



COLORADO
Division of Water Resources
Department of Natural Resources

January 16, 2020

Abdullah Javed, E.I.T.
Applegate Group, Inc.
1490 West 121st Avenue, Suite 100
Denver, CO 80234

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

Approval Period: November 1, 2019 through October 31, 2020

Contact information for Mr. Javed: 303-452-6611; AJaved@applegategroup.com

Dear Mr. Javed:

We have received your letter dated December 19, 2019, 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 8th Street Pit sand and gravel mining operation. The current permittee for the East 8th 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. 3696031).

SWSP Operation

The East 8th 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 6th 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 in order to allow reclamation. Depletions at the East 8th Street Pit during this plan period will be limited to evaporation from exposed groundwater surface areas, and ongoing lagged depletions associated with past operational and evaporative consumptive use at the site. The City of Greeley is the owner of the land on which the East 8th 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 17.1 acres during this plan period, consisting of the west cell, settling ponds, and dewatering trenches in the east cell. 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 8th Street Pit are therefore estimated to total 50.14 acre-feet for the 17.1 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.

The east cell will be continuously dewatered during this SWSP period, and all such water will be discharged to the Cache la Poudre River. As long as the pit is continuously dewatered and all water is discharged to the Cache la Poudre River, the accretions to the stream system should be sufficient to replace the lagged dewatering depletions. All site dewatering must be accounted for in a method satisfactory to the division engineer and water commissioner. Adequate measuring devices may be required in order to adequately account for the dewatering.

After cessation of dewatering the west cell in July 2016, the 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. The total lagged depletions were determined to be 47.68 acre-feet for this plan period. This amount includes 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.

Columns A through F of the attached Table 1 show the monthly breakdown of evaporative losses and lagged depletions. Depletions from the East 8th 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 6th P.M.

Replacements

Replacement water for the period of November 2019 through February 2020 will be replaced using a total of 9.01 acre-feet of fully reusable municipal return flows leased from the City of Aurora. A copy of the lease agreement dated December 12, 2019 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 SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 1, Township 3 South, Range 68 West of the 6th 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 8th 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 8th Street Pit. A copy of the mining lease has previously been provided to this office. A letter from Greeley dated November 4, 2019 confirming the monthly replacement schedule was provided with this SWSP request and is attached. Greeley will provide a total of 40.41 acre-feet of fully consumable water that has been changed for augmentation use during the period of March 2020 through October 2020. Greeley anticipates delivering the replacement water to the Cache la Poudre River at Greeley's wastewater treatment plant (WDID 0302312) located approximately $\frac{1}{2}$ mile upstream of the East 8th 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 G through K 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 8th Street operation, which the Mined Land Reclamation Board has determined equals the estimated costs of reclamation. It is noted that pursuant to 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, 2019 through October 31, 2020, 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, 2020. 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 8th 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 8th Street Pit site during this plan period must not exceed 17.1 acres, which results in an annual net evaporative loss of 50.14 acre-feet.
4. Total consumption at the East 8th 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. 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) and the water commissioners (Mark Simpson at Mark.Simpson@state.co.us and Jorge Vidal at 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 entity making replacements is 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. If a lined pond results after reclamation, replacement of lagged depletions shall continue until there is no longer an effect on stream flow.
16. Dewatering at this site will produce delayed depletions to the stream system. As long as the pit is continuously dewatered, the water returned to the stream system should be adequate to offset the depletions attributable to the dewatering operation, thus dewatering is required to continue during the term of this plan. The operator shall equip the dewatering operations with a totalizing flow meter and report monthly meter readings which will be used to determine the post-pumping depletions when dewatering ceases. Once dewatering at the site ceases, the delayed depletions must be addressed, including depletions resulting from the gradual refilling of the pit. At least three years prior to completion of dewatering, a plan must be submitted that specifies how the post pumping dewatering depletions (including refilling of the pit) will be replaced, in time, place and amount.
17. If dewatering of the site is discontinued, the pit would fill creating additional depletions to the stream system due to increased evaporation. To assure that additional depletions to the river do not occur, a financial warranty for \$270,000 for lining or backfilling of the pit has been obtained. Therefore, if the dewatering is discontinued this warranty can finance the

completion of the lining of this pit or the backfilling, thus preventing depletions to the stream system.

18. 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.
19. 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.
20. 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,



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

Attachments: Figure 1

Table 1

City of Aurora Lease (December 12, 2019)

City of Greeley Letter (November 4, 2019)

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
810 9th Street, Suite 200, Greeley, Colorado 80631, 970-352-8712

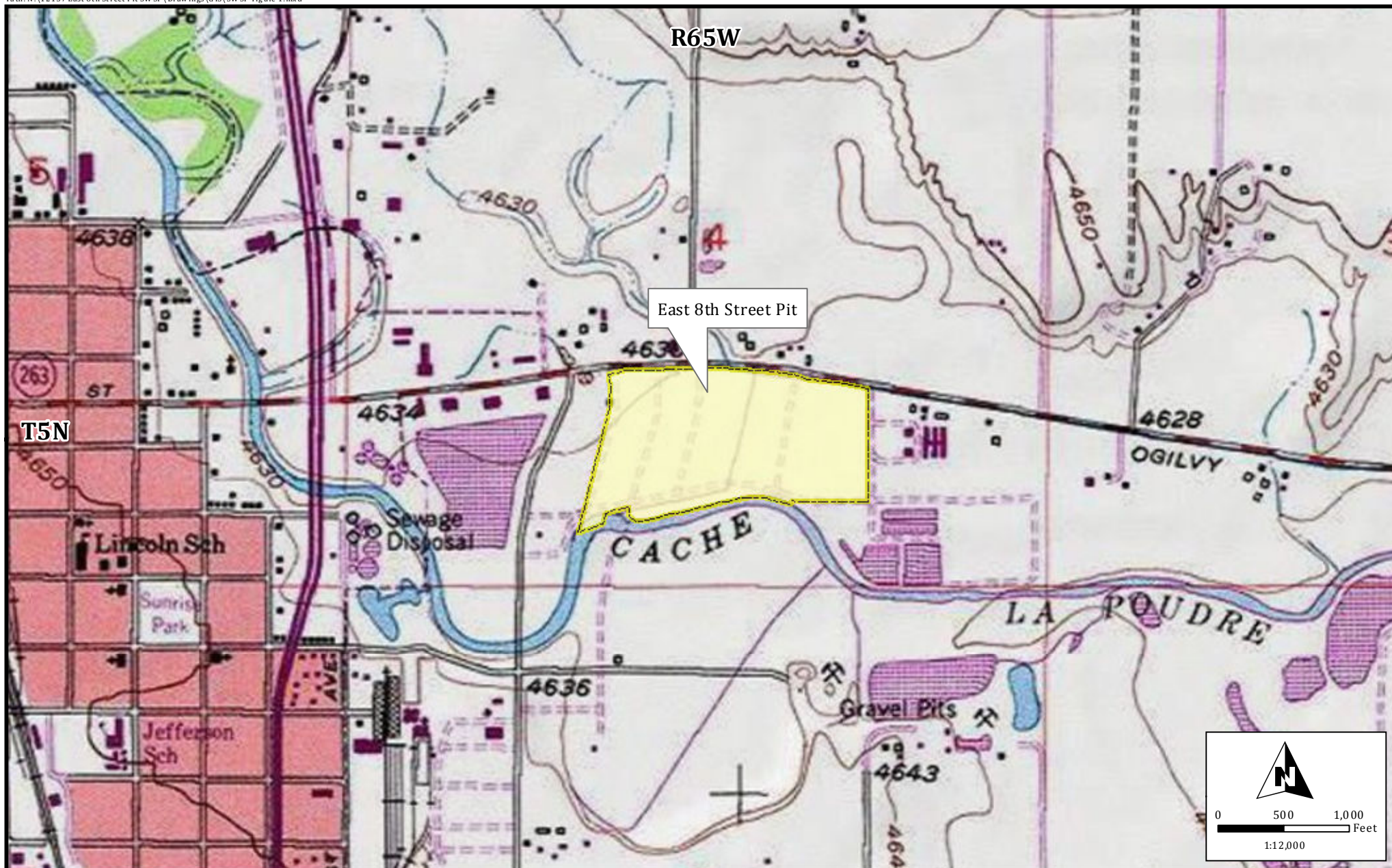
Brent Schantz, River Operations/Compact Commissioner, Brent.Schantz@state.co.us

Louis Flink, Tabulation/Diversion Records Coordinator, Louis.Flink@state.co.us

Mark Simpson, Water Commissioner, District 3, Mark.Simpson@state.co.us

Jorge Vidal, Water Commissioner, District 2, Jorge.Vidal@state.co.us

Eric C. Scott, Division of Reclamation Mining and Safety, Eric.Scott@state.co.us



**Applegate
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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: 12/18/2019

AG Job #: 12-137

All values in ac-ft unless noted

Month	Depletions						Replacements				Water Balance (K)
	Monthly Net Evap (ft) (A)	Exposed Water Surface Area (acres) (B)	Evaporative Losses (C)	Post-Dewatering Depletions (D)	Total CU (E)	Lagged Depletions (F)	Greeley Lease Volume (G)	Greeley Lease Credit (H)	Aurora Lease Volume (I)	Aurora Lease Credit (J)	
Nov-19	0.10	17.1	1.76	0.00	1.76	2.16	0.0	0.00	2.60	2.17	0.01
Dec-19	0.09	17.1	1.48	0.00	1.48	1.79	0.0	0.00	2.15	1.80	0.00
Jan-20	0.08	17.1	1.44	0.00	1.44	1.66	0.0	0.00	2.00	1.67	0.01
Feb-20	0.11	17.1	1.88	0.00	1.88	1.88	0.0	0.00	2.26	1.89	0.00
Mar-20	0.14	17.1	2.41	0.00	2.41	2.27	2.3	2.30	0.00	0.00	0.02
Apr-20	0.23	17.1	3.99	0.00	3.99	3.37	3.4	3.40	0.00	0.00	0.02
May-20	0.30	17.1	5.20	0.00	5.20	4.46	4.5	4.49	0.00	0.00	0.03
Jun-20	0.44	17.1	7.47	0.00	7.47	6.20	6.2	6.22	0.00	0.00	0.02
Jul-20	0.48	17.1	8.21	0.00	8.21	7.18	7.2	7.19	0.00	0.00	0.01
Aug-20	0.44	17.1	7.54	0.00	7.54	7.04	7.1	7.07	0.00	0.00	0.03
Sep-20	0.31	17.1	5.26	0.00	5.26	5.57	5.6	5.59	0.00	0.00	0.02
Oct-20	0.20	17.1	3.51	0.00	3.51	4.08	4.1	4.09	0.00	0.00	0.01
Total	2.93		50.14	0.00	50.14	47.68	40.4	40.36	9.0	7.52	0.21

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) Estimated aggregate production
- (E) Assuming material is 2% water by weight; material is mined in a dewatered state and is not washed
- (F) Estimated water needed for dust control on-site.
- (G) Estimated post-dewatering depletions from past pumping
- (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%	

**Agreement
For Delivery of Reusable Raw Water**

This Agreement ("Agreement") is entered into on this 12th day of December, 2019, by and between the City of Aurora, Colorado, a Colorado municipal corporation of the counties of Adams, Arapahoe and Douglas, acting by and through its Utility Enterprise ("Aurora"), whose address is 15151 East Alameda Parkway, Suite 3600, Aurora, Colorado 80012, and Laser Oilfield Service LLC ("Laser"), whose address is 2986 W. 29th St. #12, Greeley, Colorado 80631. Aurora and Laser are each referred to herein as a "Party" and together as the "Parties."

WITNESSETH

WHEREAS, Aurora has the right to use, sell, or provide for use of certain of its fully reusable municipal water return flows to the South Platte River ("Reusable Raw Water"); and

WHEREAS, such Reusable Raw Water is derived from trans-mountain or other reusable sources; and

WHEREAS, Laser has a use for a certain portion of this Reusable Raw Water; and

WHEREAS, Aurora and Laser desire to enter into this Agreement whereby Aurora shall deliver a portion of such Reusable Raw Water to Laser; and

WHEREAS, this Agreement will be of mutual benefit and convenience to Aurora and Laser; and

WHEREAS, the Aurora Utility Enterprise staff has determined, as a precondition to entering this Agreement, that Aurora is able to fulfill all exchange and operational obligations that require Reusable Raw Water, that it is able to fulfill all existing long-term agreements that require Reusable Raw Water, and that all other needs of Aurora that may be fulfilled by these sources are met; and

NOW, THEREFORE, for and in consideration of the mutual promises and covenants contained herein, and other good and valuable consideration, the adequacy and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

Agreement

1. **Term.** The Term of this Agreement shall commence on the Effective Date, as set forth in Paragraph 20(m), below, and continue until December 31, 2020 ("Term"). Aurora will commence supplying Reusable Raw Water starting in November 2019.

2. **Delivery Schedule.** Delivery of the Reusable Raw Water will be made in accordance with the following Delivery Schedule:

Date	Amount (ac-ft)
Nov-19	2.60
Dec-19	2.15
Jan-20	2.00
Feb-20	2.26
Total	9.01 ac-ft

In no event shall the total amount of Reusable Raw Water delivered exceed the maximum amounts set forth in the Delivery Schedule without Laser's written request and Aurora's written consent to modify the current Delivery Schedule. As long as Aurora is capable of delivering the Reusable Raw Water to any of the Delivery Points (defined in Paragraph 3, below) according to the Delivery Schedule, Laser will be obligated to pay the per acre-foot charge set forth in Paragraph 8, below, regardless of whether or not Laser requests or uses the Reusable Raw Water.

3. **Delivery Location.**

(a) **Delivery Points.** Laser agrees that Aurora shall initially make its delivery of the Reusable Raw Water at the outfall of the Metro Wastewater Reclamation District's Robert W. Hite treatment facility ("Hite"). Laser further agrees that Aurora may, in its sole discretion, satisfy its delivery obligations under this Agreement by delivering the Reusable Raw Water at any other delivery point or delivery points on the South Platte River (each of Hite and such other delivery points, hereinafter, a "Delivery Point", and collectively the "Delivery Points"), provided that such alternative Delivery Points are located within a reach of the South Platte River above Laser's "Point of Use", beginning at or below Hite, and continuing downstream to a point at or above the confluence of the St. Vrain and S. Platte Rivers. Laser's "Point of Use" is downstream of said confluence. Laser acknowledges and agrees that the alternate Delivery Points may include, but are not limited to, other wastewater treatment plants that may be constructed in the future that discharge Reusable Raw Water owned by Aurora, Brighton Ditch Augmentation Stations, the outfall of Walker Reservoir, and the confluence of Sand Creek and the South Platte River. Aurora will bear the responsibility for delivery of the Reusable Raw Water to these Delivery Points, and in its sole discretion may determine which of the Delivery Points it will use at any given time. Once Aurora has completed its delivery of the Reusable Raw Water hereunder, Laser shall assume sole liability for any loss, damage, or injury that may occur to persons or property as the direct or indirect result of the control and/or use of said Reusable Raw Water by Laser. The amount of Reusable Raw Water reflected in the Delivery Schedule was calculated by Laser to include any transportation losses, or "shrinkage," from Hite to the Point of Use downstream. Laser also

acknowledges the travel time between the alternate Delivery Points and the Point of Use varies, but that the timing for Aurora's delivery obligations as provided for under the Delivery Schedule shall remain the same regardless of Aurora's use of alternative Delivery Points.

(b) Credit for Avoided Transit Loss. Aurora's obligations with respect to the volume of Reusable Raw Water to be delivered under this Agreement are deemed to be satisfied if Aurora makes deliveries in such amounts as if delivered at Hite. Thus, if Aurora elects, in its sole discretion, to make its delivery of any Reusable Raw Water under this Agreement at a Delivery Point other than Hite, and if delivery at such alternative Delivery Point(s) results in reduced transit loss, Aurora shall be entitled to retain such avoided transit loss with no credit to Laser in water, money or otherwise. Aurora shall maintain and provide to Laser a monthly accounting and report of daily deliveries at the Delivery Point(s). If Aurora elects to deliver some or all of the Reusable Raw Water at alternative Delivery Point(s), then the foregoing reports shall include the calculated amount of avoided transit loss, and the amount of water physically delivered at such alternative Delivery Point(s). For purposes of calculating any such avoided transit loss, the Parties hereby agree that the volume of Reusable Raw Water required to be delivered by Aurora in accordance with the Delivery Schedule shall be discounted by an amount equal to one-half of one percent (0.5%) of such volume during the April through September irrigation season, or one-fourth of one percent (0.25%) of such volume during the October through March non-irrigation season, for each river mile in distance between Hite and such alternative Delivery Point(s) (such distance calculated to the nearest one-tenth of a mile), or by such other amount as determined by the Division Engineer for Water Division 1 (such office or its replacement the "Division Engineer") or as specified in an applicable statute or decree from a court of applicable jurisdiction. The product of this calculation shall represent the amount of avoided transit loss in acre-feet, which Aurora shall be entitled to retain.

4. Source and Quality of Reusable Raw Water. The Reusable Raw Water to be provided by Aurora under this Agreement shall, at Aurora's discretion, consist of Aurora's reusable municipal return flows to the South Platte River, any fully consumable portion of changed irrigation water rights owned by, or available to Aurora, fully consumable water diverted pursuant to decrees entered in 03CW414, 03CW415, and 06CW104, Water Division 1, and any other legal source of Reusable Raw Water available to Aurora. Under no circumstances shall this Agreement be interpreted to mean that Aurora must supply potable water should the sources set forth in this paragraph be unavailable. Aurora does not warrant or guaranty any water quality standards with respect to the Reusable Raw Water to be delivered as provided for under this Agreement, and Laser hereby waives any such warranty or guaranty.

5. Use of Reusable Raw Water. Laser shall have the right to use and reuse to extinction the Reusable Raw Water delivered under this Agreement for water supply purposes, including without limitation augmentation and exchange purposes in connection with any substitute water supply plan approved by the Colorado State Engineer's Office, augmentation purposes in accordance with any augmentation plan or appropriative right of exchange decreed by the Colorado Water Court, and any other lawful exchanges; provided that such use is consistent with the terms of this Agreement and all applicable laws, rules and regulations

6. **Water Rights Accounting.** Laser will be solely responsible for any and all reporting and accounting required by the Colorado State Engineer, the Division Engineer for Water Division 1, the Water Commissioner for Water Commissioner District 2, or any other lawful authority after Aurora makes its delivery of the Reusable Raw Water as provided for under this Agreement. This responsibility includes, but is not limited to, Laser's withdrawal of the Reusable Raw Water from the South Platte River (if any) and Laser's use of the Reusable Raw Water. In addition to the reporting requirements set forth in Paragraph 3(b) above, Aurora will provide any and all reporting and accounting required by the Colorado State Engineer, the Division 1 Engineer, or any other lawful authority concerning proof of the reusability of the Reusable Raw Water, and conveyance of the Reusable Raw Water to the Delivery Point(s).
7. **Subordination Clause.** This Agreement shall be made expressly subordinate to any present or future use of Reusable Raw Water by Aurora for the purposes of augmentation, exchange, or any other use which is or will be of greater direct benefit to Aurora and the users of its water delivery system, as well as to the water supply obligations which Aurora has incurred or will incur from any firm delivery annual agreement or delivery contract of Reusable Raw Water executed prior to the date of this Agreement. The foregoing subordination does not, in and of itself, create an excuse for Aurora's failure to deliver the Reusable Raw Water under this Agreement. However, the Parties agree that the purpose and obligations under this Agreement and Aurora's other obligations with respect to its Reusable Raw Water in the event of a *force majeure* event may cause delay or interruption in Aurora's delivery of the Reusable Raw Water.
8. **Consideration.** Laser agrees to pay to Aurora the amount of Three Hundred Dollars (\$300.00) per acre-foot ("Unit Rate") for all Reusable Raw Water delivered under this Agreement. The Unit Rate shall remain constant throughout the Term.
9. **Payment.** Aurora shall bill for all Reusable Raw Water it will deliver to Laser under the Delivery Schedule within thirty (30) business days of the Effective Date. All billing shall be done on such forms as designated by Aurora for that purpose. Payment by Laser shall be due no later than forty-five (45) days after such bill has been issued. If Laser does not make the required payment by the due date, Aurora may give Laser a notice of default. If Laser does not cure the default by making full payment within thirty (30) days of receipt of any notice of default, then Aurora, in addition to pursuing any other remedies available to it, may declare this Agreement terminated. Any delay in Aurora's invoicing for payments under this Agreement shall not constitute a breach of Aurora's obligations and shall not relieve Laser of its obligations to pay all consideration due hereunder.
10. **Non-Assignability and No Subleases.** Neither Party may assign its rights or delegate its duties hereunder without the prior written consent of the other Party. Laser may not sublease or give others the right to use the Reusable Raw Water to which it is entitled pursuant to this Agreement without the written permission of Aurora, which permission Aurora may grant or withhold at its discretion.
11. **Successors and Assigns.** This Agreement and the rights and obligations created hereby shall be binding upon and inure to the benefit of the Parties, respective successors and assigns, if any are allowed. The Parties intend that Aurora shall not incur any liability other than those liabilities

running directly to Aurora or its assigns permitted under this Agreement, if any. Laser therefore covenants and agrees, to the extent permitted by law, to indemnify, save and hold harmless Aurora from all liability, cost or expense of any kind, including Aurora's costs of defense to any other party arising in connection with or relating in any way to the execution, delivery or performance of any allowed assignment or any related document by the parties thereto or to the consummation of any transaction in connection with such documents.

12. **No Rights Conferred.** Except as otherwise provided in this Agreement, the Parties acknowledge that all Reusable Raw Water provided hereunder is intended for the present and future use of Aurora. It is further understood and agreed to by the Parties that this Agreement shall confer no rights in such Reusable Raw Water upon Laser, nor shall any future needs of Laser for water enable Laser to make claim against Aurora for any of Aurora's Reusable Raw Water, other water or water rights. Laser further acknowledges the statutory prohibition against vesting of a right for a continued lease expressed in CRS § 31-35-201 applies in these circumstances.
13. **No Opposition to Aurora Water Court Matters.** From the date of execution of this Agreement and for the Term, Laser agrees that neither it nor any of its successors, if any are allowed, will oppose Aurora in any Colorado Water Court applications filed by Aurora except to assert injury to a vested or conditional water right, including any amendment of an application to which Laser was a party.
14. **Aurora Right to Request Reuse.** The Parties hereto acknowledge that hydrologic and other conditions may exist wherein Laser may not need all or a portion of the Reusable Raw Water flow available to it under this Agreement. Aurora may contact Laser, not more frequently than once per day, to determine if any of the Reusable Raw Water to be provided hereunder will not be needed.
15. **Entire Agreement of the Parties.** This Agreement represents the entire agreement of the Parties, and neither Party has relied upon any fact or representation not expressly set forth herein. All prior and contemporaneous conversations, negotiations, possible alleged agreements, representations, covenants and warranties concerning the subject matter hereof, are merged in this Agreement.
16. **Amendment.** At any time during the Term. Laser may submit to Aurora a proposed modified Delivery Schedule setting forth revised total delivery amounts. Any proposed modified Delivery Schedule shall be effective only upon Aurora's written consent, upon which such modified Delivery Schedule will replace the existing Delivery Schedule set forth in Paragraph 2, above. This Agreement may be amended, modified, changed, or terminated in whole or in part only by written agreement duly authorized and executed by the Parties hereto.
17. **Enforcement.** The Parties agree that this Agreement may be enforced in law or in equity for specific performance, injunctive, or other appropriate relief, including damages, as may be available according to the laws of the State of Colorado. It is specifically understood that, by executing this Agreement, each Party commits itself to perform pursuant to the terms hereof, and that any breach hereof resulting in any recoverable damages shall not thereby cause the termination

of any obligations created by this Agreement unless such termination is requested by the Party not in breach hereof.

18. **Failure to Perform Due to Force Majeure.** Subject to the terms and conditions in this Paragraph, no Party to this Agreement shall be liable for any delay or failure to perform under this Agreement due solely to conditions or events of *force majeure*, as that term is specifically defined herein; provided that: (a) the non-performing Party gives the other Party prompt written notice describing the particulars of the occurrence of the *force majeure*; (b) the suspension of performance is of no greater scope and of no longer duration than is required by the *force majeure* event or condition; and (c) the non-performing Party proceeds with reasonable diligence to remedy its inability to perform and provides weekly progress reports to the other Party describing the actions taken to remedy the consequences of the *force majeure* event or condition. As used herein *force majeure* shall mean any delay or failure of a Party to perform its obligations under this Agreement caused by events beyond the Party's reasonable control, and without the fault or negligence of the Party, including, without limitation A) changes in state or federal law or administrative practice concerning, water rights administration, water quality or stream flow requirements, B) changes in state water rights administrative practice concerning the reuse of reusable raw water through leases or other agreements to others for use at locations other than Aurora, Colorado, including, but not limited to, challenges to retained dominion and control, C) acts of God, D) sudden actions of the elements such as floods, earthquakes, hurricanes, or tornadoes, E) sabotage, F) vandalism beyond that which can be reasonably prevented by the Party, G) terrorism, H) war, I) riots, J) fire, K) explosion, L) severe cold or hot weather, M) snow, N) drought [a condition more severe than that which occurred in 2002 in the South Platte River Basin or any basin from which the Reusable Raw Water originates] O) other extreme weather conditions, P) blockades, Q) insurrection, R) strike, slow down or labor disruptions (even if such difficulties could be resolved by conceding to the demands of a labor group); S) actions by federal, state, municipal, or any other government or agency (including but not limited to, the adoption or change in any rule or regulation or environmental constraint imposed by federal, state or local government bodies) but only if such requirements, actions, or failures to act prevent or delay performance, T) inability, despite due diligence, to obtain required licenses, permits or approvals, and, U) changes of law relating to financial obligations, revenues and budgetary matters concerning Colorado local governments and their enterprises. In the event a *force majeure* event or condition prevents Aurora from delivering all or part of the agreed upon amounts of Reusable Raw Water to Laser, Aurora shall refund all advance payments made for that water not delivered within sixty (60) days of the conclusion of the *force majeure* event. In no event will any delay or failure of performance caused by any conditions or events of *force majeure* extend this Agreement beyond its stated Term.

19. **Sole Obligation of Utility Enterprise.**

(a) This Agreement shall never constitute a general obligation or other indebtedness of the City of Aurora ("City"), or a multiple fiscal year direct or indirect debt or other financial obligation whatsoever of the City within the meaning of the Constitution and laws of the State of Colorado or of the Charter and ordinances of the City.

(b) In the event of a default by Aurora's Utility Enterprise of any of its obligations under this Agreement, Laser shall have no recourse for any amounts owed to it against any funds or

revenues of the City except for those revenues derived from rates, fees or charges for the services furnished by, or the direct or indirect use of, the Water System and deposited in the Water Enterprise Fund, as the terms "Water System" and "Water Enterprise Fund" as defined in Aurora's City Ordinance No. 2003-18, and then only after the payment of all operation and maintenance expenses of the Water System and all debt service and reserve requirements of any bonds, notes, or other financial obligations of the Utility Enterprise secured by a pledge of the net revenues of the Water Enterprise Fund. Notwithstanding any language herein to the contrary, nothing in this Agreement shall be construed as creating a lien upon any revenues of the Utility Enterprise or the City.

20. **Miscellaneous.**

(a) **Intent of Agreement.** This Agreement is intended to describe the rights and responsibilities of and between the named Parties, and is not intended to, and shall not be deemed to confer rights upon any persons or entities not named as Parties, nor to limit in any way the powers and responsibilities of Aurora, Laser, or any other entity not a party hereto.

(b) **Effect of Invalidity.** If any portion of this Agreement is held invalid or unenforceable for any reason by a court of competent jurisdiction as to either Party or as to both Parties, the entire Agreement will terminate.

(c) **Waiver of Breach.** Waiver of breach of any of the provisions of this Agreement by either Party shall not constitute a continuing waiver of any subsequent breach by said Party of either the same or any other provision of this Agreement.

(d) **Multiple Originals.** This Agreement may be simultaneously executed in any number of counterparts, each one of which shall be deemed an original, but all of which constitute one and the same Agreement.

(e) **Headings for Convenience.** Headings and titles contained herein are intended for the convenience and reference of the Parties only, and are not intended to confine, limit, or describe the scope of intent of any provision of this Agreement.

(f) **Recordation.** Following the execution of this Agreement, the Parties may cause this Agreement to be recorded with the Clerk and Recorder's Office of such county or counties in Colorado as they may desire.

(g) **Notice.**

(1) All notices, requests, demands, or other communications ("Notice", and collectively, "Notices") hereunder shall be in writing and given by (i) established express delivery service which maintains delivery records requiring a signed receipt, (ii) hand delivery, or (iii) certified or registered mail, postage prepaid, return receipt requested to the Parties at the following address, or at such other address as the Parties may designate by Notice in the above manner.

To Aurora:

City of Aurora
15151 East Alameda Parkway, Suite 3600
Aurora, CO 80012-1555
Attn: Director, Aurora Water

with copy to

City of Aurora
15151 East Alameda Parkway, Suite 5300
Aurora, CO 80012-1555
Attn: City Attorney

To Laser:

Laser Oilfield Service LLC.
2986 W. 29th St. #12
Greeley, Colorado 80631
Attn: Jack Miller

Notices shall be effective (iv) the next day following the date sent by an established express delivery service which maintains delivery records requiring a signed receipt, (v) upon receipt by the addressee of a hand delivery, or (vi) three (3) days following the date of mailing via certified or registered mail, postage prepaid, return receipt requested.

(2) Notwithstanding the foregoing, the Parties may communicate with respect to deliveries and modification of the Delivery Schedule pursuant to Paragraph 2, above, by e-mail as follows: (i) to Aurora to John Murphy at jmurphy@auroragov.org; and (ii) to Abdullah Javed at Applegate Group at AJaved@applegategroup.com, or at such e-mail address as may be designated by Notice in the manner provided for under this Paragraph 20.g.

(h) **Non-Business Days.** If any date for any action under this Agreement falls on a Saturday, Sunday or a day that is a "holiday" as such term is defined in Rule 6 of the Colorado Rules of Civil Procedure, then the relevant date shall be extended automatically until the next business day.

(i) **Commissions and Fees.** Each Party shall be solely responsible for the payment of any and all real estate commissions or other commissions or fees that it incurs with respect to this Agreement.

(j) **Governing Law and Venue.** This Agreement and its application shall be construed in accordance with the law of the State of Colorado. Should it be necessary to initiate court proceedings concerning this Agreement, the Parties agree that venue shall be in the District Court for Arapahoe County, Colorado.

(k) **No Attorneys' Fees.** In the event of any litigation, mediation, arbitration or other dispute resolution process arising out of or related to this Agreement each Party agrees to be responsible for its own attorneys' and other professional fees, costs and expenses associated with any such proceedings.


(l) **No Construction Against Drafter**. This Agreement was drafted by Aurora with the opportunity to review and comment by Laser and its attorney. Accordingly, the Parties agree the legal doctrine of construction against the drafter will not be applied should any dispute arise concerning this Agreement.

(m) **Effective Date**. The “Effective Date” of this Agreement is the date it is signed by the General Manager of Aurora Water.

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement as of the Effective Date.

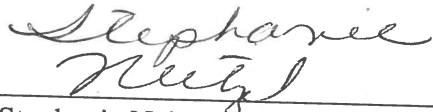
(signatures on following pages)

CITY OF AURORA, COLORADO,
ACTING BY AND THROUGH ITS
UTILITY ENTERPRISE (AURORA)


Marshall P. Brown, General Manager

12/16/19
Date

APPROVED AS TO FORM FOR AURORA:



Stephanie Neitzel, Assistant City Attorney

12/9/19
Date

20017537
ACS #

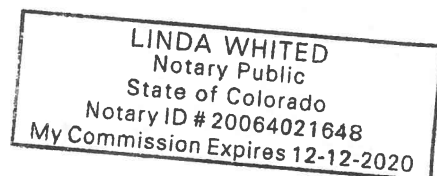
STATE OF COLORADO)
) ss
COUNTY OF ARAPAHOE)

The foregoing instrument was acknowledged before me this 16 day of December, 2019,
by Marshall P. Brown, General Manager, acting on behalf of the Utility Enterprise of the City of
Aurora, Colorado.

Witness my hand and official seal. 
Notary Public

My commission expires: 12-12-2020

(SEAL)



LASER OILFIELD SERVICE LLC (LASER)

By: *Jack Miller* 12-5-19
~~RICK~~ Jack Miller Date
Title: President

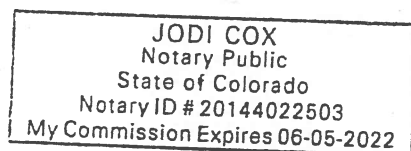
STATE OF COLORADO)
) ss.
COUNTY OF)

The foregoing Agreement was acknowledged before me this 5 day of December,
2019, by ~~Jack Miller~~, President, of Laser Oilfield Service LLC.
~~RICK~~

Witness my hand and official seal. *Jodi Cox*
Notary Public

My commission expires: 6-5-22

SEAL





November 4, 2019

Laser Oilfield Service LLC
c/o Jack Miller
1011 11th Ave
Greeley, CO 80631

Dear Jack,

The city of Greeley ("Greeley") accepts Laser Oilfield Services LLC's ("Laser") augmentation water rental request for March 2020 through October 2020. 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 immediately below Greeley's existing wastewater treatment plant outfall, at the outlet of the Flatiron Reservoir Nos. 1-5 (aka Poudre Ponds at Greeley), or at delivery stations from the Greeley Canal No. 3; 2) in Lonetree Creek, a tributary to the South Platte River, immediately below the Swift wastewater treatment plant outfall; 3) in the Big Thompson River at delivery stations or release structures from the Greeley Loveland Canal and related structures; or 4) at such other point or points Greeley chooses by giving written notice to the Laser **OR** in the Cache la Poudre or Big Thompson Rivers at delivery stations or release structures owned and operated by Greeley or available for Greeley's use where Greeley has augmentation water legally and physically available.

The request totals **40.41** AF and replacements will be made per the schedule provided by Applegate Group.

Laser's Augmentation Requirement (acre-feet)								
Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Total
2.3	3.4	4.5	6.23	7.2	7.08	5.6	4.1	40.41

The current rate for augmentation water is \$800/acre-foot, for a total of **\$32,328.00**. Please follow the directions on the attached invoice. The payment is due by **December 5, 2018**.

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) 336-4039.

Sincerely,

A handwritten signature in blue ink that reads "Alex Tennant".

Alex Tennant
Water Resources Analyst
Cc: Abdullah Javed, Applegate Group

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 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 undeclared 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.*¹

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.

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