



**COLORADO**  
Division of Water Resources  
Department of Natural Resources

December 18, 2020

Jared Dains, P.E.  
Applegate Group, Inc.  
1490 West 121<sup>st</sup> Avenue, Suite 100  
Denver, CO 80234

**Re: East 8<sup>th</sup> Street Substitute Water Supply Plan (WDID 0302562, Plan ID 4701)**  
**East 8<sup>th</sup> Street Pit, DRMS Permit No. M-2000-082 (WDID 0303016)**  
**S½ Section 4, T5N, R65W, 6<sup>th</sup> P.M.**  
**Water Division 1, Water Districts 2 & 3, Weld County**

**Approval Period: November 1, 2020 through October 31, 2021**

*Contact information for Mr. Dains: 303-452-6611; [jareddains@applegategroup.com](mailto:jareddains@applegategroup.com)*

*Accounting contact: Abdullah Javed; 303-452-6611; [ajaved@applegategroup.com](mailto:ajaved@applegategroup.com)*

Dear Mr. Dains:

We have received your letter dated October 30, 2020, requesting renewal of the above referenced substitute water supply plan ("SWSP") in accordance with section 37-90-137(11), C.R.S., to cover depletions caused by the East 8<sup>th</sup> Street Pit sand and gravel mining operation. The current permittee for the East 8<sup>th</sup> Street Pit (M-2000-082) is Superior Oilfield Services Co., LTD and the current operator is Laser Oilfield Service LLC ("Laser" or "Applicant"). This pit was previously included in the Aggregate Industries Combined SWSP (WDID 0202565) but has been covered under a separate SWSP since November 1, 2012. The required fee of \$257 for the renewal of this SWSP has been submitted (receipt no. 10007286).

### **SWSP Operation**

The East 8<sup>th</sup> Street Pit (WDID 0303016) is located just east of the City of Greeley in the south half of Section 4, Township 5 North, Range 65 West of the 6<sup>th</sup> P.M., as shown on the attached Figure 1. The west cell of the pit has been fully mined out. Dewatering of the west cell ceased in July 2016 and was allowed to refill over the following three months (August through October 2016). Dewatering of the west cell restarted in November 2016, and continued through January 2017. During February and March of 2017, the water table was below the level of the pit therefore no pumping was required for dewatering and the pit did not refill with water. The west cell was dewatered again during April 2017, and was filled during free river conditions in May and June, eliminating the need to account for an "intermittent fill" of the pit in 2017. Mining and dewatering operations switched to the east cell beginning in August 2017. No mining is proposed during this plan period, however dewatering of the east cell will continue as needed in order to allow for reclamation. Depletions at the East 8<sup>th</sup> Street Pit during this plan period will be limited to evaporation from exposed groundwater surface areas, ongoing lagged depletions associated with past operational and evaporative consumptive use at the site, and lagged depletions due to the cessation



of dewatering at the site. The City of Greeley is the owner of the land on which the East 8<sup>th</sup> Street Pit is located. Greeley will provide replacement water from their waste water treatment plant pursuant to the mining lease agreement between the Applicant and Greeley. Additional replacement water will be provided pursuant to a lease agreement between the Applicant and the City of Aurora. The final reclamation plan for the pit is to create a lined storage reservoir for the City of Greeley.

## Depletions

The total exposed groundwater surface area at this site is expected to be approximately 8 acres during this plan period, consisting almost entirely of the west cell. You have reported that due to a combination of new slurry walls and ongoing mining and dewatering operations at other sites in the vicinity, the local water table has been lowered such that the east cell is largely dry without the need for dewatering operations. Net evaporative loss was determined to be 2.93 feet per exposed acre, as approved in previous SWSPs. This value was calculated using a gross annual evaporation of 45 inches from the exposed water surface, with a credit of 9.9 inches for effective precipitation, based on average annual precipitation of 14.14 inches for the Greeley UNC weather station. Net evaporative losses at the East 8<sup>th</sup> Street Pit are therefore estimated to total 23.4 acre-feet for the 8 acres exposed during this plan period.

No material is proposed to be mined and no groundwater is proposed to be used for dust control purposes at the site during this plan period.

After cessation of dewatering the west cell in July 2016, the west cell filled to a depth of approximately 4 feet with a surface area of 7 acres, for a total fill volume of 28 acre-feet. You have assumed that the refilling occurred evenly over the three-month period of August, and September, and October 2016. The lagged depletions associated with the temporary refilling of the west cell, including lagged depletions from evaporation off the increased surface area of the cell, will be replaced under this SWSP.

The IDS Alluvial Water Accounting System (AWAS) analytical stream depletion model, which uses the Glover method, was used to calculate the lagged depletions to the Cache la Poudre River. The following parameters were used in the model: transmissivity (T) = 120,000 gallons per day per foot, specific yield (SY) = 0.2, the distance from the river to the edge of the alluvium = 11,000 feet, and the distance from the centroid of the exposed surface water areas to the river = 600 feet. Lagged depletions resulting from past consumptive use at the site that are projected to impact the river during this plan period, including those associated with the “intermittent fill” of the west cell that occurred in 2016, were determined to equal 25.81 acre-feet for this plan period.

Dewatering of the east cell ceased in August of 2018. As long as the pit was continuously dewatered, the water returned to the stream system was sufficient to offset the depletions attributable to the dewatering operations. However, once dewatering at the site ceased, delayed depletions from past dewatering continued to impact the river. Previous SWSPs were approved on the assumption that dewatering was ongoing at the east cell, therefore these lagged dewatering depletions did not get accounted for or replaced at the time they impacted the river. Based on the submitted accounting and AWAS parameters identified above, there are a total of 41 acre-feet of lagged depletions from past dewatering operations that impacted the stream between August 2018 and October 31, 2020 that were not replaced under previous substitute water supply plans. Of that

amount, approximately 14 acre-feet impacted the stream during periods of no call and did not require replacement. The remaining 27 acre-feet of lagged dewatering depletions impacted the stream during periods of call and must be replaced to the river during this plan period. You have proposed to replace these depletions by delivering 3 acre-feet of replacement water to the stream during the periods of November through December and April through October, months where there is typically a call on the river. In addition, there are a total of 7.23 acre-feet of lagged depletions from past dewatering operations that will impact the stream during this plan period (November 1, 2020 through October 31, 2021) which will be replaced during the month they are calculated to impact the river.

The total amount of depletions that must be replaced under this SWSP therefore equals 60.04 acre-feet, as shown in the attached Table 1. Columns A through G of Table 1 show the monthly breakdown of evaporative losses and lagged depletions. Depletions from the East 8<sup>th</sup> Street Pit are assumed to impact the St. Vrain River directly adjacent to the pit in the S½ of the S½ of Section 4, Township 5 North, Range 65 West of the 6<sup>th</sup> P.M.

## Replacements

Replacement water for the period of November 2020 through February 2021 will be provided using a total of 17.6 acre-feet of fully reusable municipal return flows leased from the City of Aurora. A copy of the lease agreement, as modified in a letter dated December 11, 2020, showing the monthly replacement schedule was provided with this SWSP request and is attached. The reusable effluent is anticipated to be delivered at the outfall of the Robert W. Hite Treatment Facility (a/k/a Metro Wastewater Treatment Plant (MWWTP)) (WDID 0200700), located in the SW¼ of the SW¼ of Section 1, Township 3 South, Range 68 West of the 6<sup>th</sup> P.M. Aurora may deliver water at any other delivery point on the South Platte River at or below the MWWTP to the confluence of the St. Vrain and South Platte Rivers. A transit loss of 0.25% per mile is currently assessed during the non-irrigation season (October through March) for delivery of water down the South Platte River. The delivery schedule incorporates a transit loss of 16.5% based on the assumed transit loss rate of 0.25% per mile for a distance of 66 miles from the MWWTP to the point of depletions for the East 8<sup>th</sup> Street Pit. If a different transit loss is determined by the division engineer or water commissioner, the Applicant must modify their accounting and replacements as necessary to be consistent with the determined transit loss. During the winter it is possible for a call to be placed at the Evans No. 2 Ditch (WDID 0200817) to fill Milton Reservoir, which could potentially sweep the river. It is the Applicant's responsibility to track the daily call and make arrangements as necessary to ensure the required replacement water is bypassed or otherwise delivered to the confluence of the St. Vrain and South Platte Rivers.

Pursuant to a mining lease agreement between Laser and the City of Greeley ("Greeley"), Greeley will provide additional augmentation water for the East 8<sup>th</sup> Street Pit. A copy of the mining lease has previously been provided to this office. A letter from Greeley dated December 7, 2020 confirming the monthly replacement schedule was provided with this SWSP request and is attached. Greeley will provide a total of 46.0 acre-feet of fully consumable water that has been changed for augmentation use during the period of March 2021 through October 2021. Greeley anticipates delivering the replacement water to the Cache la Poudre River at Greeley's wastewater treatment plant (WDID 0302312) located approximately ½ mile upstream of the East 8<sup>th</sup> Street Pit. The delivery schedule incorporates a transit loss of 0.13% based on an assumed rate of 0.25% per mile. Any

releases by Greeley at a location other than its wastewater treatment plant must be coordinated with the water commissioner to ensure the proper transit losses are applied and that no intervening water rights are injured. In addition, if a different transit loss is determined by the division engineer or water commissioner, the Applicant must modify their accounting and replacements as necessary to be consistent with the determined transit loss.

The monthly schedule of proposed replacement deliveries from each source, transit losses, and overall water balance is shown in columns H through L of the attached Table 1.

### **Long Term Augmentation**

In accordance with the letter dated April 30, 2010 from the Colorado Division of Reclamation, Mining, and Safety (“DRMS”), all sand and gravel mining operators must comply with the requirements of the Colorado Reclamation Act and the Mineral Rules and Regulations for the protection of water resources. The April 30, 2010 letter from DRMS requires that you provide information to DRMS to demonstrate you can replace long-term injurious stream depletions that result from mining-related exposure of groundwater. In accordance with approach number 1, Superior Oilfield Services Co., LTD, has submitted a financial warranty in the amount of \$270,000 for the East 8<sup>th</sup> Street operation, which the Mined Land Reclamation Board has determined equals the estimated costs of reclamation. The East 8<sup>th</sup> Street Pit is proposed to be reclaimed to an open water lake or reservoir. It is noted that pursuant to a mining lease agreement with the City of Greeley (landowner), Greeley has the long-term augmentation responsibility at this site.

### **Conditions of Approval**

I hereby approve this substitute water supply plan in accordance with section 37-90-137(11), C.R.S., subject to the following conditions:

1. This SWSP shall be valid for the period of November 1, 2020 through October 31, 2021, unless otherwise revoked, modified, or superseded by decree. If either lagged or projected depletions will extend beyond the plan’s expiration date, a renewal request must be submitted to this office with the statutory fee (currently \$257) prior to the expiration date but no later than September 1, 2021. If a renewal request is received after the expiration date of this plan, it may be considered a request for a new SWSP, in which case a filing fee of \$1,593 will be required.
2. Well permit no. 82986-F was obtained for the current use and exposed pond surface area of the East 8<sup>th</sup> Street Pit in accordance with sections 37-90-137(2) and (11), C.R.S.
3. The total surface area of the groundwater exposed at the East 8<sup>th</sup> Street Pit site during this plan period must not exceed 8 acres, which results in an annual net evaporative loss of 23.4 acre-feet.
4. Total consumption at the East 8<sup>th</sup> Street Pit must not exceed this amount unless an amendment is made to this plan.
5. Approval of this plan is limited to covering evaporative losses from exposed groundwater surface areas and lagged depletions. This office must first approve any additional uses for the water.

6. The replacement water that is the subject of this plan cannot be sold or leased to any other entity. As a condition of subsequent renewals of this substitute water supply plan, the replacement water must be appurtenant to this site until a plan for augmentation is obtained.
7. All releases of replacement water must be sufficient to cover all out-of-priority depletions in time, place, and amount and must be made under the direction and/or the approval of the water commissioner. Notice must be provided and approval made by the water commissioner at least 48 hours prior to the release of replacement water, or as required by the water commissioner.
8. The Division Engineer, or his designated representative, will administer all such water transported in the South Platte River or its tributaries under this SWSP, including water for replacement of depletions, past intervening headgates to ensure that such water is not intercepted or otherwise diminished in quantity by diversion, use or other interference by intervening water rights and to assure that such water remains available and suitable for Applicant's uses under this SWSP, except when any intervening headgate is diverting the entire flow of ("sweeping") the river. In the event that delivery past headgates which sweep the river requires the installation of a bypass structure or the use of an existing bypass structure by agreement with a third-party, Applicant is responsible for either installing a new bypass structure with a continuous recording measuring device(s) as approved by the Water Commissioner or securing an agreement with a third-party to use an existing bypass structure and providing such information and agreement to the Division Engineer.
9. The Division of Water Resources will not be responsible for any enforcement or administration of third party agreements that are not included in a decree of the water court.
10. The release of replacement water may be aggregated to maximize beneficial use. The water commissioner and/or the division engineer shall determine the rate and timing of an aggregated release.
11. Conveyance loss for delivery of augmentation water is subject to assessment and modification as determined by the division engineer.
12. Adequate accounting of depletions and replacements must be provided to the division engineer in Greeley ([DNR.Div1Accounting@state.co.us](mailto:DNR.Div1Accounting@state.co.us)) and the water commissioners (Mark Simpson at [Mark.Simpson@state.co.us](mailto:Mark.Simpson@state.co.us) and Jorge Vidal at [Jorge.Vidal@state.co.us](mailto:Jorge.Vidal@state.co.us)) on a monthly basis, or more frequent if required by the water commissioner. Submitted accounting shall conform to the Administration Protocol "*Augmentation Plan Accounting, Division One - South Platte Basin*" (attached).
13. It is the Applicant's responsibility to verify that the entities making replacements are identifying this use on their accounting submitted to our office. For the period of this plan, those entities are the City of Aurora and the City of Greeley (WDID 0303330 - GLIC Accounting).
14. The name, mailing address, and phone number of the contact person who will be responsible for operation and accounting of this plan must be provided on the accounting forms to the division engineer and water commissioner.
15. The approval of this SWSP does not relieve the Applicant and/or landowner of the requirement to obtain a Water Court decree approving a permanent plan for augmentation or mitigation to ensure the permanent replacement of all depletions, including long-term

evaporation losses and lagged depletions after gravel mining operations have ceased. If reclamation of the mine site will produce a permanent water surface exposing groundwater to evaporation, an application for a plan for augmentation must be filed with the Division 1 Water Court at least three (3) years prior to the completion of mining to include, but not be limited to, long-term evaporation losses and lagged depletions.

16. If a lined pond results after reclamation, replacement of lagged depletions shall continue until there is no longer an effect on stream flow.
17. Post-pumping dewatering depletions (including any depletions associated with the refilling of the pit) must be replaced in time, place and amount.
18. To assure that depletions from groundwater evaporation do not occur in the unforeseen event, or events, that would lead to the abandonment of the East 8<sup>th</sup> Street Pit, a bond in the amount of \$270,000 has been obtained through the DRMS for lining or backfilling of the pit.
19. The state engineer may revoke this SWSP or add additional restrictions to its operation if at any time the state engineer determines that injury to other vested water rights has or will occur as a result of the operation of this SWSP. Should this SWSP expire without renewal or be revoked prior to adjudication of a permanent plan for augmentation, all excavation of product from below the water table, and all other use of water at the pit, must cease immediately.
20. In accordance with amendments to section 25-8-202-(7), C.R.S. and "Senate Bill 89-181 Rules and Regulations" adopted on February 4, 1992, the State Engineer shall determine if this substitute supply is of a quality to meet requirements of use to which the senior appropriation receiving the substitute supply has normally been put. As such, water quality data or analyses may be requested at any time to determine if the requirement of use of the senior appropriator is met.
21. The decision of the state engineer shall have no precedential or evidentiary force, shall not create any presumptions, shift the burden of proof, or serve as a defense in any water court case or any other legal action that may be initiated concerning the SWSP. This decision shall not bind the state engineer to act in a similar manner in any other applications involving other SWSPs or in any proposed renewal of this SWSP, and shall not imply concurrence with any findings of fact or conclusions of law contained herein, or with the engineering methodologies used by the Applicant.

Should there be any further comments or questions, please contact Michael Hein, Lead Assistant Division Engineer, in Greeley at 970-352-8712 or Sarah Brucker of this office.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff Deatherage", is written in a cursive style.

for Jeff Deatherage, P.E.  
Chief of Water Supply

Attachments: Figure 1

Table 1

City of Aurora Lease (December 11, 2020)

City of Greeley Letter (December 7, 2020)

April 30, 2010 DRMS letter

Administration Protocol *"Augmentation Plan Accounting, Division One - South Platte River"*

Administration Protocol *"Delivering Water Using the Natural Stream, Division One - South Platte River"*

Cc: Michael Hein, Lead Assistant Division Engineer, [Michael.Hein@state.co.us](mailto:Michael.Hein@state.co.us)  
810 9<sup>th</sup> Street, Suite 200, Greeley, Colorado 80631, 970-352-8712

Brent Schantz, River Operations/Compact Commissioner, [Brent.Schantz@state.co.us](mailto:Brent.Schantz@state.co.us)

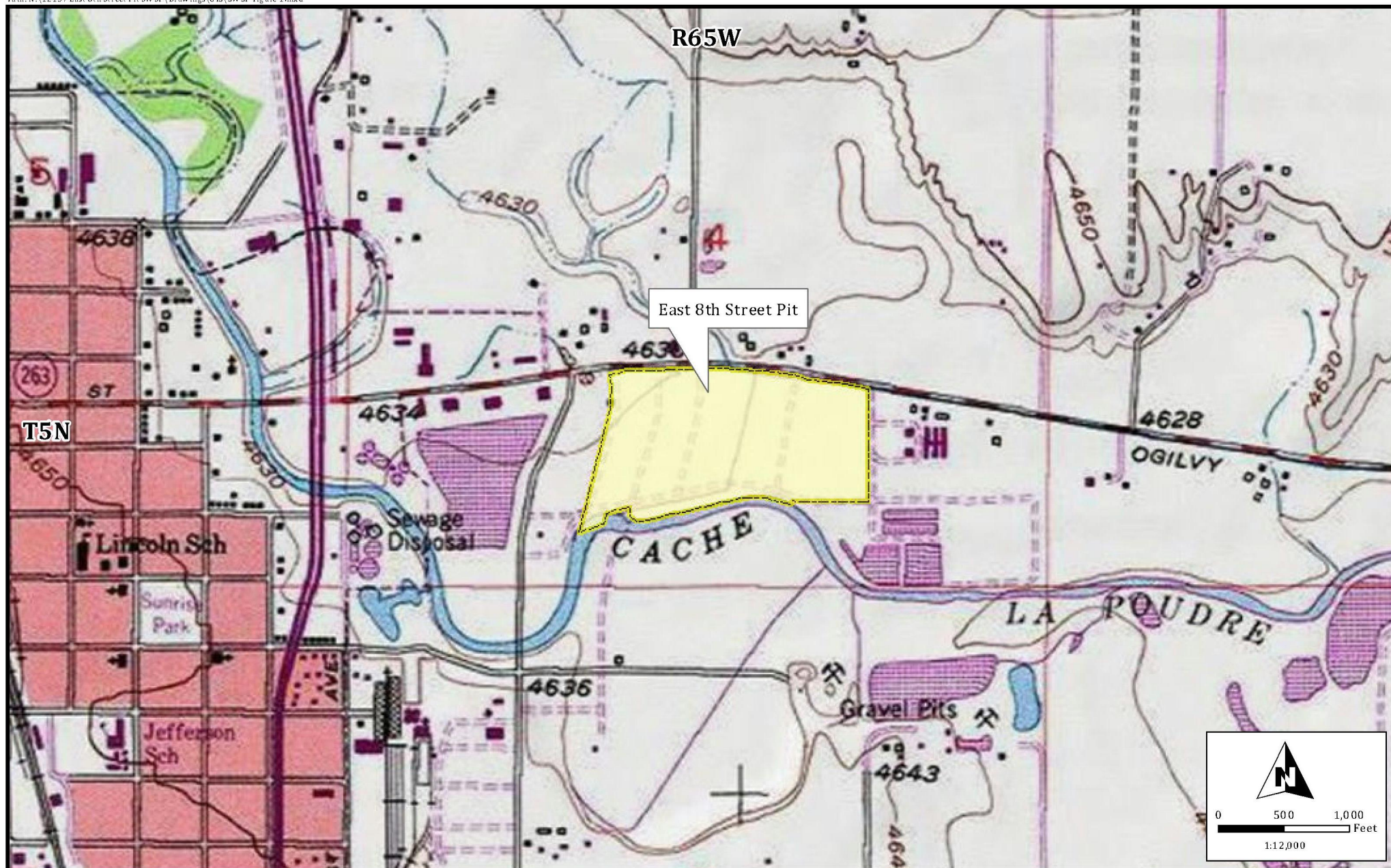
Louis Flink, Tabulation/Diversion Records Coordinator, [Louis.Flink@state.co.us](mailto:Louis.Flink@state.co.us)

Mark Simpson, Water Commissioner, District 3, [Mark.Simpson@state.co.us](mailto:Mark.Simpson@state.co.us)

Jorge Vidal, Water Commissioner, District 2, [Jorge.Vidal@state.co.us](mailto:Jorge.Vidal@state.co.us)

Eric C. Scott, Division of Reclamation Mining and Safety, [Eric.Scott@state.co.us](mailto:Eric.Scott@state.co.us)





## EAST 8TH STREET PIT (M-00-082)

Vicinity Map

Date: 7 Nov 2012

Job #: 12-137

Drawn By: JMD

Figure:

**1**

Of:

1



**Table 1**  
**WY 2019 Water Balance**  
**East 8th Street Pit Substitute Water Supply Plan**

Date Revised: 12/13/2020

AG Job #: 12-137

All values in ac-ft unless noted

Month	Depletions							Replacements				Water Balance (L)
	Exposed Water				Post-Pumping		Total Augmentation Requirement (G)	Greeley		Aurora Lease		
	Monthly Net Evap (ft) (A)	Surface Area (acres) (B)	Evaporative Losses (C)	Lagged Depletions (D)	Post-Pumping Depletions (E)	"Make-Up" Depletions (F)		Lease Volume (H)	Lease Credit (I)	Volume (J)	Credit (K)	
Nov-20	0.10	8.0	0.82	1.99	0.78	3.00	5.77	0.0	0.00	7.00	5.85	0.07
Dec-20	0.09	8.0	0.69	1.32	0.74	3.00	5.06	0.0	0.00	6.10	5.09	0.04
Jan-21	0.08	8.0	0.67	1.13	0.71	0.00	1.83	0.0	0.00	2.20	1.84	0.00
Feb-21	0.11	8.0	0.88	1.17	0.67	0.00	1.84	0.0	0.00	2.30	1.92	0.08
Mar-21	0.14	8.0	1.12	1.31	0.64	0.00	1.95	2.0	2.00	0.00	0.00	0.05
Apr-21	0.23	8.0	1.86	1.79	0.61	3.00	5.40	5.5	5.49	0.00	0.00	0.09
May-21	0.30	8.0	2.43	2.28	0.58	3.00	5.86	5.9	5.89	0.00	0.00	0.04
Jun-21	0.44	8.0	3.49	3.07	0.55	3.00	6.63	6.7	6.69	0.00	0.00	0.07
Jul-21	0.48	8.0	3.83	3.52	0.52	3.00	7.04	7.1	7.09	0.00	0.00	0.05
Aug-21	0.44	8.0	3.52	3.44	0.50	3.00	6.94	7.0	6.99	0.00	0.00	0.05
Sep-21	0.31	8.0	2.45	2.75	0.47	3.00	6.22	6.3	6.29	0.00	0.00	0.07
Oct-21	0.20	8.0	1.64	2.04	0.45	3.00	5.50	5.5	5.49	0.00	0.00	0.00
Total	2.93		23.40	25.81	7.23	27.00	60.04	46.0	45.94	17.6	14.70	0.60

**Notes:**

- (A) Monthly Evaporation rates from previous AI CoSSP approvals
- (B) Estimated exposed groundwater acreage
- (C) Monthly Evap rate (Col A) multiplied by current monthly exposed surface area (Col B)
- (D) Lagged depletions include past consumptive use at the East 8th Street Pit
- (E) Estimated post-dewatering depletions from past pumping
- (F) Previously unreplaced post-dewatering depletions being replaced during this plan period
- (G) Total Augmentation Requirement is Col D + Col E + Col F
- (H) Total Consumptive Use (CU) is Col C + Col E + Col F + Col G
- (I) CU amount is lagged back to river using Glover equation. Lagged estimate includes past consumptive use at the East 8th Street Pit
- (J) Lease from the City of Greeley
- (K) Credit from the City of Greeley lease after transit loss is assessed
- (L) Lease from the City of Aurora
- (M) Credit from the City of Aurora lease after transit loss is assessed
- (N) Water Balance = (K) + (M) - (I)

Unit Transit Loss (Poudre) =	0.25%	per mile
Greeley Lease Transit Distance =	0.5	miles
Greeley Lease Total Transit Loss =	0.13%	
Aurora Lease Transit Distance =	66	miles
Aurora Lease Total Transit Loss =	16.50%	



Aurora Water



City of Aurora

Water Resources

15151 E. Alameda Parkway, Ste. 3600

Aurora, Colorado 80012

303.739.7370

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December 11, 2020

Mr. Jack Miller  
Laser Oilfield Service LLC  
2986 W. 29<sup>th</sup> St., #12  
Greeley, CO 80631

**Re: Agreement for Delivery of Reusable Raw Water**

Dear Mr. Miller:

This letter provides the City of Aurora's consent to modify the current Delivery Schedule set forth in Paragraph 2. of the Agreement for Delivery of Reusable Raw Water between the City of Aurora and Laser Oilfield Service LLC dated October 30, 2020. This request is in response to the request from Mr. Jared Dains, engineer with Applegate Group, Inc., representing Laser Oilfield in this matter.

The modified Delivery Schedule is set forth below and replaces the Delivery Schedule set forth in Paragraph 2. of the Agreement:

Month	Nov-20	Dec-20	Jan-21	Feb-21	Total
Original Amount [ac-ft]	2.4	1.6	1.4	1.4	6.8
Additional Amount [ac-ft]	4.6	4.5	0.8	0.9	10.8
New Total Volume [ac-ft]	7.0	6.1	2.2	2.3	17.6

All the terms and conditions of the October 20, 2020 Agreement apply to the modified Delivery Schedule. Aurora shall bill Laser Oilfield for the additional amount of 10.8 acre-feet of water under the terms of the Agreement.

If you have any questions, please contact John Murphy at 303-739-7360.

Sincerely,

Dawn M. Jewell  
South Platte Basin Water Resources Supervisor

c: John Murphy  
Jared Dains, P.E.



December 7, 2020

Laser Oilfield Services Co.  
c/o John McFarland  
2986 W 29<sup>th</sup> St. Unit 12  
Greeley, CO 80631

RE: Augmentation Water Lease for **Laser Oilfield Services Co.**

Dear Mr. McFarland,

We are in receipt of Laser Oilfield Services Co. (Laser) additional augmentation water requirement schedule for March 2021 – October 2021. To meet Laser's augmentation demands, Greeley will make available to Laser, wholly consumable water that has been changed for augmentation use at one of the following locations: 1) in the Cache la Poudre River at (a) the outlet of Greeley's Water Pollution Control Facility; (b) the outlet of the Flatiron Reservoir Nos. 1-5 (aka Poudre Ponds at Greeley); (c) Release Structures for Greeley Canal No. 3 including, but not limited to: (i) the 23<sup>rd</sup> Avenue Spillway; (ii) the 16<sup>th</sup> Street Release Structure; and (ii) The F Street Release Structure; and (vi) the 35<sup>th</sup> Avenue Drainage Ditch; provided, however, that at any time the Ogilvy Ditch is calling Greeley will only deliver water upstream of the Ogilvy Ditch headgate; or (2) the Big Thompson River at delivery stations or release structures under the Greeley Loveland Irrigation Company's irrigation canal system, or any other company's canal associated therewith; provided, however, that Greeley will not deliver Leased Water to the Big Thompson River at any time the Lower Latham Ditch is calling; or (3) at such other point or points on which the Parties mutually agree in writing.

The original request totaled **20.6** acre-feet for replacements will be made per the schedule provided by Applegate Group. This request was invoiced and paid as of 12/1/2020.

The Additional Amount of **25.4** acre-feet will be added to the original amount.

Laser's Augmentation Requirement (acre-feet)									
	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Total
Original Amount	1.4	1.8	2.3	3.1	3.6	3.5	2.8	2.1	<b>20.6</b>
Additional Amount	0.6	3.7	3.6	3.6	3.5	3.5	3.5	3.4	<b>25.4</b>
Total	2.0	5.5	5.9	6.7	7.1	7.0	6.3	5.5	<b>46.0</b>

The current rate for augmentation water is \$800/acre-foot, for a total of **\$20,320.00**. Please see the attached invoice. The payment is due by **January 8, 2021**.



Please be aware that it is Laser's responsibility to receive necessary approval to use the rented augmentation supplies provided by Greeley. Any transmission losses charged by State water officials will be the sole responsibility of Laser.

If you have any questions, please do not hesitate to call me at (970) 350-9820.

Sincerely,

*Leah Hubbard*

Leah Hubbard  
Water Resources Administrator I, Greeley Water & Sewer Department

Cc: Jared Dains PE Applegate Group, Inc.  
Adam Jokerst, Deputy Director of Water Resources  
Jennifer Petrzela, Water Resources Operations Manager

**DIVISION OF RECLAMATION, MINING AND SAFETY**  
Department of Natural Resources

1313 Sherman St., Room 215  
Denver, Colorado 80203  
Phone: (303) 866-3567  
FAX: (303) 832-8106

M-2000-082



Bill Ritter, Jr.  
Governor

James B. Martin  
Executive Director

Loretta E. Piñeda  
Director

April 30, 2010

Aggregate Industries - WCR, Inc.  
1707 Cole Blvd., Ste. 100  
Golden, CO 80401

RE: Mining Operations with Exposed Ground water

To Whom It May Concern:

The Division of Reclamation Mining and Safety is responsible for ensuring that Sand and Gravel mining operators comply with the requirements of the Colorado Land Reclamation Act for the Extraction of Construction Materials (Act) and the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials (Rules). Among these requirements are provisions for the protection of water resources. The Act requires that reclamation plans must ensure minimization of disturbances to the prevailing hydrologic balance, including disturbances to the quantity of water in the area affected by mining and in the surrounding areas. § 34-32.5-116(4)(h). Rule 3.1.6(1)(a) requires compliance with Colorado water laws and regulations governing injury to existing water rights both during and after mining. Permits must specify how the permittee will comply with applicable Colorado water laws and regulations governing injury to existing water right rights. Rule 6.3.3(j); Rule 6.4.5(2)(c). After an extensive review, the Division determined that several operators may not have appropriate permit conditions to address certain reclamation liabilities arising from impacts to water resources.

In September 2009 the Division of Water Resources (DWR) updated its Guidelines for Sand and Gravel Pits. These guidelines provide guidance on achieving compliance with state law regarding replacement of depletions from sand and gravel mining, thus the guidelines provide a benchmark for the protection of hydrologic balance required under the Act and Rules. As noted in the Guidelines, sand and gravel operations which expose groundwater without complying with state law create a reclamation liability by impacting available groundwater.

State law requires that any person exposing ground water must obtain a well permit from the SEO pursuant to § 37-90-137(11). Because exposed groundwater results in out-of-priority water depletions, operations which expose ground water must also eventually obtain a water-court approved augmentation plan. Currently, several operators do not have either an augmentation plan or bonding to provide an alternative method to mitigate injurious stream depletions that result from mining-related exposure of ground water. The Division has a statutory duty to ensure that lands affected by mining are reclaimed in a manner that complies with state law and to ensure that operators have sufficient bonding to achieve reclamation. In order to assist operators in achieving compliance with these requirements, the Division proposes that, by April 30, 2011, operators should contact the Division and agree upon a plan for achieving compliance.



The Division has identified four approaches for operators:

1. File a financial warranty that will ensure backfilling of the pit to cover the exposed ground water to a depth of two feet above the static ground water level or,
2. Obtain a court approved augmentation plan prior to exposing ground water or,
3. File a financial warranty to cover the cost of installing a clay liner or slurry wall that meets the Division of Water Resources requirements for preventing ground water exposure or,
4. Obtain approval from the Division of Water Resources that acknowledges compliance with the SEO's requirements pursuant to § 37-90-137(11).

The Division will work with operators on an individual basis as they move to implement one of these plans. It is likely that options 1 and 3 will require the submittal of a technical revision or an amendment to the existing permit depending on the nature of the current mining and reclamation plan and the proposed changes. Increased financial warranties, as a result of these modifications, may be posted in a phased manner not to exceed three years. Amendments or revisions currently under review will be required to be approved by April 30, 2011 and may use the phased financial warranty approach described above. New applications going forward or presently under review by the Division will be required to meet the requirements of one of the options 1-4 at the time of application approval. Failure of affected operators to initiate contact with the Division and gain compliance as described above could result in an enforcement action being issued by the Division.

If you have any questions, please contact Tony Waldron at 303-866-3567, extension 8150.

cc:	M1977141	Lyons Quarry	M1989029	Longmont Distel Operations
	M2004051	Wattenberg Lakes	M1991140	Tucson Resource Mine
	M2004031	Hazeltine Mine	M1992069	83rd Joint Venture
	M2004044	Tucson South Resource	M1994093	Dahlia North Resources Pit
	M2003069	Timberline Resource		
	M2001016	Fredstrom Resource		
	M1989120	Platte Valley Operation		
	M1984164	Neighbors Pit		
	M1997014	Deer Creek Quarry		
	M1999021	Stegner Farms		
	M1999034	Cooley Reservoir & Fulton Wildlife Area		
	M1999098	Riverview Resources		
	M1990007	Camenish/Larson Pit		
	M2000087	Milliken Resource		
	M2000082	E 8th Street Operation		
	M1994027	Longmont Operation		
	M1977436	Brighton Mine		
	M1973021	Morrison Quarry		

# ADMINISTRATION PROTOCOL

## Augmentation Plan Accounting

### Division One – South Platte River

This protocol establishes the accounting and reporting process required to enable the division engineer's office to confirm that depletions from all out-of-priority diversions are being replaced so as to prevent injury to vested water rights. The accounting must comport with established "cradle to grave" accounting standards, which allow an audit of the information to track exactly how the data is manipulated as it is translated from raw input data to the resultant impact on the river. While this protocol is subordinate to any decreed language addressing specific accounting requirements, it generally addresses the minimum requirements of such accounting.

The accounting must use the standard convention where a depletion is "negative" and an accretion or other replacement source is "positive". The sum of the impacts will then result in either a "negative" or "positive" impact on the stream.

Wells in plans that have a negative stream impact must provide additional replacement water, curtail pumping or both until the impact is no longer negative. Plans with a negative stream impact that fail to curtail pumping will be ordered to stop pumping until such time as the projected impact of the wells is no longer negative.

1. Accounting must be submitted electronically to the water commissioner ([call 970-352-8712 to obtain email address](tel:970-352-8712)) and division engineer at [Div1Accounting@state.co.us](mailto:Div1Accounting@state.co.us) within 30 days of the end of the month for which the accounting is being submitted.
2. The accounting must provide the **contact information** including name and address for:
  - a. the owner(s) of each well
  - b. the person responsible for submitting the accounting
  - c. the plan administrator and/or the plan attorney.
3. All **input data** must be in one location, such as an "Input" worksheet, etc. The accounting must show all pumping. Input data includes the information listed below.
  - a. The required input data for each **well** is:
    - i. the monthly meter reading for wells that use a **presumptive depletion factor** (PDF) to determine the associated consumptive use (CU); or
    - ii. the monthly CU in acre-feet (AF) for wells that have a decree or approved SWSP that allows the wells to use a **water balance methodology** to determine the CU of the well. The analysis used to determine the CU must be included with the accounting.
    - iii. Wells that are decreed as an **alternate point of diversion** (APOD) to a surface water right must report pumping on a daily basis if any of the diversion during the month is claimed as being "in priority". (See *Administration Protocol – APOD Wells* for more details.)

- iv. The well meter serial readings for each meter shall be included if there is more than one meter on a well.
- b. Each **recharge site** must comply with the *Administration Protocol - Recharge* and must report the:
  - i. daily volume in AF diverted into the site;
  - ii. monthly volume in AF released from the site;
  - iii. monthly net evaporative loss in AF;
  - iv. volume of water in AF remaining at the end of the month.
- c. The accounting must identify each source of **fully consumable replacement water** actually delivered to the location impacted by the depletions. To demonstrate the water was actually delivered to the required location will require the following information:
  - i. the originating source of the water, date released and volume of water released;
  - ii. transportation losses to point of diversion or use, if any, using stream loss factors approved by the water commissioner;
  - iii. the volume of water actually delivered on a daily basis past any surface water diversion that was sweeping the river as corroborated by the water commissioner.

(See *Administration Protocol – Delivery of Water* for more details on delivering water.)
- d. For each source of **replacement water that has been “changed”** for use as a source of augmentation, such as changed reservoir shares, ditch bypass credits or credits from dry-up, etc., the following input information must be reported:
  - i. the basis and volume of the return flow obligation;
  - ii. the location the changed water was historically used; this will be the location used to determine the timing of the return flow impact on the river.
- 4. The accounting must include a monthly **projection** of the plan’s operation at least through March 31 of the next calendar year.
- 5. The accounting must include all input and output files associated with **modeling the delayed impact** of diversions. The output from the modeling must report to a summary table that shows, by month, the ongoing depletions associated with pumping, return flow obligations, etc. and accretions from recharge operations.
- 6. A **net impact** summary must show the out-of-priority depletions, accretions from each recharge site, volume of replacement water actually delivered to the location of the depletions and the resultant net impact on **a daily basis**. If necessary, the net impact must be done by river reach.

While **modeling** may use a **monthly step function** to determine the depletions from pumping and accretions from recharge, the monthly result must then be **divided by the number of days in the month** in order to **simulate a daily impact**, as water rights are administered on a daily and not monthly basis.

Replacement water must be provided such that the **daily net impact** (using the simulated daily numbers from the modeling) **is not negative**. If a well is out-of-priority for 15 days during a month, replacement must be made only for the 15 days the well is out-of-priority. The replacement must be made, however, on a daily basis as opposed to, for instance, making an aggregated release equal to the volume of the out-of-priority depletions. Likewise, the simulated daily accretion will only count toward replacing the depletion on the days the well is out-of-priority. The accretions that report to the river when the well is in priority cannot be used to replace the out-of-priority depletions.

The **accretions that impact the river when the well is in priority** are not considered “excess” unless the cumulative net impact of the well is not negative for the entire irrigation year to date. (The irrigation year for this purpose is April 1 thru the following March 31.) Until such time as the cumulative net impact is not negative, the accretions must simply be released to the river and cannot be leased to other plans or recaptured. Plans that show a positive cumulative net impact are still required to make replacements on a daily basis; the cumulative analysis only effects whether or not accretions reporting to the river when the well is in priority are considered “excess” and are, therefore, able to be recaptured.

7. The basis for determining that the depletions are **out-of-priority** must be clearly established and all steps in the calculation included in the accounting. The analysis may be done, unless otherwise limited by decree, for each well or groups of wells, provided the most junior water right associated with the group of wells is used as the reference water right for the group’s out-of-priority status.
8. Accounting must include **actual information** for the irrigation year through the month for which the accounting is being submitted **AND projections** of the plan operation through March 31 of the next calendar year.
9. The following **naming convention** must be used for all files submitted pursuant to item 1:

“Plan**WDID**\_YYMMDD”

where: PlanWDID is the WDID assigned by the division engineer’s office  
YYMMDD corresponds to the date the accounting is submitted.

As an example, the assigned WDID for the former GASP plan was 0103333. If accounting using Excel® was submitted for that plan on May 15, 2004, the file name would be:

“0103333\_040515.xls”

The name of the file must be in the subject line of the email.

10. All accounting must be reported using the **WDID** for the structure, at a minimum. Other information such as well name, permit number, etc. may also be included as desired. All wells must be decreed by the water court, permitted by the state engineer or included in a decreed plan for augmentation. Unregistered and undecreed wells cannot, in the opinion of the division engineer, be effectively administered because of the need to know the location, allowable diversion rate and use of the well - information that is only available from the decree or permitting process.

11. If a well is covered in multiple SWSP's or augmentation plans, the monthly meter readings must be the same in the accounting for each plan covering the subject well. The accounting for every plan covering the well shall state the proportionate pumping amount covered by each plan to assure all out-of-priority depletions are replaced.
12. The following additional accounting is required for sources of replacement water used for more than one plan. The water right owner of the replacement water is responsible for accounting for the total replacement amount and how much each plan is using of that total amount. The accounting for portions of the replacement water by other users must match the accounting of the water right owner. The amount of replacement water used by the water right owner and other users together shall not exceed the total replacement amount available.

(See *Administration Protocol – Use Of Unnamed Sources For Replacement* for additional requirements concerning required notice and approval of sources of replacement not specifically described in a SWSP or augmentation plan)



# ADMINISTRATION PROTOCOL

## Delivering Water Using the Natural Stream

### Division One—South Platte River

This document outlines the actions water users must take in order for the Division of Water Resources to deliver water by means of the natural stream. This protocol is subordinate to any contradicting decreed language addressing specific water rights.

#### Access

The language of section 37-84-113, C.R.S., *implicitly acknowledges that a natural stream may be used as a conduit.*<sup>1</sup>

#### Notification

The water user must notify the water commissioner **at least 48 hours and not more than 7 days prior to the release of water** being delivered via a natural stream system unless the water commissioner specifically approves a different notice requirement in advance of the release. Advance notice is necessary in order to provide the water commissioner the time required to confirm that the delivery can be made under the current stream conditions.

#### Measurement Structures

In accordance with §37-84-113, C.R.S., water users seeking to use the natural stream to deliver water

*“shall construct suitable and proper measuring flumes or weirs, equipped with self-registering devices if required by the state engineer, for the proper and accurate determination of the amount and flow of water turned into, carried through, and diverted out of said natural stream.” (underline emphasis added)*

In short, water users are responsible for the construction of all measurement structures required to administer their water. This may include measurement structures required, in the opinion of the water commissioner or division engineer, to deliver their water past intervening water rights that are drying or “sweeping” the river.

**If the water commissioner is unable to corroborate that water was delivered past a structure that was sweeping the river, none of the water released will be available for diversion or replacement credit below the sweeping structure.**

#### Transit Loss

The volume of water available for diversion or replacement credit is the volume released to the stream less transit loss. The transit loss will:

- comply with any specific court decree covering the delivery;
- be based on current conditions and shall be determined by the water commissioner or division engineer;
- be the same for all water users in the same reach of the river or stream at the time of the delivery.

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<sup>1</sup> Trail's End Ranch, LLC v. CO DWR, 91 P.3d 1058 (Colo. 2004).