



COLORADO

**Colorado Water
Conservation Board**

Department of Natural Resources

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Jared Polis, Governor

Dan Gibbs, DNR Executive Director

Rebecca Mitchell, CWCB Director

TO: Colorado Water Conservation Board Members

FROM: Linda Bassi, Section Chief
Kaylea White, Senior Water Resource Specialist
Stream and Lake Protection Section

DATE: November 18-19, 2020 Board Meeting

AGENDA ITEM: **23.c Proposed Acquisition of Contractual Interest in *City of Thornton* "Seed Water Rights" for Use in Plan for Augmentation to Augment Stream Flows on the Cache la Poudre River**

The City of Thornton ("Thornton") has offered to the Colorado Water Conservation Board a donation of a contractual interest in water to be used in the plan for augmentation to augment stream flows on the Cache la Poudre River ("Poudre Flows Plan"). Because this is one of the first offers of water to be used in the Poudre Flows Plan, the water rights offered by Thornton are referred to as "Seed Water Rights." The water would be used to support the plan in the reach of river shown in **Exhibit T1** as the "Thornton Seed Water Reach." Both the Poudre Flows Plan and the use of the Thornton Seed Water Rights in the plan are subject to the requirements of the new stream flow augmentation statute, section 37-92-102(4.5) C.R.S.

Staff Recommendation

The Board's consideration of this proposal at this meeting will initiate a 120-day period for Board review. **No formal action is required at this time.** Staff believes that the proposed acquisition will be a valuable component to support the Poudre Flows Plan. This initial presentation provides an opportunity for the Board and the public to identify questions or concerns for Staff, the Attorney General's Office, Colorado Water Trust ("CWT"), Thornton, and other Poudre Flows Partners to address at this or a subsequent meeting.

Background

Thornton was one of the initial participants in the "Poudre Runs Through It" group and its FLOWS Committee, and has been an important partner in the Poudre Flows Plan effort for several years, since at least 2014. Thornton is a key partner and signatory to the Phase II MOA (Exhibit PF5 to agenda item 23 memo). Thornton has offered to CWCB a contractual interest in certain water rights to be used in the Poudre Flows Plan within the Thornton Seed Water Reach. The Thornton Seed Water Reach extends through the entire Poudre Flows augmented reach, a stream distance of approximately 55 miles. The offer letter, draft Water Delivery Agreement, and seed water letter report are attached as **Exhibits T2, T3, and T4.**



The Board's Water Acquisition Procedures

Rule 6 of the Rules Concerning the Colorado Instream Flow and Natural Lake Level Program ("ISF Rules") sets forth the Board's procedures for acquisition of water, water rights, or interests in water for instream flow purposes. Section 37-92-102(3), C.R.S. provides 120 days for the Board to determine any terms and conditions it will accept for the Water Delivery Agreement for water, water rights, or interests in water to preserve or improve the natural environment. ISF Rule 6 requires a minimum of two Board meetings to allow for public input prior to the Board taking final action on a proposed acquisition. Therefore, the Board's initial consideration of Thornton's offer at this Board meeting initiates the 120-day time period for the Board to consider the proposal. Final action on the proposal could occur at the January 2021 Board meeting. ISF Rule 6m(4) provides that any person may request the Board to hold a hearing on the proposed acquisition, and that such a request must be filed within twenty days of this Board meeting.

ISF Rules 6.e and 6.f require the Board to evaluate the appropriateness of an acquisition and determine how best to utilize the acquired water rights to preserve or improve the natural environment. The ISF Rules list several factors the Board may consider in its evaluation of acquisitions, which are addressed in this memo.

Pursuant to statute, Staff has requested recommendations from Colorado Parks and Wildlife ("CPW"), the U.S. Department of Agriculture, and the U.S. Department of Interior. Pursuant to ISF Rule 6m(1), Staff has provided notice of the proposed Poudre Plan and the proposed acquisition of an interest in the Seed Water Rights to all persons included on the appropriate ISF Subscription Mailing Lists and provided notice to the State Engineer's Substitute Supply Plan Notification List. Staff has requested a biological analysis from CPW pursuant to Rule 6f(2). CPW will address the Board regarding this acquisition at the Board meeting. CPW's written recommendation for this proposed acquisition is attached as **Exhibit T5**.

Water Proposed for Acquisition

Thornton has offered to CWCB use of its previously changed and quantified water rights for use in the Poudre Flows Plan ("Subject Water Rights"). The Subject Water Rights are represented by some of Thornton's water rights changed in Consolidated Cases No. 86CW401, 86CW402, 86CW403, and 87CW332 ("TNP Decree"). The specific water rights are shares in the Water Supply and Storage Company (WSSC Water Rights) and Jackson Ditch Company (JDC Water Rights) which were changed and quantified in the TNP Decree. All of the Subject Water Rights have been changed to municipal and augmentation use, but not all of the water rights have been converted from the original irrigation use to the new uses under the decrees. Once the water rights are converted under the decrees, then average annual deliveries to various locations of the Poudre River potentially available for the Poudre ISF Augmentation Plan total 2,268 acre-feet at rates up to 9.52 cfs, as further described in Thornton's Seed Water Letter Report, attached as **Exhibit T4**.

Existing Instream Flow Water Rights

CWCB does not currently hold any instream flow water rights in the Thornton Seed Water Reach of the Cache la Poudre River, or downstream of the Thornton Seed Water Reach on the South Platte River. CWCB's appropriated instream flow water rights upstream of Thornton Seed Water Reach on the Cache la Poudre River will be unaffected by this plan.

Existing Natural Environment

The Thornton Seed Water Reach extends through the entire augmentation reach. The reach supports both native and non-native fish species, as well as macroinvertebrate and riparian communities. The Poudre River has undergone significant changes with a number of major agricultural, municipal, and industrial diversions representing a major anthropogenic change to the watershed. The Cache la Poudre is still a snowmelt-driven system, but water developments have significantly altered the natural flow regime resulting in severely depleted flow regime with multiple points of dry up. River flows fluctuate naturally on a diurnal and seasonal pattern, and are influenced by transbasin inflows, upstream reservoir operations, river diversions, and return flows from various uses. CPW describes the natural environment with more detail in its CPW Flow Quantification Report, (Exhibit PF3 to agenda item 23 memo).

The upper reaches of the Cache la Poudre River as it emerges from Poudre Canyon are typical cold water trout habitat supporting both rainbow and brown trout populations. As the river flows eastward through Fort Collins, the fishery transitions from one that is dominated by cold-water species to a more diverse cold water/cool water/warm water fishery. The transition zone provides important habitat for cold-water species seasonally coming down from the canyon, as well as plains species that move up from the low gradient plains zone. The Poudre River transition zone provides aquatic habitat conditions that support an array of species, including important native species with varying temperature and habitat preferences that can be unique to transition zones. This assemblage includes native minnow, sucker, and darter species, as well as the plains topminnow (Tier 1 Species of Greatest Conservation Need, CPW State Wildlife Action Plan (2015)). East of I-25, the fishery is mainly warm-water and is dominated by species in the darter, minnow, and sucker families.

Proposed Method of Acquisition

Under this proposal, the CWCB would acquire a contractual interest in Thornton's direct flow water rights as shares in the WSSC system and the JDC Ditch. Each of the water rights have been changed and quantified in water court, are decreed for augmentation use, and are subject to volumetric limits. Thornton's seed water right letter report describes each water right and the relevant quantification decree terms and conditions. See **Exhibit T4**. A draft Water Delivery Agreement between Thornton and CWCB is attached as **Exhibit T3**. Once the Board approves the proposed acquisition, the CWCB Director would sign the agreement and this interest in the water rights would be included in the water court application to be filed

for the Poudre Flows Plan. The draft water court application is attached to the agenda item 23 memo as Exhibit PF6.

Under the Water Delivery Agreement, Thornton would deliver water for exclusive use by the CWCB to be used in the Poudre Flows Plan. A process would be put in place by the Poudre Flows Management Committee to notify the Division of Water Resources, CWCB, and the other Poudre Flows Partners that such deliveries are being made. The CWCB shall request administration to protect the delivered acquired water through the Thornton Seed Water Reach from diversion or exchange by other water users, in accordance with the terms and condition of the Poudre Flows Plan decree.

Proposed Use of the Acquired Water Rights

The CWCB would use the acquired water to preserve and improve the natural environment in the Cache la Poudre River to a reasonable degree by the delivery of water by Thornton at upstream locations to augment stream flows pursuant to the Poudre Flows Plan decree. Thornton proposes to make its WSSC and JDC Water Rights available to the Poudre Flows Plan by providing changed water rights decreed in Case No. 87CW332 to the upstream reaches of the Poudre River to meet downstream return flow obligations and decree stipulations. Some of Thornton’s Water Rights can be delivered to the Poudre River upstream of the Poudre Flows Plan reach’s upper terminus from locations such as Chambers Lake and Long Draw Reservoir to be protected from the upper terminus down to the confluence of the Poudre River with the South Platte River. The water will remain in the river from the points of delivery where it will preserve and improve the natural environment in the Thornton Seed Water Reach pursuant to the decreed Poudre Flows Plan.

The CWCB would request administration of the delivered water when necessary to help maintain stream flows in the Cache la Poudre River Segments A, B, C, D, E, and F, as these segments are described in the agenda item 23 memo. CWCB would protect water provided by Thornton at flow rates up to the CPW flow quantification recommendations rates as shown in the table below.

CPW Flow Quantification Seasonal Recommendations

| Segment | Winter (Nov - March) Preserve (cfs) | Winter (Nov - March) Improve (cfs) | Summer (Apr - Oct) Preserve (cfs) | Summer (Apr - Oct) Improve (cfs) |
|---------|-------------------------------------|------------------------------------|-----------------------------------|----------------------------------|
| A | Up to 80 | 80 - 150 | Up to 114 | 114 - 260 |
| B | Up to 80 | 80 - 150 | Up to 114 | 114 - 260 |
| C | Up to 30 | 30 - 54 | Up to 40 | 40 - 54 |
| D | Up to 10 | 10 - 35 | Up to 10 | 10 - 40 |
| E | Up to 15 | 15 - 30 | Up to 15 | 15 - 30 |
| F | Up to 15 | 15 - 30 | Up to 15 | 15 - 30 |

Historical Use and Historical Return Flows

As required by section 37-92-102(4.5), the augmentation water rights offered by Thornton have already been changed and quantified in water court. The change decrees quantified historical uses and set return flow obligations. The terms and conditions of the change case decrees will continue to apply to the use of these water rights in the Poudre Flows Plan.

Potential Benefits of this Proposed Acquisition

In addition to the numerous benefits of the Poudre Flows Plan described in the agenda item 23 memo, the Board's acquisition and use of a contractual interest in the Subject Water Rights in the Poudre Flows Plan will contribute toward improving habitat connectivity in the over-appropriated Cache la Poudre River without injury to other water rights.

Location of Other Water Rights

There are many other water rights located on the Cache la Poudre River; however, they should not be affected by the protection of this previously quantified augmentation water to be delivered to and through the Thornton Seed Water Reach.

Potential Injury to Existing Rights

Any terms and conditions necessary to prevent injury to other water rights will be developed during the water court process for the Poudre Flows Plan, which will include consideration of these particular water rights to be used in the court-approved plan for augmentation. The CWCB, along with its co-applicants in the water court process will adhere to the specific statutory directions for the water rights to be used in the Poudre Flows Plan.

Stacking Evaluation

When water is available under the Water Delivery Agreement for use in the Poudre Flows Plan, the CWCB will be able to use the Subject Water Rights in addition to any other acquired water rights or interests in water available to the CWCB for augmentation of stream flows or other instream flow use, including any protected mitigation releases made pursuant to section 37-92-102(8), in this reach of the Cache la Poudre River up to the flow rates to meet the CPW flow recommendations to preserve and improve the natural environment, as approved by the Board.

Administrability

The Poudre Flows Partners have been, and will continue, coordinating with the State and Division Engineers regarding the administrability of the Poudre Flows Plan, for which this particular acquisition is an important component. Staff and the Poudre Flows Partners will continue conversation with the State and Division Engineers about using these specific water rights in the Poudre Flows Plan.

Maximum Utilization of the Waters of the State and Availability of the Delivered Water for Subsequent Use Downstream

This proposal will promote maximum utilization of the waters of the state because the augmentation water will not only be used in the Poudre Flows Plan to augment stream flows in the Cache la Poudre River, but also may be used for downstream beneficial purposes. Downstream of the Thornton Seed Water Reach, Thornton plans to leave some portion of this water in the river for reuse to meet return flow obligations or other stream obligations.

Effect of Proposed Acquisition on Any Relevant Interstate Compact Issue

The proposed acquisition should not negatively affect any interstate compact. The water rights will be used to augment stream flows and also be used for other beneficial uses downstream of the lower terminus of the Thornton Seed Water Reach. Historical return flows of the water rights will continue to be maintained. Additionally, the subject water rights and uses for the Poudre Flows Plan are located in Water District 3 and the South Platte River Compact primarily affects District 64 on the lower end of the South Platte River. Based upon the foregoing, it does not appear that this acquisition will raise any compact issues.

Costs to Complete the Transaction, and Other Associated Costs

There are various costs associated with completing this proposed acquisition, but no direct expenditures to purchase or lease an interest in these Seed Water Rights because Thornton will donate the interest in water to the CWCB. Financial contributions by Thornton and the other municipal Poudre Flows Partners along with Northern Water, and fundraising efforts by the Colorado Water Trust are significant and are expected to be sufficient to pay for CWT project support through the water court application process, and to pay for SWE's engineering work. The CWCB's indirect costs include Staff and Attorney General's Office time dedicated to participation as a co-applicant in the water court proceeding, and participation in a management committee that will coordinate planning, recording, reporting, and guidance on day-to-day operations. The costs of physical modifications of any existing diversion structures on the stream, installation and maintenance of any additional stream gages, and any additional consultant work will be the responsibility of the Poudre Flows Partners, subject to agreement by the partners.

Exhibits

- Exhibit T1: Seed Water Map
- Exhibit T2: Offer Letter
- Exhibit T3: Draft Water Delivery Agreement
- Exhibit T4: Seed Water Letter Report
- Exhibit T5: CPW Recommendation Letter

EXHIBITS

R 70 W

R 69 W

R 68 W

Augmented Segments and Preserve/Improve Flow Rates (cfs)

| Segment | Description | Winter (Nov 1 - Mar 31) | | Summer (Apr 1 - Oct 31) | |
|----------|--|-------------------------|----------|-------------------------|-----------|
| | | Preserve | Improve | Preserve | Improve |
| A | Canyon Gage to Larimer and Weld Canal Diversion | Up to 80 | 80 - 150 | Up to 114 | 114 - 260 |
| B | Larimer and Weld Canal Diversion to Spring Creek Confluence | Up to 80 | 80 - 150 | Up to 114 | 114 - 260 |
| C | Spring Creek Confluence to New Cache la Poudre Ditch Diversion | Up to 30 | 30 - 54 | Up to 40 | 40 - 54 |
| D | New Cache la Poudre Ditch Diversion to County Road 17 Crossing | Up to 10 | 10 - 40 | Up to 10 | 10 - 40 |
| E | County Road 17 Crossing to 59th Avenue Bridge | Up to 15 | 15 - 30 | Up to 15 | 15 - 30 |
| F | 59th Avenue Bridge to South Platte River Confluence | Up to 15 | 15 - 30 | Up to 15 | 15 - 30 |

Source: Colorado Parks and Wildlife. 2020. Flow Quantification Report for the Cache la Poudre River in Larimer and Weld Counties.

Note: Seed water reaches represent the reach between the uppermost point of introduction and lowermost point of withdrawal/use (not including potential leases of water further downstream).

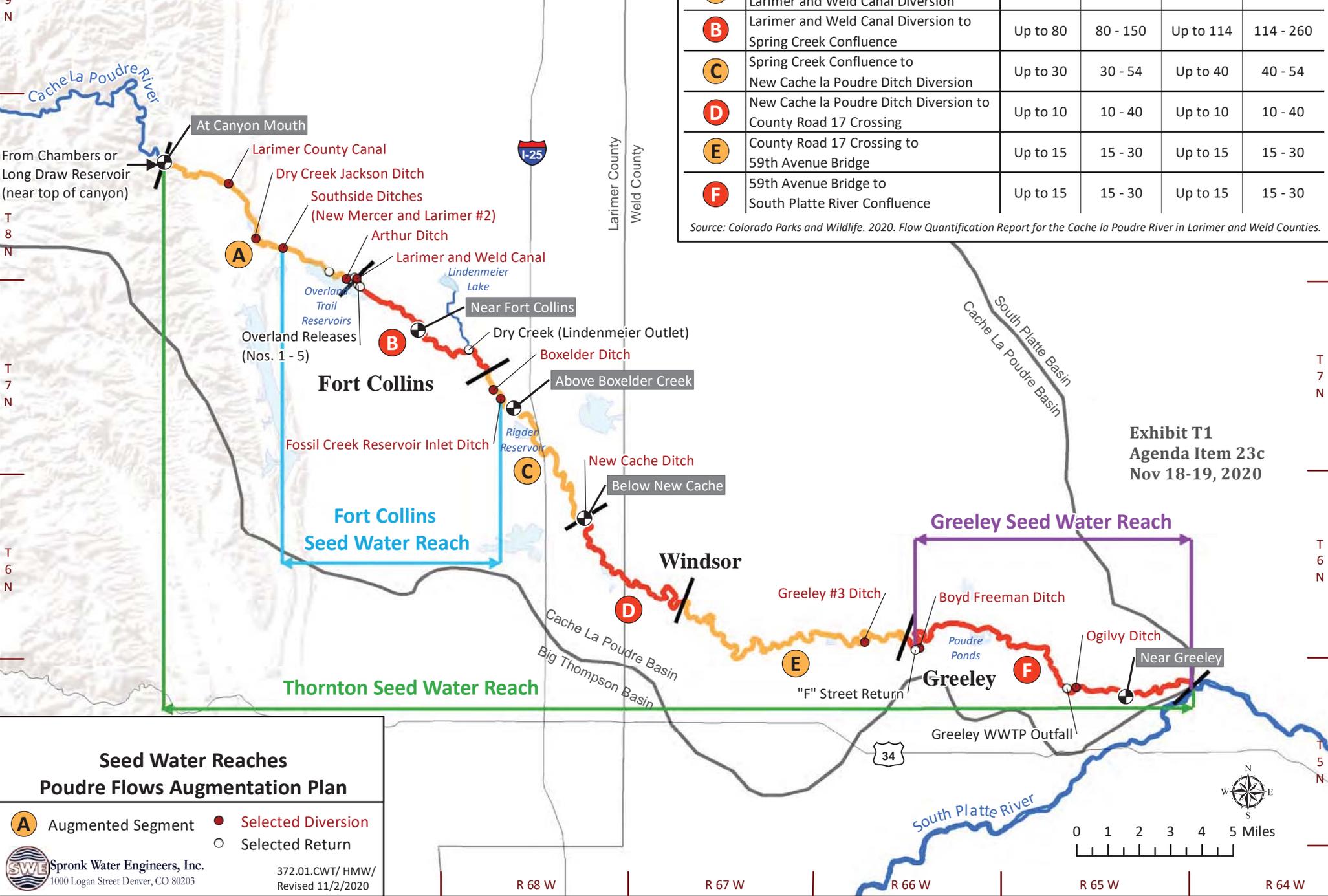


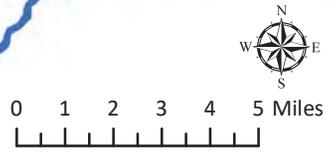
Exhibit T1
Agenda Item 23c
Nov 18-19, 2020

Seed Water Reaches Poudre Flows Augmentation Plan

A Augmented Segment ● Selected Diversion
○ Selected Return

Spromk Water Engineers, Inc.
1000 Logan Street Denver, CO 80203

372.01.CWT/ HMW/
Revised 11/2/2020



R 68 W

R 67 W

R 66 W

R 65 W

R 64 W



Infrastructure Maintenance Center
12450 Washington Street
Thornton, CO 80241-2405

Water Resources Division
720-977-6600
FAX 720-977-6202
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Linda Bassi
Chief, Stream and Lake Protection Section
Colorado Water Conservation Board
1313 Sherman St., Rm. 721
Denver, CO 80203

October 21, 2020

RE: Water Delivery Agreement for the Use of Certain Thornton Water Rights in the Poudre ISF Augmentation Plan

Dear Linda:

By this letter, the City of Thornton expresses its willingness to make available, for the use of the Colorado Water Conservation Board (CWCB), certain of its water rights changed in Consolidated Cases No. 86CW401, 86CW402, 86CW403, and 87CW332 ("TNP Decree") for inclusion in the Poudre ISF Augmentation Plan, in accordance with the proposed Delivery Agreement Described below. The specific water rights are shares in the Water Supply and Storage Company (WSSC Water Rights) and Jackson Ditch Company (JDC Water Rights) changed and quantified in the TNP Decree. Once all of Thornton's TNP Decree changed water rights have been converted to municipal use, average annual Thornton deliveries to various locations of the Poudre River potentially available for the Poudre ISF Augmentation Plan total 2,268 acre-feet at rates up to 9.52 cfs

Background – 2020 MOA with the CWCB and other Poudre Partners

On February 8, 2020, Thornton, in collaboration with the CWCB, Cache la Poudre Water Users Association, City of Fort Collins, Colorado Water Trust, Northern Colorado Water Conservancy District, City of Greeley, and Colorado Parks and Wildlife, entered into a Memorandum of Agreement for Phase II of the Cache la Poudre Instream Flow Augmentation Plan. The parties joined together to develop the Poudre ISF Augmentation Plan, an innovative, voluntary approach to increase and protect additional flows in portions of the Poudre River to preserve and improve the ecological health of the river. The need for this enhanced flow is outlined in more detail in the Flow Quantification Report for the Cache la Poudre River in Larimer and Weld Counties prepared by Colorado Parks and Wildlife to Support the Poudre River Flow Augmentation Plan (October 2020).

Contract Term and Pricing

Thornton proposes to enter into the Water Delivery Agreement for the Use of Certain Thornton Water Rights in the Poudre ISF Augmentation Plan (Water Delivery Agreement),

Exhibit T2
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which is included with this letter. The term of the Water Delivery Agreement is perpetual unless terminated according to the provisions of the agreement. No payment is owed to Thornton for the CWCB's use of water attributable to the WSSC and JDC Water Rights pursuant to the terms and conditions of the Water Delivery Agreement.

Thornton is pleased to work with the CWCB and the other partners on the Poudre ISF Augmentation Plan, which will benefit the flows in the Cache la Poudre River from the mouth of the canyon to the confluence with the South Platte River. We look forward to continuing to work with you to implement this Plan. Please let us know if we can provide any additional information to assist in the CWCB's consideration of this proposal.

Sincerely,



Emily Hunt
Deputy Infrastructure Director

cc: David Taussig, White and Jankowski
Kate Ryan, Colorado Water Trust

WATER DELIVERY AGREEMENT FOR THE USE OF CERTAIN THORNTON WATER RIGHTS IN THE POUDBRE ISF AUGMENTATION PLAN
10/16/2020

(Thornton's WSSC and JDC Water Rights Changed in Consolidated Cases No. 86CW401,86CW402, 86CW403, and 87CW332)

This Water Delivery Agreement for the Use of Certain Thornton Water Rights in the Poudre River ISF Augmentation Plan ("Agreement") is entered into by and between the City of Thornton, Colorado, a home rule municipality ("Thornton") and the Colorado Water Conservation Board, 1313 Sherman Street, Room 721, Denver, CO 80203, an agency of the State of Colorado (the "CWCB"), sometimes collectively referred to herein as the Parties.

RECITALS

A. CWCB, the Colorado Water Trust, a Colorado non-profit corporation ("Water Trust"), and other water users on the Cache La Poudre River, including Thornton, have been exploring options to improve the Poudre River as a healthy, working river. One of those efforts focused on improving flows in the Poudre, particularly downstream of the canyon mouth to the confluence of the South Platte River, at times when flows would improve the ecological health of the river, all while protecting existing water users in the reach.

B. The CWCB, Thornton and other Water Users¹, the Water Trust, and Colorado Parks and Wildlife (CPW), have entered a Memorandum of Agreement for Phase II of the Cache La Poudre River Instream Flow Augmentation Plan dated February 8, 2020, a copy of which is attached as Attachment 1 ("MOA").

C. CWCB is authorized by Section 37-92-102(3), C.R.S. to, among other means, acquire by contractual arrangement with any governmental entity water, water rights, or interests in water in such amount as the CWCB determines is appropriate for stream flows to preserve and improve the natural environmental to a reasonable degree, and to take actions to ensure such stream flows remain in the river. The CWCB is also authorized by House Bill 20-1037 which added Section 37-92-102(4.5) C.R.S (2020) to obtain a decreed plan for augmentation using changed water rights.

D. There are six defined stream segments along the Poudre River that are intended to be benefited by the Poudre Flows Plan from the canyon mouth to its confluence with the South Platte River a distance of about 54.8 miles as shown on the map attached as Attachment 2. Specifically, the following reaches will be

¹ The Cache La Poudre Water Users Association, the City of Fort Collins, the City of Greeley, the City of Thornton, and the Northern Colorado Water Conservancy District are collectively referred to as "Water Users."

augmented to preserve or improve the natural environment to a reasonable degree up to the following ranges of flow rates in cfs as quantified by CPW in its July 2018 Report in the Winter (November 1 – March 31) and Summer (April 1 – October 31) as follows:

| Segment | Winter (Nov 1 – Mar 31) Preserve | Winter (Nov 1 – Mar 31) Improve | Summer (Apr 1 – Oct 31) Preserve | Summer (Apr 1 – Oct 31) Improve |
|----------------|---|--|---|--|
| A | Up to 80 | 80 -150 | Up to 114 | 114-260 |
| B | Up to 80 | 80 - 150 | Up to 114 | 114-260 |
| C | Up to 30 | 30 - 54 | Up to 40 | 40 – 54 |
| D | Up to 10 | 10 - 35 | Up to 10 | 10 - 40 |
| E | Up to 15 | 15 - 30 | Up to 15 | 15 - 30 |
| F | Up to 15 | 15 - 30 | Up to 15 | 15 - 30 |

E. Thornton is a home rule city in the northern Denver Metropolitan Area and owns and operates an integrated municipal water supply and sewer system. Thornton has water rights in the Poudre River Basin that were changed for multiple uses including augmentation use within the Poudre River Basin in accordance with and subject to the *Findings of Fact, Conclusion of Law, Judgment and Decree on Remand* in Consolidated Cases No. 86CW401, 86CW402, 86CW403, and 87CW332 (“TNP Decree”). Thornton desires to include specific water rights from the TNP Decree in the Poudre Flows Plan in accordance with the terms of this Agreement and the MOA. Thornton desires to participate in the Poudre Flows Plan because it is a voluntary, non-regulatory market-based program that will preserve and improve streams flows in the Poudre River while at the same time protecting its water rights and property interests.

F. Pursuant to Rule 6 of the Rules Concerning the Colorado Instream Flow and Natural Lake Level Program, 2 CCR 408-2, on January 14, 2021 the CWCB found that the deliveries of Thornton’s Water Rights in the amounts described in those decrees to the CWCB for use in the stream reaches described on Attachment 2, are appropriate for stream flows to preserve and improve the natural environment to a reasonable degree, to the extent such deliveries contribute water toward the flow rates and duration of flows identified in Recital D.

G. CWCB and Thornton desire to work cooperatively to implement such legal mechanisms and to obtain such court decrees and approvals as are necessary to ensure that the water provided by Thornton to the CWCB for the Poudre Flows Plan will be legally and physically available for the intended purpose of preserving and improving the natural environment in the Poudre River by protecting such water so that it reaches and flows through the identified stream reaches where the intended beneficial use will occur and is not diverted directly or by exchange by intervening structures along those stream reaches.

NOW THEREFORE, in consideration of the mutual promises contained herein, the Parties agree as follows:

1. Water Court Application. In accordance with the MOA and to implement this Agreement, the Parties agree to file, along with some of the other Water Users, and diligently pursue such legal mechanisms including an application in Water Division No. 1 to obtain a decreed plan for augmentation for the Poudre Flows Plan that includes Thornton's Water Rights described below.

2. Thornton's Water Rights. Pursuant to the terms of this Agreement and the MOA, Thornton agrees to make the following changed water rights available to the CWCB for use in the Poudre Flows Plan. These water rights are collectively referred to in this Agreement as "Water Rights".

a. *TNP Decree*. Thornton's interest in the Water Supply and Storage Company water rights comprised of 283.354 shares or 47.23% of native water rights in the Poudre River Basin and transmountain water rights described in Exhibit B to the TNP Decree and shown on Attachment 3 ("WSSC Water Rights"). The Jackson Ditch Company Water Rights, comprised of 1.25 shares owned outright and Thornton's interest in WSSC's 6.25 shares or 17.51% of the water rights described in Exhibit C to the TNP Decree and shown on Attachment 4 ("JDC Water Rights"). The TNP Decree changed the WSSC Water Rights and JDC Water Rights to alternate types and places of use including among other things, augmentation in the Poudre and South Platte basins pursuant to the terms of the TNP Decree in paragraphs 11.3.1 and 11.3.2.

3. Commencement of Deliveries. The deliveries of the Water Rights to the Poudre Flows Plan will commence when Thornton begins operating the Thornton Northern Project, although Thornton may commence delivery of Thornton's share of WSSC transmountain water under the Poudre Flows Plan on a temporary basis earlier pursuant to C.R.S. § 37-92-308.

4. Protection of Deliveries. It is a material provision of this Agreement that such judicial decree described in paragraph 1 confirm that the water delivered under this Agreement is protected and shepherded by the State and Division Engineers to and through the stream reaches where the intended beneficial uses will occur without diversion (including diversion by augmentation, substitution or exchange) by intervening water users in the stream reaches identified in Attachment 2.

5. Reuse and Successive Use. Thornton may bring about beneficial use of the historical consumptive use of its Water Rights, in or below the stream reaches described in Attachment 2.

6. No Payment. No payment is owed to Thornton for the CWCB's use of water attributable to the Water Rights pursuant to the terms and conditions of this Agreement. However, nothing in this Agreement shall preclude amendments to this Agreement or subsequent agreements concerning the use of the Water Rights in the Poudre Flows Plan that may involve payments to Thornton.

7. Contract Rights. Any rights created by this Agreement are contractual rights. This Agreement does not create and shall not be construed to create, convey, or encumber any property interest, including any covenant, easement or servitude in the real property or water rights of the Parties.

8. Water Available for Delivery. Before April 1 of each year, or as otherwise agreed to by the Parties, Thornton will notify the CWCB of the anticipated amount, timing and location of water from the Water Rights that are initially estimated to be delivered to the Poudre Flows Plan for the Summer season identified in Recital D. A similar notification will be provided by Thornton to the CWCB before November 1 of each year, or as otherwise agreed to by the Parties, for the Winter season identified in Recital D. Thornton shall have the sole discretion in determining the amount, timing and location of water it makes available to the Poudre Flows Plan each year ("Available Water").

9. Use by CWCB. Thornton will deliver or cause to be delivered the Available Water for use by the CWCB, at times, in amounts and at locations as determined by Thornton in consultation with the CWCB, state water officials and the Water Users. The CWCB shall use the Available Water to augment instream flow to preserve and improve the natural environment to a reasonable degree and in accordance with the Poudre Flows Plan from the Water Rights' headgate(s) to and through the various stream reaches for each source of the Available Water. If the Parties and the Water Users cannot reach consensus as described in the MOA on the amount, timing and location for the use of the Available Water, then Thornton shall manage and control how the Available Water is used.

10. Emergency Withdrawal. In the event that water has been made available for use in the Poudre Flows Plan for a particular year and there is a water supply emergency in which Thornton needs to use the water that is the subject of this Agreement to supply its own customers or other purposes as determined by Thornton, Thornton may withdraw the water available to the Poudre Flows Plan for that year upon written notice to CWCB. For the purposes of this provision, a water supply emergency means a drought condition or other emergency condition involving the loss of water to its raw or treated water system as a result of unforeseen events, including but not limited to the failure or unplanned maintenance of raw or treated water facilities or natural disasters.

11. Term/Assignment/Amendment/Termination. The term of this Agreement is perpetual unless terminated under the provisions of this paragraph. This Agreement shall not be assigned or amended without the written agreement of each

party. After consultation with the CWCB, Thornton may terminate this Agreement if it reasonably believes its Water Rights are at risk or if the Court does not enter a decree for the Poudre Flows Plan that is acceptable to Thornton. After consultation with Thornton, the CWCB may terminate this Agreement if the Poudre Flows Plan application is dismissed or withdrawn from Water Court. This Agreement may also be terminated or amended upon the mutual agreement of the Parties.

12. Return Flows and Transit Losses. Thornton shall be responsible for replacement of return flows as may be required by the decrees and approvals for use of the Water Rights. Thornton will bear any transit losses imposed by the Division of Water Resources or Water Court within the stream reaches described in Attachment 2.

13. Administration/Measurement/ Operations. The Parties will cooperate in the administration and monitoring of water delivered under the Agreement and its intended beneficial uses in a manner consistent with this Agreement and the Decree. The Parties will coordinate on the installation of any measuring devices deemed necessary by the Division Engineer to administer this Agreement. The operations under this Agreement may, at times, require daily communication and monitoring by the Parties with the Water Commissioner or Division Engineer and the other Water Users. Each party will immediately report to the other party any controversy or problem with the delivery or administration of water as contemplated by the Agreement.

14. Accounting/Reporting. The Parties agree to coordinate on accounting and reporting each year. Thornton is responsible for accounting required pursuant to its Water Rights.

15. Share Assessments and Voting. Thornton will continue to pay assessment on all ditch company shares associated with the Water Rights and shall be entitled to vote all such shares at any ditch company meeting.

16. No Operating Obligation. Nothing in this Agreement shall be deemed or construed as creating any obligation other than obligations listed herein on any of the Parties to operate their water rights, interests in water, or their raw or treated waterworks systems in any particular manner. Each party retains sole and exclusive discretion concerning the operation of their water rights and waterworks systems.

17. Notice. Any notice required or permitted to be given under this Agreement will be in writing and considered effective when delivered by email, hand delivery, Express Mail, Federal Express or similar service addressed as follows:

To Thornton:

Thornton Water Resources Division
Attn: Deputy Infrastructure Director
9500 Civic Center Drive

Thornton, Colorado 80229
emily.hunt@ThorntonCO.gov

With copy to:

Thornton City Attorney's Office
Attn: City Attorney
9500 Civic Center Drive
Thornton, Colorado 80229
Joanne.Herlihy@ThorntonCO.gov

To: CWCB

Chief, Stream and Lake Protection Section
1313 Sherman St., Rm. 718
Denver, Colorado 80203
DNR_CWCBISF@state.co.us

With copy to:

Office of the Attorney General
Attn: Water Conservation Unit, Natural
Resources Section
1300 Broadway, 7th Floor
Denver, Colorado 80203
jen.mele@coag.gov

The Parties may update the above contact information and addresses by providing notice of the new contact information and addresses pursuant to this paragraph.

18. Good Faith Efforts to Resolve Disputes. Pursuant to C.R.S. § 37-92-102(3), the terms of this Agreement shall be enforceable as a water matter in the District Court for Water Division 1; provided, however, that before commencing any action or enforcement of this Agreement, the party alleging violation shall notify the other party in writing of the alleged violation and the Parties shall make a good faith effort to resolve their differences through informal consultation. All rights of enforcement shall be strictly reserved to the Parties, and no third party shall have any right to enforce this Agreement. This Agreement shall be interpreted broadly to implement its purposes. Should any conflict appear to exist between this Agreement and the MOA, this Agreement should be construed to control on use of Thornton's Water Rights.

19. Attorney's Fees. If a suit, action, or alternative dispute resolution is instituted in connection with any controversy arising out of this Agreement or to enforce any rights hereunder, the Parties shall bear their own costs and fees associated with such proceeding.

20. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Colorado.

21. No Waiver of CGIA. No term or condition of this Agreement shall be construed or interpreted as a waiver, express or implied, of any of the immunities,

rights, benefits, protections, or other provisions, of the Colorado Governmental Immunity Act, C.R.S. §24-10-101 et seq., as applicable now or hereafter amended.

22. No Third Party Beneficiaries. This Agreement does not and is not intended to confer any rights or remedies upon any person or entity other than the Parties.

23. No Waiver. Any failure or delay by a party in exercising any of its rights, powers and remedies hereunder or in accordance with law shall not lead to a waiver of such right and the waiver of any single or partial exercise of a party's rights shall not preclude such party from exercising such rights in any other way and exercising the remaining part of the party's rights.

24. Fiscal Contingency. Notwithstanding any other provisions of this Agreement to the contrary, the obligations of the Parties in fiscal years after the fiscal year of this Agreement shall be subject to appropriation of funds sufficient and intended therefor, with the Party having the sole discretion to determine whether the subject funds are sufficient and intended for use under this Agreement, and the failure of the Party to appropriate such funds shall be grounds for the Party to terminate this Agreement with written notice pursuant to Paragraph 17.

25. Complete Agreement. This Agreement and the exhibits incorporated herein contain the entire agreement and understanding of the Parties.

26. Severability. If any term or provision of this Agreement is found to be invalid, illegal or unenforceable, such invalidity, illegality or unenforceability does not affect any other term or provision of this Agreement or invalidate or render unenforceable the remaining provision.

27. Effective Date. This Agreement shall be effective on the last date shown on the signature page of this Agreement which may be executed in counterparts.

**CITY OF THORNTON, COLORADO, a
Colorado home rule municipality**

By: _____
Kevin S. Woods, City Manager

ATTEST:

Kristen N. Rosenbaum, City Clerk

APPROVED AS TO FORM:

Luis A. Corchado, City Attorney

**COLORADO WATER CONSERVATION
BOARD, an agency of the STATE OF
COLORADO**

By: _____

ATTEST:

By: _____

MEMORANDUM

TO: Dave Taussig, Alan Curtis, Cari Bischoff
FROM: Mike Ballantine, P.E.
DATE: October 29, 2020
RE: City of Thornton Water to be Included in Poudre ISF Augmentation Plan

Legislation enacted in 2020 confirmed and clarified the use of changed water rights in a plan for augmentation for instream flows. The instream flow rules require the Colorado Water Conservation Board (CWCB) to consider certain information in determining whether to acquire any offered water to the CWCB for instream flow use. This memorandum addresses the specific information requests from the CWCB regarding the changed water rights the City of Thornton is offering for use to the CWCB in the Poudre River In-Stream Flow (ISF) Augmentation Plan. The changed water rights Thornton is proposing to offer to the CWCB meet the requirements of the new statute in 37-92-102(4.5) C.R.S. (2020).

GENERAL DESCRIPTION OF WATER RIGHTS

The water rights being offered by Thornton to the CWCB for use in the Poudre River ISF Augmentation Plan are 283.354 Water Supply and Storage Company (WSSC) shares and 1.25 Jackson Ditch Company (JDC) shares that the City changed in Case No. 87CW332. The water rights owned by WSSC consist of:

- Transmountain water rights
- Poudre River direct flow rights
- Poudre River storage rights
- Seepage rights
- Poudre River exchange rights

A detailed summary of the original decrees for WSSC water rights can be found in Exhibit B to the decree for Consolidated Case Nos. 87CW332, 86CW401, 86CW402, and 86CW403 (see attached decree and exhibits). Exhibit B of the decree provides an information summary for each water right owned by WSSC including: the name of the water right, the amount of water decreed to the water right (in acre-feet for storage rights and in cubic feet per second (cfs) for all other rights), the water source for the water right, the location of diversion or storage location, the appropriation date and adjudication date for the original water right, and the original decree proceeding for the water right. All of the WSSC water rights were originally decreed for irrigation use.

Exhibit T4 (updated)
Agenda Item 23c
Nov 18-19, 2020

The water rights owned by JDC consist of:

- Poudre River direct flow rights
- Seepage rights

A detailed summary of the original decrees for JDC water rights can be found in Exhibit C to the decree for Consolidated Cases Nos. 87CW332, 86CW401, 86CW402, and 86CW403 (see attached decree and exhibits). Exhibit C to the decree provides an information summary for each JDC water right similar to the WSSC water right information summary found in Exhibit B to the decree. The original JDC water rights were also decreed for irrigation uses.

CHANGE OF USE OF OFFERED WATER RIGHTS

Thornton changed the use of the 283.354 WSSC shares (47.43 percent of the total 600 WSSC outstanding shares) and 1.25 JDC shares (5.1 percent of the total 24.5 JDC outstanding shares) in Case No. 87CW332 from agricultural use to municipal uses, including but not limited to: irrigation; domestic; mechanical; industrial; manufacturing; generation of electrical energy; power generally; fire protection; sewage treatment; street sprinkling; watering of parks, lawns, and grounds; recreation; storage; fish culture; maintenance and preservation of wildlife; exchange; augmentation; replacement; adjustment; and regulation of the Thornton municipal water system. Thornton was also decreed the right to totally consume, reuse, make a succession of uses, and dispose of the reusable water by trade, exchange, augmentation, replacement, adjustment, and regulation within and without its system as it now exists; and may hereafter exist from time-to-time (see paragraph 11.3.1 of the decree for Case No. 87CW332).

The alternate place of use of the changed water rights include within Thornton's service area as it now exists or from time-to-time is expanded, and at such places within the Poudre and South Platte basins as necessary to fulfill obligations under the decree issued in Case No. 87CW332 (see paragraph 11.3.2 of the decree for Case No. 87CW332).

CURRENT USE OF OFFERED WATER RIGHTS

Since the final decree in Consolidated Case Nos. 87CW332, 86CW401, 86CW402, and 86CW403 was entered on March 9, 1998, the City of Thornton has leased its 283.354 WSSC shares and 1.25 JDC shares to farmers under the WSSC system for continued irrigation use. To the extent Thornton has begun drying up and revegetating some of its farms with dryland vegetation, Thornton has been providing a portion of its WSSC shares to the Ditch Company to replace system losses.

WATER RIGHT AMOUNTS AVAILABLE FOR POUDBRE RIVER ISF AUGMENTATION PLAN

Thornton proposes to make its WSSC and JDC water available to the Poudre River ISF Augmentation Plan by providing changed share water decreed in Case No. 87W332 to the upstream reaches of the Poudre River to meet downstream return flow obligations and decreed

stipulations. Thornton's decree in Case No. 87CW332 identified numerous return flow obligations owed by the City, including the following:

- Water Supply and Storage Company
- Larimer and Weld Canal
- Tributaries of the Poudre River, including Box Elder Creek and the Slough
- Greeley No. 2 Canal
- The Upper Poudre River above Fossil Creek Reservoir Inlet Canal
- The Middle Poudre River below Fossil Creek Reservoir Inlet Canal and above the Boyd and Freeman Canal
- Groundwater recharge to WSSC farms located generally east of Weld County Road 29
- The South Platte River at the confluence with the Poudre River
- Tributaries of the South Platte River downstream of the confluence with the Poudre River, including Owl Creek and Lone Tree Creek

In addition, under certain Poudre River flow conditions, stipulations with the City of Greeley and Western Sugar require Thornton to deliver water to the Poudre River above the Greeley Water Purification Facility/Leprino Foods (previously Western Sugar) wastewater plant. Under certain Poudre River flow conditions Thornton's stipulation with the Ogilvy Irrigating Land Company requires delivery of water to the Ogilvy Ditch Poudre River headgate.

The Colorado Division of Parks and Wildlife (CPW) has identified flow rates for six segments (A through F) of the Poudre River from the mouth of the Poudre Canyon to the confluence with the South Platte River, that if obtained, will improve the natural environment of the river. These segments of the Poudre River will benefit from flow delivery by Thornton of its changed WSSC and JDC water from upstream locations of the Poudre River to meet its downstream return flow obligations and stipulation requirements, in lieu of replacing its obligations off-river or just upstream of the obligation locations. For example, Thornton's return flow owed to the Larimer and Weld Irrigation Company, Larimer and Weld Reservoir Company, and Windsor Reservoir and Land Company (collectively referred to herein as Larimer and Weld) can be delivered directly to the Larimer and Weld Canal from the outlet of Long Pond, or to any point directly into the Larimer and Weld Canal west of Long Pond, including the headgate on the Poudre River. By delivering its return flow obligation water via the Poudre River near the Larimer County Canal (LCC) headgate to the Larimer and Weld Canal river headgate instead of delivering its return flow obligations directly from Long Pond to the Larimer and Weld Canal, Thornton will be augmenting the flow in a 6.1-mile reach of the Poudre River between the two Ditch Company river headgates.

Per paragraph 57.3.5 of the decree in Consolidated Case Nos. 87CW332, 86CW401, 86CW402, and 86CW403, Thornton will meet its replacement obligations from various means including making releases from storage facilities. Locations where Thornton proposes to make releases of its WSSC and JDC shares for credit, provided it has the right to use these structures, in the Poudre River ISF Augmentation Plan include:

- Chambers Lake and Long Draw Reservoir
- An augmentation station located near the LCC Poudre River headgate

- Dry Creek confluence with the Poudre River (via releases from Lindenmeier Lake to Dry Creek)
- Reservoir(s) located within the six segments of the Poudre River as identified by CPW

Return flow locations and stipulation obligation locations where releases of Thornton’s WSSC and JDC shares will be delivered include:

- Larimer and Weld Canal-Poudre River headgate
- Fossil Creek Reservoir Inlet Canal-Poudre River headgate (Upper Poudre River return flow obligation)
- Greeley No. 2 Canal-Poudre River headgate
- Boyd and Freeman Canal-Poudre River headgate (Middle Poudre River return flow obligation)
- Just upstream of the Greeley Water Purification Facility (Greeley and Western Sugar Stipulations)
- Ogilvy Ditch-Poudre River headgate
- South Platte River and Poudre River confluence

Table 1 (attached) summarizes the average monthly and maximum daily return flow obligations and stipulation obligations from Case No. 87CW332, in which Thornton proposes to make deliveries with its changed WSSC and JDC shares for use by the CWCB in the Poudre River ISF Augmentation Plan. The total maximum daily releases to meet downstream obligations ranges from 3.14 cfs¹ in February to 9.52 cfs² in September. Not included in the Table 1 summary are the additional releases required for river transit losses that Thornton will be required to make to deliver the full replacement amount at the obligation location. Average annual Thornton deliveries to various locations of the Poudre River available for the Poudre River ISF Augmentation Plan total 2,268 acre-feet³ when all of Thornton’s shares have been changed to municipal use. The average annual volume of 2,268 acre-feet does not include all the flow releases Thornton will make to satisfy the Greeley/Western Sugar stipulation.

It should be noted that if no calls are placed by water rights on Boxelder Creek and the Slough below the LCC, then return flows owed to Box Elder Creek and the Slough can be replaced to

¹ Thornton can use its Greeley stipulation flow release requirement for other uses downstream of the Greeley Water Purification Facility, including use to replace the South Platte River return flow obligation. Thus, the maximum daily release to meet downstream obligations in February is the sum of the Upper Poudre River return flow obligation (0.34 cfs) and the Greeley Western Sugar stipulation flow rate (2.8 cfs), or 3.14 cfs.

² Thornton can use its Ogilvy Ditch stipulation water to offset its return flow obligations owed to the Poudre River and South Platte River (see paragraph 55.2 of the 87CW332 decree). Thus, the maximum daily release flow rate in September is the sum of the Larimer and Weld Canal return flow obligation (6.03 cfs), the Greeley No. 2 Canal return flow obligation (0.27 cfs), the Greeley/Western Sugar stipulation obligation (2.8 cfs), and the Ogilvy Ditch stipulation obligation (0.42 cfs), or 9.52 cfs.

³ The average annual Thornton deliveries of 2,268 acre-feet include: 1,317 acre-feet to the Larimer and Weld Canal, 172 acre-feet to the Upper Poudre River (88 acre-feet of the 260 acre-feet annual obligation is met by deliveries to the Ogilvy Ditch), 100 acre-feet to the Greeley No. 2 Canal, 4 acre-feet to the Middle Poudre River (21 acre-feet of the 25 acre-feet annual average obligation is met by deliveries to the Ogilvy Ditch), 300 acre-feet to the Ogilvy Ditch, and 375 acre-feet to the South Platte River (58 acre-feet of the 433 acre-feet annual obligation is met by deliveries to the Ogilvy Ditch).

the Poudre River or South Platte River, if the water right calling for water is senior to December 31, 1987. Further, if there are no calls on Owl Creek and Lone Tree Creek below the LCC, then return flows owed to Owl Creek and Lone Tree Creek can be replaced to the South Platte River below the Poudre River confluence if the river call is senior to December 31, 1987. Thus, at times additional water may be available for augmenting flow in the Poudre River that has not been quantified herein.

Figures 1 through 3 (attached) show the Poudre River reaches between Thornton release locations and Thornton obligation locations where releases are made from Chambers Lake/Long Draw Reservoir, LCC Augmentation Station, and Lindenmeier Lake, respectively. Also shown on Figures 1 through 3 are the six Segments A through F of the Poudre River that were identified by the CPW for flow preservation and flow improvement.

Tables 2 through 4 (attached), show the maximum daily flow rate releases for each month at the beginning of each CPW flow segment when Thornton makes release from Chambers Lake/Long Draw Reservoir, LCC Augmentation Station, and Lindenmeier Lake, respectively. The maximum daily flow rates shown in Tables 2 through 4 reflect the additional flow rate release Thornton will be required to make to account for historical transit losses that have been assessed by the Division Engineer on the Poudre River (.25 percent per mile loss upstream of the I-25 Poudre River crossing and .5 percent per mile loss downstream of the I-25 Poudre River crossing).

It is our understanding that the CPW has preliminarily identified the following flow rates to preserve and improve the Poudre River for adoption in the Poudre River ISF Augmentation Plan:

| Poudre River Segment | Winter (November 1 - March 31) Preservation Flow Rate (cfs) | Summer (April 1 - October 31) Preservation Flow Rate (cfs) | Winter (November 1 - March 31) Improvement Flow Rate (cfs) | Summer (April 1 - October 31) Improvement Flow Rate (cfs) |
|----------------------|---|--|--|---|
| A | Up to 80 | Up to 114 | 80 - 150 | 114 - 260 |
| B | Up to 80 | Up to 114 | 80 - 150 | 114 - 260 |
| C | Up to 30 | Up to 40 | 30 - 54 | 40 - 54 |
| D | Up to 10 | Up to 10 | 10 - 40 | 10 - 40 |
| E | Up to 15 | Up to 15 | 15 - 30 | 15 - 30 |
| F | Up to 15 | Up to 15 | 15 - 30 | 15 - 30 |

The proposed water deliveries of Thornton’s WSSC shares and JDC shares for use by the CWCB in the Poudre River ISF Augmentation Plan promotes the maximum utilization of waters of the state by delivering the water to meet return flow obligations and stipulation obligations, while at the same time supporting the natural environment along the delivery path of the Poudre River.

CHANGE OF USE TERMS AND CONDITIONS CASE NO. 87CW332

Terms and conditions relating to the change of Thornton’s water rights in Case No. 87CW332 are detailed in paragraph 57 of the decree. Thornton will begin replacement to the Larimer and Weld Canal, Greeley No. 2 Canal, to the Poudre River, to the South Platte River, to the tributaries of the Poudre River and South Platte River, and to the groundwater aquifer when

Thornton converts the native portion of its WSSC shares to municipal use. Thus, Thornton's change of use water offered to the CWCB for use in the Poudre River ISF Augmentation Plan will become available via replacement of return flow obligations and stipulation obligations when the native portion of Thornton's WSSC shares have been converted to municipal use.

All terms and conditions from the change of use decree apply and it is our opinion that the terms and conditions of the decree should not impact the amount of Thornton water identified herein as being available to the Poudre River ISF Augmentation Plan.

THORNTON WATER RIGHTS OPERATIONS

Before April 1 (Summer Season) and November 1 (Winter Season) of each year, or as otherwise agreed to, Thornton will notify the CWCB of the anticipated amount, timing and location of water from the Water Rights that are initially estimated to be delivered to the Poudre Flows Plan for that season ("Available Water"). Thornton shall have the sole discretion in determining the amount, timing and location of water it makes available to the Poudre Flows Plan each year. Thornton will deliver or cause to be delivered the Available Water for use by the CWCB, at times, in amounts and at locations as determined by Thornton in consultation with the CWCB, state water officials and the Water Users. The CWCB shall use the Available Water to augment instream flow to preserve and improve the natural environment to a reasonable degree and in accordance with the Poudre Flows Plan from the Water Rights' headgate(s) to and through the various stream reaches for each source of the Available Water. The Division Engineer's Office may through administration measures protect the Thornton releases through the qualifying stream reach from diversion or exchange by other water users.

**TABLE 1
THORNTON OBLIGATION DELIVERIES FOR CASE NO. 87CW332 FOR USE BY THE CWCB IN THE Poudre RIVER ISF AUGMENTATION PLAN**

| Month | Larimer and Weld Canal | | Upper Poudre River Upstream of Fossil Creek Reservoir Inlet Ditch | | Greeley No. 2 Canal | | Middle Poudre River Above Boyd and Freeman Canal | | Greeley/Western Sugar Stipulation Water Releases Directly Above the Greeley Purification Facility ⁴ | | Ogilvy Ditch Stipulation Ogilvy Ditch ⁵ | | South Platte River at Poudre River Confluence | |
|--------------|--------------------------------------|-------------------------------|---|-------------------------------|--------------------------------------|-------------------------------|--|-------------------------------|--|-------------------------------|--|-------------------------------|---|-------------------------------|
| | Average Monthly Delivery (acre-feet) | Maximum Daily Flow Rate (cfs) | Average Monthly Delivery (acre-feet) | Maximum Daily Flow Rate (cfs) | Average Monthly Delivery (acre-feet) | Maximum Daily Flow Rate (cfs) | Average Monthly Delivery (acre-feet) | Maximum Daily Flow Rate (cfs) | Average Monthly Delivery (acre-feet) | Maximum Daily Flow Rate (cfs) | Average Monthly Delivery (acre-feet) | Maximum Daily Flow Rate (cfs) | Average Monthly Delivery (acre-feet) | Maximum Daily Flow Rate (cfs) |
| January | ***1 | ***3 | 22 | 0.36 | 0 | 0 | 0 | 0 | *** | 2.8 | *** | *** | 61 | 0.99 |
| February | ***1 | ***3 | 19 | 0.34 | 0 | 0 | 0 | 0 | *** | 2.8 | *** | *** | 54 | 0.97 |
| March | ***1 | ***3 | 22 | 0.36 | 0 | 0 | 0 | 0 | *** | 2.8 | *** | *** | 58 | 0.94 |
| April | ***1 | ***3 | 20 | 0.34 | 0 | 0 | 4 | 0.06 | *** | 2.8 | *** | *** | 2 | 0.03 |
| May | 135 | 5.61 | 22 | 0.36 | 14 | 0.23 | 4 | 0.06 | *** | *** | 20 | 0.33 | 7 | 0.35 |
| June | 225 | 5.66 | 21 | 0.35 | 21 | 0.35 | 4 | 0.06 | *** | *** | 69 | 1.16 | 13 | 0.35 |
| July | 281 | 5.82 | 22 | 0.36 | 25 | 0.41 | 4 | 0.05 | *** | *** | 97 | 1.58 | 16 | 0.35 |
| August | 271 | 5.97 | 23 | 0.37 | 24 | 0.39 | 4 | 0.05 | *** | 2.8 | 89 | 1.45 | 15 | 0.35 |
| September | 161 | 6.03 | 22 | 0.37 | 16 | 0.27 | 5 | 0.06 | *** | 2.8 | 25 | 0.42 | 7 | 0.35 |
| October | ***1 | ***3 | 22 | 0.36 | 0 | 0 | 0 | 0 | *** | 2.8 | *** | *** | 71 | 1.15 |
| November | ***1 | ***3 | 22 | 0.37 | 0 | 0 | 0 | 0 | *** | 2.8 | *** | *** | 65 | 1.09 |
| December | ***1 | ***3 | 23 | 0.37 | 0 | 0 | 0 | 0 | *** | 2.8 | *** | *** | 64 | 1.04 |
| Total | 1,317² | | 260 | | 100 | | 25 | | 300 | | 433 | | | |

1. October through April average return flow obligation is 244 acre-feet and can be paid back only when Larimer and Weld Canal is diverting water to storage between the months of October through April.
2. The 1,317 total annual obligation includes 244 acre-feet of obligations between October and April.
3. Variable flow rate depending on days when the Larimer and Weld Canal is diverting water to storage.
4. Monthly obligations dependent on Poudre River flows above the Greeley Water Purification Facility. See Exhibit V of the decree in Case No. 87CW332.
5. Return flow replacements to the Ogilvy Ditch reduce return flow amounts owed to the Middle Poudre and South Platte River.

TABLE 2
Thornton Maximum Daily Obligations Case No. 87CW332
Chambers Lake or Long Draw Reservoir Releases¹ to Each CPW Flow Segment
(considering Poudre River Transit Losses²)
All Values in CFS

| Month | Total Release From Chambers/Long Draw to Flow Segment A (max daily) | Beginning of Flow Segment B ³ (max. daily) | Beginning of Flow Segment C ⁴ (max. daily) | Beginning of Flow Segment D ^{5,6} (max. daily) | Beginning of Flow Segment E ⁷ (max. daily) | Beginning of Flow Segment F ⁸ (max. daily) |
|-----------|---|---|---|---|---|---|
| January | 3.7 | 3.7 | 3.6 | 3.1 | 3.0 | 2.8 |
| February | 3.7 | 3.6 | 3.6 | 3.1 | 3.0 | 2.8 |
| March | 3.7 | 3.7 | 3.6 | 3.1 | 3.0 | 2.8 |
| April | 3.8 | 3.7 | 3.6 | 3.2 | 3.1 | 2.9 |
| May | 6.6 | 0.9 | 0.8 | 0.5 | 0.4 | 0.4 |
| June | 7.6 | 1.7 | 1.7 | 1.3 | 1.3 | 1.2 |
| July | 8.3 | 2.3 | 2.3 | 1.8 | 1.7 | 1.6 |
| August | 8.3 | 2.1 | 2.1 | 1.6 | 1.6 | 1.5 |
| September | 10.3 | 4.1 | 4.0 | 3.5 | 3.4 | 3.2 |
| October | 3.7 | 3.7 | 3.6 | 3.1 | 3.0 | 2.8 |
| November | 3.7 | 3.7 | 3.6 | 3.1 | 3.0 | 2.8 |
| December | 3.7 | 3.7 | 3.6 | 3.1 | 3.0 | 2.8 |
| Maximum | 10.3 | 4.1 | 4.0 | 3.5 | 3.4 | 3.2 |

1. Thornton releases from Chambers Lake or Long Draw Reservoir to the Poudre River at Canyon Gage (beginning of Flow Segment A) to replace 87CW332 return flow obligations including Poudre River transit losses.
2. Historical Poudre River transit losses assessed include .25% per mile loss from the Poudre River at Canyon Gage to where the Poudre River crosses I-25 and .50% per mile loss from where the Poudre River crosses I-25 to the Poudre River-South Platte River confluence.
3. 2.1% transit loss through Flow Segment A (8.5 miles) with deliveries to the Larimer and Weld Canal.
4. 1.6% transit loss through Flow Segment B (6.3 miles).
5. .3% transit loss through Flow Segment C above Fossil Creek Ditch Inlet (1 mile).
6. 2.7 % transit loss through Flow Segment C below Fossil Creek Ditch Inlet (7 miles, 3.1 miles upstream of I-25 and 3.9 miles downstream of I-25) with deliveries to the Greeley No. 2 Canal.
7. 3.4% transit loss through Flow Segment D (6.8 miles).
8. 6.2% transit loss through Flow Segment E (12.4 miles).

TABLE 3
Thornton Maximum Daily Obligations Case No. 87CW332
Larimer County Canal Augmentation Station¹ Releases to Each CPW Flow Segment
(considering Poudre River Transit Losses²)
All Values in CFS

| Month | Total Release From LCC Augmentation Station (max daily) | Beginning of Flow Segment B ³ (max. daily) | Beginning of Flow Segment C ⁴ (max. daily) | Beginning of Flow Segment D ^{5,6} (max. daily) | Beginning of Flow Segment E ⁷ (max. daily) | Beginning of Flow Segment F ⁸ (max. daily) |
|-----------|---|---|---|---|---|---|
| January | 3.7 | 3.7 | 3.6 | 3.1 | 3.0 | 2.9 |
| February | 3.7 | 3.6 | 3.6 | 3.1 | 3.0 | 2.9 |
| March | 3.7 | 3.7 | 3.6 | 3.1 | 3.0 | 2.9 |
| April | 3.8 | 3.7 | 3.7 | 3.2 | 3.1 | 2.9 |
| May | 6.6 | 0.9 | 0.8 | 0.5 | 0.5 | 0.4 |
| June | 7.5 | 1.7 | 1.7 | 1.3 | 1.3 | 1.2 |
| July | 8.2 | 2.3 | 2.3 | 1.8 | 1.7 | 1.6 |
| August | 8.2 | 2.1 | 2.1 | 1.6 | 1.6 | 1.5 |
| September | 10.3 | 4.1 | 4.0 | 3.5 | 3.4 | 3.2 |
| October | 3.7 | 3.7 | 3.6 | 3.1 | 3.0 | 2.9 |
| November | 3.7 | 3.7 | 3.6 | 3.1 | 3.0 | 2.9 |
| December | 3.7 | 3.7 | 3.6 | 3.1 | 3.0 | 2.9 |
| Maximum | 10.3 | 4.1 | 4.0 | 3.5 | 3.4 | 3.2 |

1. Thornton releases from Larimer County Canal Augmentation station located 2.4 miles downstream of the beginning of Flow Segment A.
2. Historical Poudre River transit losses assessed include 0.25% per mile loss from the LCC Poudre River Augmentation Station to where the Poudre River crosses I-25 and .50% per mile loss from where the Poudre River crosses I-25 to the Poudre River-South Platte River confluence.
3. 1.5% transit loss through Flow Segment A downstream of the LCC (6.1 miles) with deliveries to the Larimer and Weld Canal.
4. 1.6% transit loss through Flow Segment B (6.3 miles).
5. .3% transit loss through Flow Segment C above Fossil Creek Ditch Inlet (1 mile).
6. 2.7 % transit loss through Flow Segment C below Fossil Creek Ditch Inlet (7 miles, 3.1 miles upstream of I-25 and 3.9 miles downstream of I-25) with deliveries to the Greeley No. 2 Canal.
7. 3.4% transit loss through Flow Segment D (6.8 miles).
8. 6.2% transit loss through Flow Segment E (12.4 miles).

TABLE 4
Thornton Maximum Daily Obligations Case No. 87CW332
Lindenmeier Lake Releases to Poudre River via Dry Creek¹
(considering Poudre River Transit Losses²)
All Values in CFS

| Month | Total Release From Lindenmeier Lake to Flow Segment B (max daily) | Beginning of Flow Segment C ³ (max. daily) | Beginning of Flow Segment D ^{4,5} (max. daily) | Beginning of Flow Segment E ⁶ (max. daily) | Beginning of Flow Segment F ⁷ (max. daily) |
|-----------|---|---|---|---|---|
| January | 3.6 | 3.6 | 3.2 | 3.1 | 2.9 |
| February | 3.6 | 3.6 | 3.2 | 3.1 | 2.9 |
| March | 3.6 | 3.6 | 3.2 | 3.1 | 2.9 |
| April | 3.7 | 3.7 | 3.2 | 3.1 | 2.9 |
| May | 0.8 | 0.8 | 0.5 | 0.4 | 0.4 |
| June | 1.7 | 1.7 | 1.3 | 1.3 | 1.2 |
| July | 2.3 | 2.3 | 1.8 | 1.7 | 1.6 |
| August | 2.1 | 2.1 | 1.6 | 1.6 | 1.5 |
| September | 4.0 | 4.0 | 3.6 | 3.4 | 3.2 |
| October | 3.6 | 3.6 | 3.2 | 3.1 | 2.9 |
| November | 3.6 | 3.6 | 3.2 | 3.1 | 2.9 |
| December | 3.6 | 3.6 | 3.2 | 3.1 | 2.9 |
| Maximum | 4.0 | 4.0 | 3.6 | 3.4 | 3.2 |

1. Thornton releases to Poudre River from Lindenmeier Lake via Dry Creek to Flow Segment B approximately .9 miles upstream of the beginning of Flow Segment C.
2. Historical Poudre River transit losses assessed include .25% per mile loss from the Dry Creek-Poudre River Confluence to where the Poudre River crosses I-25 and .50% per mile loss from where the Poudre River crosses I-25 to the Poudre River-South Platte River confluence.
3. .2% transit loss through Flow Segment B (.9 miles).
4. .3% transit loss through Flow Segment C above Fossil Creek Ditch inlet (1.0 mile).
5. 2.7% transit loss through Flow Segment C below Fossil Creek Ditch Inlet (7 miles, 3.1 miles upstream of I-25 and 3.9 miles downstream of I-25) with deliveries to Greeley No. 2 Canal.
6. 3.4% transit loss through Flow Segment D (6.8 miles).
7. 6.2% transit loss through Flow Segment E (12.4 miles).

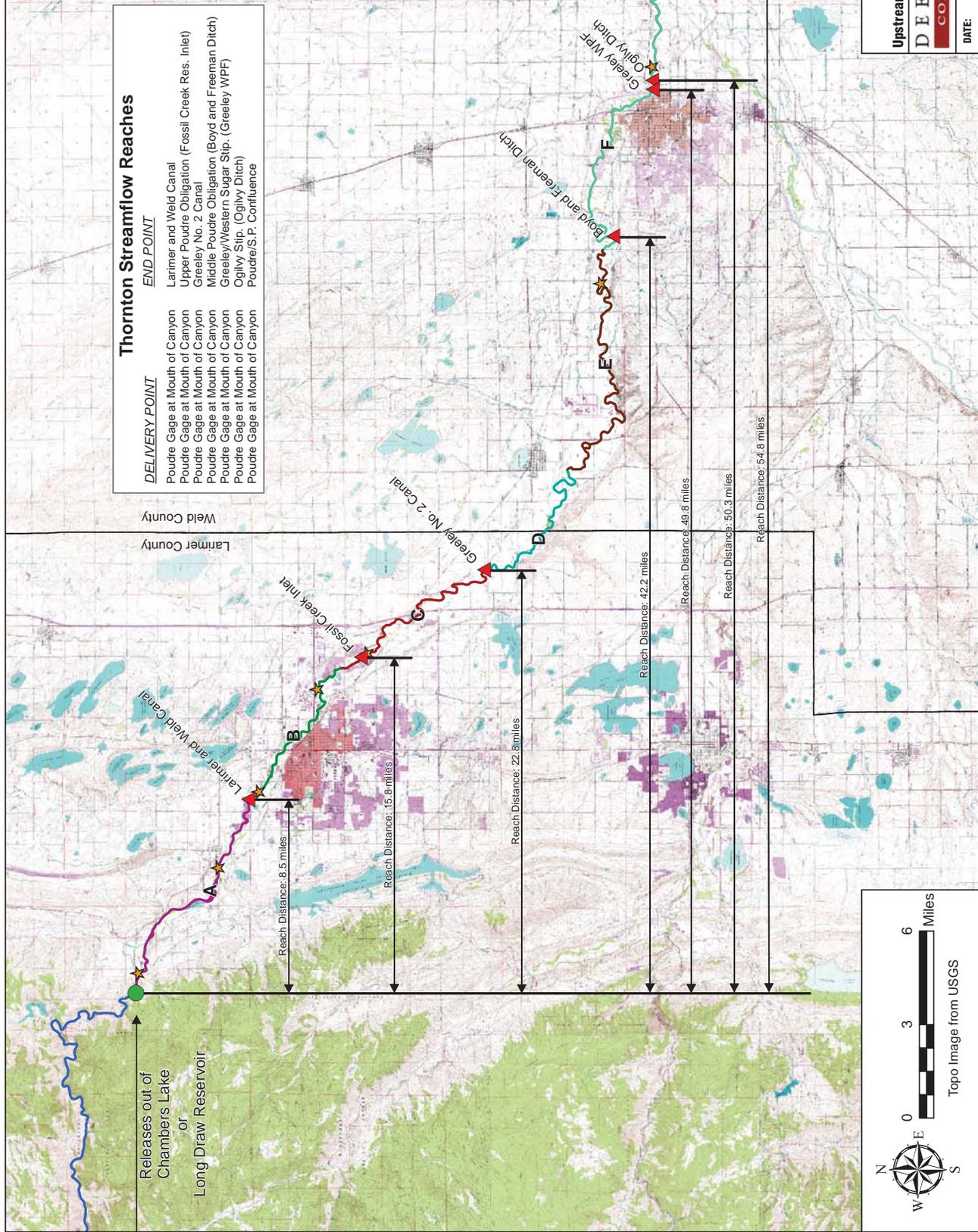
Legend

- ▲ Thornton Return Obligations
- Thornton Delivery Point
- ★ Poudre Dry-up Points

**Colorado Parks and Wildlife
Poudre River Segment**

- Segment A
- Segment B
- Segment C
- Segment D
- Segment E
- Segment F

| DELIVERY POINT | END POINT |
|--------------------------------|---|
| Poudre Gage at Mouth of Canyon | Larimer and Weld Canal |
| Poudre Gage at Mouth of Canyon | Upper Poudre Obligation (Fossil Creek Res. Inlet) |
| Poudre Gage at Mouth of Canyon | Greeley No. 2 Canal |
| Poudre Gage at Mouth of Canyon | Middle Poudre Obligation (Boyd and Freeman Ditch) |
| Poudre Gage at Mouth of Canyon | Greeley/Western Sugar Slip. (Greeley WPF) |
| Poudre Gage at Mouth of Canyon | Ogilvy Slip. (Ogilvy Ditch) |
| Poudre Gage at Mouth of Canyon | Poudre/S.P. Confluence |



0 3 6 Miles

Topo Image from USGS

CITY OF THORNTON

Upstream Res. Release - Poudre Streamflow Reaches

DEERE & AULT CONSULTANTS, INC.

FIGURE NO. 1

DATE: 10/15/2018 SCALE: 1 inch = 3 miles

G:\0158 Thornton\0158.037.017\GIS\Upstream Res Figure.mxd Monday, October 15, 2018 01:37 PM

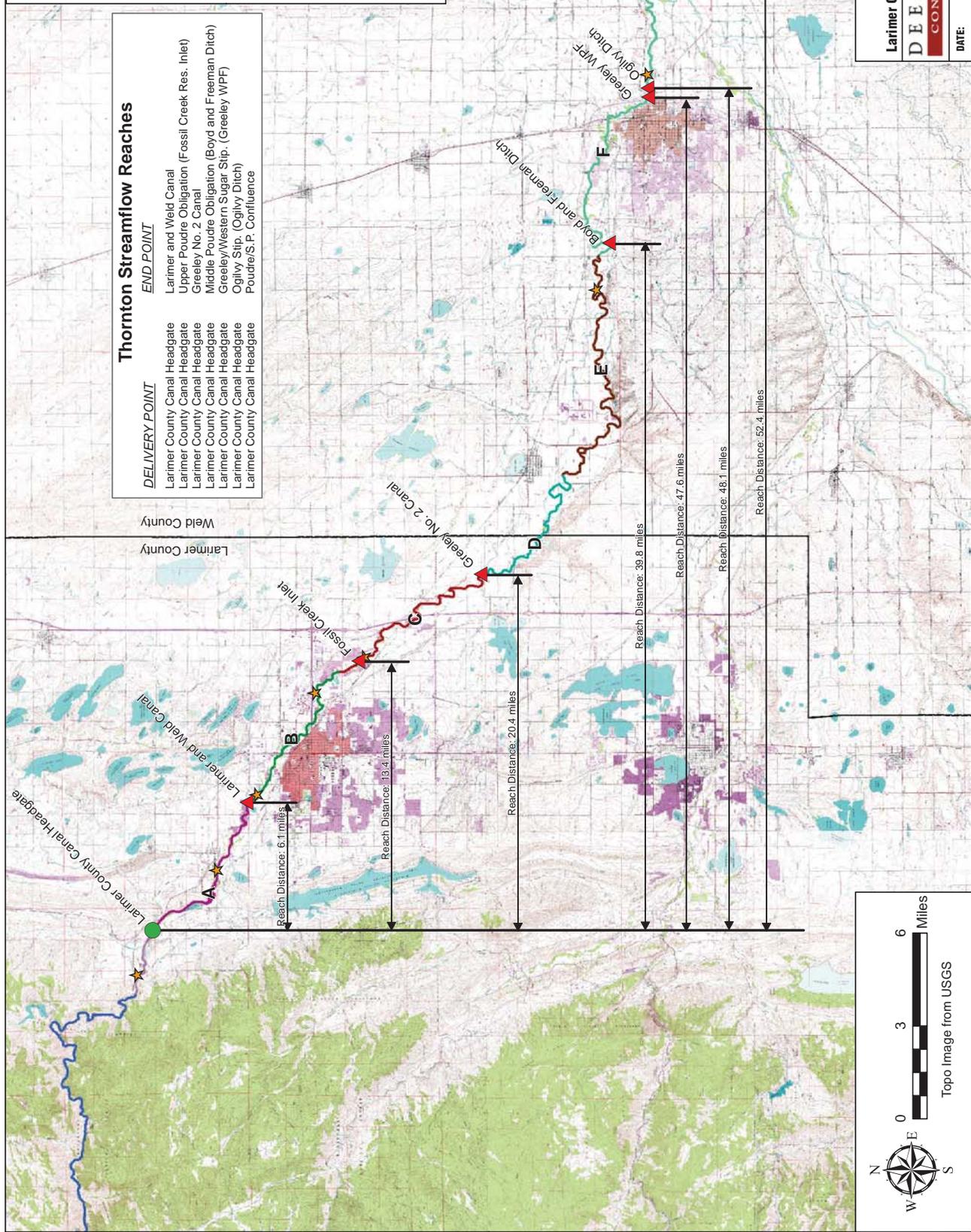
Legend

- Thornton Return Obligations
- Thornton Delivery Point
- Poudre Dry-up Points

**Colorado Parks and Wildlife
Poudre River Segment**

- Segment A
- Segment B
- Segment C
- Segment D
- Segment E
- Segment F

| DELIVERY POINT | END POINT |
|-------------------------------|---|
| Larimer County Canal Headgate | Larimer and Weld Canal |
| Larimer County Canal Headgate | Upper Poudre Obligation (Fossil Creek Res. Inlet) |
| Larimer County Canal Headgate | Greeley No. 2 Canal |
| Larimer County Canal Headgate | Middle Poudre Obligation (Boyd and Freeman Ditch) |
| Larimer County Canal Headgate | Greeley/Western Sugar Strip. (Greeley WPF) |
| Larimer County Canal Headgate | Ogilvy Strip. (Ogilvy Ditch) |
| Larimer County Canal Headgate | Poudre/S.P. Confluence |



North arrow and scale bar:

0 3 6 Miles

Topo Image from USGS

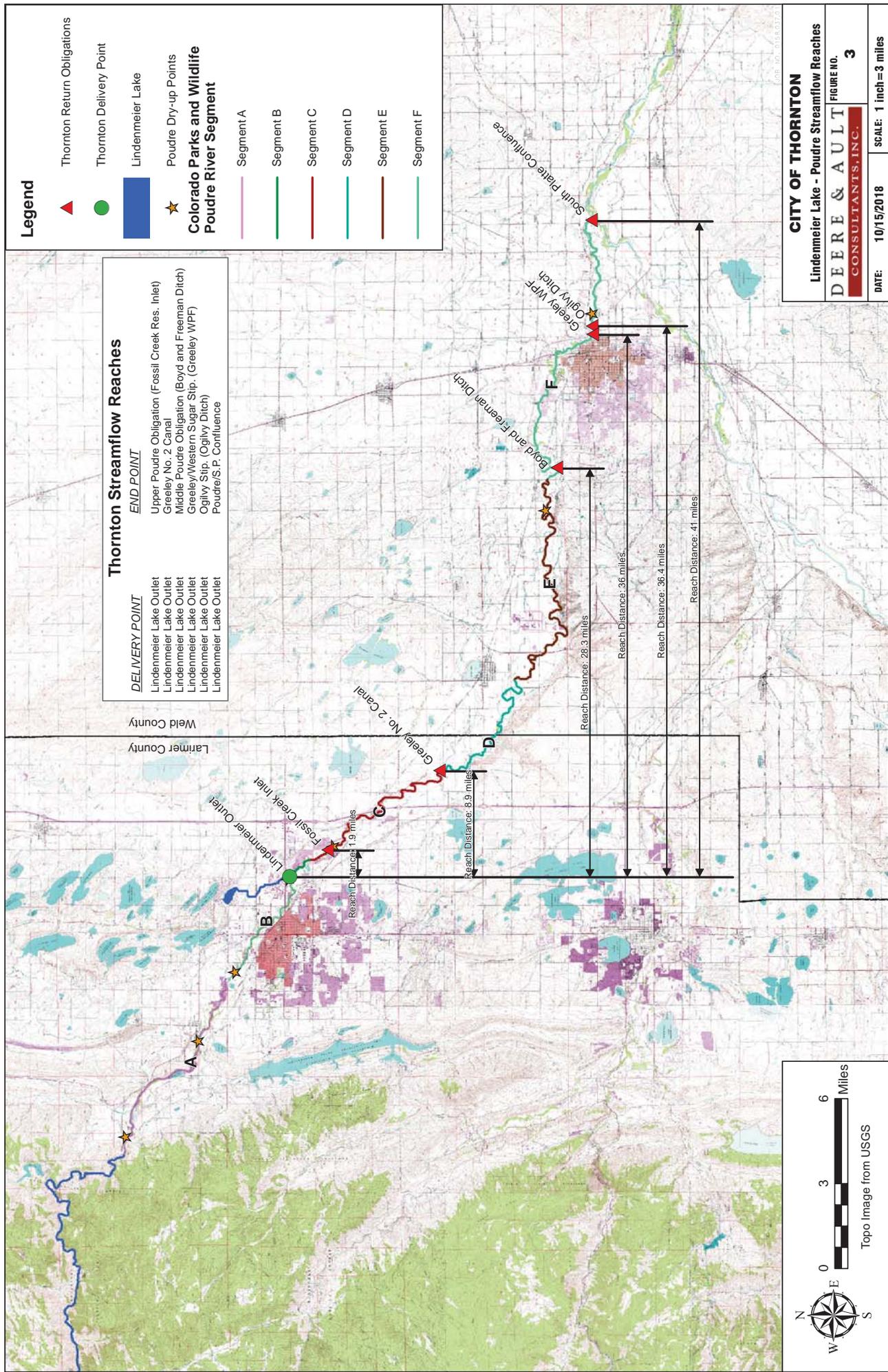
CITY OF THORNTON

Larimer County Canal - Poudre Streamflow Reaches

DEERE & AULT CONSULTANTS, INC.

FIGURE NO. **2**

DATE: 10/15/2018 SCALE: 1 inch = 3 miles



Legend

- ▲ Thornton Return Obligations
 - Thornton Delivery Point
 - Lindenmeier Lake
 - ★ Poudre Dry-up Points
- Colorado Parks and Wildlife
Poudre River Segment**
- Segment A
 - Segment B
 - Segment C
 - Segment D
 - Segment E
 - Segment F

Thornton Streamflow Reaches

| DELIVERY POINT | END POINT |
|-------------------------|---|
| Lindenmeier Lake Outlet | Upper Poudre Obligation (Fossil Creek Res. Inlet) |
| Lindenmeier Lake Outlet | Greeley No. 2 Canal |
| Lindenmeier Lake Outlet | Middle Poudre Obligation (Boyd and Freeman Ditch) |
| Lindenmeier Lake Outlet | Greeley/Western Sugar Strip. (Greeley WPF) |
| Lindenmeier Lake Outlet | Ogilvy Strip. (Ogilvy Ditch) |
| Lindenmeier Lake Outlet | Poudre/S.P. Confluence |

0 3 6 Miles
 Topo Image from USGS

CITY OF THORNTON
 Lindenmeier Lake - Poudre Streamflow Reaches
DEERE & AULT CONSULTANTS, INC. FIGURE NO. **3**
 DATE: 10/15/2018 SCALE: 1 inch = 3 miles

G:\0158 Thornton\0158_037\01\GIS\Lindenmeier Figure.mxd Monday, October 15, 2018 01:54 PM

EXHIBIT B
WSSC WATER RIGHTS

| <u>Name</u> | <u>Amount</u> | <u>Source</u> | <u>Location</u> <u>10 40 160 Sec Twn Rge</u> | <u>Appropriation</u> <u>Date</u> | <u>Adjudication</u> <u>Date</u> | <u>Judicial</u> <u>Proceeding</u> |
|------------------------------------|---------------|---|---|-------------------------------------|------------------------------------|--------------------------------------|
| <u>Direct-Flow(Dist. 3)</u> | | | | | | |
| Larimer County Canal | 10.76 cfs | CLP ¹ | SW SE SW 13-8N-70W | 1862/03/01 | 1882/04/11 | Case 320 Transfer (1423 TT) |
| Larimer County Canal | 13.89 cfs | CLP | SW SE SW 13-8N-70W | 1864/09/15 | 1882/04/11 | Case 320 Original (1423 TT) |
| Larimer County Canal | 2.00 cfs | CLP | SW SE SW 13-8N-70W | 1868/03/15 | 1882/04/11 | Case 320 Original (2406 TT) |
| Larimer County Canal | 2.67 cfs | CLP | SW SE SW 13-8N-70W | 1868/03/15 | 1882/04/11 | Case 320 Original (2818 TT) |
| Larimer County Canal | 4.00 cfs | CLP | SW SE SW 13-8N-70W | 1873/03/20 | 1882/04/11 | Case 320 Original (2406 TT) |
| Larimer County Canal (Henry Smith) | 7.23 cfs | CLP | SW SE SW 13-8N-70W | 1878/04/01 | 1882/04/11 | Case 320 Original |
| Larimer County Canal | 463.00 cfs | CLP | SW SE SW 13-8N-70W | 1881/04/25 | 1882/04/11 | Case 320 Original |
| Larimer County Canal | 246.45 cfs | CLP | SW SE SW 13-8N-70W | 1914/09/28 | 1945/12/18 | Case 5362 (84CW204) Supp. |
| <u>Storage (Dist. 3)</u> | | | | | | |
| Chambers Lake Reservoir | 3,080.0 AF | Joe Wright Creek, Fall River Creek and Trap Creek | NE NE SE 6-7N-75W | 1882/07/12 | 1886/10/12 | Case 320 Original |
| WSSC Res. No. 2,3 | 689.0 AF | CLP | NE SE SW 14-8N-69W | 1882/10/01 | 1904/12/09 | Case 1591 Original |
| WSSC Res. No. 4 | 574.0 AF | WSSC Res No. 2,3 | SE NE SW 23-8N-69W | 1882/10/01 | 1904/12/09 | Case 1591 Original |

DECREE
86CW401,402,403; 87CW332

| <u>Name</u> | <u>Amount</u> | <u>Source</u> | <u>Location</u> <u>10 40 160 Sec Twn Rge</u> | <u>Appropriation</u> <u>Date</u> | <u>Adjudication</u> <u>Date</u> | <u>Judicial</u> <u>Proceeding</u> |
|----------------------------------|---------------|--|---|-------------------------------------|------------------------------------|--------------------------------------|
| WSSC Res. No. 1 (Rocky Ridge) | 4,726.0 AF | CLP | SW SE SW 11-8N-69W | 1891/09/01 | 1904/12/09 | Case 1591 Original |
| WSSC Res. No. 5 (Long Pond) | 4,037.0 AF | CLP | SW SE NW 31-8N-68W | 1891/09/01 | 1904/12/09 | Case 1591 Original |
| Lindemeier Lake | 608.0 AF | Long Pond Res. | SW NW NE 6-7N-68W | 1892/02/16 | 1904/12/09 | Case 1591 Original |
| WSSC Res. No. 4 | 310.0 AF | Long Pond Res. | 23-8N-69W | 1892/02/16 | 1904/12/09 | Case 1591 (W-7821-74) Original |
| WSSC Res. No. 4 | 422.0 AF | WSSC Res No. 2,3 | SE NE SW 23-8N-69W | 1900/12/12 | 1904/12/09 | Case 1591 Original |
| Black Hollow Res. | 6,428.0 AF | CLP | SE SE SE 34-8N-67W | 1906/02/20 | 1922/04/22 | Case 2031 Supp. |
| Chambers Lake Reservoir | 3,577.0 AF | Joe Wright Creek, Fall River Creek and Trap Creek | NE NE SE 6-7N-75W | 1910/05/28 | 1922/04/22 | Case 2031 Supp. |
| Kluver Res. | 1,562.0 AF | CLP | SW NE NW 23-8N-69W | 1911/05/01 | 1945/12/18 | Case 5362 Supp. |
| Black Hollow Res. | 2,158.0 AF | CLP | SE SE SE 34-8N-67W | 1918/10/05 | 1945/12/18 | Case 5362 Supp. |
| Long Draw Res. | 4,201.0 AF | Long Draw Creek | NE NW SE 11-6N-75W | 1922/06/05 | 1945/12/18 | Case 5362 Supp. |
| Chambers Lake Reservoir | 2,197.0 AF | Joe Wright Creek, Fall River Creek and Trap Creek | NE NE SE 6-7N-75W | 1922/12/03 | 1945/12/18 | Case 5362 Supp. |
| WSSC Res. No. 2,3 | 3,615.0 AF | CLP | NE SE SW 14-8N-69W | 1943/10/04 | 1953/09/10 | Case 11217 Supp. |
| WSSC Res. No. 2,3 | 445.9 AF | CLP | NE SE SW 14-8N-69W | 1943/10/04 | 1953/09/10 | Case 11217 (W-112-74) Supp. |
| WSSC Res. No. 2,3 | 138.0 AF | CLP | NE SE SW 14-8N-69W | 1943/10/04 | 1977/12/31 | W-112-77 Supp. |

DECREE
86CW401,402,403; 87CW332

| <u>Name</u> | <u>Amount</u> | <u>Source</u> | <u>Location</u> <u>10 40 160 Sec Twn Rge</u> | <u>Appropriation</u> <u>Date</u> | <u>Adjudication</u> <u>Date</u> | <u>Judicial</u> <u>Proceeding</u> |
|---|---------------|---------------------------|--|-------------------------------------|------------------------------------|--|
| Long Draw Res. | 6,600.0 AF | CLP | NE NW SE 11-6N-75W | 1965/08/31 | 1977/12/31 | W-9322-78 (83CW126) Supp. |
| Trap Lake II | 3,800.0 AF | Trap Creek | NW NW SW 21-7N-75W | 1982/06/16 | 1982/12/31 | 82CW289 Supp. - Cond. |
| <u>Transbasin</u> | | | | | | |
| Chambers Lake Reservoir | 11,478.0 AF | Big Laramie River | 6-7N-75W | 1891/08/07 | 1896/10/30 | Case 1247 Original |
| Laramie River Ditch (Skyline Ditch) | 300.0 cfs | West Branch Laramie River | NE NE SW 14-8N-76W | 1891/08/07 | 1896/10/30 | Case 1247 Original (84CW204) Supp. |
| Cameron Pass Ditch | 10.0 cfs | Michigan River | SE 2-6N-76W | 1882/07/30 | 1902/04/23 | Case 1519 Original |
| Cameron Pass Ditch | 18.0 cfs | Michigan River | NW SE 2-7N-76W | 1898/07/07 | 1902/04/23 | Case 1519 Original |
| Grand River Ditch Alternate Point Alternate Point | 524.6 cfs | Colorado River | NE SW NW 21-6N-75W NW NE NW 28-5N-76W NW NE SE 29-6N-75W | 1890/09/01 | 1906/08/11 | Case 112 Original |
| Laramie River Tunnel ² | 300.0 cfs | Big Laramie River | NE SW 7-8N-75W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 (84CW204) Supp. |
| Rawah Ditch ² | 225.0 cfs | Rawah Creek | NE NE SW 32-9N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| Rawah and Lower Supply Ditch ² | 275.0 cfs | Rawah Creek | SE SE SW 14-9N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| McIntyre Ditch ² | 40.0 cfs | McIntyre Creek | SE NE NE 31-9N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| Link Lake No. 1 ^[2] | 1,050.0 AF | Rawah Creek | SE 7-8N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |

DECREE
86CW401,402,403; 87CW332

| <u>Name</u> | <u>Amount</u> | <u>Source</u> | <u>Location</u> 10 40 160 Sec Twn Rge | <u>Appropriation</u> <u>Date</u> | <u>Adjudication</u> <u>Date</u> | <u>Judicial</u> <u>Proceeding</u> |
|---------------------|---------------|----------------|--|-------------------------------------|------------------------------------|--------------------------------------|
| Link Lake No. 2[2] | 1,400.0 AF | Rawah Creek | SW 5-8N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| Link Lake No. 3[2] | 525.0 AF | Rawah Creek | NW 5-8N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| Link Lake No. 4[2] | 592.0 AF | Rawah Creek | SW 32-9N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| Link Lake No. 5[2] | 700.0 AF | Rawah Creek | NE 5-8N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| Link Lake No. 6[2] | 300.0 AF | Rawah Creek | SW 32-9N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| Link Lake No. 7[2] | 440.0 AF | Rawah Creek | NE 5-8N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| Link Lake No. 8[2] | 2000.0 AF | Rawah Creek | SW 4-8N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| Link Lake No. 9[2] | 574.0 AF | Rawah Creek | NE 6-8N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| Link Lake No. 10[2] | 425.0 AF | McIntyre Creek | NE 31-9N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| Link Lake No. 11[2] | 1,148.0 AF | McIntyre Creek | SW 31-9N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| Link Lake No. 12[2] | 138.0 AF | Rawah Creek | NW 4-8N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| Link Lake No. 13[2] | 597.0 AF | Rawah Creek | NE 29-9N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |

DECREE
86CW401,402,403; 87CW332

| <u>Name</u> | <u>Amount</u> | <u>Source</u> | <u>Location</u> <u>10 40 160 Sec Twn Rge</u> | <u>Appropriation</u> <u>Date</u> | <u>Adjudication</u> <u>Date</u> | <u>Judicial</u> <u>Proceeding</u> |
|--|---------------|---------------|---|-------------------------------------|------------------------------------|--------------------------------------|
| Link Lake No. 14 [2] | 597.0 AF | Spring Creek | NE 29-9N-76W | 1902/08/25 | 1914/02/20 | Case 2725 Case 5993 Supp. |
| Laramie Lake | 340.0 AF | Drainage | SE NW 32-8N-75W | 1890/07/01 | 1944/09/11 | Case 5993 Supp. |
| Lost Lake | 288.0 AF | Drainage | SW SE 31-8N-75W | 1890/07/02 | 1944/09/11 | Case 5993 Supp. |
| Lily Lake | 178.0 AF | Drainage | SE NW 29-8N-78W | 1912/07/01 | 1944/09/11 | Case 5993 Supp... |
| <u>Seepage</u> Lind Reservoir [2] | 54.9 AF | Seepage | SE NE SE 35-8N-68W | 1881/04/21 | 1972/12/31 | W-1748 W-1877 Supp. |
| WSSC Seepage A | 2.0 cfs | Seepage | NE NE NW 20-8N-69W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |
| WSSC Seepage B | 2.0 cfs | Seepage | SE SE SE 17-8N-69W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |
| WSSC Seepage 1 | 5.0 cfs | Seepage | SW NW SW 4-8N-69W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |
| WSSC Seepage 2 | 12.0 cfs | Seepage | SW NW NE 3-8N-69W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |
| WSSC Seepage 2A | 4.0 cfs | Seepage | NE NE SW 3-8N-69W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |
| WSSC Seepage 2b | 2.0 cfs | Seepage | NW SW SE 17-8N-68W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |
| WSSC Seepage 3 | 20.0 cfs | Seepage | NE SW NW 14-8N-68W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |
| WSSC Seepage 4 | 1.0 cfs | Seepage | NE NW SW 14-8N-68W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |
| WSSC Seepage 6 | 2.0 cfs | Seepage | NW NW SW 31-8N-67W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |

DECREE
86CW401,402,403; 87CW332

| <u>Name</u> | <u>Amount</u> | <u>Source</u> | <u>Location</u> 10 40 160 Sec Twn Rge | <u>Appropriation</u> <u>Date</u> | <u>Adjudication</u> <u>Date</u> | <u>Judicial</u> <u>Proceeding</u> |
|-----------------|---------------|---------------|--|-------------------------------------|------------------------------------|--------------------------------------|
| WSSC Seepage 7 | 2.0 cfs | Seepage | NW SW SE 6-7N-67W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |
| WSSC Seepage 7a | 0.1 cfs | Seepage | SW NE SW 8-7N-67W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |
| WSSC Seepage 7b | 0.3 cfs | Seepage | SW SW SE 8-7N-67W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |
| WSSC Seepage 7c | 2.0 cfs | Seepage | NW NW SW 13-7N-67W | 1960/06/01 | 1972/12/31 | W-1877 Supp. |
| WSSC Seepage 8 | 0.62 cfs | Seepage | NE SE SE 5-7N-66W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |
| WSSC Seepage 9 | 1.0 cfs | Seepage | SE NE SE 5-7N-66W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |
| WSSC Seepage 10 | 0.9 cfs | Seepage | SW NW SW 4-7N-66W | 1881/04/21 | 1972/12/31 | W-1877 Supp. |

1. Cache la Poudre River.
2. Partial Ownership.

DECREE
86CW401,402,403; 87CW332

EXHIBIT C
JDC WATER RIGHTS

| <u>Name</u> | <u>Amount</u> | <u>Source</u> | <u>Location</u> <u>10 40 160 Sec Twn Rge</u> | <u>Appropriation</u> <u>Date</u> | <u>Adjudication</u> <u>Date</u> | <u>Adjudication</u> <u>Type</u> |
|-------------------------|---------------|------------------|---|-------------------------------------|------------------------------------|------------------------------------|
| <u>Direct-Flow</u> | | | | | | |
| Dry Creek Ditch | 11.67 cfs | CLP ¹ | SE NW SW 30-8N-69W | 1861/06/10 | 1882/04/11 | Case 320 Original |
| Dry Creek Ditch | 14.42 cfs | CLP | SE NW SW 30-8N-69W | 1870/10/21 | 1882/04/11 | Case 320 Original |
| Dry Creek Ditch | 12.13 cfs | CLP | SE NW SW 30-8N-69W | 1873/09/15 | 1882/04/11 | Case 320 Original |
| Dry Creek Ditch | 12.70 cfs | CLP | SE NW SW 30-8N-69W | 1879/07/15 | 1882/04/11 | Case 320 Original |
| <u>Seepage</u> | | | | | | |
| Jackson Ditch Seep A | 1.0 cfs | Seepage | SW SE NE 30-8N-69W | 1861/06/10 | 1972/12/31 | Case W-7157 Supp. |
| Jackson Ditch Seep B | 3.0 cfs | Seepage | NW SW SW 15-8N-69W | 1861/06/10 | 1972/12/31 | Case W-7157 Supp. |
| Jackson Ditch Seep C | 1.0 cfs | Seepage | NW SW NE 29-8N-69W | 1861/06/10 | 1972/12/31 | Case W-7157 Supp. |

1. Cache la Poudre River.

DECREE
86CW401,402,403; 87CW332



COLORADO

Parks and Wildlife

Department of Natural Resources

Water Resources Section - Aquatic,
Terrestrial, and Natural Resources Branch

November 5, 2020

Ms. Linda Bassi
Ms. Kaylea White
Colorado Water Conservation Board
Stream and Lake Protection Section
1313 Sherman Street, 7th Floor
Denver, CO 80203

SUBJECT: Plan for Augmentation to Augment Stream Flows in the Cache la Poudre River

Linda and Kaylea:

The purpose of this letter is to provide the Colorado Water Conservation Board (CWCB) staff with Colorado Parks and Wildlife's (CPW) opinions regarding the potential acquisition of water rights to maintain, enhance, and improve river conditions on the Cache la Poudre River (Poudre River) in Division 1 as part of a plan for augmentation to augment stream flows in the Poudre River. The proposed acquisition arrangement involves the CWCB acquiring an interest in water rights through contractual agreements with the Cities of Thornton, Greeley, and Fort Collins. The Cities have provided the first set of water rights ("Seed Water") to be included in the augmentation plan to augment stream flows for the purpose of preserving and improving the natural environment to a reasonable degree in six segments of the Poudre River from the canyon mouth to the confluence with the South Platte River. The following represents CPW's opinions and recommendations on the acquisition of the Seed Water and on the concept of a plan for augmentation of stream flows on the Poudre River ("Poudre Flows Plan"). November will be the first of a two CWCB meeting process, in which the CWCB can take action on the proposed acquisition at the second January meeting. CPW's opinions and recommendations on the Seed Water from Fort Collins, Greeley, and Thornton are included in this letter.

Background

Stream flows in the Poudre River above and through the City of Fort Collins have been a concern for many decades. There have been many attempts to address this issue with little success; in the late 1980s, the City of Fort Collins approached the state to investigate the possibility of an appropriated CWCB instream flow water right. The state quickly concluded that significant and complex water availability issues precluded such an approach because there simply was not enough water through the reach to support a new appropriation.

More recently, a group of local stakeholders, water users, and state agencies gathered with the common goal of developing a new approach to improve connectivity in the Poudre River. With several dry-up locations on the river for much of the year, water was not available for a traditional appropriation of water for instream flow use. The group has endeavored to pilot a

Exhibit T5
Agenda Item 23c
Nov 18-19, 2020



concept leveraging quantified augmentation supplies to meet instream flow needs. This novel concept adds replacement water to the Poudre River to satisfy non-consumptive, instream flow needs. The group, which stemmed from the FLOWS committee of the Poudre Runs Through It Group, is referred to as the Poudre Flows Group, and includes major water users in the Poudre Basin, including the Cache la Poudre Water Users Association, the City of Fort Collins, Northern Colorado Water Conservancy District, the City of Greeley, and the City of Thornton. The Colorado Water Trust has led this group of broad interests to solidify the concept of a plan for augmentation of stream flows and completed a legislative effort in early 2020 to clarify CWCB's statutory authority to file an application for such a plan for augmentation.

Natural Environment in the Poudre River

The Poudre River has been extensively studied by CPW and other entities. The natural environment includes a somewhat diverse fishery consisting of both native and non-native species. The upper reaches of the Poudre River as it emerges from Poudre Canyon are typical cold-water trout habitat supporting rainbow and brown trout. As the river flows eastward through Fort Collins, the fishery transitions to a mixed cold water/cool water/warm water fishery. Trout occur regularly downstream to approximately Prospect Avenue, but persist in the system down to approximately the highway crossing at I-25; however, they are challenged and limited by low flows, reduced habitat, and higher water temperatures.

High public use exists throughout the urban stretch of the Poudre River. Considerable public access draws visitors to swim, tube, picnic, walk, bird watch, and fish. Recent fish population surveys indicate there are 1,000 to 2,000 trout per river mile within the Fort Collins area. Impacts associated with this high recreational use include accelerated bank erosion and degradation of natural values. Regardless, the Poudre River is an important resource for the community. Fishing and the overall health of the Poudre River is an important recreational driver for the local economy.

The transition zone of the Poudre River provides important habitat for cold-water species seasonally coming down from the canyon, as well as plains species that move up from the low gradient plains zone of the Poudre River. Fish species diversity increases as the river flows through Fort Collins, where native minnow, sucker, and darter species, as well as the Plains Topminnow (Tier 1 Species of Greatest Conservation Need, CPW State Wildlife Action Plan) start to show up in fish sampling efforts. East of I-25, the fishery is dominated by species in the darter, minnow, and sucker families.

The Poudre River is important from a native species conservation standpoint although sampling efforts show a declining trend in native species diversity and abundance. This is coincident with increased demands and water diversions, causing habitat fragmentation during periodic low flow conditions and fewer high flow events connecting the river with its floodplain. The Poudre Flows Plan will introduce sufficient water to improve upon low flow conditions and take necessary steps towards habitat connectivity for fish species in decline.

Evaluation of Flows Necessary to Preserve and Improve the Natural Environment

Early in their process, the Poudre Flows Group asked CPW to assemble and analyze all existing biological and hydraulic data in order to develop instream flow recommendations to be used as flow targets for water acquisitions in this reach of the river. The quantification of flows required to both preserve and improve the natural environment to a reasonable degree is

summarized by CPW in the report titled “Flow Quantification Report for the Cache la Poudre River in Larimer and Weld Counties” dated October 2020.

In general, CPW used a combination of R2CROSS and PHABSIM data collected and published by a variety of parties over a period of ten years. The R2CROSS data was collected by CPW, Fort Collins, and CWCB staff; other data was collected and analyzed by several consulting firms working on various aspects of the Northern Integrated Supply Project (NISP) and Halligan and Seaman Reservoir expansion projects. Flow recommendations and segment delineations from the Flow Quantification Report are provided below:

| Segment | Winter (November 1 - March 31) | | Summer (April 1 - October 31) | |
|---------|--------------------------------|--------------|-------------------------------|---------------|
| | Preserve Flow | Improve Flow | Preserve Flow | Improve Flow |
| A and B | Up to 80 cfs | 80 - 150 cfs | Up to 114 cfs | 114 - 260 cfs |
| C | Up to 30 cfs | 30 - 54 cfs | Up to 40 cfs | 40 - 54 cfs |
| D | Up to 10 cfs | 10 - 40 cfs | Up to 10 cfs | 10 - 40 cfs |
| E and F | Up to 15 cfs | 15 -30 cfs | Up to 15 cfs | 15 -30 cfs |

| Segment | Upper Terminus | Lower Terminus |
|---------|--|--|
| A | Canyon Gage | Larimer/Weld Canal Diversion |
| B | Larimer/Weld Canal Diversion | Spring Creek Confluence |
| C | Spring Creek Confluence | New Cache la Poudre Diversion |
| D | New Cache la Poudre Diversion | County Road 17 Crossing |
| E | County Road 17 Crossing | 59 th Avenue Bridge (Greeley) |
| F | 59 th Avenue Bridge (Greeley) | South Platte Confluence |

The Poudre River from the canyon mouth to the confluence of the South Platte River is considered an important transition zone fishery. Transition zones provide aquatic habitat conditions that support an array of species, including important native species with varying temperature and habitat preferences that can be unique to transition zones. Conditions within transition zones are not static and may shift seasonally or from year-to-year. The flow recommendations summarized in this report are based on physical habitat, but do not include habitat assessments for all native species and no direct temperature considerations were made. Future investigations to the relationship between habitat, flow, and thermal regime may be incorporated into CPW’s preferred flow targets to ensure favorable habitat and thermal conditions for native warm-water species using the transition zone.

Seed Water Rights

The envisioned Poudre Flows Plan starts with the initial Seed Water donations from the Cities; augmentation water can be subsequently added to the Plan after appropriate review and approval processes by both the CWCB and Division of Water Resources (DWR). Water rights which may be added to the plan are limited to water rights for which historical consumptive use has been quantified and changed to augmentation. The initial Seed Water from Thornton, Greeley, and Fort Collins is described in more detail below. CPW is supportive of the benefits that will be provided individually and collectively from the Cities’ contributions of water.

Fort Collins

Fort Collins has offered to the CWCB Seed Water which includes their shares in the Arthur Irrigation Company, the Larimer County Canal No. 2 Irrigating Company, and the New Mercer Ditch Company (which together with the Warren Lake Reservoir Company are collectively known as the Southside Ditches, however Warren Lake Reservoir Company shares are not included in the offered water rights). Shares were quantified and changed to include augmentation and other uses. Currently, water is being diverted and used for irrigation in their original ditch systems.

As part of the Poudre Flows Plan, each year Fort Collins will make a determination how much water will continue to be used for irrigation or municipal use, or be made available for use in the Poudre Flows Plan. Under typical operations, water will be used for instream flow augmentation in Segments A, B, and upper portions of C where the consumptive use portion of their shares will be diverted at Fossil Creek Reservoir Inlet Ditch (FCRID) for storage in Rigden Reservoir. Return flow obligations will be left in the river. Fort Collins may also deliver the consumptive use credits farther downstream to lease to other users.

Fort Collins' Seed Water Contribution may provide additional water between the Southside Ditches and FCRID in average daily rates *up to* 0.1 to 19 cfs between April and October, depending on Fort Collins' contribution in a given year. Added water will increase flows at two dry-up locations - increasing flows for both cold-water trout and native species and providing notable benefits to the heavily used urban stretch of the Poudre River surrounding Fort Collins.

Greeley

Greeley has offered to the CWCB Seed Water which includes their water right shares in Greeley Irrigation Company (GIC) that were changed from irrigation to municipal use. Greeley's shares are currently being diverted at the GIC (Greeley #3) headgate. Seed Water part of the Poudre Flows Plan will travel approximately 2 miles down the canal where it will be released back to the Poudre River through the F-street return structure. As such, the reach benefitting from Greeley's Seed Water is between the F-Street Return and the confluence with the South Platte, although Greeley may choose to bypass water at the GIC headgate in the future.

Greeley will decide on a year-to-year basis how much water to dedicate to the Poudre Flows Plan, making no less than 1 cfs available each year. Greeley's Seed Water contribution may increase river flows by an average of *up to* 1.3 to 8.9 cfs between April through October. Maximum rates of up to 16 cfs in July may be provided. Additional water will benefit native species in Segment F representing the first step to restore connectivity at a known dry-up location during irrigation season.

Thornton

Thornton has offered to the CWCB Seed Water which includes Water Supply and Storage Company Shares and Jackson Ditch Company Shares changed from irrigation use to municipal use. Thornton has proposed making all of this water available to the Poudre Flows Plan to meet downstream return flow obligations and stipulation requirements of changed water at various points within the six segments.

Benefits resulting from Thornton's Seed Water commitment will accrue over the entire Poudre Flows Plan reach extending from the canyon mouth to the South Platte River confluence.

Thornton's additions may increase river flows by an average of *up to* 1.5 cfs to 7.0 cfs year-round. Flow rates vary downstream as return flow obligations are satisfied, but this added water will provide year-round increased river flows to improve connectivity for cold-water trout and native warm-water fish species in Segments A through F.

Conclusions and Recommendations

CPW applauds the efforts of the Poudre Flows Group to innovate a creative, market-driven approach to solving the complex water shortages facing the Poudre River. In addition to having broad support from water users in the Poudre River Basin, this plan for augmentation offers a unique solution to improve connectivity in an over-appropriated river without injuring vested water rights holders.

CPW strategic goals in the Poudre River include "supporting fish passage projects for warm-water and transitional zones and continuing focused fish community monitoring as it relates to water development and habitat restoration projects" (CPW South Platte Basin Plan, 2018). Both of these strategic goals align with flow restoration benefits that will be realized through the Poudre Flows Plan. The availability of sufficient water and flow regimes are a critical factor impacting fish communities, and CPW is hopeful the added water will help improve conditions for species in decline.

CPW is of the opinion that the proposed acquisition of the Seed Water will result in benefits, namely supporting improvements to habitat fragmentation throughout the Poudre River. We appreciate the collaboration amongst water users and the state to restore the Poudre River to a healthy, working river. CPW therefore believes that CWCB should proceed with this acquisition concept while continuing to coordinate with the water users, DWR, and CPW. As the Poudre Flows Plan is implemented, logistical hurdles related to administration and physical bypass of water at diversion structures are expected. CPW looks forward to being involved in these conversations as they unfold; incorporating fish passage for both trout and native species at physical barriers would provide notable connectivity benefits. As always, CPW staff will be available at the November 2020 CWCB meeting to answer any questions that the CWCB might have relating to this agenda item. Thank you for the opportunity to assist in this matter.

Sincerely,



Katie Birch
Instream Flow Program Specialist

CC: Battige, Spohn, Wright, Conovitz, Armstrong, Harris, DeWalt, Leslie, Cannon, Surface