



DEPARTMENT OF NATURAL RESOURCES

DIVISION OF WATER RESOURCES

February 13, 2014

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

John W. Hickenlooper
Governor
Mike King
Executive Director
Dick Wolfe, P.E.
Director/State Engineer

Re: Aggregate Industries South Platte Combined Replacement Plan (WDID 0202565)
Water Division 1, Water Districts 2, 3, 5 and 6
Weld and Adams Counties

RECEIVED

Approval Period: January 1, 2014 through December 31, 2014
Contact phone number for Mr. Jared Dains: 303-452-6611

FEB 14 2014
Division of Reclamation,
Mining & Safety

Dear Mr. Dains:

We have received your November 27, 2013 letter requesting renewal of a substitute water supply plan ("SWSP") in accordance with § 37-90-137(11), C.R.S. to cover depletions caused by gravel mining operations at multiple mine sites operated by Aggregate Industries ("Aggregate" or "Applicant") along the South Platte River mainstem, Lower Poudre River (Timnath Reservoir inlet to the confluence with the South Platte River) and St. Vrain River. This plan proposes to replace depletions resulting from current and past mining at the eleven sites specified in Table A below:

Table A – Pit Overview

Site Name	Stream Reach	DRMS Permit No.	WDID	Current Well Permit No.	New Permit Required	Exposed Surface Area (acres)
Jeronimus Pit	South Platte	M-1999-034 ^a	0203029	63281-F	No	7.7 ^b
Hazeltine Pit	South Platte	M-1904-031	0203030	63224-F	No	1.0
Brighton Pit	South Platte	M-1977-436	0203031	56993-F	No	5.0
Tucson South Pit	South Platte	M-2004-044	0203032	None	N/A	None
Tucson Pit	South Platte	M-1991-140	0203033	56829-F	No	2.0
Wattenberg Pit	South Platte	M-2001-008	0203034	69068-F	No	16.0
Platte Valley Pit	South Platte	M-1989-120	0203035	74992-F	No	78.8
Distel Pit	St. Vrain	M-1989-029	0503000	67433-F & 76960-F	No	N/A ^c
Tull Pit	St. Vrain	M-1994-027	0603001	74831-F	No	2.0
W.W. Farms Pit	Lower Poudre	M-1999-098	0303014	76207-F	No	32.4
F-Street Pit	Lower Poudre	M-1992-069	0303015	67989-F	No	26.2

^a The Jeronimus Pit, was added to the M-1999-034 permit (historically referred to as the "Fulton Lakes Pit") via an amendment approved by the DRMS on July 8, 2003. Aggregate had completed mining at the Fulton Lakes Pit and reclamation of the site and ownership was transferred to the City of Thornton. The only consumptive use of water under the permit no. M-1999-034, remains that associated with the Jeronimus Pit.

^b 7.7 acres exposed after December 31, 1980 and 14.7 acres exposed prior to January 1, 1981.

^c The City of Longmont has assumed the augmentation responsibilities for lagged and future depletions from evaporation and consumptive use by wetlands vegetation at the site under their plan for augmentation decreed in case no. 09CW271.

The mining site locations are specified in Table B below and depicted on the attached Figure 1.

Table B – Pit Locations

Site Name	Location
Jeronimus Pit	Section 16, T2S, R67W
Hazeltine Pit	Section 9, T2S, R67W
Brighton Pit	Sections 14 and 23, T1S, R67W
Tucson South Pit	Sections 1 and 12, T1S, R67W
Tucson Pit	Section 1, T1S, R67W
Wattenberg Pit	Sections 25 and 36, T1N, R67W; Section 30, T1N, R66W
Platte Valley Pit	Section 30, T1N, R66W
Distel Pit	Sections 7, 8, 9, 17 and 18, T2N, R68W
Tull Pit	Sections 9, 16 and 17, T2N, R68W
W.W. Farms Pit	Sections 32 and 33, T6N, R66W
F-Street Pit	Sections 34 and 35, T6N, R66W

The required fee of \$3,341 (13 sites x \$257/site renewal fee) has been submitted (receipt no. 3662677). The SWSP request initially included the Teti Pit (WDID 0203027) and the North Dahlia Pit (WDID 0203028). A plan for augmentation for these two sites was decreed in water court case no. 2007CW198 on December 17, 2013 and all depletions from these sites will be replaced under the decreed plan for augmentation. It is noted that the East 8th Street Pit (M-2000-082, WDID 0303016) is no longer a part of this Combined SWSP. Aggregate sold this pit to Superior Oilfields and as of November 2012 this pit is no longer covered by Aggregate. All depletions hitting the river are the responsibility of Superior and are now covered under Superior's SWSP (WDID 0302562). A summary of the pit operations at each of the eleven sites remaining in this SWSP is provided below.

*Jeronimus Pit
(South Platte
Mainstem)*

Status: Mining operations at the Jeronimus Pit are complete. Operations on-site include backfilling of the pit with fines from the Hazeltine Pit. The only depletion covered by this SWSP is water lost due to evaporation. The 14.7-acre area exposed at the Jeronimus Pit prior to 1981 is tied to the location as shown on the exhibit dated January 31, 2011 as provided in the 2011 SWSP. The credits for the pre-1981 area are tied to the location identified on that map and may not be re-allocated to other areas of ground water exposure within the gravel pit permit boundary.

Exposed Ground Water Surface: 7.7 acres post-81, 14.7 acres pre-81

Active Dewatering: No

*Hazeltine Pit
(South Platte
Mainstem)*

Status: Regular mining operations are projected to continue at the Hazeltine Pit during 2014. Depletions covered by this SWSP include water lost due to dewatering, evaporation, production of up to 700,000 tons of aggregate, and dust control. Dewatering operations are expected to remain continual and constant at a rate of 418 gallons per minute.

Exposed Ground Water Surface: 1.0 acre

Active Dewatering: Yes

*Brighton Pit
(South Platte
Mainstem)*

Status: Mining operations at the Brighton Pit are complete and reclamation is in progress. Depletions covered by this SWSP include water lost due to evaporation, dust control, and post-pumping dewatering depletions. The south and central reservoirs are lined with a slurry wall (WDID 0203385) and have obtained SEO liner approval. Reclamation work includes backfilling the remaining exposed areas, of which 1 acre was backfilled in 2013.

Exposed Ground Water Surface: 5.0 acres

Active Dewatering: No

*Tucson South Pit
(South Platte
Mainstem)*

Status: Mining operations have not started at Tucson South Pit, and are not anticipated during this plan period. This SWSP covers no depletions at this site.

Exposed Ground Water Surface: None

Active Dewatering: No

*Tucson Pit
(South Platte
Mainstem)*

Status: Mining operations at the Tucson Pit are complete and reclamation is in progress. The only depletion covered by this SWSP is water lost due to evaporation. A portion of the pit (Rogers Reservoir, WDID 0203917) has been lined with a slurry wall and has obtained SEO liner approval. All post-pumping depletions have been replaced under previous SWSPs.

Exposed Ground Water Surface: 2.0 acres

Active Dewatering: No

*Wattenberg Pit
(South Platte
Mainstem)*

Status: Aggregate intends to actively mine the Wattenberg Pit during 2014. Depletions covered by this SWSP include water lost due to evaporation, production of up to 750,000 tons of aggregate, dust control, and dewatering. Dewatering operations are expected to remain continual and constant at a rate of 609 gallons per minute.

Exposed Ground Water Surface: 5.0 acres

Active Dewatering: Yes

*Platte Valley Pit
(South Platte
Mainstem)*

Status: Mining operations at the Platte Valley Pit are not anticipated to occur in 2014, though reclamation activity consisting of backfilling portions of the site will continue in 2014. Depletions covered by this SWSP include water lost due to evaporation, dust control, and concrete batching. Water for concrete batching will come from Well Permit No. 13410-F-R (WDID 0207073). It should be noted this well's water right was on the division engineer's 2010 Decennial Abandonment List but it may still be used in accordance with its permit as long as all depletions are treated as junior to all other vested water rights.

Exposed Ground Water Surface: 78.8 acres

Active Dewatering: No

*Distel Pit
(St. Vrain River)*

Status: Mining operations at the Distel Pit were completed in 2011 and reclamation is in progress. Depletions covered by this SWSP include lagged depletions from dust control, dewatering, and past aggregate production. Dewatering at the site ceased due to flooding in September 2013, and Aggregate currently has no plans to reactivate dewatering. The City of Longmont has assumed the augmentation responsibilities for lagged and future depletions from evaporation and consumptive use by wetlands vegetation at the site under their plan for augmentation decreed in case no. 2009CW271.

Exposed Ground Water Surface: N/A (augmented under case no. 2009CW271)

Active Dewatering: No

*Tull Pit
(St. Vrain River)*

Status: Mining operations are anticipated to begin at the Tull Pit in 2014. Depletions covered by this SWSP include water lost due to evaporation, dust control, production of 350,000 tons of aggregate, and dewatering. The site will be dewatered continuously once pumping for dewatering purposes begins.

Exposed Ground Water Surface: 1.0 acre

Active Dewatering: Yes (to begin in 2014)

*W.W. Farms Pit
(Lower Poudre River)*

Status: Mining operations at the W.W. Farms Pit (aka Riverview Resources) has been put on hold due to economic conditions. Depletions covered by this SWSP include water lost due to evaporation, dewatering, dust control, and concrete batching. During Spring of 2011 the pit was flooded by the Poudre River due to the high spring runoff conditions. The entire exposed surface area will be assessed evaporative losses as this is an unlined pit. Dewatering operations are expected to remain continual and constant at a rate of 93 gallons per minute. Note: The Applicant has obtained a decreed plan for augmentation in water court case no. 1990CW23 to cover evaporation from up to 66 acres of exposed water surface area in one or more unlined ponds remaining at the site post mining; however, since final reclamation of the site has not yet occurred, all depletions from this pit will continue to be replaced under this SWSP during this plan period.

Exposed Ground Water Surface: 68.0 acres

Active Dewatering: Yes

*F-Street Pit
(Lower Poudre River)*

Status: Mining operations at the F-Street Pit are complete and reclamation is in progress. Depletions covered by this SWSP only include water lost due to evaporation as lagged dewatering and operational depletions are no longer accruing to the river.

Exposed Ground Water Surface: 26.2 acres

Active Dewatering: No

Depletions

The depletions resulting from evaporation, water lost in mined product, dust control and concrete batching at each site are shown in Table C below:

Table C – Depletion Summary (all amounts in acre-feet)

Site Name	Evaporation	Water Lost in Mined Product	Dust Control	Concrete Batching	Total	Lagged Depletions	Lagged Dewatering Depletions Impacting the River ^c	Total Lagged Depletions
Jeronimus Pit	20.63	0	0	0	20.63	21.25	0	21.25
Hazeltine Pit	2.68	20.60 (700,000 tons)	1.98	0	25.26	27.26	0 ^d	27.26
Brighton Pit	13.67	0	1.98	0	15.65	19.15	7.44	26.59
Tucson South Pit	0	0	0	0	0	0	0	0
Tucson Pit	5.47	0	0	0	5.47	5.47	0	5.47
Wattenberg Pit	14.65	22.07 (750,000 tons)	1.98	0	38.70	44.82	0 ^d	44.82
Platte Valley Pit	208.92	0	10.00	5.00 ^b	218.92	219.09	0	219.09
Distel Pit	0 ^a	0	1.98	0	1.98	2.11	5.31	7.42
Tull Pit	2.58	10.30 (350,000 tons)	1.98	0	14.86	2.70	0 ^d	2.70
W.W. Farms Pit	196.72	0	1.98	1.00	199.70	198.25	0 ^d	198.25
F-Street Pit	71.79	0	0	0	71.79	71.79	0	71.79
Total	--	--	--	--	612.96	--	--	624.64

^a Evaporation is replaced by the City of Longmont under their augmentation plan decreed in water court case no. 09CW271.

^b Water use for concrete batching to be pumped from well permit no. 13410-F-R (WDID 0207073) therefore not included in totals.

^c Lagged Dewatering Depletions, as shown in the table, are from past dewatering operations that have ceased but continue to impact the stream system.

^d So long as the pit is continuously dewatered, the water returned to the stream system is considered to be adequate to offset depletions attributable to the dewatering.

A stream depletion model using either the Glover method, or Stream Depletion Factor (SDF) method was used to calculate the lagged depletions to the river. The Glover method uses four aquifer input parameters for each site as follows: 1) X - distance (ft) from centroid of exposed ground water to river, 2) W - distance (ft) from the aquifer boundary through the well to the river channel, 3) T - transmissivity of the alluvial aquifer (in gallons per day per foot) between the well and the river, and 4) S - specific yield (0.2 was used for all wells). The parameters used in the model for each site are listed on the following page in Table D.

Table D – Aquifer Characteristics

Site Name	T (gal/day/ft)	X (ft)	W (ft)	SDF (days)
Jeronimus Pit	100,000	1,600	23,000	-
Hazeltine Pit	100,000	1,200	23,000	-
Brighton Pit	-	-	-	10
Tucson South Pit	75,000	1,600	4,600	-
Tucson Pit	70,000	1,200	4,225	-
Wattenberg Pit	80,000	1,200	5,500	-
Platte Valley Pit	150,000	1,400	7,400	-
Distel Pit	50,000	700	5,300	-
Tull Pit	50,000	4,900	9,300	-
W.W. Farms Pit	120,000	900	8,750	-
F-Street Pit	120,000	2,600	5,000	-

The consumptive use and lagged stream depletions from each site are summarized in the attached "South Platte Substitute Supply Plan Accounting" sheet.

Replacements

Lower Poudre River

Replacement Sources	Projected 2014 Yields (acre-feet)	Comments
Whitney Ditch	189.15	13.5 shares
Boyd & Freeman Ditch	140.95	240 shares total
Platte River Power Authority Lease	37.5	Annual Lease

Note: Projected 2014 yields may vary from previous estimates of net yields due to the computed return flow obligations based on the previous year's actual water deliveries.

Whitney Ditch

Aggregate owns a total of 13.5 shares in the Whitney Ditch Company. Five (5) of the shares of the Whitney Ditch were historically used to irrigate 65 acres at W.W. Farm consisting of 65% corn, 30% alfalfa and 5% beans. Using a Blaney-Criddle analysis the potential crop consumptive use for the 65 acres was determined to be 96.8 acre-feet. Assuming a 10% ditch loss and 55% farm efficiency the dry year consumptive use was determined to be 64.27 acre-feet.

Six (6) of the shares of the Whitney Ditch were historically used to irrigate 57.1 acres of pasture grass at Orr Farm #1. Using a Blaney-Criddle analysis the potential crop consumptive use for the 57.1 acres was determined to be 96.8 acre-feet. Assuming a 15% ditch loss and 60% farm efficiency the dry year consumptive use was determined to be 84.64 acre-feet.

The remaining 2.5 shares of the Whitney Ditch were historically used for the irrigation of 24 acres at Orr Farm #2 (50% alfalfa and 50% corn grain). A total of 40 shares of the Whitney Ditch were recently changed in case no. 2002CW390 that was approved by the water court on September 26, 2007. As in case no. 2002CW390, the applicant estimated ditch loss to be 15%, a maximum farm irrigation efficiency of 60% was used, and a return flow split of 50% surface and 50% subsurface return flows was used. Since the centroid of the irrigated area is located approximately 4,210 feet from the river, any future SWSP request must provide a justification for the use of this surface/subsurface return flow split. Based on the above, the total net consumptive use available for the dry-up of this 24-acre property was determined to be 37.3 acre-feet. The historical consumptive use was estimated using the Modified Blaney-Criddle methodology in the IDSCU model with South Platte Decision Support System (SPDSS) calibrated crop coefficients for the Upper Plains. The use of the Upper Plains coefficients may not be representative of actual crop consumptive use at the subject site. **The SEO is willing to accept the Applicant's use of the calibrated coefficients for the Upper Plains for this SWSP**

period but for any future submittals, the Applicant must submit additional documentation about the applicability of the calibrated coefficients for the Upper Plains, develop their own locally calibrated crop coefficients consistent with the methodology provided in Task Memo 59.1, or use standard TR-21 coefficients. If calibrated coefficients are used, we request that you provide such calculations for the SEO's review.

For the 2014 plan period, the applicant will dedicate all 13.5 Whitney Ditch shares to this SWSP. The expected consumptive use credit has been estimated from a dry-year farm headgate delivery of 24.75 acre-feet per share (which includes a 15% ditch loss) or approximately 334 acre-feet for the 13.5 Whitney Ditch shares. After accounting for the return flow obligations the total consumptive use credit for 2014 is projected to be approximately 189 acre-feet.

Beginning in 2011, Aggregate utilized the return structure owned by the Whitney Irrigation Company located in the SE¼ of Section 30, Township 6 North, Range 66 West, 6th P.M. Aggregate anticipates that this return structure will be utilized again in 2014. **An updated carriage agreement with Whitney Irrigation Company must to be submitted to the State Engineer's Office for the 2014 irrigation season if the return structure will be utilized in 2014.**

The dry-up locations for the subject Whitney Ditch shares were originally identified through an April 12, 2011 letter to the Division 1 Engineer. That letter stated the northern portion of Orr Farm #1 may continue to be irrigated using 1 of the 13.5 Whitney Ditch shares owned by the Applicant. In 2011 the entire Orr Ditch Farm #1 was removed from irrigation due to damage to the lateral serving the property. Therefore the entire farm is included as a dry-up location for all 13.5 shares dedicated to the plan in 2014. The share dedication dated February 29, 2012 remains valid and is attached.

Boyd & Freeman Ditch

Aggregate was granted the right to use 240 shares in the Boyd & Freeman Ditch Company owned by 83rd Joint Venture LLC under the F-Street Pit Mineral and Surface Lease dated April 17, 1998. These shares were acquired from 83rd Joint Venture LLC by the City of Greeley in 2011. In a letter dated September 12, 2011, Greeley confirmed that Aggregate may continue to utilize these shares for this plan.

The Boyd & Freeman Ditch shares were historically used to irrigate 85 acres of pasture grass. Using a Blaney-Criddle analysis the potential crop consumptive use for the 85 acres was determined to be 142 acre-feet. Assuming a 10% ditch loss and 55% farm efficiency the dry-year consumptive use was determined to be 99.28 acre-feet. The applicant will utilize all 240 shares in this plan. **Any future SWSP request utilizing these shares as a replacement source must include a full historic consumptive use analysis for the subject shares.**

The expected consumptive use credit for the 240 shares of the Boyd & Freeman Ditch has been estimated from a dry-year farm headgate delivery of 0.77 acre-feet per share (which includes a 10% ditch loss) or approximately 184 acre-feet for all 240 shares. After accounting for the return flow obligations the total consumptive use credit for 2014 is projected to be approximately 141 acre-feet. This value is greater than the estimated dry-year yield because smaller deliveries were made in 2013, thus Aggregate will owe less subsurface return flows for 2014.

Prior to the 2012 irrigation season, Greeley installed an augmentation station that can measure these shares back to the river. In order for credit to be taken for these shares, they must continue to be measured, recorded, and accounted for to the satisfaction of the District 3 Water Commissioner and Division Engineer.

Platte River Power Authority Lease

Aggregate has leased 37.5 acre-feet of water from the Platte River Power Authority ("PRPA") for this plan period. PRPA has an Agreement dated August 10, 1978 for Reuse of Water for Energy

Generation with the City of Fort Collins ("Fort Collins") and Water Supply and Storage Company ("WSSC"). PRPA, Fort Collins, and WSSC obtained approval of a plan for augmentation including reuse of water in case no. W-9322-78. This water right was decreed in case no. W-9322-78 as developed water, not tributary to the South Platte River. The Court found that 4,200 acre-feet or more per year will be available from Fort Collins to the PRPA to be used primarily for cooling purposes in connection with its Rawhide Energy Station. Pursuant to the decree in case no. W-9322-78, if PRPA does not require the water for its own purposes, it or Fort Collins or other water users designated by it may utilize the water for any other beneficial purposes including augmentation. In addition, PRPA has entered into an Agreement with the North Poudre Irrigation Company ("North Poudre") dated November 15, 1979 which grants PRPA the right to store surplus water (which is surplus water beyond the needs of the Rawhide Energy Station) in the Fossil Creek Reservoir and lease such water to others who can use such water from Fossil Creek Reservoir through direct delivery. **This office receives no accounting from Fossil Creek Reservoir. Therefore, in order to receive credit for any replacement water released from Fossil Creek Reservoir, the Applicant must provide accounting that is to the satisfaction of the Division Engineer.** Pursuant to the lease between the PRPA and Aggregate, PRPA will release approximately 12.0 acre-feet of this reusable water from Fossil Creek Reservoir in April 2014 and 25.5 acre-feet in October 2014.

St. Vrain River

Replacement Sources	Projected 2014 Yields (acre-feet)	Comments
Smith & Emmons Ditch	---	1.5 shares total; not proposed to be used in 2014
Leggett Reservoir	---	19.6 shares total; not proposed to be used in 2014
Godding, Dailey & Plumb Ditch	---	3 shares total; not proposed to be used in 2014
Left Hand Ditch Company	---	4 shares total; not proposed to be used in 2014
City of Longmont Lease	---	Annual lease if necessary; not proposed to be used in 2014

Note: Projected 2014 yields may vary from previous estimates of the net yield due to the computed return flow obligations based on the previous year's actual water deliveries.

Smith & Emmons Ditch

Aggregate owns 1.5 of 8 total outstanding shares in the Smith & Emmons Ditch Company. The 1.5 Smith & Emmons Ditch shares were historically used to irrigate 68 acres of pasture grass. Using a Blaney-Criddle analysis the potential crop consumptive use for the 68 acres was determined to be 108.7 acre-feet. Assuming a 10% ditch loss and 55% farm efficiency the dry-year consumptive use was determined to be 91.65 acre-feet for the 1.5 shares.

The applicant may not utilize the 1.5 shares of Smith & Emmons Ditch as a replacement source in this SWSP until such time as all required measurement and bypass structures have been installed and approved by the water commissioner. Applicant does not expect to utilize this replacement source during the duration of this SWSP.

Leggett-Owens Reservoir

Donald J. Sherwood historically owned 19.6 shares of the Leggett-Owens Ditch and Reservoir Company, which Aggregate was allowed to use for augmentation pursuant to the mining lease agreement between the two parties. In January 2011, the City of Longmont completed its acquisition of these shares. During an average year the 19.6 shares represent 60 acre-feet of water and can be released when needed. The consumptive use credit available from the 19.6 shares is estimated at 33 acre-feet, based on 55% efficiency.

If necessary, the Applicant will coordinate with the City of Longmont for the use of this water. The applicant may only utilize the 19.6 shares at such time as all required measurement and bypass

structures have been installed and approved by the water commissioner. Applicant does not expect to utilize this replacement source during the duration of this SWSP. Prior to use of these shares as a replacement source in any future SWSP, the Applicant must provide a full historic consumptive use analysis for the subject shares.

City of Longmont Lease

For this SWSP period, the use of leased water from the City of Longmont is not necessary and is not proposed to be utilized. In the future, Aggregate may use leased water from the City of Longmont if a supplemental source of replacement water is needed.

Godding, Dailey & Plumb Ditch

Aggregate owns three (3) shares in the Godding, Dailey & Plumb Ditch. The consumptive use for this water right was quantified in the SWSP request for the Distel Pit dated November 14, 2000, which was approved by this office in a letter dated January 10, 2001. That analysis found that the net annual consumptive use from two (2) Godding, Dailey & Plumb Ditch shares averaged 56.20 acre-feet, assuming a 10% ditch loss and 55% farm irrigation efficiency. Therefore, the dry year consumptive use for the three shares was determined to be 84.30 acre-feet. Any future SWSP request utilizing these shares as a replacement source must include a full historic consumptive use analysis for the subject shares, including identification of the historically irrigated area. The actual monthly historical diversions must be used and compared to the monthly crop consumptive use (based on actual weather data).

The applicant may only utilize the 3 shares of Godding, Dailey & Plumb Ditch at such time as all required measurement and bypass structures have been installed and approved by the water commissioner. Applicant does not expect to utilize this replacement source during the duration of this SWSP.

Left Hand Ditch Company

Aggregate owns four (4) shares in the Left Hand Ditch Company, which they acquired from their predecessor, C&M Aggregates (Certificate No. 1824). This source is not being claimed in this SWSP but may be utilized in the future. Prior to use of these shares as a replacement source in any future SWSP, the Applicant must provide a full historic consumptive use analysis for the subject shares.

Plum Creek

Silver Heights Lease

Aggregate seeks the flexibility to use water from this source when needed. The Applicant must provide a copy of a lease/purchase agreement to the State Engineer's Office and the division engineer for use of such additional replacement water prior to its use as a replacement source under this SWSP. In addition, this source of replacement water may only be used in this SWSP if the Applicant complies with the attached Division One Administration Protocol "Use of Replacement Sources Not Specifically Identified in an SWSP or Augmentation Plan".

South Platte River

Replacement Sources	Projected 2014 Yields (acre-feet)	Comments
Centennial	25.00	Available throughout the year
Westminster 1998	294.79	Available throughout the year-perpetual lease; 265.54 acre-feet proposed to be used in 2014
Westminster Annual Lease	125.00	Annual Lease with Westminster
Thornton Effluent	10.53	November – March only
Fulton Ditch	176.80	96 Shares total; 71 to be used in 2014
Brighton Ditch	159.40	1.037 Shares total
Old Brantner Ditch	---	11 shares total; not proposed to be used in 2014
Bergen Reservoirs 4, 5, & 6	---	191 shares total; not proposed to be used in 2014
Last Chance Ditch Co. No. 2	---	0.3154 shares total; not proposed to be used in 2014
Lupton Bottom Seep Ditches No. 1 & No. 2	---	100% ownership; not proposed to be used in 2014
Huett Seepage Ditch	---	100% ownership; not proposed to be used in 2014

2014 projected yield may vary from previous estimated of the net yield due to the computed return flow obligations based on the previous year's actual water deliveries

Centennial Lease

Aggregate conveyed water rights in exchange for a perpetual lease of augmentation water in an agreement with Centennial Water and Sanitation District in 1996. The agreement requires Centennial to provide Aggregate with 30 acre-feet of fully consumable water each year. The rate of delivery for the 30 acre-feet cannot exceed 0.5 cfs, but can be taken at any time throughout the year. Aggregate anticipates utilizing 12.5 acre-feet during November 2014 and 12.5 acre-feet during December 2014 in this SWSP. (The remaining 5 acre-feet will be utilized in Aggregate's SWSP associated with case no. 2011CW294.) A copy of the Centennial letter dated October 29, 2013 confirming their lease was provided to this office with the SWSP request and is attached to this SWSP approval. According to the letter, the release rate is anticipated to average 0.25 cfs per day.

Westminster 1998 Lease

The 1998 effluent lease with the City of Westminster is a perpetual lease that provides 0.28 cfs of fully consumable water every day of each year (averaging 16.89 acre-feet per month) and an additional 0.17 cfs every day from October 1 to June 30 during each year (averaging 10.25 acre-feet per month) at the outfall of the Metro Wastewater Treatment Plant. The lease provides 294.79 acre-feet annually, of which 265.54 acre-feet are anticipated to be utilized in this SWSP.

Westminster Annual Lease

Pursuant to a March 4, 2010 Consumable Water Lease Agreement with the City of Westminster, Aggregate may lease up to 519 acre-feet of consumable water annually, with a minimum lease of 150 acre-feet per year unless by mutual agreement between the parties. For 2014, Aggregate and Westminster have agreed to a total annual delivery amount of 125 acre-feet. A copy of the proposed delivery schedule is attached. Deliveries under this lease are available from November 10th through March 20th from either the Metro Wastewater Treatment Plant or the Big Dry Creek Wastewater Treatment Plant. For this SWSP, transit losses were assessed assuming deliveries will be from the Big Dry Creek Wastewater Treatment Plant.

Thornton Lease

Aggregate has a perpetual lease of 10.53 acre-feet of fully consumable effluent from the City of Thornton, which will be released from the Metro Wastewater Treatment Plant at a rate of 0.35 cfs daily from November 1st through March 31st.

Fulton Ditch

Aggregate owns 96 shares in the Fulton Ditch Company. The historic use of the 96 Fulton ditch shares yields 235.88 acre-feet of water during April through September while generating 67.75 acre-feet of return flow obligation during October through March, resulting in a dry-year consumptive use of 168.13 acre-feet per year. This quantification is based on the technique used in the March 24, 1999 approval for the Fulton Lakes Pit, where the historic consumptive use values were determined using an analysis decreed in case no. 82CW393. In this approach, headgate diversions were based on average monthly values for the period of 1976-1988 and a 10% conveyance loss was assumed as well as a farm efficiency of 50%. The return flow obligations, which were not addressed in the above decree, were calculated in the previous plan using a SDF value of 270 days and the assumption that all water diverted but not used by the crops is returned to the stream system through deep percolation. **Any future SWSP request utilizing these shares as a replacement source must include a full historic consumptive use analysis for the subject shares for a representative study period, including identification of the historically irrigated area and justification of the selected study period and assumptions used in the analysis, including those made for farm efficiency and surface/subsurface return flow composition. The actual monthly historical diversions must be used and compared to the monthly crop consumptive use (based on actual weather data).**

For 2014, Aggregate anticipates that 71 shares will be used for replacement under this SWSP, and 25 shares will be retained for irrigation purposes. The 71 shares used for replacement purposes under this SWSP will be delivered through the augmentation station owned by the South Adams County Water & Sanitation District located just downstream of the ditch headgate. The expected consumptive use credit for the 71 Fulton Ditch shares for 2014 has been estimated from a dry-up farm headgate delivery of 3.50 acre-feet per share or approximately 249 acre-feet for the 71 Fulton Ditch shares. Because there is no immediate surface component the return flow obligations were calculated as a percentage of the previous year farm headgate delivery. In 2013, Aggregate delivered only 144 acre-feet of the Fulton Ditch shares because the full yield of the water right was not needed to meet the replacement obligations. The total consumptive use credit in 2014 is projected to equal 177 acre-feet, which is greater than the dry-year yield because of the reduced subsurface return flow obligation requirement resulting from low deliveries in 2013.

Brighton Ditch

Pursuant to a March 4, 2010 Water Lease with the City of Westminster, Aggregate has the right to use 1.038 shares in the Brighton Ditch Company owned by the City of Westminster for augmentation purposes.

Included as a part of the total shares is 4/6th of a share historically used to irrigate 40.4 acres at the Wattenberg Property consisting of 50% pasture grass and 50% alfalfa. Using a Blaney-Criddle analysis the potential crop consumptive use for the 40.4 acres was determined to be 73.23 acre-feet. Assuming a 30% ditch loss and 55% farm efficiency the dry year consumptive use was determined to be 72.2 acre-feet.

The other 0.371 shares were historically used to irrigate 72.1 acres at the Haake Property along with 5.75 shares of New Branter Ditch. The property consists of 50% pasture grass and 50% alfalfa. Using a Blaney-Criddle analysis the potential crop consumptive use for the 72.1 acres was determined to be 130.75 acre-feet. Assuming a 30% ditch loss and 55% farm efficiency the dry year consumptive use for the 0.371 Brighton ditch shares was determined to be 46.5 acre-feet.

Any future SWSP request utilizing Brighton Ditch shares as a replacement source must include a full historic consumptive use analysis for the subject shares, including identification of the historically irrigated area(s). The actual monthly historical diversions must be used and compared to the monthly crop consumptive use (based on actual weather data).

Aggregate will utilize the entire 1.038 shares for use in this plan. The expected credit for the Brighton Ditch shares has been estimated from a dry-year farm headgate delivery (using a 30% ditch loss) of 283 acre-feet per share, or 293 acre-feet for all 1.038 shares. Return flows consist of surface return flows, which are based on current deliveries, and subsurface return flows which are based on the previous year's total deliveries. In 2013, Aggregate delivered only 159 acre-feet of the Brighton Ditch shares because the full yield of the water right was not needed to meet the replacement obligations. The total consumptive use credit in 2014 is projected to equal 159 acre-feet, which is greater than the dry-year yield because of the reduced subsurface return flow obligation requirement resulting from low deliveries in 2013.

Old Brantner Ditch

Aggregate currently has use of 11 shares of Old Brantner Ditch, however they do not propose to utilize those shares during this plan period. Prior to use of these shares as a replacement source in any future SWSP, the Applicant must provide a full historic consumptive use analysis for the subject shares.

Bergen Reservoirs 4, 5, & 6

Aggregate acquired shares (estimated to be 191 shares out of the 403.5 total shares) in the Bergen Reservoir from its predecessor, Cooley Gravel Company, however they do not propose to utilize those shares in this plan at this time. Prior to use of these shares as a replacement source in any future SWSP, the Applicant must provide a full historic consumptive use analysis for the subject shares.

Last Chance Ditch Company No. 2

Aggregate acquired 0.3154 shares (Certificate Nos. 248 & 251) in the Last Chance Ditch Company No. 2 from its predecessor, Cooley Gravel Company, however they do not propose to utilize those shares in this plan at this time. Prior to use of these shares as a replacement source in any future SWSP, the Applicant must provide a full historic consumptive use analysis for the subject shares.

Lupton Bottom Seep Ditches No. 1 and No. 2

Aggregate acquired 100% ownership of the Lupton Bottom Seep Ditches No. 1 and No. 2 from the Lupton Bottom Ditch Company, however they do not propose to utilize this source in this plan at this time. Prior to use of these shares as a replacement source in any future SWSP, the Applicant must provide a full historic consumptive use analysis for the subject shares.

Huett Seepage Ditch

Aggregate acquired 100% ownership of the Huett Seepage Ditch from its predecessor, CAMAS Colorado, however they do not propose to utilize this source in this plan at this time. Prior to use of these shares as a replacement source in any future SWSP, the Applicant must provide a full historic consumptive use analysis for the subject shares.

The proposed depletions and replacements are shown in the attached Division 1 Water Accounting Summary.

Dewatering

All sites that are actively dewatering have been equipped with a Totalizing Flow Meter ("TFM") to measure the dewatering discharge. Monthly dewatering volumes must be recorded monthly with the meter readings included on submitted accounting. As long as dewatering operations remain continual at constant rates the net accretions are assumed to offset any lagged depletions. Under this assumption, the Applicant is not claiming any dewatering credit. Once dewatering operations stop, or are significantly reduced, at specific sites the monthly meter readings will be used to analyze post

pumping depletions. The sites undergoing active dewatering during this SWSP period are the Hazeltine Pit, Wattenberg Pit, and W.W. Farms Pit, and the Tull Pit which will begin dewatering in 2014.

Long Term Depletions and Reclamation

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 ground water. The DRMS letter identifies four approaches to satisfy this requirement, which are identified and described in the attached letter.

In accordance with approach no. 4, you have provided an affidavit dated February 29, 2012, that dedicates the 13.5 shares of the Whitney Ditch Company and 96 shares of the Fulton Irrigating Ditch Company described above as replacement water solely for this combined SWSP for as long as there are depletions at these gravel pit sites or until such time as another replacement source is obtained. This dedication supersedes a previous dedication dated January 25, 2011. A copy of the affidavit is attached to this letter. For the purposes of this SWSP, this affidavit will be accepted for the dedication of the shares; however, if the State Engineer determines that a different affidavit or dedication process is necessary to assure proper dedication of the shares, additional information may be required prior to future SWSP approvals. The current bond posted for the F-Street pit was found to be inadequate during a site inspection by DRMS on February 10, 2012. Per an August 14, 2012 letter from DWR, we will continue to renew the SWSP for the F-Street Pit to allow time for Aggregate to actively work towards settling legal matters pertaining to the long-term replacement source with the land owner. Until this issue is resolved, or shares are dedicated to this plan for the purposes of long term injurious stream depletions, no diversion of ground water beyond that approved by this SWSP (evaporation) will be permitted at the site.

A summary of the final reclamation and the compliance approach to the DRMS letter including the current posted bond amount is shown below in Table E.

Table E – Final Reclamation Summary

Site Name	Proposed Final Reclamation	Bond Amount	DRMS Approach No.	Comments
Jeronimus Pit	Backfilled	\$1,510,800	1, 4	Backfilling of all post-81 areas in progress. Water rights dedicated via February 29, 2012 affidavit.
Hazeltine Pit	Lined Reservoir	\$670,602	3	Bonded for lining. (Note: This pit was lined in 2005, prior to mining; however, the liner has not yet been tested or approved.)
Brighton Pit	Lined Reservoir/Lakes	\$1,579,215	1, 3	Bonded for lining. The south and central reservoirs are lined with a slurry wall (WDID 0203385) and have obtained SEO liner approval.
Tucson South Pit	Lined Reservoir	\$11,000	3	Mining has not yet begun at this site. An increase of bonding is required prior to commencement of mining operations.
Tucson Pit	Lined Reservoir/Lakes	\$811,000	1, 3	Bonded for lining. A portion of the pit (Rogers Reservoir, WDID 0203917) has been lined with a slurry wall and has obtained SEO liner approval.
Wattenberg Pit	Lined Reservoir	\$520,000	3	Bonded for lining. (Note: This pit was lined in 2013; however, the liner has not yet been tested or approved.)

Platte Valley Pit	Ground Water Lake	\$754,732	1, 4	Bonded for backfilling. Water rights dedicated via February 29, 2012 affidavit.
Distel Pit	Ground Water Lake	\$1,483,800	1, 2	Bonded for backfilling. Lagged and future depletions from evaporation and consumptive use by wetlands vegetation at the site covered under City of Longmont augmentation plan decreed in case no. 2009CW271.
Tull Pit	Lined Reservoir	\$350,775	1, 3	Bonded for lining or backfilling. Conditional water storage right decreed in case no. 1994CW062.
W.W. Farms Pit	Lined Reservoir/Ground Water Lakes	\$155,480	2	Conditional water storage right and plan for augmentation for evaporation from up to 66 acres of water surface area decreed in case no. 1990CW23 (site currently exposes 68 acres).
F-Street Pit	Ground Water Lake	\$71,404	1 or 3	Inadequate bond. Applicant in legal discussions with landowner to resolve.

Conditions of Approval

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

1. This SWSP shall be valid for the period of January 1, 2014 through December 31, 2014, unless otherwise revoked, modified, or superseded by decree. The initial date of approval for this SWSP was August 16, 2005 for operations beginning September 1, 2004. Should a request for renewal of this plan be needed, such renewal request must be submitted to this office with the statutory fee (currently \$257 per pit) no later than **October 1, 2014**.
2. Well permits have been obtained for the current use and exposed pond surface area of each gravel pit in accordance with § 37-90-137(2) and (11), C.R.S., as identified in Table A of this approval.
3. The total area of pond surface exposed after December 31, 1980 for each of the pits shall not exceed those values listed in Table A of this approval. Should the total surface area exposed exceed those amounts, an amendment will need to be filed with this office.
4. The total amount of ground water to be consumed at each of the pits shall not exceed the values listed in Table C of this approval. Total consumption at each pit must not exceed these amounts unless an amendment is made to this plan.
5. Approval of this plan is for the purposes as stated herein. This office must first approve any additional uses for the water. Any future additional historic consumptive use credit given (e.g., agricultural water transfer) for these sites must consider all previous credits given.
6. All releases of replacement water must be sufficient to cover all out-of-priority depletions in time, place, and amount and must be made under the direction and/or the approval of the water commissioner(s). The release of replacement water may be aggregated to maximize beneficial use. The water commissioner(s) and/or the division engineer shall determine the rate and timing of an aggregated release.
7. Conveyance loss for delivery of replacement water is subject to assessment and modification as determined by the division engineer.
8. The replacement water, which is the subject of this plan cannot be sold or leased to any other entity. As a condition of subsequent renewals of this substitute water supply plan, the replacement water must be appurtenant to these sites until a plan or plans for augmentation are obtained. All replacement water must be concurrent with depletions in quantity, timing, and locations. According to an affidavit dated February 29, 2012, the Applicant dedicated the 13.5

shares of the Whitney Ditch Company and 96 shares of the Fulton Irrigating Ditch Company as replacement water solely for this SWSP for as long as there are depletions at these gravel pit sites or until such time as another replacement source is obtained. For the purposes of this SWSP, this affidavit will be accepted for the dedication of the shares; however, if the State Engineer determines that a different affidavit or dedication process is necessary to assure proper dedication of the shares, additional information may be required prior to future SWSP approvals.

9. All diversions shall be measured in a manner acceptable to the division engineer. The Applicant shall install and maintain such measuring devices as required by the division engineer for operation of this SWSP. In addition, the applicant shall maintain daily records of all diversions, replacements, and the amount of water used for each particular purpose. The applicant shall provide a report of these records to the division engineer and the water commissioner on a monthly basis on a form approved by them. The accounting must be submitted to the division engineer in Greeley (Div1Accounting@state.co.us) and the water commissioners William Schneider (William.Schneider@state.co.us), Mark Simpson (Mark.Simpson@state.co.us), Shera Sumerford (Shera.Sumerford@state.co.us), and Bob Carlson (Bob.Carlson@state.co.us) within 30 calendar days of the end of the month for which the accounting is being made. Submitted accounting shall conform to the Administration Protocol "Augmentation Plan Accounting, Division One – South Platte River" (attached)

In addition, the applicant shall verify that each entity making replacements for this plan, have included this plan in their respective accounting submitted to the division engineer. For this plan period those entities are the Platte River Power Authority, Centennial Water and Sanitation District, City of Westminster, and City of Thornton.

10. The installation of any device used for measuring replacement water in this plan must be inspected by a Division 1 hydrographer. Furthermore, the exact location of all return structures utilized in this plan must be provided to the division engineer and appropriate water commissioner in order to allow for inspections of the structures. Finally, all charts or other output data associated with each measuring device utilized in this plan must be provided in a timely manner acceptable to all of the water commissioners identified herein.
11. 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.
12. 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.
13. The name, address, and phone number of a contact person who will be responsible for the operation and accounting of this plan must be provided to the Water Commissioner(s) and the Division Engineer.

14. Subject to approval by the division engineer, the Applicant may lease or purchase additional replacement water as identified in this SWSP request, including water leased from Silver Heights and/or the City of Longmont. Such additional sources of replacement water may only be used in this SWSP if the Applicant complies with the attached Division One Administration Protocol "Use of Replacement Sources Not Specifically Identified in an SWSP or Augmentation Plan".
15. The Applicant shall perform an inspection and provide verification for all parcels of dried up land used to generate augmentation credits during the term of this SWSP. The final verification of dry up will be in the form of an affidavit signed by an individual having personal knowledge of the dry up for the entire irrigation season for each parcel of land used in this SWSP. In accordance with the attached protocol for dry-up of irrigated land, the Applicant shall provide a written notification to the water commissioner and division engineer **by April 1, 2014** identifying the lands to be dried up for the **2014** irrigation season. **By October 15, 2014** the Applicant shall provide an affidavit to the water commissioner and division engineer that identifies and confirms the lands that were dried up during the **2014** irrigation season in order that the final determination of augmentation credits for the irrigation season can be made along with mapping showing any revisions to the dried-up acreage. A GIS shapefile must be emailed to Div1Accounting@state.co.us for each dry-up notification and affidavit. The shapefile shall include the pending case number, the WDID of the plan, the acreage of dry-up, and any accompanying metadata. In addition, the datum must NAD83 and the UTM projection must be Zone 13 North. The Applicant shall modify accounting to reflect that the credit from any dried up fields containing alfalfa or native grass was assessed in the following manner:
- (a) For fields deep tilled or chemically treated to successfully kill alfalfa or native grass, 100% credit will be given for consumptive use as otherwise computed under the conditions of this approval.
- (b) For fields not deep tilled or chemically treated to successfully kill alfalfa, records of monthly monitoring of depth to groundwater at existing irrigation wells or existing or new monitoring wells or piezometers within ¼-mile of each alfalfa or native grass field must be maintained. Credits will be reduced according to the following table when depth to groundwater is less than the depth assumed to provide no significant contribution to alfalfa growth. Measurements taken at the start of each month will determine the necessary reduction in credit to be applied during the following month. The applicant may use another methodology upon review and approval by the State Engineer and Division Engineer.

Depth to Ground Water (Feet)	Percent Reduction in CU Credit ¹	
	Native Grass	Alfalfa
1	85%	100%
2	50%	90%
3	30%	75%
4	20%	50%
5	15%	35%
6	10%	20%
7	5%	15%
8	0%	10%

1. Adapted from *EVAPOTRANSPIRATION AND AGRONOMIC RESPONSES IN FORMERLY IRRIGATED MOUNTAIN MEADOWS, South Park, Colorado*, March 1, 1990; Revised September 1, 1991

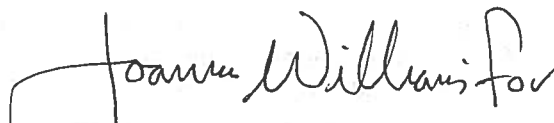
16. If reclamation of any mine site included in this SWSP will produce a permanent water surface exposing groundwater to evaporation, an application for a plan for augmentation must be filed with the Division 1 Water Court at least three years prior to the completion of mining to include, but not be 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. Granting of this plan does not imply approval by this office of any such court application(s).
17. Dewatering at the Hazeltine Pit, W.W. Farms Pit, Wattenberg Pit, and Tull Pit will produce delayed depletions to the stream system. As long as the pits are continuously dewatered, the water returned to the stream system should be adequate to offset the depletions attributable to the dewatering operation. Once dewatering at a site ceases, the delayed depletions must be addressed. Accordingly, dewatering is required to continue the Hazeltine Pit, W.W. Farms Pit, Wattenberg Pit, and Tull Pit during the term of this approval. At least three years prior to completion of dewatering, a plan must be submitted that specifies how the post pumping dewatering depletions (including refilling of the pit) will be replaced, in time, place and amount.
18. Prior to claiming any credit for the water returned to the stream system from dewatering in excess of lagged dewatering depletions (a net accretion), the applicant must install a totalizing flow meter that accurately measures the quantity of water being pumped and returned to the stream system via dewatering operations and account on a real time basis for the actual dewatering depletions and accretions. No net accretion credits are sought by the Applicant for this approval period.
19. If dewatering of any of these sites is discontinued, the pit would fill creating additional depletions to the stream system due to increased evaporation. To assure that additional depletions to the river do not occur, a bond has been obtained through the DRMS for lining or backfilling of the lakes. Therefore, if the dewatering is discontinued these bonds can finance the completion of the lining of these pits or the backfilling, thus preventing depletions to the stream system.
20. This substitute water supply plan may be revoked or modified at any time should it be determined that injury to other water rights has or will occur as a result of this plan. Should this substitute water supply plan expire without renewal or be revoked prior to adjudication of a permanent plan for augmentation, all excavation of product from below the water table, and all other use of water at the pits, must cease immediately.
21. 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 if this substitute water supply plan 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.
22. The approval of this substitute water supply plan 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.
23. The approval of this substitute water supply plan 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 sites 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. According to the plan, mining has ceased at the Jeronimus Pit, Platte Valley Pit, F-Street Pit, Brighton Pit, Tucson Pit, Distel Pit. Since mining has ceased at these sites, either the lakes must be lined or backfilled, or an application for a plan of augmentation for the site must be filed with the water court. In addition all lagged depletions shall continue to be replaced under a SWSP until there is no longer an effect on stream flow or a court approved augmentation plan is approved by the water court.

24. 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 substitute water supply 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.

Should you have any further comments or questions, please contact Dean Santistevan, Assistant Division Engineer, in Greeley at 970-352-8712 or Sarah Brucker of this office.

Sincerely,


Jeff Deatherage, P.E.
Chief of Water Supply

Attachments: Figure 1

South Platte Substitute Supply Plan Accounting
City of Greeley Boyd & Freeman Authorization (9/12/2011)
Platte River Power Authority Lease (11/26/2013)
Centennial Water and Sanitation District Agreement (10/29/2013)
City of Westminster 1998 Lease (5/22/1998)
City of Westminster Agreement (10/28/2013)
City of Thornton Lease (3/31/2006)
City of Westminster Brighton Ditch Lease (3/4/2010)
Affidavit-Dedication of Water Rights to this SWSP (2/29/2012)
Letter from DRMS dated April 30, 2010
Accounting, Use of Unnamed Sources, and Dry-up Protocols

cc: Dean Santistevan, Assistant Division Engineer, dean.santistevan@state.co.us
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Mark Simpson, Water Commissioner District 3, mark.simpson@state.co.us

Shera Sumerford, Water Commissioner District 5, shera.sumerford@state.co.us

Bob Carlson, Water Commissioner District 6, bob.carlson@state.co.us

Colorado Division of Reclamation Mining and Safety

South Platte (Aggregate Industries) Combined Approval 2014_Final_Draft.Docx

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AGGREGATE INDUSTRIES COMBINED SSP Vicinity Map

Date: 27 Nov 2013

Job #: 06-103

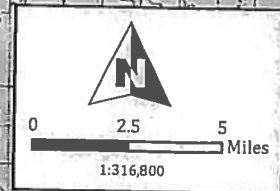
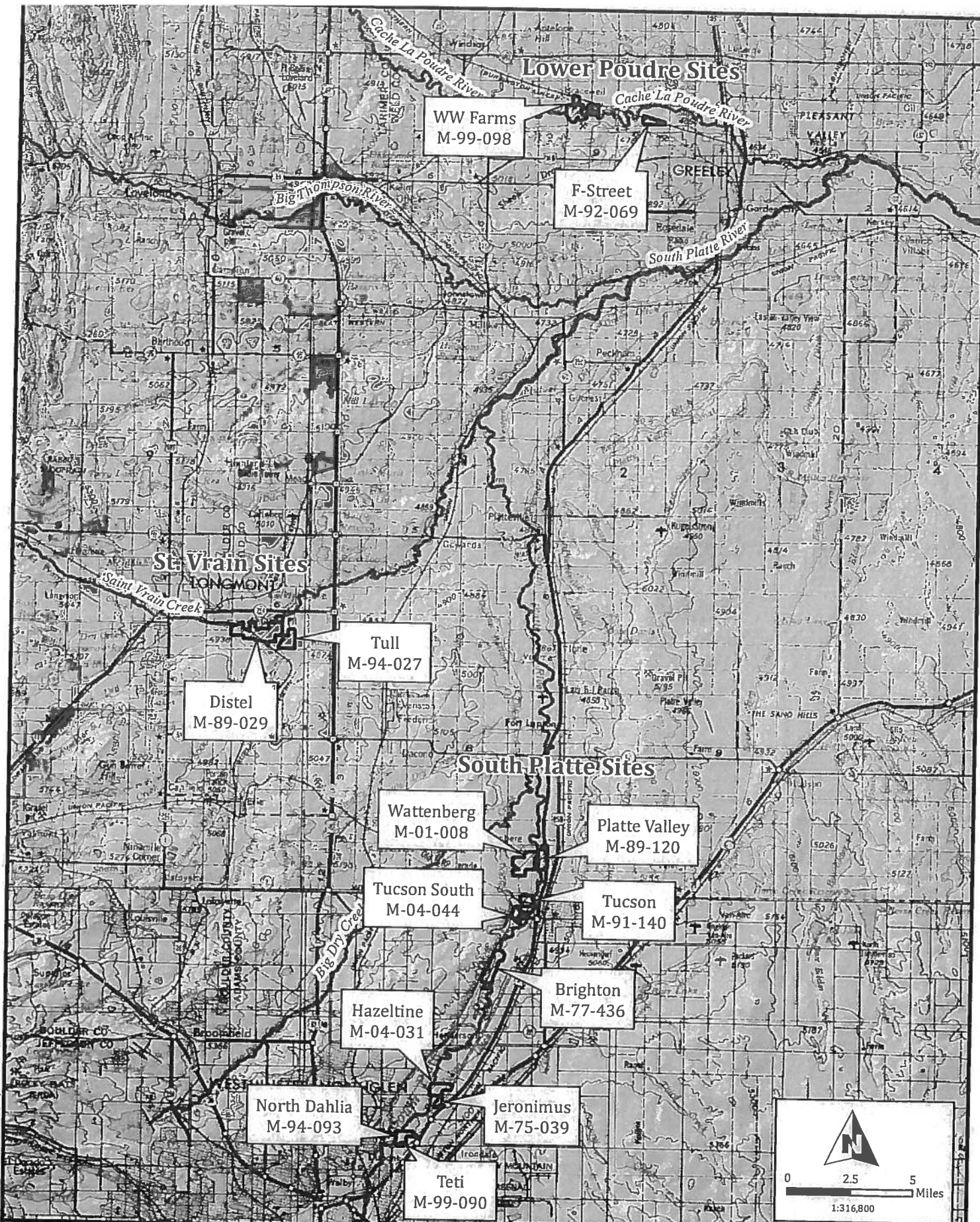
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Aggregate Industries - WCR, Inc.
South Platte Combined Substitute Supply Plan Accounting
2014

TOTAL ON-SITE CONSUMPTIVE USE (ac-ft)

Site	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Total	Comments
District 2														
Lawrence Wash Plant														Removed From CoSSP
Tell Pit (WOID 0203027)														Augmented under Case No. 07CWI198
North Dakota Pit (WOID 0203028)														Augmented under Case No. 07CWI198
Fulton Lakes Pit														Removed From CoSSP
Jennings Pit (WOID 0203029)	0.65	0.77	1.02	1.57	2.20	3.13	3.26	2.97	2.25	1.50	0.70	0.61	20.63	
Hazlett Pit (WOID 0203030)	0.15	0.20	0.26	0.38	3.09	3.21	3.23	3.19	3.10	2.90	2.80	0.15	25.26	
Brighton Pit (WOID 0203031)	0.47	0.61	0.75	1.36	1.63	2.29	2.47	2.20	1.73	1.13	0.58	0.45	15.65	
Tucson South Pit (WOID 0203032)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Tucson North Pit (WOID 0203033)	0.16	0.20	0.25	0.46	0.56	0.82	0.89	0.79	0.60	0.40	0.18	0.15	8.47	
Wentworth Pit (WOID 0203034)	1.53	1.97	2.43	3.31	4.04	4.96	5.07	4.79	4.00	3.11	1.96	1.54	38.70	
Pierre Valley Pit (WOID 0203035)	6.07	7.77	9.48	19.05	22.73	32.93	35.65	31.60	24.34	16.71	6.86	5.75	218.92	Operations not yet begun/not anticipated to begin in 2014
District 5/6														
Daniel Pit (WOID 0503000)	0.07	0.10	0.13	0.20	0.23	0.23	0.23	0.23	0.23	0.13	0.13	0.07	1.98	Removed From CoSSP
Tull Pit (WOID 0403001)	0.15	0.19	0.26	1.69	1.78	1.90	1.96	1.90	1.78	1.60	1.92	0.15	14.86	Net active/Not included in CoSSP
District 3														
Stagner Pit	5.51	7.88	9.90	15.84	19.95	29.04	32.19	32.64	20.63	13.98	6.93	5.51	199.70	Removed From CoSSP
W.W. Farms Pit (WOID 0303014)	2.10	2.62	3.41	5.76	7.34	10.74	11.79	11.00	7.60	4.98	2.36	2.10	71.79	Removed From CoSSP
F-Street Pit (WOID 0303015)														Removed From CoSSP
East 8th Street Pit														Removed From CoSSP
Total Consumptive Uses														
District 2	9.02	11.82	14.19	28.74	34.25	47.35	50.57	43.55	36.01	25.74	13.07	8.64	324.63	
District 5/6	0.22	0.29	0.39	1.89	2.01	2.13	2.19	2.13	2.01	1.73	1.65	0.22	16.84	
District 3	7.81	10.20	13.31	21.60	27.29	39.78	43.98	43.65	28.23	18.96	9.29	7.61	271.49	
Total	16.85	22.01	27.88	52.23	63.54	89.26	96.74	90.33	66.24	46.42	24.00	16.46	612.96	

(-) accretions / (+) depletions

Site	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Total	Comments
District 2														
Lawrence Wash Plant														Removed From CoSSP
Tell Pit (WOID 0203027)														Augmented under Case No. 07CWI198
North Dakota Pit (WOID 0203028)														Augmented under Case No. 07CWI198
Fulton Lakes Pit														Removed From CoSSP
Jennings Pit (WOID 0203029)	-1.19	-1.14	-1.18	-1.36	-1.66	-2.10	-2.48	-2.60	-2.45	-2.10	-1.66	-1.13	-21.25	
Hazlett Pit (WOID 0203030)	-1.92	-1.21	-0.99	-1.82	-2.52	-2.75	-2.87	-2.91	-2.91	-2.83	-2.78	-1.78	-27.26	
Brighton Pit (WOID 0203031)	-1.76	-1.75	-1.79	-2.09	-2.34	-2.74	-2.99	-2.93	-2.66	-2.23	-1.78	-1.52	-26.59	
Tucson South Pit (WOID 0203032)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Tucson North Pit (WOID 0203033)	-0.29	-0.28	-0.29	-0.35	-0.43	-0.55	-0.66	-0.69	-0.64	-0.55	-0.42	-0.33	-5.47	
Wentworth Pit (WOID 0203034)	-3.66	-3.12	-3.11	-3.38	-3.78	-4.27	-4.60	-4.65	-4.39	-3.91	-3.26	-2.71	-44.82	
Pierre Valley Pit (WOID 0203035)	-10.52	-10.35	-10.92	-14.63	-18.44	-23.79	-28.12	-28.51	-25.67	-21.23	-15.30	-11.61	-219.09	Operations not yet begun/not anticipated to begin in 2014
District 5/6														
Daniel Pit (WOID 0503000)	-0.85	-0.77	-0.72	-0.70	-0.68	-0.65	-0.62	-0.59	-0.56	-0.49	-0.43	-0.38	-7.42	Net included in CoSSP
Tull Pit (WOID 0403001)	-0.68	-0.68	-0.68	-0.69	-0.10	-0.14	-0.20	-0.26	-0.33	-0.40	-0.45	-0.49	-2.70	
District 3														
Stagner Pit	-8.08	-8.66	-10.03	-13.47	-16.99	-22.84	-26.97	-28.70	-23.44	-17.68	-12.16	-9.22	-198.25	Net active/Not included in CoSSP
W.W. Farms Pit (WOID 0303014)	-4.85	-4.31	-4.05	-4.19	-4.80	-5.78	-7.12	-8.12	-8.37	-7.78	-6.76	-5.65	-71.79	Removed From CoSSP
F-Street Pit														Removed From CoSSP
East 8th Street Pit														Removed From CoSSP
Total Stream Depletions														
District 2	-19.34	-17.85	-18.29	-23.63	-29.16	-36.20	-41.72	-42.29	-38.70	-32.85	-25.17	-19.28	-344.48	
District 5/6	-0.93	-0.85	-0.80	-0.78	-0.78	-0.79	-0.82	-0.85	-0.89	-0.88	-0.88	-0.87	-10.12	
District 3	-12.93	-12.97	-14.09	-17.67	-21.79	-28.62	-34.09	-36.82	-31.81	-25.46	-18.92	-14.87	-270.03	
Total	-33.20	-31.67	-33.17	-42.08	-51.73	-65.61	-76.63	-79.97	-71.40	-59.19	-44.97	-35.02	-624.64	

Aggregate Industries - WCR, Inc.
South Platte Combined Substitute Supply Plan Accounting
2014

REPLACEMENT SOURCES (ac-ft)

Source	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Total	Comments
District 2														
Silver Heights														
Levi Chance Ditch No 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	12.50	0.00	
Centennial	26.44	23.76	26.27	24.79	25.05	23.19	13.21	13.28	13.26	25.03	24.98	26.30	265.54	
Thompson Effluent	2.15	2.01	2.15	0.00	0.00	0.00	0.00	0.00	0.00	2.08	2.08	2.15	10.53	
Fulton Ditch	0.00	0.00	2.10	16.16	26.14	43.52	63.48	53.07	30.09	12.26	0.00	0.00	248.81	
Old Breanier Ditch														
Brighton Ditch	0.00	0.00	2.43	21.43	50.28	56.07	51.76	50.04	41.16	19.81	0.00	0.00	293.00	
Westminster 1999	25.00	25.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.00	20.00	125.00	
New Breanier Ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Removed from Plan
Loggert Reservoir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Smith & Eriens Ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Hill NLS Ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
South Platte Ditch														
Muir Meadows Ditch														
Longmont WWTP														
Left Hand Ditch Co														
Coffin & Davis Ditch														
Bass Ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Removed from Plan
P & D Ditch														
GST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Removed from Plan
Little Giche	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Removed from Plan
Undermiller	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Removed from Plan
Fert Collins / RPA	0.00	0.00	0.00	12.00	0.00	0.00	0.00	0.00	0.00	25.50	0.00	0.00	37.50	
Whitney Ditch	0.00	0.00	0.00	9.44	48.90	62.42	85.39	75.81	49.82	2.29	0.00	0.00	334.07	
Boyd & Freeman Ditch	0.00	0.00	0.00	3.87	28.95	43.68	52.31	29.88	18.34	7.09	0.00	0.00	184.11	13.5 shares used
Graham Ditch Company	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
City of Greeley	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Return Flow Obligations (ac-ft)

Source	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Total	Comments
District 2														
Fulton Ditch	-5.73	-5.05	-4.53	-4.20	-4.30	-4.60	-5.78	-7.13	-8.10	-8.19	-7.57	-6.62	-72.01	
Old Breanier Ditch														
Brighton Ditch	-3.38	-2.95	-3.87	-12.43	-21.96	-19.28	-16.39	-16.99	-16.50	-11.24	-4.66	-3.97	-133.60	
New Breanier Ditch	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Whitney Ditch	-2.04	-1.75	-1.53	-5.47	-23.01	-21.99	-29.19	-27.41	-21.23	-5.75	-3.13	-2.43	-144.92	Removed from Plan
Boyd & Freeman Ditch	-0.06	-0.05	-0.04	-0.90	-7.54	-5.88	-11.69	-5.84	-4.27	-1.71	-0.10	-0.08	-43.16	

Transit Loss Summary (ac-ft)

Source	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Total	Comments
District 3														
St. Vrain at Confluence	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Poudre At Confluence	0.00	0.00	0.00	-0.55	-0.83	-1.47	-2.05	-1.17	-0.40	-1.13	0.00	0.00	-7.60	
South Platte To St. Vrain River	-6.32	-6.14	-6.30	-5.01	-8.35	-11.25	-11.23	-8.98	-4.49	-2.60	-10.08	-8.63	-89.39	
St. Vrain To Poudre River	-1.78	-1.78	-1.90	-1.62	-3.67	-5.21	-5.21	-3.98	-1.57	-0.13	-2.60	-2.14	-31.59	

Basin Summary (ac-ft)

Location	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Total	Comments
St. Vrain at Confluence	-0.93	-0.85	-0.80	-0.78	-0.78	-0.79	-0.82	-0.85	-0.89	-0.88	-0.88	-0.87	-10.12	Net deficits allowed during non-irrigation season
Upper Poudre	0.00	0.00	0.00	12.00	0.00	0.00	0.00	0.00	0.00	25.50	0.00	0.00	37.50	Net deficits allowed during non-irrigation season
Poudre At Confluence	-15.03	-14.77	-15.65	0.73	24.68	44.13	60.69	33.44	10.45	0.83	-22.15	-17.38	89.96	Net deficits allowed during non-irrigation season
South Platte River														
Above St. Vrain Confluence	18.81	18.78	19.96	17.12	37.71	53.25	53.33	40.99	16.71	2.22	27.08	22.45	328.40	Net deficits allowed during non-irrigation season
Below St. Vrain Confluence	17.88	17.93	19.16	16.34	36.93	52.46	52.51	40.14	15.82	1.34	26.20	21.57	318.28	Net deficits allowed during non-irrigation season
Above Poudre Confluence	16.11	16.15	17.26	14.71	33.26	47.25	47.30	36.16	14.25	1.21	23.59	19.43	286.68	Net deficits allowed during non-irrigation season
Net Balance	1.07	1.38	1.60	1.54	57.95	91.39	107.99	69.60	24.70	2.04	1.44	2.05	376.65	
% of Month Under Call Conditions	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	-	
Supplemental Lease Water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Transit Loss on Lease Water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Final Water Balance	1.07	1.36	1.60	1.54	57.95	91.39	107.99	69.60	24.70	2.04	1.44	2.05	376.65	31.5 miles @ 0.25% per mile



COPY

September 12, 2011

Mr. Timothy J. Flanagan, Esq.
Fowler, Schimberg & Flanagan
1640 Grant Street
Denver, CO 80203

RE: 83rd Joint Venture LLC Boyd Irrigation Company Ditch Shares

Dear Mr. Flanagan,

As you may have heard, the City of Greeley purchased 240 shares of stock in the Boyd Irrigation Company ("BIC") from 83rd Joint Venture. The acquisition was completed August 5, 2011 in lieu of the sale of the shares for delinquent unpaid assessments. Mr. Melvin Dinner, counsel to the BIC, and Lory Stephens, Secretary/Treasurer of the BIC, provided the City of Greeley a copy of your letter, dated August 1, 2011, and later delivered attachments. As the current owner of the 240 shares of stock discussed in your letter, the City of Greeley wanted to respond to your letter to address Aggregate Industries' temporary use of the Boyd Irrigation Company shares.

Temporary Use of 240 Shares of Boyd Irrigation Company Shares

The shares were conveyed to Greeley subject to CAMAS', now known as Aggregate Industries ("AI"), temporary rights under the Mineral and Surface Lease dated April 17, 1998 with 83rd Joint Venture, LLC ("Lease"), which includes the exclusive rights to use any water or water rights appurtenant to the property including shares in the "Boyd Ditch" owned by the lessor or related parties in connection with the operations of CAMAS. Paragraph 19 of the lease defines the operations of CAMAS as (i) exploration for, extraction by mining, excavation, processing, stockpiling, removal and sale of sand, gravel and related materials, and related operations; (ii) the operation of an aggregate processing plant; (iii) the operation of an asphalt plant; (iv) the operation of a concrete-ready-mix plant, and similar or related industrial uses. The Lease terminates April 17, 2013 and Greeley understands that Aggregate is working on completion of its reclamation obligations as stated in AI's South Platte Combined Replacement Plan dated March 21, 2011 ("Plan").

As also stated in the Plan, AI is working with the landowner to transition the land back to 83rd Joint Venture within the next two years after reclamation is complete. Pursuant to the lease, the 240 Boyd Irrigation Company shares will remain available to AI for use in its Substitute Water Supply Plan for the duration of the lease term for AI's operations on the property.

Mr. Timothy J. Flanagan
September 12, 2011
Page 2

The BIC has commenced construction work on the Boyd and Freeman headgate and ditch to repair recent flood damage and to install the measuring and recording devices requested by the State Engineer's Office and expects the work to be complete later this fall. This work is designed in part to allow for the use of the 240 BIC shares in AI's annual substitute supply plans consistent with AI's temporary rights to use the shares for this purpose. Greeley's purchase of the shares required Greeley to pay 83rd Joint Venture's portion of Company assessments for this work.

Full Replacement of Evaporative Losses

As was acknowledged in AI's April 26, 2011 letter to the Division of Reclamation, Mining and Safety, the BIC shares only provide partial replacement of the planned evaporative losses from the F-Street Pit. The AI letter suggests that the post reclamation consumptive use will be approximately 168 acre-feet per year, the depletions associated with a 67-acre water surface. Moreover, the BIC shares would only be available as a replacement source during the irrigation season. AI's Plan indicates that additional augmentation water for the F-Street Pit will be rented from Greeley. Greeley would be happy to discuss the possible rental of additional replacement water to AI for this purpose.

Long-Term Water Augmentation Obligations

According to the Lease, 83rd Joint Venture is responsible for implementing and complying with the requirements of any water augmentation plan following the termination of the Lease. 83rd Joint Venture is still the record owner of the land on which a permanent augmentation plan must be filed for the F-Street Pit. The conveyance of the water rights did not include conveyance of the land and Greeley has no obligation to provide long-term augmentation water for this property. In light of the fact that 83rd Joint Venture conveyed the shares in lieu of a sale for delinquent assessments, it will no longer have the shares available for partial long-term coverage of evaporative losses from the F-Street Pit and will have to acquire other water rights to meet this obligation. Again, Greeley acquired the shares subject to AI's temporary use of the shares in its SWSPs as described in the Lease.

Greeley would be happy to meet with you or your clients to discuss the use of the BIC shares in AI's Plan or related matters. Please have your client contact Jim Hall, Water Resources Manager, at (970) 336-4039 to discuss any of these issues further.

Sincerely,



Katie L. Wiktor
Assistant City Attorney

cc: Eric Reckentine, Deputy Director
Jim Hall, Water Resources Manager

WATER LEASE

THIS WATER LEASE is by and between Aggregate Industries, Inc. ("Aggregate") and the Platte River Power Authority ("Platte River") sometimes collectively referred to as "the Parties".

WITNESSETH

WHEREAS, Platte River is a party to an "Agreement for the Reuse of Water for Energy Generation", ("Reuse Agreement") among the City of Fort Collins ("the City"), Water Supply and Storage Company, and Platte River dated August 10, 1978; and

WHEREAS, the Reuse Agreement, among other things, conveys to Platte River the right to receive reusable water delivered by the City; and

WHEREAS, Platte River is a party to an Agreement ("North Poudre Agreement") with the North Poudre Irrigation Company ("North Poudre") dated November 15, 1979 and amended on September 10, 2009, which grants Platte River the right to convey waters through North Poudre's Fossil Creek Inlet and to temporarily store waters to which Platte River is entitled in North Poudre's Fossil Creek Reservoir; and

WHEREAS, reusable water available to Platte River is used primarily for cooling water for the Rawhide Energy Station, but Platte River may have, from time to time, surplus reusable water temporarily available in Fossil Creek Reservoir; and

WHEREAS, the Platte River Board of Directors, in Resolution No. 13-12, has authorized the "lease or rent, for a term up to one year, any unused water which Platte River may receive through the Reuse Agreement to entities within Colorado Water Court Division 1:

- (a) First, with equal priority, to the municipalities of Estes Park, Fort Collins, Longmont and Loveland for their use or use in their water lease programs;
- (b) Second, to other entities within Colorado Water Court Division 1."; and

WHEREAS, Aggregate wishes to lease such water for delivery April 2014, and October 2014; and

WHEREAS, the water department staffs of Estes Park, Fort Collins, Longmont, and Loveland have consented pursuant to Resolution No. 13-12.

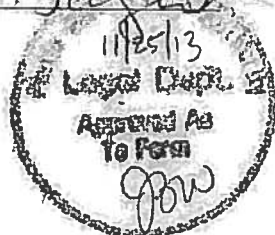
NOW THEREFORE, in consideration of the mutual promises and covenants of the Parties hereto, it is agreed as follows:

1. Platte River will lease to Aggregate a portion of its current balance in Fossil Creek Reservoir, a quantity of approximately 12.0 acre-feet in April 2014, and 25.5 acre-feet in October 2014 for a total of 37.5 acre-feet of reusable water ("Subject Water"), to be delivered from Fossil Creek Reservoir. This release will be coordinated by the Poudre River Water Commissioner with review and concurrence by North Poudre. The Poudre River Water Commissioner will determine the actual amount of Subject Water presently held by Platte River in the Fossil Creek Reservoir that is delivered to Aggregate and payment will be made on the actual amount delivered or deliverable.
2. The water is subject to availability. Platte River will make reasonable efforts to provide Subject Water; however, Platte River shall only be required to make available to Aggregate quantities of water which Platte River determines to be surplus to its own needs.
3. The Subject Water leased to Aggregate is for the exclusive use by Aggregate and shall not be leased or conveyed to others except by written permission from Platte River.
4. The cost of the Subject Water shall be \$300 (THREE HUNDRED DOLLARS) per acre-foot. Payment will be made by Aggregate thirty (30) days from the date of billing, but in any event prior to the release of Subject Water. Payment shall be nonrefundable and not contingent upon whether the Subject Water is actually released or used by Aggregate, so long as Platte River either delivered or was ready to deliver the Subject Water. Platte River shall provide written notification to Aggregate of any variation to the amount of water available relative to the lease quantities listed in Paragraph 1 prior to each lease month. Platte River shall refund Aggregate \$300 per acre-foot for any Subject Water that was not made available to Aggregate during the term of the lease.
5. The Delivery Point of the Subject Water leased to Aggregate shall be the outlet of Fossil Creek Reservoir. Aggregate shall bear any losses associated with conveyance of the Subject Water from the Delivery Point to any location where Aggregate may use the water. All releases from Fossil Creek Reservoir are subject to weather conditions.
6. Platte River makes no warranties concerning the quality of the Subject Water, nor the purposes for which the Subject Water is suitable.
7. This instrument represents the complete agreement of the Parties and no oral modification shall be recognized. Any amendments or additions shall be in writing.
8. The terms and provisions of this lease are binding upon the Parties, their successors and assigns.
9. The Water Lease shall be effective upon the date shown below.

DATED this 26 day of November, 2013.

PLATTE RIVER POWER AUTHORITY

By: Jackie A. [Signature]
General Manager



-WCR,
AGGREGATE INDUSTRIES, INC.

By: [Signature]

[Signature]

CENTENNIAL

WATER AND SANITATION DISTRICT

October 29, 2013

Jared Dains
Applegate Group, Inc.
1499 West 120th Avenue, Suite 200
Denver, CO 80234

RE: Aggregate Industries Lease 2014

Dear Mr. Dains,

I am writing to confirm that Centennial W&S District will provide 15 AF of lease water during November and 15 AF during December 2014, as per your request on behalf of Aggregate Industries. I anticipate the release rate will average 0.25 cfs/day.

Please contact me with any concerns.

Sincerely,


Swithin Dick

Water Resources Engineer



62 West Plaza Drive
Highlands Ranch, Colorado 80129
www.centennialwater.org

303-791-0430 Telephone
303-791-0437 Engineering Fax
303-791-3290 Financial Services Fax

EXCHANGE AGREEMENT

This Agreement ("Agreement") is entered into this 22nd day of May, 1998, between Camas Colorado, Incorporated, an Indiana corporation, ("Camas") and the City of Westminster, ("Westminster" or the "City").

WHEREAS, Westminster is a municipal corporation in the State of Colorado that provides water and sewer services to individuals located within the Westminster Water Service Area;

WHEREAS, Camas Colorado, Incorporated is a corporation of the State of Indiana and owns and operates Cooley Gravel Company in Colorado. Cooley Gravel Company is a wholly owned subsidiary of Camas engaged in certain mining activities in the State of Colorado ("Cooley");

WHEREAS, Cooley is the owner of the following water rights:

(a) 7.5 shares of the capital stock in the Farmers Reservoir and Irrigation Company ("FRICO") assigned for water delivery purposes to the Standley Division, Share Certificate Number 6974;

(b) 31 shares of the capital stock in the Manhart Ditch Company, Replacement Certificate for lost certificates Numbers 43 and 48;

(c) 40.875 shares of the capital stock of the Wellington Reservoir Company, Share Certificate Number 1272; and


(d) 48.715 shares of the capital stock of the Burlington Ditch Reservoir and Land Company, Share Certificate Number 3576.

Within fifteen (15) days of execution of this Agreement, Camas will cause Cooley to execute and record a quit claim deed and assignment of share certificates formally transferring Cooley's interest in the water rights identified above to Camas. The Water Rights identified herein shall thereafter be referred to collectively as the "Camas Water Rights";

WHEREAS, Camas is the owner of approximately 30.69 acres of land, more or less, located in the SE $\frac{1}{4}$ of Section 7, Township 3 South, Range 68 West of the 6th P.M., Adams County, more particularly described in the legal description attached hereto, as Exhibit A (the "Camas Lands");

WHEREAS, in connection with the operation of its municipal water service system, Westminster owns certain water rights that yield water that has been decreed to be fully consumable. Moreover, in connection with the operation of its municipal water

treatment system, Westminster owns and generates fully consumable wastewater effluent at its Big Dry Creek Wastewater Treatment Plant ("Big Dry Creek") and at the Metropolitan Denver Wastewater Reclamation District's Sewage Disposal Plant ("Metro") on the South Platte River.

 WHEREAS, the parties wish to effectuate a transfer of ownership of the Camas Water Rights and the Camas Lands for certain cash payments and the provision of 290 acre feet of consumable water to Camas in perpetuity, (the "Camas Exchange") pursuant to the terms of this Agreement.

WHEREAS, in the judgment of the Westminster City Council, the terms of this Agreement coupled with the implementation of the Camas Exchange will result in improvement in the capacity, efficiency, or service of Westminster's utility system.

WHEREAS, pursuant to Section 14.2 of the Westminster City Charter, the City may otherwise dispose of property constituting part of the City's utility system subject to certain findings by the City Council.

WHEREAS, Westminster enters this Agreement to effect the disposition of a portion of the City's utility system and thereby facilitate the implementation of the Camas Exchange contemplated herein.

NOW THEREFORE, for and in consideration of the premises, the mutual promises contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Exchange.

The parties will exchange the Camas Water Rights and the Camas Lands for 290 acre-feet annually of consumable water and a one time payment of \$288,500.00, all pursuant and subject to the further terms of this Agreement.

2. Escrow.

Upon execution of this Agreement, the parties will create an interest-bearing escrow with Land Title Guarantee Company pursuant to Escrow Instructions in the form attached hereto as Exhibit B into which Westminster shall deposit the sum of \$20,000.00 (the "Escrow Funds"). The Escrow Instructions shall provide that if, within twenty (20) days of receipt of the Title Commitment described in Paragraph 3.2, below, Westminster provides Camas with written notice of title defects to the Camas Water Rights or to the

8.9 Effective Date. This Agreement shall be effective upon execution by both parties.

8.10 Execution of Counterparts. This Agreement may be executed in counterparts.

8.11 Authority. Each signatory acknowledges and represents that he or she has the authority to enter into this Agreement and bind the party for which he or she signs.

CITY OF WESTMINSTER, a Colorado
municipal corporation

Approved by Westminster
City Council on 2-9-98

By: William Christopher
William Christopher
City Manager

Attest:

Michele Kelley
City Clerk

CANAS COLORADO, INCORPORATED

By: Richard Mergens
Rick Mergens
Vice President

Attest:

MaDez
Secretary

LEJ:jma-193

DRAFT

SPECIAL WARRANTY DEED

This Deed, made this ____ day of _____, 1998, between the CITY OF WESTMINSTER, a municipal corporation duly organized and existing under and by virtue of the laws of the State of Colorado, whose legal address is 4800 West 92nd Avenue, Westminster, Colorado 80020, Grantor, and OMAHA COLOMBUS, INC., a corporation duly organized and existing under and by virtue of the laws of the State of Indiana, whose legal address is 3505 South Teller Street, Lakewood, Colorado 80238, Grantee.

WITNESSETH:

That the Grantor, for and in consideration of the sum of One Dollar (\$1), other good and valuable consideration, and the agreements and obligations of the parties as described in the Agreement between the parties dated _____, 1998, the receipt and sufficiency of which is hereby confessed and acknowledged, has granted, bargained, sold and conveyed, and by these presents does grant, bargain, sell, convey and confirm unto the Grantee, its successors and assigns, forever, all right, title, interest and ownership in the following described water, water rights, and rights to the use of water:

(a) .28 c.f.s. of fully consumable water every day of the year delivered in perpetuity at a point at or above the confluence of Clear Creek and the South Platte River in Adams County, Colorado; and,

(b) In addition to the amounts identified in paragraph (a), above, an additional .17 c.f.s. of fully consumable water every day from October 1 until June 30 delivered in perpetuity at a point at or above the confluence of Clear Creek and the South Platte River in Adams County, Colorado.

TOGETHER with all and singular the hereditaments and appurtenances thereto belonging or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; and all the estate, right, title, interest, claim and demand whatsoever of the said party of the first part, either in law or equity, of, in and to the above-bargained water, water rights, and right to use of waters with the hereditaments and appurtenances;

TO HAVE AND TO HOLD the said water, water rights, and rights to the use of waters above-bargained and described, with the appurtenances, unto Grantee, its successors and assigns forever. The Grantor, for itself, its successors and assigns, does covenant and agree that it shall and will warrant and forever defend the above-bargained water, water rights, and rights to the use of the water in the quiet and peaceable possession of the Grantee, its

EXHIBIT E

October 28, 2013

Aggregate Industries-WCR, Inc.
1687 Cole Boulevard, Suite 200
Golden, CO 80401

City of Westminster
Director of Public Works
4800 W. 92nd Avenue
Westminster, CO 80030

Re: 2014 Effluent Deliveries per Consumable Water Lease Agreement

In accordance with Section 2.2 of the Consumable Water Lease Agreement, dated March 4, 2010, between Aggregate Industries-WCR, Inc. (AI) and City of Westminster (Westminster), AI and Westminster hereby mutually agree to a 2014 total annual delivery amount of 125 acre-feet as set forth in the following delivery schedule for 2014:

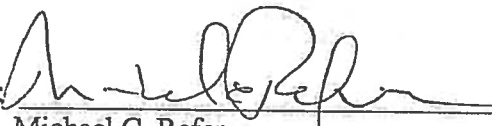
All values in ac-ft

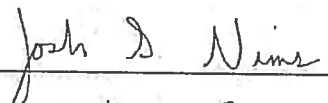
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
25	25	20	0	0	0	0	0	0	0	35	20	125

AI and Westminster further agree that the annual lease payment for 2014 shall be prorated based upon the 2014 annual delivery amount of 125 acre-feet. Based upon the \$200 per acre-foot lease payment as set forth in Section 2.4 of the Consumable Water Lease Agreement, the total lease payment to be paid by AI to Westminster for the 2014 deliveries is \$25,000.

AGGREGATE INDUSTRIES-WCR, INC.

CITY OF WESTMINSTER

By: 
Michael C. Refer
Regional Manager
Environmental & Land Services

By: 
Printed Name: Josh S. Nims
Title: Senior Water Resources Engineer

Date: 10/28/2013

Date: 11/7/2013

EXHIBIT D

WATER LEASE

This Water Lease is made and entered into this 31ST day of MARCH, 2006 by and between THE CITY OF THORNTON, a Colorado municipal corporation, ("Thornton"), as Lessor and AGGREGATE INDUSTRIES - WEST CENTRAL REGION, INC., an Indiana Corporation, whose address is 1707 Cole Boulevard, Suite 100, Golden, Colorado, 80401 ("Lessee").

WHEREAS, Thornton owns fully consumable water in its municipal water system, which water, may be delivered to the South Platte River; and

WHEREAS, Thornton desires to lease to Lessee and Lessee desire to lease from Thornton a portion of Thornton's fully consumable water; and

WHEREAS, As consideration for this Water Lease, Lessee is simultaneously selling and transferring 3.0 shares in the Colorado Agricultural Ditch Company (Certificate number 1000) to Thornton pursuant to the Agreement for the Purchase, Sale and Lease of Water Rights dated JANUARY 12, 2005.

NOW, THEREFORE IN CONSIDERATION OF THE ABOVE REPRESENTATIONS AND OF THE MUTUAL PROMISES AND COVENANTS CONTAINED HEREIN AND, THE RECEIPT AND ADEQUACY OF WHICH IS HEREBY MUTUALLY ACKNOWLEDGED, THE PARTIES AGREE AS FOLLOWS:

1. Term. This Water Lease shall be a permanent lease, subject to termination only in the event that Lessee, its heirs or assigns notify Thornton in writing that it no longer has any use for, and no longer desire to use the fully consumable water.

2. Consideration. As consideration for this Water Lease, Lessee is simultaneously selling and transferring 3.0 shares in the Colorado Agricultural Ditch Company (Certificate number 1000) to Thornton pursuant to the Agreement for the Purchase, Sale and Lease of Water Rights dated 1/12, 2005. As consideration for the 3.0 Colorado Agricultural Shares, Thornton agrees to permanently lease and provide for Lessee's use the following amount of fully consumable water delivered by Thornton to the South Platte River from any fully consumable water rights owned by Thornton. The rate, period and location of water delivery are set forth below.

- a) Delivery Period and Rate. Thornton shall deliver fully consumable water at a rate of 0.035 c.f.s./day November 1 through March 31.
- b) Location. Thornton agrees to deliver the fully consumable water to the South Platte River in the reach from the outfall of the Metropolitan Wastewater Reclamation District Central Plant to the confluence of Big Dry Creek and the South Platte River, but in any case above the calling right within that reach.

3. Water Quality. Thornton does not warrant or guarantee that the water it provides satisfies any water quality standards.

4. Assignability. Lessee may freely assign its rights under this Water Lease in whole or in part to any other person or entity. No such assignment will be effective until written notice has been given to Thornton and no assignment will be allowed if it increases the obligations under this Water Lease. Prior to selling, permanently assigning or otherwise transferring Lessee's rights under this Water Lease, Lessee agrees to notify Thornton of its intent to transfer the rights and enter into an exclusive 30 day negotiation period with Thornton to determine if the Parties can come to an agreement to transfer the rights back to Thornton. Thornton may assign its obligation under this agreement only with the written consent of Lessee or its assignee, which consent shall not be unreasonably withheld.

5. Venue. This Water Lease shall be governed by the laws of the State of Colorado, and any legal action concerning the provisions hereto shall be brought in the County of Adams, State of Colorado.

6. Entire Agreement. This Water Lease constitutes the entire agreement between the parties superseding all prior oral or written communications. None of the provisions of this Water Lease may be amended, modified or changed except by a writing signed by both parties.

7. Waiver. The waiver of any breach of any of the provisions of this Water Lease by either party shall not constitute a continuing waiver or a waiver of any subsequent breach by said party either of the same or of another provision of this Water Lease.

8. Notices. All notices and communications regarding this Water Lease should be directed, in writing by hand delivery or certified mail return receipt requested, to the Water Resources Manager, Civic Center, 9500 Civic Center Drive, Thornton, Colorado, 80229, for Thornton and to Aggregate Industries, Attn: Michael Refer, Vice President of Administration, 1707 Cole Boulevard, Suite 100, Golden, Colorado, 80401 for Lessee, or to any subsequent address provided by the parties.

IN WITNESS WHEREOF, the Parties have executed this Water Lease on the date first above written.

AGGREGATE INDUSTRIES - WEST CENTRAL REGION, INC.

By

Title

Michael Refer
VICE PRESIDENT

STATE OF COLORADO

COUNTY OF

Adams

)
) SS

The foregoing instrument was acknowledged before me this 31st day of March 2006
by Michael Refer

WITNESS my hand and official seal.

My Commission expires:

March 5, 2010

John A. Dielman
NOTARY

ATTEST:

Nancy A. Vincent
Nancy Vincent, City Clerk

CITY OF THORNTON:

BY Jack Ethredge
Jack Ethredge, City Manager

APPROVED AS TO FORM:

Dennis A. Hanson
Assistant City Attorney

WATER LEASE

THIS LEASE is entered into this 14th day of March 2009, between the City of Westminster ("Westminster"), lessor, and Aggregate Industries-WCR, Inc., a Colorado corporation ("AI"), lessee.

WHEREAS, Westminster is the owner of 1.038 shares in the Brighton Ditch, (the "BDC Shares"), identified as Stock Certificate Numbers 228 and 229;

WHEREAS, Westminster is a municipal corporation in the State of Colorado that provides water and sewer services to individuals located within the Westminster Water Service Area;

WHEREAS, Pursuant to Section 14.3 of the Westminster City Charter, the City is further authorized to lease water subject to subsections (a) and (b) of said Section 14.3. In the judgment of the Westminster City Council, the terms of this Water Lease, and the payments generated thereby, satisfy the requirements of Section 14.3 (a) and Section 14.3 (b) of the Westminster City Charter.

WHEREAS, AI is a corporation of the State of Colorado;

WHEREAS, AI desires to lease the water derived from the BDC Shares, and Westminster is willing to lease to AI the water derived from the BDC Shares under the specific conditions hereinafter set forth.

WHEREAS, Westminster and AI are parties to an Agreement dated October 24, 2000, (the "Storage Agreement"), as amended on February 10, 2009, whereby AI is mining gravel deposits from certain lands located near Wattenberg, Colorado and, upon completion of mining, is constructing a water storage reservoir for Westminster on said lands.

NOW THEREFORE, in consideration of the foregoing recitals, the mutual covenants and agreements hereinafter set forth, the mutual covenants and agreements set forth in the Agreement, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Westminster and AI agree as follows:

1. Westminster agrees to lease the water derived from the BDC Shares to AI subject to the terms of this Lease.
2. AI agrees to put the water derived from the BDC Shares to "beneficial use" as that term is defined under Colorado Water Law, and will take no action that would constitute an abandonment of the BDC Shares or otherwise jeopardize the historical consumptive use associated with the BDC Shares. AI agrees to continue to divert the water derived from the BDC Shares and maintain the same level of consumptive use of the water that has occurred historically.
3. The parties expressly acknowledge and agree that Westminster has made no representation or warranties regarding the quality of or fitness for any use of the water derived from the BDC Shares and provided to AI pursuant to the terms of this lease. AI hereby waives any actual

or potential rights it might have concerning any warranties from Westminster as to fitness for a particular use, product liability claims, and all other extant or later created or conceived of strict liability or strict liability claims and rights concerning the fitness or appropriateness of the water for a particular use or users. Moreover, Westminster does not represent or guarantee that the water meets or will meet any particular water quality standards or complies with or will comply with any requirements of any governmental agency or authority, or that the water is suitable for any use by AI or others.

4. AI shall not have any right of ownership of the BDC Shares.

5. This Lease may not be assigned by AI without the prior written consent of Westminster. AI shall provide Westminster with notice of any intention to assign this Lease to any other third party. To the extent this Water Lease is assigned to any third party, AI will obtain a written acceptance of the terms of this Water Lease by the third party, including, but not limited to the provisions of Paragraph 3, above, as well as a written waiver signed by the third party specifically waiving the same rights waived by AI in Paragraph 3, above. Any assignment of this Water Lease by AI shall not be effective until the requirements of this paragraph have been satisfied.

6. This Lease shall expire upon the occurrence of any one of the following events:

a. The completion by AI and acceptance by Westminster of lined storage pursuant to the terms of the Storage Agreement; or

b. The termination of the Storage Agreement; or

c. AI's failure to make good faith efforts to mine and complete the lined water storage facility pursuant to the Storage Agreement; or

d. AI's breach or failure to fully comply with any terms of this Lease Agreement;
or

e. AI's failure to make annual payments to Westminster as required under paragraph 7, below; or

f. Ten years for the date of execution of this lease; or

g. Upon mutual agreement of the parties.

7. As consideration for this lease, AI will pay Westminster an annual fee equivalent to the annual assessments, any special assessments or any related fees, including, but not limited to carriage and/or augmentation station usage fees, associated with the BDC Shares. During the term of this lease, Westminster will notify AI in writing of any assessments or fees paid on said BDC Shares. During the term of this lease, AI shall promptly reimburse Westminster for any payments made by Westminster that constitute annual assessments, special assessments, or related fees associated with the BDC Shares. AI's failure to reimburse Westminster within 30 days of written notice shall constitute grounds for terminating this Lease pursuant to paragraph 6(e), above.

8. All notices required to be given or made under the Water Lease shall be in writing and sent by United States mail or hand delivery to the following addresses:

To Westminster: City of Westminster
Director of Public Works and Utilities
4800 West 92nd Avenue
Westminster, Colorado 80031
Facsimile: (303) 706-3927

To AI: Senior Vice President
Aggregate Industries - WCR, Inc.
1707 Cole Boulevard, Suite 100
Golden, Colorado 80401
Facsimile: (303) 716-5340

All notices will be deemed effective one (1) day after hand delivery, or if mailed, upon receipt. Either party, by written notice, may change the address to which future notices, billings, or payments shall be sent.

9. Findings of Westminster City Council. This lease of Consumable Water is made pursuant to the following findings hereby entered by the Westminster City Council: In the judgment of City Council, the terms of this Water Lease Agreement, including the payments received from the lease, will result in improvement of the capacity, efficiency, or service of Westminster's utility system, and Westminster enters into this Water Lease Agreement and will effect the lease of Consumable Water from Westminster's utility system and use the payment there from to facilitate improvements of Westminster's utility system.

10. In accordance with the requirements of Section 14.3 (a) of the Westminster City Charter, Westminster's obligations to deliver water under this Water Lease Agreement may be curtailed under the following circumstances. If, in Westminster's sole discretion, Westminster adopts mandatory citywide water use restrictions as a result of drought conditions, dam failure, or other catastrophic circumstance limiting Westminster's ability to satisfy the indoor water supply needs of its citizens, Westminster may curtail daily deliveries to AI under this lease by an amount consistent with said mandatory citywide water use restrictions. Once any such mandatory citywide water use restrictions expire or are otherwise lifted, Westminster shall immediately thereafter resume full daily deliveries under this Water Lease Agreement.

11. If, for any reason Westminster is temporarily unable to satisfy its obligations for delivery of water to AI under this Water Lease Agreement for any period of time, the parties agree that any damages resulting to AI therefrom shall be limited to a pro rata refund of the total lease payment. Westminster shall not be liable for any consequential, exemplary or punitive damages for failure to deliver water pursuant to this Water Lease Agreement. Other than a pro rata refund of the total lease payment, no other damages may be asserted or paid by Westminster to AI as a result of the inability to deliver water. AI expressly waives any and all other claims of damages.

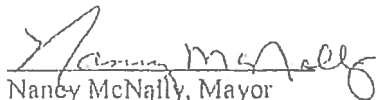
12. During the term of this Lease, Westminster may, but is not required, seek to change the use of the BDC Shares to municipal uses. AI agrees that it will not oppose, but will cooperate with the City, any actions filed in the water court or administrative or other proceedings for approval of the City's request for a change of use of the BDC Shares, including, but not limited to, an application involving a change of water right, alternate point of diversion, appropriative rights of exchange or other water court applications involving the BDC shares.

13. The terms of this Water Lease shall be binding on any successors and assigns, subject to the following additional provision. Notwithstanding the provisions of this paragraph and paragraph 6, above, Westminster may terminate this lease upon sale of the BDC Shares to a third party. In such circumstances, Westminster will make a good faith effort to replace the amount and timing of the consumptive use yield associated with the BDC Shares with alternate sources of fully consumable water acceptable to AI during what would have been the remaining term of this lease under paragraph 6, above.

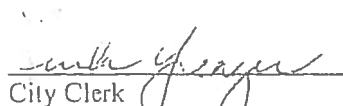
14. This Water Lease constitutes the entire agreement between Westminster and AI concerning the provision of water by Westminster to AI derived from the BDC Shares, and all prior negotiations, representations, writings, understandings, or agreements pertaining to the provision of water by Westminster to AI derived from the BDC Shares are superseded by this Water Lease.

15. If any covenant, term, condition, or provision of this Water Lease shall for any reason be held to be invalid or unenforceable, the invalidity or unenforceability of such covenant, term, condition, or provision shall not affect any other provision contained in this Water Lease. The intention of Westminster and AI is that all provisions hereof are severable.

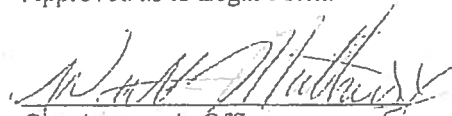
CITY OF WESTMINSTER


Nancy McNally, Mayor

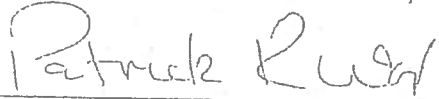
Attest:


City Clerk

Approved as to Legal Form:


City Attorney's Office

AGGREGATE INDUSTRIES-WCR, Inc.

A handwritten signature in dark ink, appearing to read "Patrick Ward", written over a horizontal line.

Patrick Ward, Senior Vice President

ATTEST:

A handwritten signature in dark ink, appearing to read "Michael Refer", written over a horizontal line.

Michael Refer,
Regional Manager – Environmental Land Services

Dedication of Water Rights to the

Aggregate Industries Combined Substitute Supply Plan

Aggregate Industries – WCR, Inc. (AI), is the owner of 13.5 shares of the Whitney Ditch Company (which are associated with the W.W. Farms Pit, DRMS Permit No. M-99-098), and 96 shares of the Fulton Irrigating Ditch Company (which are not associated with any specific site but rather are associated generally with the entire AI Combined Substitute Water Supply Plan (CoSSP)). AI hereby affirms that the above water rights will be dedicated solely to the AI CoSSP for as long as there are depletions at the associated gravel pits or until such time as another replacement source is obtained. The water rights will not be sold, leased, or traded to others during the term of this dedication. This dedication supersedes the previous dedication dated January 25, 2011.

Signature: 

Title: Regional Mgr.

Date: 2/29/2012

STATE OF COLORADO)

)

COUNTY OF Jefferson

The foregoing instrument was acknowledged before me this 29th day of February, 2012, by Michael C. Defer, Environmental & Land Services Manager for Aggregate Industries - WCR, Inc.

My commission expires: 2-26-13

Witness my hand and official seal.



Connie N. Davis

Notary Public

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) 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:

"PlanWDID_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
*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.

ADMINISTRATION PROTOCOL
Dry-Up of Irrigated Land
Division One – South Platte River

As required by either a decreed change of water rights or a substitute water supply plan, a source of irrigation water may be either permanently or temporarily removed from a parcel of land in order to make the historical consumptive use portion of that water supply available for other uses, typically augmentation. This protocol addresses the documentation required to administer the effective "dry-up". To the extent that one or more of the following directives are in direct contradiction with a decree of the court, the terms of the decree must be followed.

Permanent Dry-up Covenant

1. Must be decreed by the court.
2. Must be filed with clerk and recorder's office for the county wherein the land is located.
3. Must email a GIS shapefile to Div1Accounting@state.co.us that includes case number, WDID, and total acreage permanently dried-up, along with any accompanying metadata. The shapefile must be in NAD83 datum, UTM projection, Zone 13North.
4. Must address the issue of noxious weeds as required by §37-92-305(4.5)(a), C.R.S. and/or other county or local ordinances. (DWR is not authorized to administer the issue of noxious weeds; this statement is, therefore, simply informational).

Temporary Dry-up Agreement

1. May be made for a term that is not less than one irrigation season.
2. Unless otherwise stated in the approved SWSP, a written notification, reporting land of intended dry-up, must be submitted prior to April 1 of each irrigation season to the division engineer, water commissioner and Div1Accounting@state.co.us. Along with the written notification, a GIS shapefile reflecting the land of intended dry-up must be submitted. The shapefile must be emailed to Div1Accounting@state.co.us. The shapefile shall include case number, WDID, and acreage of dry-up, along with any accompanying metadata. The shapefile must be in NAD83 datum, UTM projection, Zone 13North.
3. Unless otherwise stated in the approved SWSP, a written affidavit, affirming land actually dried up, must be submitted prior to October 31 of each irrigation season to the division engineer, water commissioner and Div1Accounting@state.co.us. Along with the written affidavit, a GIS shapefile, reflecting the dried up acreage proclaimed in the affidavit, must be submitted. If the submitted affidavit indicates that the intended and actual dry-up acreages are identical, then no GIS shapefile is required. The shapefile must be emailed to Div1Accounting@state.co.us. The shapefile shall include case number, WDID, and acreage of dry-up, along with any accompanying metadata. The shapefile must be in NAD83 datum, UTM projection, Zone 13North.
4. Once written notice has been made to the division engineer and/or water commissioner, the dry-up requirement is irrevocable during the current irrigation season regardless of whether or not the water associated with the historical consumptive use is actually used.

