to Confluence with Yampa River	1	3 cfs (1.1 - 12/31)	9/23/1977	Junior Appropriation
W-1375-77	South Fork Soda Creek	Headwaters to confluence with Soda Creek	3	1 cfs (1/1 - 12/31)	9/23/1977	Junior Appropriation
W-1376-77	Soda Creek	Headwaters to Forest Service Boundary	7	5 cfs (1/1 - 12/31)	9/23/1977	Junior Appropriation

Yampa River ISF

There is one decreed ISF water right on the Yampa River ("Yampa ISF"), appropriated by the CWCB in 2001. The Yampa ISF begins at the Yampa River's confluence with Morrison Creek and extends downstream to the inlet to Lake Catamount Reservoir, a distance of 5.4 miles. Streamflow is often below the Yampa ISF decreed amount, and releases from Stagecoach Reservoir pursuant to the Water Trust/CWCB's first-ever Temporary Loan of water to ISF under 37-83-105, C.R.S. increased flows up to the decreed amount. Since 2012, the Water Trust and the City combined have released over 10,000 acre-feet of water from Stagecoach Reservoir to the Yampa River, both for instream flow use, and for downstream non-consumptive municipal use by the City at its WWTP. The Yampa ISF is an important water right to consider when assessing alternative management options for the City's Stagecoach Reservoir contract as it provides a legal mechanism for releasing water from Stagecoach Reservoir for decreed beneficial use, in addition to municipal use by the City. Catamount Metropolitan District, who owns and operates Lake Catamount, has voluntarily bypassed the Water Trust releases through Lake Catamount. When the City makes downstream use of water released from Stagecoach Reservoir, administration through Lake Catamount may also be possible.

Walton Creek ISF

There are four decreed ISF water rights on Walton Creek: Case No. W-1303-77, appropriated in 1977 for 3 cfs year-round; Case No. W-1304-77, appropriated in 1977 for 5 cfs year-round; Case No. W-1311-77, appropriated in 1977 for 10 cfs year-round; and Case No. 79CW0102, appropriated in 1979 for 16 cfs year-round. The ISF reaches on Walton Creek extend from its headwaters to the Walton Creek Ditch, but do not extend downstream to the Yampa River, likely because there was no water available for appropriation downstream of the Walton Creek Ditch.

Spring Creek ISF

There are two decreed ISF water rights on Spring Creek – Case Nos. W-1378-77 and W-1377-77 (Upper Spring Creek ISF and Lower Spring Creek ISF). Both water rights were appropriated by the CWCB in 1977 for 2 cfs and 3 cfs, respectively. The Upper Spring Creek ISF covers six miles of stream from its headwaters to its confluence with "Water Reservoir" aka the City's old Town Reservoirs on Spring Creek.

The Lower Spring Creek ISF covers 1 mile or stream from its confluence with the "Water Reservoir" to its confluence with the Yampa River.

Soda Creek ISF

There is one decreed ISF water right on Soda Creek decreed in Case No. W-1376-77. This ISF water right was appropriated by the CWCB in 1977 for 5 cfs year-round and the decreed ISF reach is approximately seven miles long. In addition to the ISF on Soda Creek, there is an ISF water right on the South Fork of Soda Creek, tributary to Soda Creek. The South Fork Soda Creek ISF was decreed in W-1375-77 for 1 cfs year-round, and the decreed ISF reach is approximately three miles long.

Existing Streamflow Conditions

Yampa River

The Yampa River maintains a natural flow regime despite the presence of small reservoirs in its headwaters[3]. However, the Yampa River has suffered from low flows through the City of Steamboat Springs during recent drought years impacting the local recreation economy and causing exceedance of the State's water temperature standards meant to protect aquatic life. Even in average years, flows in the Yampa River can drop to levels that can stress fish and impact recreation. Streamflow data from 1990-2017 from the USGS gage 09239500 (YAMPA RIVER AT STEAMBOAT SPRINGS, CO), shows that the Yampa River frequently drops below 100 cfs in August and September. The City's 2003 Yampa River Management Plan defined 100 cfs as the level at which commercial tubing outfitters should suspend or reduce tubing operations[4].

Walton Creek

Walton Creek is a tributary of the Yampa River upstream of the City of Steamboat Springs. According to the Colorado Division of Water Resources' gage "WALTON CREEK NEAR STEAMBOAT SPRINGS, CO. (WLTNCKCO)," the Walton Creek ISF occasionally experiences low flow conditions (below the ISF amount) in July, and frequently experiences low flow conditions in August-October.

Spring Creek

Spring Creek is a tributary of the Yampa River in the City of Steamboat Springs. Spring Creek exhibits low flows during the irrigation season and is subject to dry-up at regular intervals[5]. There is no modern gage on Spring Creek, but a historical gage in the Upper Spring Creek ISF reach (USGS 09239400 SPRING CREEK NEAR STEAMBOAT SPRINGS) shows that the ISF may face low flows starting in mid-late July that last through October.

Butcherknife Creek

Butcherknife Creek is a tributary of the Yampa River in the City of Steamboat Springs. There are no current or historic stream gages on Butcherknife Creek to provide estimates of low flow periods.

[3] EcoMetrics, Lotic Hydrological, Acclivity Associates. 2017. *Yampa River Health Assessment Report*.
[4] City of Steamboat Springs. 2003. *Yampa River Management Plan*.
[5] K. Romero-Heaney. Personal communication, April 23rd, 2018.

Diversion records from CDSS[6] for Butcherknife Creek indicate that it may exhibit low flows during the irrigation season beginning in July.

Soda Creek

Soda Creek is a tributary of the Yampa River in the City of Steamboat Springs. There are no current or historic stream gages on Soda Creek to provide estimates of low flow periods. Administrative call records from CDSS for Soda Creek indicate that it may exhibit low flows during the late irrigation season, and beginning in July of dry years.

Alternative Water Management Strategies

Broadly speaking, there are various means to restore streamflow: market-based transactions to benefit instream flows (the Water Trust's particular expertise); infrastructure projects, such as lining a ditch; and modifying operations, such as diverting water at an alternate location or diverting water at a better time for the source stream. Finding the right strategy for a water right requires a careful review and analysis of the water right, ditch system operations, and potential impacts to water right holders. While our review focused on market-based transactions, we also identified other types of opportunities, where applicable.

If structured properly, these transactions provide flexible ways for a water user to continue to own and at times use their water rights, while providing environmental benefits at other times. Each is authorized by Colorado statutes, and may require a water right quantification, public notice period, proof of non-injury and approval by the water court or state water officials. These transactions offer varying levels of flexibility (particularly for the water right owner), protection from diminishment/abandonment, and potential streamflow benefits, and are situational - requiring certain qualifying conditions to be effective flow restoration tools for any given water right. The contractual arrangements that form the basis of these transactions may be permanent or temporary. Table 2 provides a summary of the transactions available authorized by statute. Our review of the Identified Water Rights considered the specific statutory requirements described below. Only a subset of the alternative water management tools summarized in Table 2 were considered for the purposes of this review – other available streamflow restoration tools are presented for educational purposes only.

In some cases, modifications to water right operations, free from the requirements of formal water court or administrative approval, may yield streamflow benefits. These are often creative solutions that may include diversion re-timing, irrigation scheduling, or coordination of multiple diversions, to name some examples. Infrastructure upgrades can also produce streamflow benefits when they result in reduced diversions from source streams. These include projects such as: ditch lining, ditch piping, switching to more efficient irrigation systems, automated headgates, and more. Any potential project must be fully vetted from a technical and legal standpoint to determine risks and benefits before it may move forward.

[6] Colorado Division of Water Resources, Colorado Water Conservation Board 2018. Colorado's Decision Support Systems. http://cdss.state.co.us/Pages/CDSSHome.aspx

Table 2. Alternative Water Management Tools.

Tool	Statute, C.R.S.	Use	Approval Process	Term	Comment	Water Administrable for Instream Use?	Protections for HCU?	Protections from Abandonment ?	Used Before?
New ISF Appropriation*	37-92-102(3)	Protect flows as they exist at time of appropriation; purpose is to preserve the existing natural environment	CWCB[1] & Water Court	Permanent	New junior water right	Yes	N/A	N/A	YES; *Thousands statewide*
ISF Water Acquisition -- Permanent	37-92-102(3)	Restore flows with senior water rights; Preserve or improve the natural environment	CWCB[2] & Water Court	Permanent	Direct flow or storage rights; donations, purchases, permanent split-season uses, contractual interests	Yes	N/A; Permanent ISF use	N/A as long as permanent ISF use	YES; *Moser, McKinley*[5]
ISF Water Acquisition-- Long Term Leases	37-92-102(3)	Restore flows with senior water rights; Preserve or improve the natural environment	CWCB[2] & Water Court	Contractual *(but prefer term longer than 10 years)*	Leases, Trust Agreements, use of available augmentation water	Yes	Yes, 37-92-102(3)	Yes, 37-92-103(2)(b)(VI)	YES; *Pitkin Co.*[6]
ISF Water Acquisition-- Temporary Instream Flow Lease *(3-in-10 Lease)*	37-83-105(2)	Restore flows with senior water rights; Preserve the natural environment	CWCB[3], DWR	3 uses in 10 years, 120 days/year, non-renewable	Must use with existing but water-short ISF	Yes	Yes, 37-83-105(2)(c)	Yes, 37-92-103(2)(b)(V)	YES; *Winter Park Ranch W&S District*[5]*, and others*
Ag to Ag Lease to Downstream User	37-83-105(1)	Potential incidental flow benefits to the intervening stream reach	DWR	180 days/ calendar year	Must involve water rights decreed "solely for agricultural irrigation purposes"	No	N/A	N/A	Not sure
Water Conservation Programs	37-92-305(3)(c)	Restore flows through voluntary reduced diversions	Enrollment in Water Conservation Program approved by authorized entity	5 years in any consecutive 10 year period; unlimited use if under a specified federal program	Applicable in all water divisions EXCEPT Division 7	No	Yes, 37-92-305(3)(c)	Yes, 37-92-103(2)(b)(I)	YES; *Rio Colorado*[5]*, SCPP projects*

Tool	Statute, C.R.S.	Use	Approval Process	Term	Comment	Water Administrable for Instream Use?	Protections for HCU?	Protections from Abandonment ?	Used Before?
Forbearance Agreements	N/A	Restore flows through voluntary reduced diversions	Private agreement	Contractual	Impacts historical use of water right (no HCU protection); *Might consider Water Conservation Program instead*	No	No	No	YES; *Wheeler Ditch 2013*[5]
Undecreed Reservoir Release	N/A	Restore flows with storage water release	Private agreement	Contractual	The storage equivalent of a forbearance agreement. Reservoir risks refill next year (can only refill under free river conditions).	No	No	No	YES; *Big Beaver Res. 2002*
Substitute Water Supply Plan *(For pending Water Court Cases)*	37-92-308(4)	Pair with a pending water acquisition to preserve or improve the natural environment	DWR	1 year approval	Expedite ISF use of water rights while water court case for that use is pending	Yes	Same protections as for Permanent or Long Term Water Acquisitions	Yes, 37-92-103(2)(b)(VI)	YES; *Gabino Gallegos*[5]
Substitute Water Supply Plan *(For stream depletions of less than 5 years)*	37-92-308(5)	Restore flows with senior water rights; preserve or improve the natural environment	DWR, CWCB[2] if ISF use	1 year approvals, up to 5 years max renewable	For temporary use of a water right for ISF for 5 years or less	Yes	See Note [4]	Yes, 37-92-103(2)(b)(VI)	Not for ISF use
Interruptible Water Supply Agreement	37-92-309	Restore flows with senior water rights; preserve or improve the natural environment	CWCB[2], DWR	3 years in 10, renewable twice	Allows for the temporary loan of one water right for the use under another water right	Depends	See Note [4] Could pair with a Water Conservation Program	Yes, 37-92-103(2)(b)(VI)	NO
Simple Change of Point of Diversion to Downstream Location	37-92-305(3.5)	Restore flows between old and new downstream diversion point	Water Court	N/A	Moving the diversion point downstream may increase flows for a section of river; does not require quantification of water right under certain circumstances	No	N/A; Decreed Use	N/A; Decreed Use	Unknown for flow restoration use
Change of Point of Diversion to Downstream Location	37-92-305(3)	Restore flows between old and new downstream point of diversion	Water Court	N/A	If circumstances are not met for a simple change, must then quantify water right	No	N/A; Decreed Use	N/A; Decreed Use	YES; *Breem Ditch*[5]

Tool	Statute, C.R.S.	Use	Approval Process	Term	Comment	Water Administrable for Instream Use?	Protections for HCU?	Protections from Abandonment ?	Used Before?
Strategic Retirement of Water Right	N/A	Restore flows, or protect against future depletions	Private agreement	Permanent	Retire conditional or absolute water right, particularly useful in reaches with existing but junior ISFs.	No	N/A	N/A	YES; *Three Sisters Ditch*[5]
Storage Water Delivery for Decreed Uses	N/A	Storage releases add water to rivers when delivered for downstream decreed uses such as augmentation, municipal, or other uses	Private agreement	Contractual	Contractual delivery of storage water for decreed use	Depends on decree; possible incidental flow benefits between points	N/A; Decreed Use	N/A; Decreed Use	YES; *Florida River ISF augmentation; Muni-rec contracts; Stagecoach Res 2016*[5]
Storage Release for In-channel Piscatorial Use	Upper Gunnison, 838 P.2d 840	Restore flows with reservoir release	Water Court	At discretion of owner, pursuant to decree	Exception to CWCB exclusive authority for ISF	Yes, decreed use	N/A; Decreed Use	N/A; Decreed Use	YES, *Taylor Reservoir*
Rotational Crop Management Contracts for ISF use	37-92-305(4)(a)(IV)	Restore flows with senior water rights	CWCB[2]	Contractual	Useful with a group of irrigators	Yes	Yes, 37-92-102(3)	Yes, 37-92-103(2)(b)(VI)	NO

NOTES

***** New ISF appropriations are not flow restoration tools, but are listed here for comparison purposes.

[1] CWCB New appropriation process usually requires 1-2 years to complete.

[2] CWCB water acquisition approval process requires 2 Board meetings; may require a hearing if requested.

[3] CWCB Director can approve temporary ISF leases once SEO determines non-injury; Board will confirm Director's decision at subsequent meeting.

[4] No specific statute, but case law may provide protections: *"By enacting these statutes, the General Assembly has authorized short-term changes that do not penalize the appropriator in any subsequent change of water right proceeding. The methodology for calculating historic consumptive use of the water rights over a representative period of time for a permanent change will not count or discount the years of authorized temporary use. The legislature clearly intended to promote flexibility in the administration of water rights, especially in the circumstances of temporarily transferring water from agricultural use to municipal use on a contract basis. It did not intend to penalize owners of decreed appropriations for properly taking advantage of these statutes according to their terms." ISG, LLC v. Arkansas Valley Ditch Ass'n*, 120 P.3d 724, 734 (Colo. 2005)

[5] Reference individual projects at: http://www.coloradowatertrust.org/impact/projects

Water Court Transactions

Water right owners can achieve the greatest certainty for their water management operations with permanent changes of water rights or long term leases which require a change of water right. These types of actions typically involve changing points of diversion to new or alternate locations, adding or changing types or places of beneficial use, or augmenting out of priority junior uses. Once approved, a permanent change of water right or plan for augmentation will allow for long term benefits under the new operations. Permanent transactions allow for administration by the Division Engineer, including the ability to place a call and shepherding of water through an instream flow reach.

Permanent/Long Term ISF Acquisition

One of the ways to secure water for streamflow benefits is through an agreement with the Colorado Water Conservation Board and a permanent change of water rights to instream flow use by the CWCB. The CWCB's statutory authority for acquiring water is quite broad – this allows for flexible arrangements between the CWCB and a water user. Water acquisition transactions with the CWCB also require a separate process for CWCB Board approval, in addition to water court approval. In the early 1990's, the City of Boulder conveyed several senior water rights to the CWCB for instream flow use in Boulder Creek. Under this pioneering permanent transaction, the City developed a plan to re-operate its water rights to provide for both municipal use and to restore and protect flows in Boulder Creek during peak irrigation demands. The court decreed the requested changes including provisions for the rights to revert to the City during drought conditions, and also for City to use or remarket the water downstream of the instream flow uses. Other examples for instream flow partnerships with CWCB could include:

- adding senior water to existing, junior instream flow rights in order to "improve" the natural environment above the original filing, or to permanently restore flows to dry segments of stream that had no previously existing instream flow;
- securing split season (aka partial season or deficit irrigation) use of a water right for both consumptive and non-consumptive purposes;
- creating long term leases of water rights to secure instream flows for a specified period of time;
- adding instream flow use to protect augmentation deliveries to downstream senior water rights.

While the obvious benefits from these types of transactions include the greater certainty afforded by obtaining a water court decree for the new or changed uses, this greater certainty is borne out of a greater, and more expensive, process -- the most obvious of which is the water court process. In order to prove non-injury to other water right owners, it is necessary to complete a full engineering analysis for the subject water rights. And the costs of litigating contested issues can be an expensive venture. In considering use of this type of transaction, the expectation should be that the transactional benefits and certainty outweigh those potential costs.

Simple Change of Point of Diversion

C.R.S. §37-92-305(3.5). For various reasons, a water user may wish to change the diversion location for a decreed water right. However, any change in point of diversion requires approval by the water court to ensure injury to other water users is prevented. In a typical change case, proving non-injury requires analyses to demonstrate that the change will not result in expanded use, and this quantification of

historical use of an existing decreed water right has often been a risk water users are unwilling to take on.

In 2012, the legislature passed SB12-97 which created a streamlined approval process for water users simply wishing to change a point of diversion. This new streamlined process eliminates the need to quantify the water right to prove non-injury, thereby removing a major disincentive to a potential water user wishing to move a headgate. Under this new statute, a water user may file for a Simple Change of Point of Diversion as long as:

1. the change is a surface water to surface water change (i.e. switching the surface diversion to a shallow well would not be permitted under this law);
2. the change in point of diversion is the sole change claimed; and
3. there are no intervening surface diversions or points of inflow, including an instream flow water right (if point of diversion is moved upstream within ISF reach).

A Simple Change of Water Rights to a downstream point of diversion could be a useful tool for the City to provide incidental streamflow benefits to an intervening stream reach, or to improve riparian habitat by consolidating agricultural diversions at a single structure or, when possible, moving headgates downstream.

Administrative Approval Transactions

Unlike permanent actions that require water court approval, there are several temporary transactions available under state statutes that can facilitate water management objectives. These temporary transactions typically require only an administrative approval, operate for shorter terms, and require fewer technical analyses than permanent transactions. These temporary transactions can be very effective for managing drought or other transitory environmental conditions, or for assessing operational benefits prior to considering a permanent transaction.

Ag to Ag Lease

C.R.S. §37-83-105(1). Under an "Ag to Ag Lease", the *"owner of a water right decreed and used solely for agricultural irrigation purposes may loan all or a portion of the water right to another owner of a decreed water right on the same stream system and that is used solely for agricultural irrigation for no more than 180 days during any one calendar year if the division engineer approves such loan in advance and the loan does not cause injury to other decreed water rights."* Other than the 180 day operation per calendar year, there are no other limits in the statute governing how often the Ag to Ag Lease can be exercised. The statute requires a reasonable estimate of historical consumptive use, public notice to other water users, and a determination of non-injury by the state and division engineers. One of the most attractive features of this temporary transfer is that an Ag to Ag Lease can be quickly approved by the State and Division Engineers through an expedited administrative process after their determination that there will be no injury to other water rights, with the potential for unlimited subsequent renewals.

The legal authority for Ag to Ag leases or exchanges has been in place since the early 1900's, but the statute was significantly revised in 2003 to allow for loans of water for instream flow use. The statutory authority for temporary instream flow loans provided by section 37-83-105(2) (and described below) was exercised for the first time in 2012. However, it does not appear the updated process for section

37-83-105(1) (the Ag to Ag Lease) has ever been implemented, and any application by the City requesting approval of an Ag to Ag Lease would be a test of existing procedures. This type of transaction could potentially be used to implement full or split season sharing of City water on downstream agricultural parcels with incidental streamflow benefits in the intervening reaches of stream. If successful, the City's precedent-setting use of this type of transaction could open the door to other beneficial transactions in the basin.

Temporary Loan to CWCB for ISF (3-in-10 Lease)

C.R.S. §37-83-105(2)(a). Under a Temporary Loan to the CWCB for ISF (a "3-in-10 lease"), water rights may only be used for a period of 120 days in a calendar year, and only for three years of use over a ten-year period. A 3-in-10 lease may only be used on any stream where the CWCB currently holds a junior decreed ISF right, and only in an amount up to the decreed amount of the ISF. Again, one of the most attractive features is that a 3-in-10 lease does not require a water court change case; the State and Division Engineers can approve the use of a 3-in-10 lease through an expedited administrative process after their determination that there will be no injury to other water rights. The 3-in-10 lease is ideal for use to temporarily restore flows to dewatered segments of instream flow reaches, or in emergency low flow circumstances, such as during an acute drought, when aquatic resources require an immediate streamflow response. Importantly, the 3-in-10 lease offers protections for water users who participate in the program, and administration by the Division Engineer, including the ability to place a call and shepherding through the instream flow reach. C.R.S. § 37-83-105(c) provides that any years during which the water right is used for instream flow instead of the decreed use, those years will be excluded from any future analyses of historical consumptive use for the water right. The statutes also protect the water right from the presumption of abandonment. As mentioned previously, the 3-in-10 lease was first implemented in 2012 by the Colorado Water Trust, UYWCD, and the CWCB.

While there are many obvious benefits to the 3-in-10 leases, there are also some statutory limitations that restrict their use. These temporary instream flow leases cannot be used on streams where there is no existing, decreed instream flow water right. This limitation makes it difficult to restore flows to some water-short stream segments. Another limitation is that the amount of water leased for instream flow use can only be used to help satisfy a water-short instream flow right; it cannot be use to increase decreed instream flow amounts. Also, once used, these types of leases are non-renewable. Regardless of the current limitations, 3-in-10 leases can to restore flows to water short segments of existing ISFs.

Substitute Water Supply Plan *(for non-Water Court Actions)*

C.R.S. §37-92-308(5). Substitute Water Supply Plans (SWSP) allow the Colorado Division of Water Resources to approve a temporary change of a water right for any new use so long as the depletions to the river do not accrue beyond five years.

> *"…for new water use plans involving out-of-priority diversions or a change of water right, if no application …. has been filed with a water court and the water use plan or change proposed and the depletions associated with such water use plan or change will be for a limited duration, not to exceed 5 years, … the state engineer may approve such a plan or change as a substitute water supply plan…".*

For example, an irrigation water right may be temporarily changed to instream flow use or other uses by means of the SWSP administrative approval process, without going to water court. The approval is limited to one year, but the plan can be renewed for up to 5 years by following the same application process. As with other temporary transactions, the SWSP process requires public notice and engineering to demonstrate non-injury.

A SWSP could provide opportunities for habitat or instream flow improvements or allow the City to test different water management scenarios prior to considering a permanent change of water rights. The SWSP tool has been in place for many years, and is commonly used by water right owners to effect a change of water rights while considering a permanent application or waiting for a pending application to be decreed. The SWSP tool can protect historical consumptive use of water rights by continued consumptive use. If the water rights are used under an SWSP for instream flow use, the statutes provide additional protections against abandonment under 37-92-103(2)(b)(VI). Recent case law has also reaffirmed the protections for historical consumptive use.[7]

The CWCB has operated SWSPs for instream flow use on the Slate River near Crested Butte and on the Alamosa River awaiting decrees in permanent change cases under 308(4). However, to the best of our knowledge, the tool provided by sub-section 5 has not been used for flow restoration purposes.

Use of a SWSP for flow restoration purposes has advantages over a 3-in-10 because no underlying instream flow is required, and a SWSP could be used to improve flows over an existing instream flow, if one is present. This tool would, however, require a full two-board meeting process with the CWCB, whereas a 3-in-10 lease uses an expedited one-board meeting process.

Interruptible Water Supply Agreements (IWSA)

C.R.S. §37-92-309. Interruptible Water Supply Agreements allow one water right owner to transfer the historical consumptive use to another type or place of use on a temporary basis. For example, the consumptive use portion of an irrigation water right may be temporarily transferred downstream to municipal or instream flow use, upon a showing of non-injury, and provide incidental instream flow benefits to a water short stream segment.

As with the SWSP tool, an IWSA could provide opportunities for habitat or instream flow improvements by temporarily changing water rights to a downstream use, and also serve as a pilot project when considering a more permanent transaction. The IWSA tool requires public notice and proof of non-injury prior to approval, and the statute specifically requires a "detailed report prepared by a professional engineer evaluating historical consumptive use, return flows and the potential for material injury to other water rights…and that proposed conditions to prevent such injury." The IWSA tool provides the same water right protections afforded the SWSP and other temporary tools. An IWSA

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[7] *"By enacting these statutes, the General Assembly has authorized short-term changes that do not penalize the appropriator in any subsequent change of water right proceeding. The methodology for calculating historic consumptive use of the water rights over a representative period of time for a permanent change will not count or discount the years of authorized temporary use. The legislature clearly intended to promote flexibility in the administration of water rights, especially in the circumstances of temporarily transferring water from agricultural use to municipal use on a contract basis. It did not intend to penalize owners of decreed appropriations for properly taking advantage of these statutes according to their terms." ISG, LLC v. Arkansas Valley Ditch Ass'n, 120 P.3d 724, 734 (Colo. 2005).*

cannot be exercised for more than 3 years in a 10 year period, but may be renewed 2 additional times subject to the same application procedures.

The IWSA is a relatively new tool that was created in 2003 to maximize beneficial use of water resources without the need for a water court change. It is unclear how exactly this statue could be interpreted; therefore, any use by the City would likely serve as the test case for this particular tool. Both the SWSP and the IWSA require more detailed applications than the 3-in-10 lease, but are less expensive than water court.

As with the SWSP, an IWSA is not bound by the existing instream flow requirement imposed for the 3-in-10 lease; unlike the SWSP, an IWSA approval can operate for a longer period of time.

Water Conservation Program

C.R.S. §37-92-305(3)(c)(II). In 2013, the Colorado General Assembly passed Senate Bill 19, a measure designed to promote water conservation by offering water rights owners "safe harbor" when they decrease or curtail consumptive uses of water under qualifying government sponsored water conservation programs. The protections afforded by this legislation require the water courts to exclude from any future historical use calculations any years the water right was used in an approved conservation program. Although the legislation does not provide any legal protection for (i.e. administration by the Division Engineer, such as the ability to place a call or shepherding past downstream headgates) for flows resulting from suspended or reduced diversions, this tool has been used successfully to restore streamflow to segments of streams between diversions. In addition to the protections related to quantification, §37-92-103(2) provides protection against abandonment. Under SB13-19, use of this tool was limited to use in Water Divisions 4, 5, and 6; however, in 2017, HB17-1233 extended use of this tool to Water Divisions 1-6.

Strategic Retirement of Water Right

Under certain circumstances, it could prove beneficial to retire an existing water right in order to restore streamflow or create instream flow benefits. On three separate streams located in Water Divisions 1, 5 and 7, water right owners have retired irrigation rights instead of filing a change of water right application in order benefit instream flows. In each case, there were no intervening priorities between the retired water right and the instream flow water right priority, and therefore, the strategic retirement could provide incidental benefits to the CWCB's decreed water right. The retirement was accomplished by motion and order from the water court, and saved both parties the engineering and legal expenses of a full change of water right proceeding. While this particular tool has geographical and administrative constraints, it nonetheless can be of great value if the factual conditions support its use. The Water Trust does not recommend this tool for pre-Colorado River Compact water rights.

Alternative Water Management Opportunities for the City of Steamboat Springs' Identified Water Rights

The City of Steamboat Springs owns a diverse water right portfolio including water rights decreed for irrigation, municipal, augmentation, and numerous other uses. The City initially identified certain water rights and one contractual right to use stored water ("Identified Water Rights") for consideration. This section generally summarizes the potential opportunities for streamflow restoration using the City's Identified Water Rights. Each opportunity would require additional feasibility analysis to determine its viability.

Yampa River

The City owns direct flow water rights that divert from the Yampa River between Lake Catamount Reservoir and the WWTP in addition to a contractual right to use water stored in Stagecoach Reservoir. These water rights are decreed primarily for irrigation and municipal, while some water rights also have decreed uses including industrial, recreation, and augmentation.

Stagecoach Reservoir Contract

The City currently has a contract with UYWCD for 552 acre-feet of water in Stagecoach Reservoir. Opportunities related to the Stagecoach Reservoir contract include releasing water for non-consumptive municipal uses through Steamboat to the WWTP for water quality improvement and, if administratively tenable, for the RICD water right located in the City.

South Yampa Valley Water Rights

The City's South Valley water rights include water rights decreed for irrigation at the City's Legacy Ranch, a water right related to a former gravel mining operation, and water rights used for wetland mitigation. Opportunities related to the operation of the City's water rights in the South Yampa Valley include efficiency projects, operational modifications to diversions, and the potential for a long term ISF lease with the CWCB. Any long term ISF lease would require appropriate input from water right owners in shared ditches, and would allow the CWCB to preserve and/or improve the natural environment to a reasonable degree.

City Reach Water Rights

Between the Yampa River's confluence with Fish Creek and the City's WWTP, the City owns water rights that are decreed for irrigation, municipal, domestic, recreational, and other uses. The opportunities associated with these water rights may include diversion structure upgrades and/or efficiency upgrades that may benefit water quality and streamflow downstream of the Yampa River's confluence with Fish Creek.

Spring, Soda, and Butcherknife Creeks

Many of the City's Identified Water Rights on Spring, Soda, and Butcherknife Creeks were the original water supply for the City's municipal supply. The City now primarily diverts its municipal supply from Fish Creek, but still owns water rights on Spring, Soda, and Butcherknife Creeks. These three streams all meet the Yampa River in the City, and several of the City's Identified Water Rights on these streams may also be diverted at alternate points on the Yampa River in the City for raw water irrigation of parks and open space. Opportunities using the Identified Water Rights to benefit streamflow on these streams are limited, as water may not be available at the decreed points of diversion during the late season in drier years. Despite this limitation, it appears that the most viable option for these water rights that may result in streamflow benefits includes their use for raw water irrigation at the City's parks and open spaces.