



COLORADO
Division of Water Resources
Department of Natural Resources

April 30, 2020

Joshua Oliver
Brannan Sand and Gravel Company, LLC
2500 East Brannan Way
Denver, CO 80229

Re: Valley's Edge Resource Substitute Water Supply Plan (WDID 0202660)
DRMS File No. M-2016-030 (WDID 0210499)
SWSP Plan ID: 5868
Section 20, T1N, R66W of the 6th P.M., Weld County
Water Division 1, Water Districts 2

Approval Period: May 1, 2020 through April 30, 2021
Contact phone number for Mr. Joshua Oliver: 303-534-1231
Contact email address for Mr. Joshua Oliver: joliver@brannan1.com

Dear Mr. Oliver:

This letter is in response to your February 28, 2020 application requesting a substitute water supply plan (SWSP) amendment and renewal for a sand and gravel pit operated by Brannon Sand and Gravel (Brannon or Applicant) in accordance with section 37-90-137(11), C.R.S. The Applicant shall be responsible for compliance with this SWSP, but the State Engineer's Office may also pursue the landowner, for eventual compliance. The required fee of \$257.00 for the SWSP has been paid (receipt no. 3697061).

SWSP Operations

This SWSP seeks to replace depletions resulting from the Valley's Edge Resource Gravel Mine (Figure 1, attached). The Lupton Meadows Gravel Mine is located in Section 20, Township 1 North, Range 66 West of the 6th P.M. The Applicant commenced mining of the site in June 2017. The depletions that result from the mining operation include evaporation from exposed groundwater, dust suppression, and water lost with the mined product. According to the DRMS permit, the life expectancy of the Valley's Edge Resource Gravel Mine is less than 20 years. Approximately 66,000 tons are to be excavated from the pit each month during this plan period. The proposed reclamation of the site is an industrial development, which will require a complete backfill of the site. Depletions for this site will be replaced using effluent water leased from the City of Aurora.

In accordance with the letter dated April 30, 2010 (attached) 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. The DRMS letter identifies four approaches to satisfy this requirement.



In accordance with approach nos. 1 and 3, you have obtained a bond for \$873,550 through the DRMS for complete reclamation of the site which, according to your DRMS permit, will require a complete backfill of the site.

Depletions

The projected depletions for the period of this SWSP consist of net evaporation from exposed groundwater surface area, water removed in the mined product, and dust suppression. The SWSP assumes that 30 acres of water surface will be exposed at the site for this plan period. According to the SWSP, request no dewatering will occur at this site.

Evaporation and Mining Operations

The Applicant proposed to replace evaporation from exposed groundwater at the site based upon evaporation atlases in NOAA Technical Report NWS 33 and the precipitation at the Brighton station, as shown in attached Table 1. Gross annual evaporation at the gravel pit location is estimated to be 45.00 inches per year. Net evaporation is defined as gross evaporation less the consumptive use of water by vegetation that naturally occurred at the site prior to construction of the pit. The effective precipitation was estimated based on the data from the Brighton NOAA weather station. The net evaporation from the 30 acres of exposed water surface is 87.97 acre-feet for this SWSP approval period.

In addition to the evaporation, water is lost with the mined product removed from the mine site and water is used for dust suppression. The Applicant projected that they will produce up to 66,000 tons of mined product per month. During this SWSP period, the applicant estimated 30% of the material will be withdrawn from areas below ambient groundwater; the product will be washed and therefore the groundwater lost with the mined product during this period is estimated at 2 percent by weight for the material mined above the groundwater table, and 4 percent by weight for the material mined below the groundwater table. The water lost with the mined product is projected to be 8.12 acre-feet per year for product mined above the groundwater table and 7.06 acre-feet per year for the product mined below the groundwater table (15.18 acre-feet total for this SWSP approval period), as shown in amended Table 1, attached. In order to assure that the depletions from water lost in mined product does not exceed the estimated amount, the Applicant must separately track the amount of product mined above and below the groundwater table and separately track the depletions from each. The estimated water used for dust suppression is 6.72 acre-feet for this SWSP approval period, as shown in amended Table 1, attached.

The total consumptive use for this site is 109.87 acre-feet total for this SWSP approval period. A monthly breakdown of the total annual depletions is shown in the revised Table 1, attached.

Lagged Depletions

The IDS AWAS stream depletion model was used to determine the lagged depletions to the South Platte River. The aquifer characteristics used in the model for the evaporative depletions are: transmissivity (T) = 70,000 gallons per day per foot, specific yield (SY) = 0.2, the distance from the well to the stream = 5,700 feet and the location of the parallel impermeable boundary was estimated to be 7,900 feet from the stream.

The total replacement obligations for May 2020 through April 2021 are 76.53 acre-feet. Depletions from this operation will accrue to the South Platte River in the SE ¼ of the NW ¼ of Section 19, Township 1 North, Range 66 West, 6th P.M. For purposes of this SWSP the depletions will be owed at the location where the South Platte River crosses the north line of the SE ¼ of the NW ¼ of Section 19.

Replacements

Out-of-priority depletions from the Valley's Edge Resource Gravel Mine will be replaced using fully consumable municipal return flows leased from the City of Aurora. The replacement is provided through a lease dated March 7, 2017. If actual depletions are greater than projected depletions in any month, the amount of replacement water required from the City of Aurora may exceed the agreed upon volume. The Applicant is responsible for assuring that adequate replacement volume is provided.

Under the lease, water will be delivered to the outfall of the Robert W. Hite Treatment Facility (aka Metro Sewer, WDID 0200700) located on the South Platte River. According to the lease, Aurora may alternatively deliver water at other points along a reach of the South Platte River beginning at or below the Hite Treatment Facility extending downstream to the confluence of the St. Vrain River and the South Platte River. The Applicant must notify the water commissioner at least 48 hours prior to making replacement deliveries at a location other than the Hite Treatment Facility; in the instance of an intervening call the Applicant will not be allowed to make replacements downstream of the calling right.

The Hite Treatment Facility is located approximately 22 miles upstream of the Pit. The delivery schedule includes a transit loss of 0.5% per mile (11% for 22 miles) during the months of April through October and 0.25% per mile (5.5% for 22 miles) during the months of November through March. Conveyance loss for delivery of augmentation water to the South Platte River is subject to assessment and modification as determined by the Division Engineer.

Conditions of Approval

I hereby approve the proposed SWSP in accordance with section 37-90-137(11), C.R.S. subject to the following conditions:

1. This SWSP is approved with the effective date of May 1, 2020 through April 30, 2021, unless otherwise revoked or superseded by decree. If this plan is not decreed in water court by the SWSP expiration date, a renewal request must be submitted to this office with the statutory fee of \$257 no later than March 1, 2021.
2. Well Permit 82057-F has been issued for this pit, and this permit remains valid. The permit covers up to 30 acres of exposed surface area and allows for annual water uses of up to 118.23 acre-feet for evaporation losses, water lost with the mined product, and dust control. Actual depletions cannot exceed these amounts and are limited to those uses specifically approved through this SWSP.
3. The total surface area of the groundwater exposed at the Valley's Edge Resource Gravel Mine must not exceed 30 acres during this plan period, which results in a maximum annual evaporative loss of 87.97 acre-feet.
4. The annual water used for dust control at the Valley's Edge Resource Gravel Mine shall not exceed 6.72 acre-feet per year and the total product mined at the Valley's Edge Resource Gravel Mine shall not exceed 46,000 tons per month above the groundwater table and 20,000 tons per month below the groundwater table, which results in 15.18 acre-feet per year of water lost with the mined aggregate.
5. Total consumption at the Valley's Edge Resources Gravel Mine must not exceed these aforementioned amounts unless an amendment is made to this SWSP.

6. Approval of this SWSP is for the purposes as stated herein. This office must first approve any additional uses for the water.
7. The replacement water that is the subject of this SWSP cannot be sold or leased to any other entity. As a condition of subsequent renewals of this SWSP, the replacement water must be appurtenant to this site until a plan for augmentation is obtained. All replacement water must be concurrent with depletions in quantity, timing, and locations.
8. Adequate accounting of depletions and replacements must be provided to the division engineer in Greeley (Div1Accounting@state.co.us), the water commissioner (Jorge Vidal at Jorge.Vidal@state.co.us) and the River Operations & Compact Coordinator (Brent Schantz, at Brent.Schantz@state.co.us) on a monthly basis. All amounts shall be in acre-feet. All submitted accounting must conform to the Administration Protocol *"Augmentation Plan Accounting - Division One, South Platte River"* (attached).
9. Applicant shall verify that the entity making replacement has included them on their accounting submitted to our office. In this case, that entity is the City of Aurora.
10. All pumping for dust control shall be measured in a manner acceptable to the division engineer.
11. The Applicant did not propose any dewatering as part of this SWSP request therefore dewatering shall not occur at this site unless an amended SWSP is first obtained.
12. Conveyance loss for delivery of augmentation water to the point of depletion on the South Platte River is subject to assessment and modification as determined by the division engineer. Any changes to the assessed conveyance loss will be communicated to the Division One Call List via email.
13. 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.
14. 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.
15. 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.
16. In accordance with the letter dated April 30, 2010 (copy attached) 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

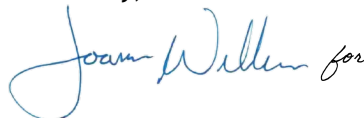
result from mining related exposure of groundwater. The DRMS letter identifies four approaches to satisfy this requirement.

In accordance with approach nos. 1 and 3, you have indicated that a bond has been obtained for \$873,550 through the DRMS for lining of this site to assure that depletions from groundwater evaporation do not occur in unforeseen event(s) that would lead to the abandonment of the Pit.

17. All releases of replacement water must be sufficient to cover all out of priority depletions and be made under the direction and/or approval of the water commissioner.
18. 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.
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 occurred 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 the 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 the substitute water 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 plans or in any proposed renewal of this plan, 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.

If you have any questions concerning this approval, please contact Wenli Dickinson in the Denver office or Dean Santistevan in the Greeley office.

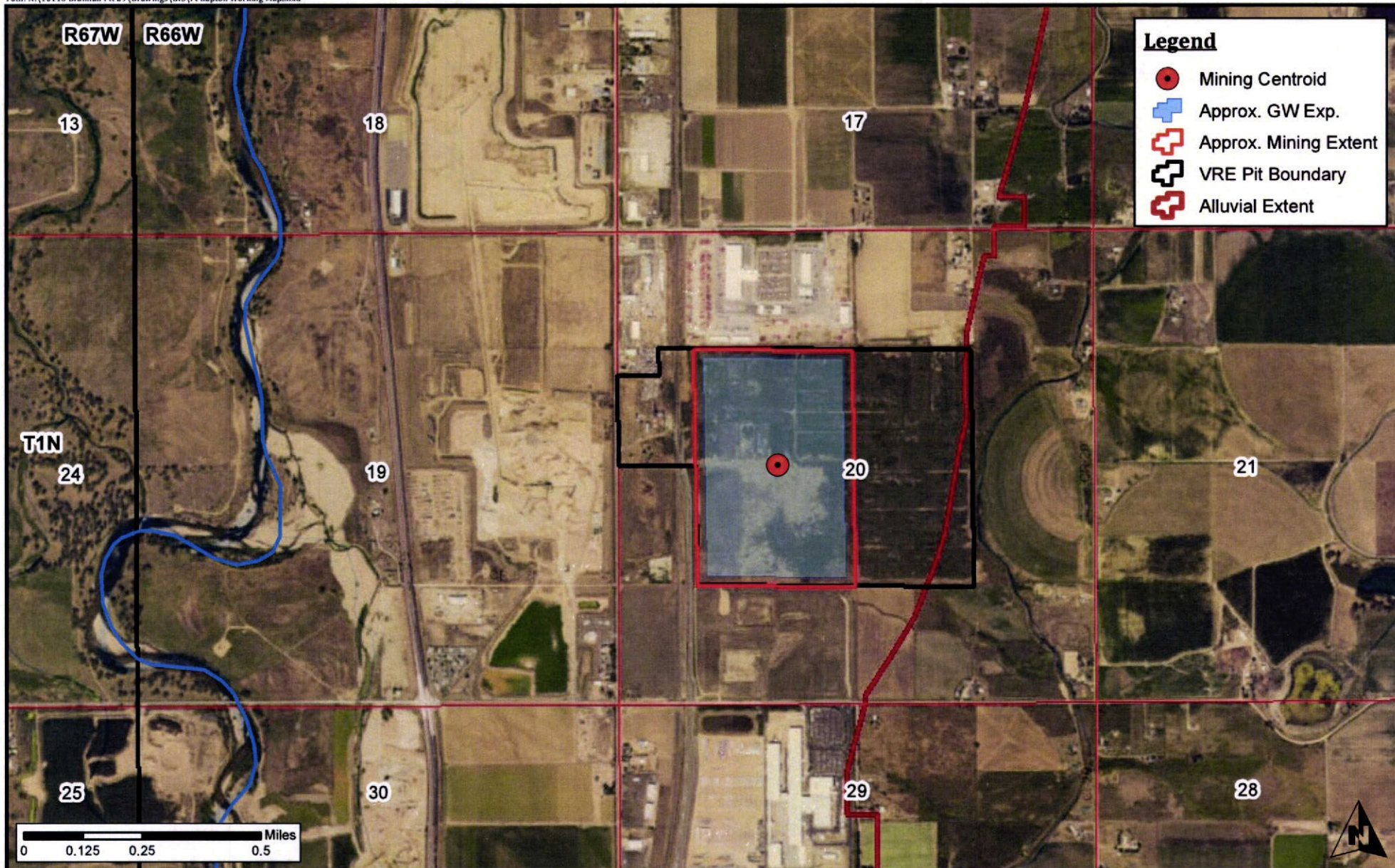
Sincerely,

A handwritten signature in blue ink, appearing to read "Joan Williams for", written over the printed name of Jeff Deatherage.

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

Attachments: Figure 1
Table 1, amended
Lease with City of Aurora
Letter from DRMS dated April 30, 2010
Augmentation Plan Accounting Protocol

cc: Dean Santistevan, Assistant Division Engineer, Dean.Santistevan@state.co.us
Brent Schantz, River Operations & Compact Coordinator, Brent.Schantz@state.co.us
Jorge Vidal, District 2 Water Commissioner, Jorge.Vidal@state.co.us
Division of Reclamation Mining and Safety, dnr_drmsminadmin@state.co.us



Applegate Group, Inc.

Water Resource Advisors for the West
 1490 West 121st Ave., Ste 100 Phone: (303) 452-6611
 Denver, CO 80234-2728 Fax: (303) 452-2759
 www.ApplegateGroup.com e-mail: info@applegategroup.com

Valley's Edge Resource SWSP

Vicinity Map

Best Copy Available

Date: 19 Apr 2017

Job #: 10-116

Drawn By: SJB

Figure:

1

Of:

1

All values in ac-ft unless noted

Month	Depletions													Totals and Deliveries					
	Pumped from Pit						Evaporation												
	Aggregate Production abv GW (tons)	Aggregate Production below GW but in a dewatered state (tons)	Water Retained in Product abv GW	Water Retained in Product in GW	Water used for Dust Control	<u>Subtotal</u> Consumption of Pumped Water	Monthly Net Evap (%)	Monthly Net Evap (ft)	Precip. Brighton (ft)	Evap. Credit (70%) (ft)	Evap After Eff Precip Credit (ft)	Exposed Water Surface (acres)	<u>Subtotal</u> Evap Losses	<u>Total</u> CU (ac-ft)	<u>Lagged</u> <u>Depletion</u> (ac-ft)	<u>Aurora</u> <u>Delivery</u> <u>Schedule</u>	<u>Transit</u> <u>Losses</u>	<u>Aurora</u> <u>Credit</u> <u>after</u> <u>Losses</u>	<u>Water</u> <u>Balance</u>
May-20	46,000	20,000	0.68	0.59	0.56	1.83	12.0	0.45	0.19	0.14	0.31	30.0	9.42	11.25	-3.66	4.10	0.45	3.65	-0.01
Jun-20	46,000	20,000	0.68	0.59	0.56	1.83	14.5	0.54	0.13	0.09	0.45	30.0	13.51	15.34	-3.73	4.38	0.48	3.90	0.17
Jul-20	46,000	20,000	0.68	0.59	0.56	1.83	15.0	0.56	0.14	0.10	0.47	30.0	14.01	15.83	-4.34	5.17	0.57	4.60	0.26
Aug-20	46,000	20,000	0.68	0.59	0.56	1.83	13.5	0.51	0.14	0.10	0.41	30.0	12.34	14.16	-5.12	6.07	0.67	5.40	0.28
Sep-20	46,000	20,000	0.68	0.59	0.56	1.83	10.0	0.38	0.08	0.06	0.32	30.0	9.59	11.41	-5.82	6.82	0.75	6.07	0.25
Oct-20	46,000	20,000	0.68	0.59	0.56	1.83	7.0	0.26	0.08	0.05	0.21	30.0	6.27	8.09	-6.86	7.96	0.88	7.08	0.22
Nov-20	46,000	20,000	0.68	0.59	0.56	1.83	4.0	0.15	0.06	0.04	0.11	30.0	3.17	5.00	-7.30	8.41	0.46	7.95	0.65
Dec-20	46,000	20,000	0.68	0.59	0.56	1.83	3.0	0.11	0.04	0.03	0.08	30.0	2.48	4.31	-7.98	9.14	0.50	8.64	0.66
Jan-21	46,000	20,000	0.68	0.59	0.56	1.83	3.0	0.11	0.04	0.02	0.09	30.0	2.64	4.47	-8.18	9.33	0.51	8.82	0.64
Feb-21	46,000	20,000	0.68	0.59	0.56	1.83	3.5	0.13	0.03	0.02	0.11	30.0	3.26	5.08	-7.42	8.45	0.46	7.99	0.57
Mar-21	46,000	20,000	0.68	0.59	0.56	1.83	5.5	0.21	0.09	0.06	0.14	30.0	4.25	6.07	-8.2	9.30	0.51	8.79	0.59
Apr-21	46,000	20,000	0.68	0.59	0.56	1.83	9.0	0.34	0.15	0.10	0.23	30.0	7.05	8.87	-7.92	8.90	0.98	7.92	0.00
Period total	552,000	240,000	8.12	7.06	6.72	21.91	100				2.93		87.97	109.87	-76.53	88.03	7.23	80.80	4.27

**Agreement
For Delivery of Reusable Raw Water**

This Agreement ("Agreement") is entered into on this 7 day of march, 2017, 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 the Brannan Sand and Gravel Company, LLC, a Colorado corporation, whose address is 2500 Brannan Way, Denver, Colorado 80229 ("Brannan"). Aurora and Brannan 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 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, Brannan has a use for a certain portion of this Reusable Raw Water; and

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

WHEREAS, this Agreement will be of mutual benefit and convenience to Aurora and Brannan; 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 (including this Agreement), 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. **General Terms.** The terms of this Agreement shall commence on the Effective Date as defined in Paragraph 21 below, and continue until the last date for delivery of water as provided for on the water delivery schedule attached hereto as Exhibit A ("Delivery Schedule") such date being October 31, 2021. Aurora may, in its sole discretion, extend this Agreement for additional one (1) year terms through October 31, 2028 at Brannan's request. Brannan must notify Aurora by September 1 that it requests a one-year extension of this Agreement for the following water year (November 1 through October 31). Aurora will confirm the extension of this Agreement, or not, including delivery schedule and applicable rates, by written notification to Brannan to be made by no later than forty-five (45) days after Brannan's request, and said delivery schedule shall be the Delivery Schedule.

2. **Delivery Schedule.** Delivery of the Reusable Raw Water will be made in accordance with the Delivery Schedule. Brannan may at any time submit to Aurora a proposed modified delivery schedule setting forth revised monthly delivery totals for the upcoming water year or for the remainder of the current water year. Subject to Aurora's approval, a response by Aurora to be made no later than forty-five (45) days after Brannan's request, the modified delivery schedule shall be the Delivery Schedule. As long as Aurora is capable of delivering the Reusable Raw Water to the Delivery Points (defined in Paragraph 3, below) according to the Delivery Schedule, Brannan will be obligated to pay the per-acre foot charge set forth in Paragraph 8 below regardless of whether or not Brannan requests or uses the Reusable Raw Water.

3. **Delivery Location.**

(a) **Delivery Points.** Brannan 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"). Brannan 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 beginning at or below Hite, and continuing downstream to a point at or above the location on the South Platte River that is generally described as being above the confluence of the South Platte River and St. Vrain Creek at a point in the SE1/4 of the NW1/4 of Section 19, Township 1 North, Range 66 West of the 6th P.M. ("Point of Use"). Brannan 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, the 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, Brannan 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 Brannan. The amount of Reusable Raw Water reflected in the Delivery Schedule was calculated by Brannan to include any transportation losses, or "shrinkage," from Hite to the Point

of Use downstream. Brannan 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 Brannan in water, money or otherwise. Aurora shall maintain and provide to Brannan 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 Brannan hereby waives any such warranty or guaranty.

5. **Use of Reusable Raw Water.** Brannan 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 replacement and exchange purposes in connection with any substitute water supply plan approved by the Colorado State Engineer's Office, augmentation and exchange purposes in accordance with any augmentation plan or appropriate 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.** Brannan 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, Brannan's withdrawal of the Reusable Raw Water from the South Platte River (if any) and Brannan'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 through any of the following: (a) its obligations pursuant to Water Division 1, Case Nos. 95CW226 and 227, Case No. 99CW158, Case No. 01CW284 and Case No. 02CW341; (b) the November, 30, 2007, Water Supply Agreement with the Rocky Mountain Energy Center, LLC; (c) the May 20, 2003, Water Rights Purchase and Sale Agreement with the City of Thornton, Colorado; (d) the May 19, 2006, Reusable Water Lease Agreement with the Central Colorado Water Conservancy District; (e) the June 30, 2015, Intergovernmental Agreement ("IGA") for Delivery of Reclaimed Wastewater with E-470 Public Highway Authority; (f) the August 16, 2015, Agreement with Asphalt Specialties Company for Lease of Firm Delivery of Reclaimed Wastewater; (g) the September 17, 2015, Agreement for Lease of Firm Delivery of Reclaimed Groundwater with Bucklen Equipment Company; (h) the December 8, 2015, IGA with Adams County for Delivery of Reclaimed Wastewater, (i) the June 29, 2016 Agreement with Asphalt Specialties Company for Delivery of Reusable Raw Water, (j) the April 4, 2016 Agreement with R.M. Hiner Construction Co for Delivery of Reusable Raw Water, (k) the April 30, 2016 Agreement with Ready Mixed Concrete Company for Delivery of Reusable Raw Water, (l) the October 11, 2016 IGA with Todd Creek Village Metropolitan District for Delivery of Reusable Raw Water, (m) the September 14, 2016 IGA with West Greeley Conservation District for Delivery of Reusable Raw Water, and (n) any and all obligations resulting from any firm delivery annual lease 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.** Brannan 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 of this Agreement, but may change due to market conditions if the term extends for additional years, pursuant to Paragraph 1, above.

9. **Payment.** Aurora shall bill for all Reusable Raw Water it will deliver to Brannan for the 2017 water year under the Delivery Schedule within thirty (30) business days of the Effective Date.

On January 1, for each year this Agreement is extended pursuant to Paragraph 1 above, Aurora shall bill for all Reusable Raw Water to be delivered under the Delivery Schedule for that year. All billing shall be done on such forms as designated by Aurora for that purpose. If the Delivery Schedule is subsequently modified during the water year, Aurora will either send a supplemental bill or may account for current water year changes in the bill for the next water year. Payment by Brannan shall be due no later than forty-five (45) days after such bill has been issued. If Brannan does not make the required payment by the due date, Aurora may give Brannan a notice of default. If Brannan 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 Brannan 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. Brannan 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 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 directly running directly to Aurora or its assigns permitted under this Agreement, if any. Brannan 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 Brannan, nor shall any future needs of Brannan for water enable Brannan to make claim against Aurora for any of Aurora's Reusable Raw Water, other water or water rights. Brannan 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, Brannan 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.

14. **Aurora Right to Request Reuse.** The Parties hereto acknowledge that hydrologic and other conditions may exist wherein Brannan may not need all or a portion of the Reusable Raw Water flow available to it under this Agreement. Aurora may contact Brannan, 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.** 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 Brannan, Aurora shall refund all advance payments made for that water not delivered within sixty (60) days of the conclusion of the *force majeure* event or the cancellation of the Agreement pursuant to the remaining provisions of this Paragraph. 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. In the event any delay or failure of performance on the part of the Party claiming *force majeure* continues for an uninterrupted period of more than one hundred twenty (120) days from its occurrence or inception as noticed pursuant to this Paragraph, the Party not claiming *force majeure* may, at any time following the end of such one hundred twenty (120) day period, may terminate this Agreement upon written notice to the Party claiming *force majeure*, without further obligation except as to costs and balances incurred prior to the effective date of such termination.

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, Brannan 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, Brannan, 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 Brannan: Brannan Sand and Gravel Company, LLC
2500 Brannan Way
Denver, CO 80229
Attn: Alex Schatz

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 adjustments of the Delivery Schedule pursuant to Paragraph 2 by e-mail as follows: (i) to Aurora to John Murphy at jmurphy@auroragov.org; and (ii) to Brannan to Alex Schatz at aschatz@brannanl.com, or to such e-mail address as may be designated by Notice in the manner provided for under Paragraph 20(g)(1), above.

(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 review and comment from the attorney for Brannan. Accordingly, the Parties agree the legal doctrine of construction against the drafter will not be applied should any dispute arise concerning this Agreement.

21. **Effective Date**. The "Effective Date" of this Agreement shall be the date it is signed by the Director 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, Director

3/7/17
Date

APPROVED AS TO FORM FOR AURORA:


Stephanie Neitzel, Assistant City Attorney II

2/15/2017 16003421
Date ACS #

STATE OF COLORADO)
) ss
COUNTY OF ARAPAHOE)

The foregoing instrument was acknowledged before me this 7 day of march, 2017,
by Marshall P. Brown, Director, acting on behalf of the Utility Enterprise of the City of Aurora,
Colorado.

Witness my hand and official seal.



Notary Public

My commission expires: 12-12-20

(SEAL)

LINDA WHITED Notary Public State of Colorado Notary ID # 20084021648 My Commission Expires 12-12-2020

BRANNAN SAND AND GRAVEL COMPANY, LLC (BRANNAN)

Brannan Sand and Gravel Company, LLC
A Colorado Corporation

By: [Signature]

February 27, 2017
Date

Title: Manager

STATE OF COLORADO)
) ss.
COUNTY OF Adams)

The foregoing Agreement was acknowledged before me this 27th day of February, 2017, by J.C. Marvel, Jr., N/A by N/A, of Brannan Sand and Gravel Company, LLC, a Colorado corporation.

Witness my hand and official seal.

[Signature]
Notary Public

My commission expires: 12-10-18

(SEAL)

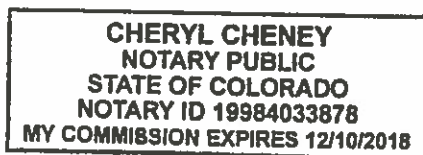


Exhibit A

Brannan Sand and Gravel Initial Delivery Schedule at RWHTF (values in acre-feet)

Water Year	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
2017								0.2	0.2	0.3	0.4	0.5	1.6
2018	0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.3	1.4	1.6	1.9	2.1	14.2
2019	2.2	2.4	2.5	2.7	2.7	2.8	2.9	3.0	3.1	3.2	3.4	3.5	34.2
2020	3.6	3.7	3.7	3.7	3.8	3.8	3.8	3.8	3.9	4.0	4.1	4.2	46.3
2021	4.2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.3	4.3	52.2

April 30, 2010

Permittee Address

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: Permit Id Site Name

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)