



COLORADO
Division of Water Resources
Department of Natural Resources

January 17, 2019

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

Re: Lafarge Middle Poudre Combined Substitute Water Supply Plan (WDID 0302533, Plan ID 3068)
Three Bells Pit, DRMS Permit No. M-1979-191 (WDID 0303023)
Sections 11 & 13, T6N, R68W, 6th P.M.
Water Division 1, Water District 3, Larimer County

Approval Period: January 1, 2019 through December 31, 2019

Contact Information for Mr. Dains: 303-452-6611; jareddains@applegategroup.com

Dear Mr. Dains:

We have received your letter dated December 21, 2018, requesting renewal of the above referenced substitute water supply plan to cover depletions caused by gravel mining operations at the Three Bells Pit, operated by Martin Marietta Materials, Inc. (“MMM” or “Applicant”). The required fee of \$257 has been submitted (receipt no. 3689824).

The Lafarge Middle Poudre Combined Plan previously included a number of other sites that are no longer covered under this SWSP for various reasons.

The Shields Mine (M-2006-064, WDID 0303027) was previously included in the plan but was acquired by the City of Fort Collins in 2014 and is covered under an individual SWSP (WDID 0302700).

The Port of Entry Pit (M-1982-182, WDID 0303026) was removed from the combined plan as of January 1, 2012 and is currently covered under an individual SWSP (WDID 0302533) that previously relied on replacement credits generated through this SWSP. As of 2017, the Port of Entry SWSP relies on replacement sources owned or controlled by the City of Fort Collins and is no longer debited against this combined plan.

The compacted clay liner for the Kyger Pit (M-1999-088, WDID 0303025) was approved by the State Engineer’s Office as meeting the design standard for liners on January 24, 2014, and the Kyger Pit is now classified as a lined reservoir in accordance with the 1999 SEO Guidelines. All lagged depletions due to past mining and dewatering operations at the Kyger Pit were replaced by the end of 2015 and the site is no longer required to be covered under a SWSP.



SWSP Operation

The Three Bells Pit is a sand and gravel mining operation located adjacent to the Cache la Poudre River just north of the Town of Windsor in Larimer County, Colorado. General information regarding the Three Bells Pit is provided in Table A below. A map showing the location of the Three Bells Pit is attached as Figure 1.

Table A - Replacement Plan Site

Site Name	DRMS Permit No.	WDID	Exposed Surface Area	Well Permit No.	New Permit Required?
Three Bells Pit	M-1979-191	0303023	5.5 acres	64818-F	No

The Three Bells Pit consists of two primary cells, the “Veldman” parcel to the southeast and the “DiTullio” parcel to the northwest. Mining operations have been completed at both parcels, and all dewatering has ceased. The clay liner for the Veldman parcel was approved by the State Engineer’s Office as meeting the design standard for liners in a letter dated March 6, 2015, and is now classified as a lined reservoir in accordance with the 1999 SEO Guidelines (River Bluffs Lake, WDID 0303324). The remaining areas of groundwater exposure at the DiTullio parcel were lined during the 2018 plan period. The clay liner for DiTullio Pond 3 was approved by the State Engineer’s Office as meeting the design standard for liners in a letter dated January 4, 2018, and the clay liner for DiTullio Pond 1 was approved by the State Engineer’s Office as meeting the design standard for liners in a letter dated August 6, 2018. Both ponds are now classified as lined reservoirs in accordance with the 1999 SEO Guidelines (Three Bells DiTullio Property Pond 3, WDID 0303376; and Three Bells DiTullio Property Pond 1, WDID 0303396, respectively).

Depletions

There will be no consumptive use of groundwater at the site during this plan period, only replacement of ongoing lagged depletions associated with past mining and dewatering operations at the site.

A stream depletion model using the Glover method was used to calculate the lagged depletions to the Cache La Poudre River. The alluvial aquifer model was used with the following aquifer input parameters: transmissivity (T) = 45,000 gallons/day/foot; the distance of centroid of the exposed ground water to the Cache La Poudre River (X) = 1,900 feet; the distance from the parallel impermeable boundary to the Cache La Poudre River (W) = 4,800 feet; and the specific yield (S) = 0.2.

Lagged depletions resulting from past evaporation of exposed groundwater, aggregate production, and other mining operations at the site will total 6.66 acre-feet for this plan period.

Dewatering at the Veldman parcel ceased at the end of October, 2014, and dewatering at the DiTullo parcel ceased at the end of August 2017. While the site was continuously dewatered, the water returned to the stream system was considered to be adequate to offset the depletions attributable to the dewatering. However, after dewatering at the site ceased, the delayed depletions from dewatering must be replaced. Lagged depletions from dewatering were calculated

using the Glover method with the parameters identified above. Past dewatering operations at the site have resulted in lagged depletions totaling 78.08 acre-feet during this plan period.

Lagged depletions from past mining and dewatering operations at the site will total 84.74 acre-feet during this plan period, as summarized in Table B below. A monthly breakdown of the lagged depletions, including the lagged dewatering depletions, can be found in the attached Table 1.

Table B - Depletion Summary (all amounts in acre-feet)

Site Name	Evaporation Loss	Water Lost in Mined Product	Dust Control	Liner Construction	First Fill	Total	Lagged Depletions	Lagged Dewatering Depletions	Total Lagged Depletions
Three Bells Pit	0	0	0	0	N/A	0	6.66	78.08	87.74

Replacements

Replacement water will come from a variety of sources, including accretion credits from past recharge of shares of the Box Elder Ditch Company (WDID 0300926), leased excess credits from direct delivery of Whitney Ditch Company shares (WDID 0300930), accretion credits from past recharge of Whitney Ditch Company shares, leased augmentation water from the City of Fort Collins, and water stored in Heaton Reservoir.

BEDC Recharge Accretions

Lafarge West, Inc., the former operator of the subject site and SWSP, previously owned and dedicated to this plan 5.0 shares in the Box Elder Ditch Company. The 5.0 Box Elder Ditch Company shares were sold but recharge credits continue to be available for replacement use under this combined plan for water that was delivered to recharge through the 2014 irrigation year. In addition, MMM obtained approval from Steamboat Partners Investments, LLC for the use of their 1.0 Box Elder Ditch Company share in the 2015 and 2016 SWSPs. Accretions from past recharge of these shares will continue to accrue to the stream in 2019.

The Box Elder Ditch is divided into 64 Box Elder Ditch Company (“BEDC”) shares. The 5.0 shares previously dedicated to this plan are from the group of 5.5 shares previously owned by Lafarge that were historically associated with the Three Bells Farm. The 1.0 share owned by Steamboat Partners comes from this same group of 5.5 shares. A total of 6.0 BEDC shares were historically utilized for the irrigation of 344.3 acres at the Three Bells Farm. The historical consumptive use credit for the 6.0 BEDC shares used to irrigate the Three Bells property was determined to be 307.0 acre-feet (51.2 acre-feet per share), based on a historical consumptive use analysis submitted with the 2014 SWSP request.

Table 2 from the 2014 SWSP request shows the average ditch diversion for the Box Elder Ditch from 1950 to 2007. Table 3 takes the average ditch diversions for the Box Elder Ditch from 1950 to 1984 and analyzes the historic consumptive use and return flows for the 6.0 BEDC shares. Table 4 breaks this information down further to come up with the monthly historic farm headgate diversions and return flows for the 5.0 BEDC shares previously utilized in this plan. As shown on Table 4, the average annual farm headgate diversion associated with the subject 5.0 BEDC shares is 457.0

acre-feet (91.4 acre-feet per share) with an associated return flow obligation of 201.1 acre-feet (40.2 acre-feet per share). This leaves a net consumptive use credit of 255.9 acre-feet, or 51.2 acre-feet per share.

The BEDC shares were previously diverted into a recharge pit (WDID 0302002) through an existing lateral from the ditch. The recharge pit was constructed on the un-mined portion of the Three Bells Pit site and was excavated to only the upper portion of the gravel deposit so as not to expose additional groundwater. The estimated recharge pit size is one (1) acre. For the purposes of calculating recharge credit under this plan, evaporation from open water was assumed for the entire surface area of the recharge pit for the number of days water was diverted into the recharge pit. Based on this approach, the proportion of days with water diverted into the recharge pit to the number of days per month was applied to the monthly gross evaporation rate, resulting in an evaporative consumptive use from the recharge pit of approximately 2.04 acre-feet.

From 2004 through October 2014, a cumulative volume of 4,697 acre-feet associated with the 5.0 Lafarge BEDC shares was recharged. In addition, 189.11 acre-feet associated with the 1.0 Steamboat Partners BEDC share were recharged from November 2014 through November 2015, along with 263.6 acre-feet from April 2016 through October 2016. A recharge model was used to determine the total monthly recharge accretion credits. The recharge model uses the following parameters: transmissivity (T) = 45,000 gallons/day/foot, the distance of centroid of the recharge pit to the Cache La Poudre River (X) = 1,600 feet, the distance from the parallel impermeable boundary to the Cache La Poudre River (W) = 5,000 feet, and the specific yield (S) = 0.2.

The lagged accretions to the Cache la Poudre River from past deliveries to recharge are estimated to total 11.87 acre-feet for the 2019 calendar year. The recharge accretions accrue to the Cache la Poudre River downstream of the river diversion for the New Cache system (WDID 0300929).

Return flow obligations associated with the use of the BEDC shares are based on return flow percentages during the irrigation season (May through September) and the non-irrigation season (October through April). Irrigation season return flow factors are applied to monthly farm headgate deliveries and non-irrigation season return flow factors are applied to total annual farm headgate deliveries. Therefore, the return flow obligations associated with the past diversion of the subject BEDC shares into recharge have been replaced under previous SWSPs.

Whitney Ditch Recharge Accretions

MMM owns 12 shares of the Whitney Ditch used primarily to provide replacements for the Parsons Mine under Martin Marietta's Parsons Mine Substitute Water Supply Plan (WDID 0302583). The SWSP allows the use of excess replacement credit associated with the subject 12 Whitney Ditch shares in other gravel pit SWSPs. The shares can be delivered either directly to the river for immediate credit or delivered to a recharge pond (Parsons Mine Recharge Area, WDID 0302067) for lagged recharge accretion credits. This SWSP will utilize 4.5 acre-feet of excess recharge credits during the month of October 2019. The current Parsons Mine Substitute Water Supply Plan is only valid through May 31, 2019; the 4.5 acre-feet of accretions dedicated to this SWSP for the month of October 2019 will be deducted from the amount of replacement water available for use in any renewal of the Parsons Mine Substitute Water Supply Plan covering October 2019. Return flow obligations will be accounted for and replaced under the Parsons Mine Substitute Water Supply Plan.

Whitney Ditch Direct Delivery

MMM has entered into a lease with Aggregate Industries for 28.4 acre-feet of excess augmentation credit generated from direct delivery of 13.5 shares in the Whitney Ditch Company owned by Aggregate Industries. A copy of the lease agreement between MMM and Aggregate Industries, dated December 19, 2018, is attached to this approval. The leased Whitney Ditch credits will be available during the months of May through September 2019, according to the monthly schedule shown on Exhibit A to the lease. The subject 13.5 shares are utilized as a replacement source in Aggregate Industries' South Platte Combined Replacement Plan (WDID 0202565). The total consumptive use credit for 2019 is projected to be approximately 175.01 acre-feet, as more fully described in Aggregate Industries' South Platte Combined Replacement Plan. Based on the recently submitted 2019 renewal request for Aggregate Industries' South Platte Combined Replacement Plan, Aggregate Industries is projected to have sufficient replacement supplies on the Cache la Poudre during the period of May through September 2019 to cover all replacement obligations under their South Platte Combined Replacement Plan and the excess credits leased to MMM for use in this SWSP. The Whitney Ditch shares are anticipated to be delivered to the Cache la Poudre River via a return structure owned by the Whitney Irrigation Company located in the SE¼ of Section 30, Township 6 North, Range 66 West, 6th P.M. Return flow obligations associated with the use of the shares will be accounted for and replaced under the Aggregate Industries' South Platte Combined Replacement Plan.

City of Fort Collins

MMM has obtained a lease for up to 7.3 acre-feet of replacement water from the City of Fort Collins for the month of April, 2019. A copy of the lease, dated January 8, 2019, is attached. The replacement water will come from reusable sources owned or controlled by the City of Fort Collins that have been previously decreed for augmentation, which may include:

- Arthur Irrigation Company Shares (391.3642 shares changed in case no. 92CW129)
- Larimer County Canal No. 2 Irrigation Company Shares (391.3642 shares changed in case no. 92CW129)
- New Mercer Ditch Company Shares (44.81716 shares changed in case no. 92CW129)
- Warren Lake Reservoir Company Shares (83.1892 shares changed in case no. case no. 92CW129)
- The Michigan Ditch Supply System (146 cfs of transmountain water per case no. 88CW206)
- Joe Wright Reservoir (decreed for augmentation use case nos. CA-11217 & W-9322-78)
- Windy Gap Project (annual reuse agreement with Platte River Power Authority for use of this water per case no. W-9322-78)

The decree entered in case no. 92CW129 changed the use of the above-identified ditch shares, collectively referred to as the "Southside Ditches Water Rights", from irrigation to all municipal uses, including augmentation and replacement, and to allow diversion and storage at multiple locations as specified in the decree, including storage in Fossil Creek Reservoir.

Replacement water will be delivered to the confluence of the Foothills Outfall Channel and the Cache la Poudre River in the NW¼ of the NW¼ of Section 34, Township 7 North, Range 68 West, 6th P.M., just below Rigden Reservoir (WDID 0303326), approximately 5 miles upstream from the

Three Bells Pit. Conveyance loss for delivery of replacement water is subject to assessment and modification as determined by the division engineer. The applicant shall coordinate with the water commissioner to apply appropriate transit losses for delivery of replacement water.

If replacements are made using sources originating from Joe Wright Reservoir, there are diversions that could potentially sweep the river between Joe Wright Reservoir and the Three Bells Pit. It is the Applicant's responsibility to track the daily call and make arrangements as necessary to ensure the replacement water is bypassed or otherwise delivered to the point of depletions.

Heaton Reservoir

MMM is the owner of Heaton Reservoir (WDID 0504089), located adjacent to the confluence of Boulder Creek with St. Vrain Creek in the N½ of the NE ¼ of Section 9, T2N, R68W, 6th P.M. The slurry wall liner for the Heaton Reservoir was approved by the State Engineer's Office as having met the design standard for liners in a letter dated April 7, 2003 and it is therefore classified as a lined reservoir in accordance with the 1999 SEO Guidelines. Heaton Reservoir was granted a conditional water storage right for 680 acre-feet in case no. 2001CW193. As of October 2018, there were approximately 600 acre-feet of fully consumable water stored in the reservoir. You have estimated that 40.4 acre-feet of replacement water will be pumped from Heaton Reservoir during the periods of January through March, and November through December 2019. Transit loss will be assessed from the point of release at the confluence of Boulder Creek with St. Vrain Creek, down St. Vrain Creek to its confluence with the South Platte River, and finally to the confluence of the South Platte River and the Cache la Poudre River, a distance of approximately 35 miles. When there are no intervening water rights on the Cache la Poudre River, South Platte River, and St. Vrain Creek between the Three Bells Pit and the outlet of Heaton Reservoir calling for water, MMM may use water released from Heaton Reservoir to cover the depletions from this plan. If the water released from Heaton Reservoir is unable to replace the depletions from this plan anytime during the non-irrigation season, MMM must provide replacement water above the calling water right either from an alternative source that may be added to this plan as described below or by trucking replacement water from Heaton Reservoir and discharging it above the calling water right. Any trucking of water for replacement purposes must first be approved by the water commissioner.

Additional Replacement Sources

Supplemental leases will be obtained in the event that the above-described sources are insufficient to replace all depletions from the Three Bells Pit. Such supplemental leases may be obtained from any authorized augmentation source contained in a gravel pit approved pursuant to § 37-90-137(11), C.R.S., that is capable of making replacements at the most upstream calling right impacted by the Three Bells Pit depletions.

The Applicant has requested permission to lease out any of its excess replacement credit to other gravel pit SWSPs approved pursuant to § 37-90-137(11), C.R.S., to the extent that such excess replacement credit exists. The Applicant must provide written notice to the Division Engineer and Water Commissioner at least 30 days in advance of the desired commencement of use of the excess replacement credits, which must include the specific plan in which the credits will be used, the provision in the plan that allows an unnamed source to be added for credit, the annual and monthly amount of excess replacement credit available, the location at which the water will be delivered to

the stream, and a copy of a lease agreement between the Applicant and the purchaser of the excess replacement credits if the additional plan is not owned by the Applicant. The Applicant cannot claim credit for the use of the excess replacement credits in any other plan until they have received written approval from the Division Engineer or Water Commissioner. Any use of any such excess replacement credits must continue to be directly related to the mining of sand and gravel.

A monthly breakdown of projected lagged depletions, replacements, and return flow obligations is shown on the attached Table 2.

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. The DRMS letter (attached) identifies four approaches to satisfy this requirement.

The Three Bells Pit is proposed to be reclaimed to Developed Water Storage. In accordance with approach no. 3, the bond for the Three Bells Pit has been increased to \$3,294,000 to cover the cost of final reclamation.

Conditions of Approval

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

1. This plan shall be valid for the period of January 1, 2019 through December 31, 2019, unless otherwise revoked or superseded by decree. Additional SWSPs are required until there is no longer an effect on stream flow from lagged depletions from mining and dewatering at the Three Bells Pit. Any renewal request must be submitted to this office with the statutory filing fee (currently \$257 per pit) no later than November 1, 2019.
2. Well permit no. 64818-F was obtained for the use and exposed groundwater surface at the site in accordance with § 37-90-137(2) and (11), C.R.S.
3. This SWSP does not authorize the exposure of any groundwater or any consumptive use of groundwater at the site. Any use of groundwater at the Three Bells Pit must first be approved by this office through an amendment to this SWSP.
4. Replacement water shall be made available to cover all out-of-priority depletions in time, place, and amount and shall be made available under the direction and/or 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. The replacement may be aggregated to maximize beneficial use. The water commissioner and/or division engineer shall determine the rate and timing of an aggregated release.

5. If an intervening water right on the Cache la Poudre River, South Platte River, or St. Vrain Creek between the Three Bells Pit and the outlet of Heaton Reservoir is calling for water at any point during the non-irrigation season, and MMM does not have any alternative sources available that can be delivered above the calling water right, the Applicant is required to truck replacement water from Heaton Reservoir and discharge it above the calling water right. Any trucking of water for replacement purposes must first be approved by the water commissioner.
6. The replacement water, which is the subject of this plan cannot be sold or leased to any other entity, unless excess replacement credits exist and the Applicant has obtained written approval from the Division Engineer or Water Commissioner for the use of such excess replacement credits. 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 or liner approval is obtained for the site.
7. The Applicant has proposed to use for replacement, if needed, water available from any other source legally available for augmentation and which can be provided in the amount, at the time, and at the location required to replace out of priority depletions from the subject pits. Additional sources of replacement water in this SWSP may only be used if the Applicant complies with the attached Division One Administration Protocol *"Use of Replacement Sources Not Specifically Identified in an SWSP or Augmentation Plan"*.
8. Conveyance loss for delivery of replacement water is subject to assessment and modification as determined by the water commissioner or division engineer.
9. The Applicant shall provide daily accounting (including, but not limited to diversions, depletions, replacement sources, and river calls) on a monthly basis, or more frequent if required by the water commissioner. The accounting must be emailed to the water commissioner, Mark.Simpson@state.co.us, and DNR_Div1Accounting@state.co.us within 30 days of the end of the month for which the accounting applies. Accounting and reporting procedures are subject to approval and modification by the division engineer. Accounting forms need to identify the WDID number for each well operating under this SWSP. **NOTE:** Monthly accounting, even during the winter non-irrigation season, is required.
10. The name, address, and phone number of the contact person who will be responsible for the operation and accounting of this plan must be provided on the accounting forms submitted to the division engineer and the water commissioner.
11. Applicant shall follow the applicable protocols as referenced in the attached documents for the operation of this SWSP.
12. If reclamation 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 to include, but not be limited to, long-term evaporation losses and lagged depletions.
13. If a lined pond results after reclamation, replacement of lagged depletions shall continue until there is no longer an effect on stream flow.
14. To assure that depletions from ground water evaporation do not occur in the unforeseen event, or events, that would lead to the abandonment of the Three Bells Pit, a bond in the amount of \$3,294,000 has been obtained through the DRMS for lining or backfilling of the pit. Additionally, if the dewatering at the Three Bells Pit is discontinued before the pit is lined, the bond can finance the completion of the lining of the pit or backfilling, thus preventing

depletions to the stream system.

15. 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 use of groundwater must cease immediately.
16. In accordance with amendments to § 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 whether the 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 analysis may be requested at any time to determine if the water quality is appropriate for downstream water users.
17. 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 pending water court case or any other legal action that may be initiated concerning this plan. 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 Michael Hein in Greeley at (970) 352-8712 or Sarah Brucker in Denver at (303) 866-3581.

Sincerely,



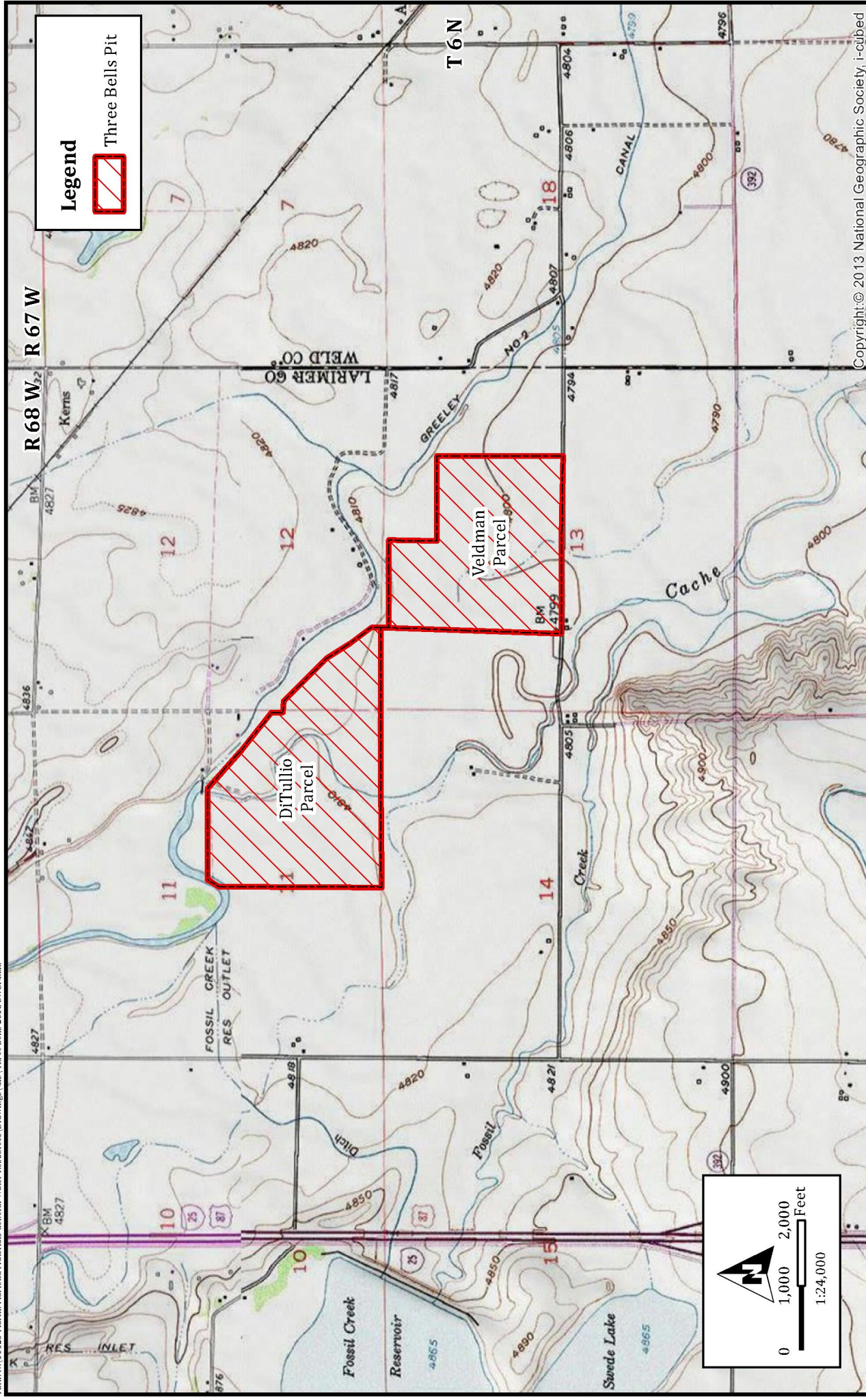
for Jeff Deatherage, P.E.
Chief of Water Supply

Attachments: Figure 1 - Overview Map
Table 1 - Total Lagged Depletions
Tables 2-4, Middle Poudre Combined SWSP 2014 (dated 11/21/2013)
Table 2 - 2019 Water Balance
Aggregate Industries Lease Agreement (Whitney Ditch excess augmentation credit)
City of Fort Collins Lease Agreement
DRMS April 30, 2010 letter
Division One Augmentation Protocol *“Augmentation Plan Accounting, Division One - South Platte River”*
Division One Administration Protocol *“Delivering Water Using the Natural Stream”*
Division One Administration Protocol *“Use of Replacement Sources Not Specifically Identified in an SWSP or Augmentation Plan”*

Cc: Michael Hein, Lead Assistant Division Engineer, Division 1, Michael.Hein@state.co.us
810 9th Street, Suite 200, Greeley, CO 80631

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

Amy Eschberger, Division of Reclamation Mining and Safety, Amy.Eschberger@state.co.us



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 Applegate Group, Inc. Water Resource Advisors for the West 1490 West 121st Ave, Suite 100 Denver, CO 80234-2728 www.ApplegateGroup.com Phone: (303) 452-4611 Fax: (303) 452-2759 e-mail: info@applegategroup.com	THREE BELLS PIT SWSP Overview Map		Date: 31 Oct 2017 Job #: 11-126 Drawn By: JMD	Figure: 1 Of: 1
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Table No. 1

Three Bells Pit SWSP 2019



12/21/2018

10-106

Total Lagged Depletions*Red italics denote projections*

Month	Three Bells Pit Lagged Depletions (ac-ft) (A)	Three Bells Pit Lagged Dewatering Depletions (ac-ft) (B)	Total Poudre Lagged Depletions (ac-ft) (C)
<i>Jan-19</i>	<i>0.90</i>	<i>9.88</i>	<i>10.78</i>
<i>Feb-19</i>	<i>0.82</i>	<i>9.09</i>	<i>9.91</i>
<i>Mar-19</i>	<i>0.74</i>	<i>8.36</i>	<i>9.10</i>
<i>Apr-19</i>	<i>0.67</i>	<i>7.69</i>	<i>8.36</i>
<i>May-19</i>	<i>0.61</i>	<i>7.08</i>	<i>7.68</i>
<i>Jun-19</i>	<i>0.55</i>	<i>6.51</i>	<i>7.06</i>
<i>Jul-19</i>	<i>0.50</i>	<i>5.99</i>	<i>6.49</i>
<i>Aug-19</i>	<i>0.45</i>	<i>5.51</i>	<i>5.96</i>
<i>Sep-19</i>	<i>0.41</i>	<i>5.07</i>	<i>5.48</i>
<i>Oct-19</i>	<i>0.37</i>	<i>4.66</i>	<i>5.03</i>
<i>Nov-19</i>	<i>0.34</i>	<i>4.29</i>	<i>4.63</i>
<i>Dec-19</i>	<i>0.31</i>	<i>3.95</i>	<i>4.25</i>
Total	6.66	78.08	84.74

NOTES:

(A) Three Bells Pit Lagged Depletions

(B) Three Bells Pit Lagged Dewatering Depletions

(C) Total lagged depletions, (A)+(B)

Table No. 2

Middle Poudre Combined SWSP 2014

Box Elder Ditch Diversions

11/21/2013
10-106

All diversions in acre-feet													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1950	0.0	0.0	0.0	0.0	902.5	1751.4	2092.6	1000.7	654.6	0.0	0.0	0.0	6401.8
1951	0.0	0.0	0.0	0.0	1144.5	1759.4	2221.5	626.8	1053.2	0.0	0.0	0.0	6805.4
1952	0.0	0.0	0.0	0.0	729.9	2423.8	1519.4	2110.4	1465.8	136.9	0.0	0.0	8386.2
1953	0.0	0.0	0.0	0.0	1569.0	2376.2	2388.1	1809.0	769.6	0.0	0.0	0.0	8911.9
1954	0.0	0.0	0.0	95.2	2570.6	2114.4	2217.6	825.1	597.0	382.8	0.0	0.0	8802.8
1955	0.0	0.0	0.0	140.8	2029.1	944.2	2171.9	1281.3	599.0	0.0	0.0	0.0	7166.4
1956	0.0	0.0	0.0	0.0	743.8	1779.2	2402.0	1071.1	376.9	1033.4	0.0	0.0	7406.4
1957	0.0	0.0	0.0	0.0	0.0	1073.1	2332.6	1709.8	831.1	0.0	0.0	0.0	5946.5
1958	0.0	0.0	0.0	0.0	0.0	1152.4	2031.1	1723.7	809.3	45.6	0.0	0.0	5762.1
1959	0.0	0.0	0.0	0.0	390.8	2332.6	2294.9	2054.9	489.9	0.0	0.0	0.0	7563.1
1960	0.0	0.0	0.0	226.1	1051.3	1697.9	2283.0	1559.0	664.5	73.4	0.0	0.0	7555.2
1961	0.0	0.0	0.0	0.0	172.6	805.3	1884.3	1440.0	489.9	0.0	0.0	0.0	4792.2
1962	0.0	0.0	0.0	333.2	1691.9	1235.7	2005.3	1814.9	662.5	0.0	0.0	0.0	7743.6
1963	0.0	0.0	0.0	317.4	2469.5	979.9	2271.1	610.9	557.4	0.0	0.0	0.0	7206.1
1964	0.0	0.0	0.0	0.0	1953.8	1180.2	2889.6	1168.3	634.7	714.1	0.0	0.0	8340.6
1965	0.0	0.0	0.0	0.0	1451.9	244.0	1356.7	1610.6	632.7	0.0	0.0	0.0	5295.9
1966	0.0	0.0	0.0	162.7	1570.9	1112.7	2292.9	569.3	240.0	196.4	0.0	0.0	6144.9
1967	0.0	0.0	0.0	0.0	491.9	71.4	1031.4	1658.2	559.4	406.6	0.0	0.0	4218.9
1968	0.0	0.0	0.0	0.0	1063.2	1211.9	2457.6	1327.0	888.6	452.2	17.9	0.0	7418.3
1969	0.0	0.0	0.0	7.9	787.5	688.3	2249.3	1426.1	339.2	0.0	0.0	0.0	5498.3
1970	0.0	0.0	0.0	0.0	686.3	646.6	1662.2	1741.5	370.9	0.0	0.0	0.0	5107.5
1971	0.0	0.0	0.0	0.0	164.6	1989.5	2175.9	1549.1	372.9	0.0	0.0	0.0	6252.0
1972	0.0	0.0	0.0	75.4	1338.9	1049.3	2128.3	1275.4	158.7	210.3	0.0	0.0	6236.1
1973	0.0	0.0	0.0	0.0	271.7	1759.4	2132.3	1761.4	783.5	65.5	0.0	0.0	6773.7
1974	0.0	0.0	0.0	0.0	1747.5	1380.5	2269.1	1721.7	660.5	121.0	0.0	0.0	7900.3
1975	0.0	0.0	0.0	0.0	910.4	741.8	2503.2	1666.1	569.3	214.2	0.0	0.0	6605.1
1976	0.0	0.0	0.0	0.0	737.9	2060.9	2703.5	2126.3	716.0	33.7	0.0	0.0	8378.3
1977	0.0	0.0	0.0	0.0	1535.2	2532.9	1188.3	1192.1	752.3	412.6	0.0	0.0	7613.5
1978	0.0	0.0	0.0	77.6	256.3	1163.7	2488.5	2174.9	839.0	0.0	0.0	0.0	7000.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	2222.9	1116.9	54.0	0.0	0.0	0.0	3393.8
1980	0.0	0.0	0.0	0.0	0.0	1444.8	1692.9	1481.7	536.1	0.0	0.0	0.0	5155.5
1981	0.0	0.0	0.0	11.9	654.0	1402.3	2276.1	1042.9	214.0	0.0	0.0	0.0	5601.2
1982	0.0	0.0	0.0	115.6	622.8	279.5	1802.8	1586.8	220.0	0.0	0.0	0.0	4627.5
1983	0.0	0.0	0.0	0.0	0.0	0.0	1798.6	1960.9	182.3	0.0	0.0	0.0	3941.8
1984	0.0	0.0	0.0	0.0	180.9	1549.9	1953.6	1874.2	772.4	74.8	0.0	0.0	6405.7
1985	0.0	0.0	0.0	0.0	806.5	1794.3	1907.1	1776.6	313.1	0.0	0.0	0.0	6597.6
1986	0.0	0.0	0.0	0.0	933.8	1490.0	2171.4	1232.0	617.9	120.5	0.0	0.0	6565.6
1987	0.0	0.0	0.0	73.6	465.9	1142.3	2009.1	1349.0	274.0	68.6	0.0	0.0	5382.4
1988	0.0	0.0	0.0	0.0	479.8	1533.6	1902.6	1369.6	525.5	74.8	0.0	0.0	5885.9
1989	0.0	0.0	0.0	75.5	783.5	666.3	1930.9	998.7	315.2	0.0	0.0	0.0	4770.0
1990	0.0	0.0	0.0	0.0	268.0	1100.1	1262.1	926.8	389.8	0.0	0.0	0.0	3946.7
1991	0.0	0.0	0.0	0.0	321.9	1007.0	1860.7	1267.1	348.7	0.0	0.0	0.0	4805.4
1992	0.0	0.0	0.0	0.0	837.2	1021.9	936.4	1264.6	363.4	372.5	0.0	0.0	4796.0
1993	0.0	0.0	0.0	0.0	729.9	988.8	1628.1	1766.3	191.0	47.9	0.0	0.0	5352.0
1994	0.0	0.0	0.0	330.3	546.3	1316.3	1694.3	1119.3	661.1	0.0	0.0	0.0	5667.5
1995	0.0	0.0	0.0	281.5	117.0	368.5	1217.3	2240.4	956.6	191.6	0.0	0.0	5372.9
1996	0.0	0.0	0.0	237.0	1436.1	896.9	2091.8	1240.5	843.8	478.0	0.0	0.0	7224.1
1996	0.0	0.0	0.0	174.9	1334.1	665.1	1994.4	320.9	457.6	389.3	0.0	0.0	5336.3
1998	0.0	0.0	0.0	0.0	858.5	1119.5	2088.2	1800.0	886.2	0.0	0.0	0.0	6752.4
1999	0.0	0.0	0.0	92.4	0.0	186.5	2036.3	1755.0	977.9	88.4	0.0	0.0	5136.4
2000	0.0	0.0	0.0	483.8	1022.7	1728.2	1933.1	1251.6	1171.1	306.7	0.0	0.0	7897.1
2001	0.0	0.0	0.0	159.1	447.3	1311.7	1815.7	1727.4	797.4	542.9	0.0	0.0	6801.5
2002	0.0	0.0	0.0	181.3	1398.8	1207.2	1369.0	414.9	552.3	608.5	292.0	0.0	6024.0
2003	0.0	0.0	0.0	188.8	484.1	894.2	1949.6	1595.1	742.4	734.1	295.5	0.0	6883.9
2004	0.0	0.0	0.0	698.2	790.4	844.6	1834.1	1489.4	708.1	468.3	97.6	0.0	6930.8
2005	0.0	0.0	0.0	166.1	960.9	584.7	2299.3	1455.1	647.4	391.1	241.8	0.0	6746.4
2006	0.0	0.0	0.0	420.5	1066.3	1948.8	1767.7	848.2	819.6	474.3	136.8	0.0	7482.2
2007	0.0	0.0	0.0	77.0	1212.5	1429.5	2118.4	1571.9	875.5	357.7	0.0	0.0	7642.5
Avg.	0.0	0.0	0.0	89.7	848.1	1210.0	1982.9	1421.5	602.6	177.4	18.6	0.0	6351.0
Avg for 5 Shares	0.0	0.0	0.0	7.0	66.3	94.5	154.9	111.1	47.1	13.9	1.5	0.0	496.2
Max .	0.0	0.0	0.0	698.2	2570.6	2532.9	2703.5	2240.4	1465.8	1033.4	295.5	0.0	8911.9
Max for 5 Shares	0.0	0.0	0.0	54.5	200.8	197.9	211.2	175.0	114.5	80.7	23.1	0.0	696.2

Table No. 3
Martin Marietta Materials, Inc.
Middle Poudre Combined SWSP

Prepared By: Asplenata Group, Inc.
Date Revised: 11/21/2013
AS Job#: 10-106

Historic Consumptive Use and Return Flows for 5.5 Box Elder Ditch Share used at Three Belts Property

Month	Average Headgate Diversion (ac-ft) (A)	Prorata Diversion For 6.0 Shares (ac-ft) (B)	Diversions Available at Farm Headgate (ac-ft) (C)	Water Available for Crop Consumption (ac-ft) (D)	Potential Irrigation Requirement (ac-ft) (E)	Calculated CU Credit (ac-ft) (F)	Total Return Flows (ac-ft) (G)	Surface Return Flows (ac-ft) (H)	Subsurface Return Flows (ac-ft) (I)	Lagged Subsurface Return Flows (ac-ft) (J)	Historic Accretions & Depletions 6.0 Shares (ac-ft) (K)	Historic Accretions & Depletions 5.5 Shares (ac-ft) (L)
Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.53	-9.53	-8.74
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.29	-8.29	-7.60
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.33	-7.33	-6.72
Apr	44.30	4.15	3.74	2.24	5.00	2.24	1.50	0.30	1.20	6.70	-3.26	-2.99
May	907.30	85.06	76.55	45.93	34.00	34.00	42.55	8.51	34.04	10.72	57.32	52.54
Jun	1283.80	120.36	106.32	64.99	123.00	64.99	43.33	8.67	34.66	18.58	81.07	74.31
Jul	2091.20	196.05	176.45	105.87	140.00	105.87	70.58	14.12	56.46	25.12	137.21	125.77
Aug	1470.60	137.87	124.08	74.45	66.00	66.00	58.08	11.52	46.47	31.24	81.23	74.46
Sep	571.40	53.57	48.21	28.93	30.00	28.93	19.26	3.86	15.43	28.50	15.85	14.53
Oct	130.70	12.25	11.03	6.62	5.00	5.00	6.03	1.21	4.82	20.68	-10.86	-9.96
Nov	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	14.95	-14.95	-13.71
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.42	-11.42	-10.47
Total	6499.3	609.3	640.4	329.0	404.0	307.0	241.3	48.3	193.1	193.1	307.0	281.4

- (A) Average Headgate Diversions for Box Elder Ditch (1950 to 1984)
 (B) Prorata Diversion for 6.0 Box Elder Shares (64 total shares in ditch)
 (C) Available at Farm Headgate = (B) Prorata Diversions for 6.0 shares * 90% (10% Ditch Losses)
 (D) Water Available for Crop Consumption = (C) Farm Headgate Delivery * 60% Field Efficiency
 (E) Potential irrigation requirement and crop demand from CSU SP CU Model Modified Blaney-Ordle Model Run (Appendix F)
 (F) Calculated CU credit for 6.0 Box Elder Ditch shares, whichever is less, (D) or (E)
 (G) Return Flows at Farm, (C)-(F)
 (H) Surface return flows, (G) Total return flows * 0.2
 (I) Subsurface return flows, (G) Total return flows * 0.8
 (J) Lagged subsurface return flows at river, from lagging model where X = 1,500 ft, W = 4,800 ft, T = 50,000 gpd/ft, and S = 0.2
 (K) Historic accretions and depletions for 6.0 Box Elder Shares used at Three Belts Property
 (L) Historic accretions and depletions for 5.5 Box Elder Share owned by Lafarge from Three Belts

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Table No. 4
Martin Marietta Materials, Inc.
Middle Poudre Combined SWSP

Prepared By: Applegate Group, Inc.
Date Revised: 11/21/2013
AG Job #: 10-106

RECEIVED
 NOV 26 2013
 WATER RESOURCES
 STATE ENGINEER
 COLO

Historic Farm Headgate Diversions and Return Flows for 5.0 Box Elder Ditch Shares

Month	5.0 Shares from Three Bells Farm					
	Farm Headgate Diversions	Surface Return Flows	Lagged Subsurface Return Flows	Total Return Flows	Net Depletions	RF Obligation Percentages
	(ac-ft) (A)	(ac-ft) (B)	(ac-ft) (C)	(ac-ft) (D)	(ac-ft) (E)	(ac-ft) (F)
Jan	0.00	0.00	7.94	7.94	-7.94	1.7%
Feb	0.00	0.00	6.91	6.91	-6.91	1.5%
Mar	0.00	0.00	6.11	6.11	-6.11	1.3%
Apr	3.11	0.25	5.58	5.83	-2.72	1.3%
May	63.79	7.09	8.94	16.03	47.77	25.1%
Jun	90.27	7.22	15.49	22.71	67.56	25.2%
Jul	147.04	11.76	20.93	32.70	114.34	22.2%
Aug	103.40	9.68	26.03	35.71	67.69	34.5%
Sep	40.18	3.21	23.75	26.96	13.21	67.1%
Oct	9.19	1.00	17.24	18.24	-9.05	4.0%
Nov	0.00	0.00	12.46	12.46	-12.46	2.7%
Dec	0.00	0.00	9.52	9.52	-9.52	2.1%
Total	457.0	40.2	160.9	201.1	255.9	-

(A) From Table No. 3 Column (C), pro-rated to 5.0 share

(B) From Table No. 3 Column (H), pro-rated to 5.0 share

(C) From Table No. 3 Column (J), pro-rated to 5.0 share

(D) = (B) + (C)

(E) = (A) - (D)

(F) For May through September, equal to the monthly return flows divided by the monthly farm headgate diversions.

For October through April, equal to the monthly return flows divided by the total annual farmheadgate diversions

Table No. 2

Three Bells Pit SWSP 2019

Distance from Heaton Reservoir to Poudre River Confluence =

35
0.50%

 miles
Transit Loss Rate =

0.50%

 per mile



12/21/2018
10-106

2018 Water Balance

Red Italics denote projections

Month	Total Combined Lagged Depletions (ac-ft) (A)	Farm Headgate Delivery for Recharge of Box Elder Shares (ac-ft) (B)	Evap at Recharge Pit for Box Elder shares (ac-ft) (C)	Net Recharge (ac-ft) (D)	Lagged Recharge Credit of Box Elder Shares (ac-ft) (E)	2018 FHD =		Return Flow Obligation (ac-ft) (G)	Net Impact to the Poudre River (ac-ft) (H)	% of Month Under Call Conditions (I)	Initial Net Impact to the Poudre River (ac-ft) (J)	Additional Replacements					Net Impact to the Poudre River (ac-ft) (P)
						Return Flow Factor (ac-ft) (F)	0.00					Aggregate Industries Lease of Whitney Credit (ac-ft) (K)	Fort Collins Lease (ac-ft) (L)	Excess Whitney Recharge (Parsons SWSP) (ac-ft) (M)	Heaton Reservoir Release (ac-ft) (N)	Heaton Reservoir Transit Loss (ac-ft) (O)	
Jan-19	10.78	0.00	0.00	0.00	1.55	1.7%	0.00	0.00	-9.23	100%	-9.23				11.2	1.96	0.01
Feb-19	9.91	0.00	0.00	0.00	1.42	1.5%	0.00	0.00	-8.49	100%	-8.49				10.3	1.80	0.01
Mar-19	9.10	0.00	0.00	0.00	1.29	1.3%	0.00	0.00	-7.81	100%	-7.81				9.5	1.66	0.03
Apr-19	8.36	0.00	0.00	0.00	1.18	1.3%	0.00	0.00	-7.18	100%	-7.18		7.3			0.00	0.12
May-19	7.68	0.00	0.00	0.00	1.08	25.1%	0.00	0.00	-6.61	100%	-6.61	6.7				0.00	0.09
Jun-19	7.06	0.00	0.00	0.00	0.99	25.2%	0.00	0.00	-6.07	100%	-6.07	6.1				0.00	0.03
Jul-19	6.49	0.00	0.00	0.00	0.90	22.2%	0.00	0.00	-5.59	100%	-5.59	5.6				0.00	0.01
Aug-19	5.96	0.00	0.00	0.00	0.82	34.5%	0.00	0.00	-5.14	100%	-5.14	5.2				0.00	0.06
Sep-19	5.48	0.00	0.00	0.00	0.75	67.1%	0.00	0.00	-4.73	100%	-4.73	4.8				0.00	0.07
Oct-19	5.03	0.00	0.00	0.00	0.69	4.0%	0.00	0.00	-4.35	100%	-4.35			4.5		0.00	0.15
Nov-19	4.63	0.00	0.00	0.00	0.63	2.7%	0.00	0.00	-4.00	100%	-4.00				4.9	0.86	0.04
Dec-19	4.25	0.00	0.00	0.00	0.57	2.1%	0.00	0.00	-3.68	100%	-3.68				4.5	0.79	0.04
Total	84.74	0.00	0.00	0.00	11.87			0.00	72.87	-	-72.87	28.4	7.3	4.5	40.4	7.1	0.66

NOTES:

- (A) Total lagged depletions from Table No. 1 Column (G)
- (B) Projected and actual diversions into recharge in 2012 for 5 Box Elder Ditch Company shares
- (C) Estimated evaporation losses from the recharge site assuming 1.0 acre pond at gross evaporation rate
- (D) = (B) - (C)
- (E) Lagged recharge from recharge model
- (F) Return flow factors from Table No. 4 Column (F)
- (G) May through September: Columns (B) * (F). October through April: Column (F) * Total farm headgate delivery from previous irrigation season
- (H) Columns (E) - (A) - (G) (positive values indicate a net accretion)
- (I) Percentage of month under call conditions
- (J) Column (H) * Column (I)
- (K) Aggregate Industries lease of excess augmentation credit from direct delivery of Whitney Ditch shares
- (L) City of Fort Collins augmentation water lease
- (M) Excess augmentation credit from recharge of Whitney Ditch shares in Martin Marietta's Parsons Mine SWSP
- (N) Release from Heaton Reservoir
- (O) Transit loss on Heaton Reservoir release
- (P) = (J) + (K) + (L) + (M) + (N) - (O)

WATER LEASE AGREEMENT

THIS AGREEMENT is made and entered into this 19th day of December 2018, by and between Aggregates Industries. (AI), and Martin Marietta Materials, Inc, ("Martin Marietta").

RECITALS

Whereas AI is the owner of 13.5 shares in the Whitney Ditch Company which have been changed to augmentation use in Case No. 90CW23 and utilizes these shares in its annually-approved Combined Substitute Supply Plan (WDID 0202565) to generate augmentation credit for its portfolio of gravel pit operations.

Whereas AI anticipates it will have excess augmentation credit from its Whitney Ditch shares at a point on the Poudre River above the Greeley No. 3 diversion during a portion of the 2019 irrigation season.

Whereas Martin Marietta has a need for augmentation credit on the Poudre River above the Greeley No. 3 river diversion during the 2019 irrigation season, with such water to be used as a replacement source in Martin Marietta's Three Bells Pit Substitute Water Supply Plan (WDID 0302533).

AGREEMENT

Therefore, in consideration of the mutual covenants and promises of the parties hereto, it is agreed as follows:

1. Beginning from the date of this Agreement until September 30, 2019, AI will lease to Martin Marietta 28.4 AF of excess augmentation credit from its Whitney Ditch shares per the schedule in attached Exhibit A to be used in Martin Marietta's Substitute Water Supply Plan.
2. The water leased to Martin Marietta is for the exclusive use by Martin Marietta and shall not be leased or conveyed to others except by written permission from AI.
3. The cost of the lease water shall be \$200.00 per acre-foot. Payment will be made by Martin Marietta within thirty days following the month of use or can be made in one lump sum payment of \$5,680 to AI for the 2019 season. This payment shall be nonrefundable and is not contingent upon Martin Marietta's actual usage of the water.
4. This Agreement is binding upon the parties, their successor and assigns.

Aggregate Industries

By: Joel Bolduc

(Print Name and Title) Joel Bolduc, Land and Environ. Mgr.

Martin Marietta Materials, Inc.

By: David Haysman

(Print Name and Title)

David Haysman Regional VP/GM Aggregates

EXHIBIT A

All values in acre-feet

May-19	Jun-19	Jul-19	Aug-19	Sep-19	Total
6.7	6.1	5.6	5.2	4.8	28.4

AGREEMENT FOR THE RENTAL OF THE USE OF CERTAIN FULLY CONSUMABLE WATER OF THE CITY OF FORT COLLINS

This Agreement, dated January 8, 2019 is entered into by and between the following Parties: the City of Fort Collins, Colorado, a municipal corporation (“City”); and Martin Marietta (“Renter”).

Recitals

- A. The City owns and operates a municipal water supply system and various water rights and contractual and other rights to use water (“City Water Interests”). Water attributable to some of the City Water Interests can be used, reused, and/or fully consumed for various uses pursuant to the terms and conditions of their respective decrees, contracts, and other controlling documents (“City Fully Consumable Water”).
- B. Pursuant to Article XII, Section 4 of the City Charter, if at any time the water supply is greater than the immediate needs of the City and its inhabitants, the Council may authorize the City Manager to permit the use of such surplus water by consumers outside the city at such rates as the Council may prescribe; provided that no vested right shall accrue under such permits.
- C. The City Manager, Utilities Executive Director, and their designees have been duly authorized by the City Council to rent the use of such surplus City Fully Consumable Water.
- D. Renter desires to rent the use of a certain amount of City Fully Consumable Water for the period of time and the uses defined below (“Subject Water”).
- E. The City has determined that the City’s water supply is currently greater than the immediate needs of the City and its inhabitants such that the Renter can use the Subject Water pursuant to the terms and conditions of this Agreement, which will benefit the City.

Agreement

- 1. **INCORPORATION OF RECITALS.** The Recitals set forth above are hereby incorporated into this Agreement as if fully set forth herein.
- 2. **RENTAL OF THE USE OF THE SUBJECT WATER.** The City agrees to deliver the Subject Water to Renter pursuant to the terms and conditions of this Agreement.
 - 2.1. **Volume.** The City agrees to deliver up to 7.3 acre-feet of the Subject Water to the Delivery Point (defined below) during the term of this Agreement. Renter shall have no rights to the Subject Water or any City Fully Consumable Water not delivered to Renter during the term of this Agreement.
 - 2.2. **Approved Uses.** Renter shall only use the Subject Water delivered under this Agreement for the following uses: augmentation of depletions in the Three Bells Pit SWSP

(WDID0302533) Renter shall not be entitled to claim or use any return flows from the above-described use.

2.3. **Delivery Requests.** The City will deliver the Subject Water pursuant to the schedule attached hereto as Exhibit A. Deliveries will be made in increments of 0.1 acre feet. The City reserves the right to not make requested deliveries if such deliveries would not be beneficially used by Renter and result in waste (such as, by way of example and not limitation, deliveries of water for augmentation use may not be made during a free river period when depletions need not be augmented).

2.4. **Delivery Point.** The requested volume of the Subject Water will be delivered to the "Delivery Point", being: the confluence of the Foothills Outfall Channel and the Cache la Poudre River in the NW1/4 of the NW1/4 of Section 34, Township 7 North, Range 68 West, 6th P.M. (just below Rigden Reservoir. The City will bear any transit losses assessed on the delivery of the Subject Water to the Delivery Point. Renter shall bear any transit losses on the conveyance of the Subject Water from the Delivery Point downstream.

2.5. **Source of City Water.** The City Fully Consumable Water will be attributable to the City Water Interests that are lawfully available for the Renter's use as defined above including, but not necessarily limited to those listed in Exhibit B. The City shall have the sole discretion to select which City Water Interest to use to deliver the Subject Water to Renter.

2.6. **Force Majeure.** In the event that the City cannot deliver the City Fully Consumable Water to the Delivery Point due to circumstances beyond its control, the City will deliver the water to the Delivery Point as soon as practicable, but shall have no obligation to the Renter for the delay in such deliveries.

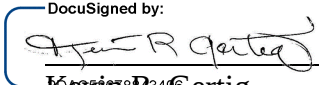
2.7. **Ownership and Assessments.** This Agreement only authorizes Renter to use the City Fully Consumable Water delivered to Renter pursuant to the terms and conditions herein. The City retains all ownership of the underlying City's Water Interests. In the event the City cannot make the Subject Water available to the Renter for the uses described herein due to circumstances beyond its control, including administrative interpretations or actions by the Colorado Water Division of Water Resources, the City shall have no obligation to Renter.

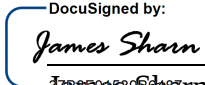
2.8. **Accounting.** The City will account for such deliveries to the Delivery Point in the City's accounting and report the same to the State Engineer's Office on a monthly basis. The City shall have no obligation related to the accounting or other obligations associated with the Renter's use of the City Fully Consumable Water. Upon request by Renter, the City will provide Renter with information on the specific City Water Interests used to deliver water to Renter under this Agreement provided, however, that the City shall have no obligation to provide such information to Renter until the City has submitted its final accounting for the subject time period to the Division Engineer for Water Division 1.

3. **PAYMENT.** Simultaneously with the execution of this Agreement, Renter has paid the City \$2,920 for the rental of the use of the Subject Water, consistent with the rates established by City Council pursuant to Article XII, Section 6 of the City Charter. Said payment is nonrefundable.
4. **TERM.** The term of this Agreement shall be from the above date through April 30, 2019.
5. **ASSIGNMENT AND TRANSFER.** This Agreement shall not be transferred or assigned by either Party without written approval of the other Party.
6. **NO THIRD-PARTY BENEFICIARIES.** This Agreement is entered into between the Parties for the purposes set forth herein. It is the intent of the Parties that they are the only beneficiaries of this Agreement and the Parties are only benefitted to the extent provided under the express terms and conditions of this Agreement.
7. **COLORADO LAW.** The Agreement shall be governed by the laws of the State of Colorado, insofar as any matter is not regulated by applicable laws of the United States.
8. **ENTIRE AGREEMENT.** The making, execution and delivery of this Agreement by the Parties has been induced by no representations, statements, warranties or agreements other than those expressed in this Agreement. This Agreement embodies the entire understanding of the Parties as to the subject matter hereof and there are no further or other agreements or understandings, written or oral, in effect between the Parties relating to its subject matter unless expressly referred to in this Agreement. Modification of this Agreement by the Parties may be made only by a writing signed by the Parties.

FORT COLLINS UTILITIES

RENTER

By:  1/14/2019
Kevin R. Gertig
Utilities Executive Director

By:  1/16/2019
James Sharn
Director – Natural Resources
Martin Marietta

Approved as to Form:

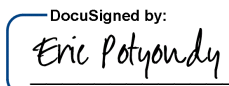
 1/14/2019
City Attorney's Office
Eric Potyondy

EXHIBIT A
(Delivery Schedule)

April 2019

April 1 – April 5 – 1.9 acre-feet
April 8 – April 12 – 1.8 acre-feet
April 15 – April 19 – 1.8 acre-feet
April 22 – April 26 – 1.8 acre-feet

EXHIBIT B
(City Water Interests)

The City Fully Consumable Water delivered under this Agreement will be attributable to the City Water Interests that are lawfully available for the Renter's use as defined above including, but not necessarily limited to, the following:

<u>Water Interest Name</u>	<u>Decree References¹ and Notes</u>
Arthur Irrigation Company Shares or Effluent	Case No. 1992CW129; Case No. 2005CW323
Colorado-Big Thompson Project Water	Attributable to North Poudre Irrigation Company Shares and allotment contracts with the Northern Colorado Water Conservancy District
Halligan Reservoir Enlargement Water Right	Case No. 2013CW3185
Joe Wright Reservoir Water Rights	Case No. W-9322-78
Larimer County Irrigating Canal No. 2 Company Shares and Effluent	Case No. 1992CW129; Case No. 2005CW323
Michigan Ditch Water Rights and Effluent	Case No. W-1424; Case No. 1988CW206
New Mercer Ditch Company Shares and Effluent	Case No. 1992CW129; Case No. 2005CW323
North Poudre Irrigation Company Shares	Multiple Use Portion
Rigden Reservoir and Effluent	Case No. 2014CW3158
Warren Lake Reservoir Company Shares and Effluent	Case No. 1992CW129; Case No. 2005CW323
Water Supply Storage Company Shares and Effluent	Case No. 1992CW129; Case No. 2005CW323
Windy Gap Units and Effluent	Case No. W-9322-78

¹ The decrees identified in the table are for reference purposes only and are not intended to be a comprehensive list of all relevant decrees.

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



Bill Ritter, Jr.
Governor

James B. Martin
Executive Director

Loretta E. Piñeda
Director

April 30, 2010

Lafarge West, Inc.
10170 Church Ranch Way, Ste. 200
Westminster, CO 800210000

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:	M2006064	Shields at Fossil Creek Mine	M1983031	Stromquist Pit
	M1994002	Andrews S & G #5 (Burlington Pit)	M1974072	Chantala Pit
	M2006018	North Bank Resources	M1985218	Rich Pit
	M2006073	Sundance Sand and Gravel Resource	M1985206	Boone-Martin Pit
	M2009082	Parsons Mine	M1995022	Andrews #2
	M1977081	Greeley West Pit	M1990144	Boone-Fillmore Pit
	M2003091	Duckworth Pit	M1997087	Hartman Pit
	M2000113	Mamm Creek Sand & Gravel	M2001094	Shaw Pit
	M2001090	River Valley Resource	M2002009	Beeman Pit #1
	M2000016	Riverbend Operation	M1981307	Fountain Pit
	M1979134	Powers Pit	M1977439	Home Office Mine
	M1977036	Greeley 35th Ave Pit	M1979191	Three Bells Pit
	M2000034	Reichert Pit	M1982182	Port of Entry Pit
	M2001051	North Taft Hill Expansion Site	M2002081	Overland Ponds
	M1974015	Lyons Pit	M1981088	McCoy Pit
	M1974004	Specification Aggregates Quarry	M1982034	Miller Pit
	M1987176	Hamm Pit	M1996082	Blair Mesa Pit
	M1988042	Cottonwood Pit	M1980136	Chambers Pit
	M1990112	State Pit	M1977098	Sievers Pit
	M1979002	North Delta Pit	M1983013	Latham - Burkett Pit
	M1979159	Brose Pit	M1979097	East Rigden Pit
	M1998014	Gypsum Ranch Pit	M1991035	Bluestone Pit
	M1999088	Kyger Pit	M1986159	Courtner Pit
	M1998075	Andrews #3 (Mock Pit)	M1974070	Nelson Pit
			M2000002	Tanabe Pit
			M1994045	Bluestone Pit
			M1986079	M & G Pit

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).

ADMINISTRATION PROTOCOL
*Use Of Replacement Sources Not Specifically Identified
In An SWSP Or Augmentation Plan*
Division One – South Platte River

This protocol addresses the minimum standards required for use of a source of replacement water not specifically described in an SWSP or augmentation plan.

- Request to the Division Engineer and Water Commissioner must be in writing and must include:
 - the augmentation plan or SWSP provision in the purchasers plan that allows an unnamed source to be added to the plan for credit
 - the decree provision or SWSP provision in the sellers plan that allows water to be sold for use in the purchasers plan
 - the annual and monthly amount of water available from the water right to be used for replacement
 - the location at which the water will be delivered to the stream
 - a lease agreement between the seller and purchaser of the replacement water
- Applicant shall have written approval from the Division Engineer or Water Commissioner before an unnamed source is added to an augmentation plan or SWSP.
- Applicant must comply with the Augmentation Plan Accounting Protocol and, if appropriate, the Delivery of Water Protocol.

This protocol is subordinate to any decreed language addressing specific situations.