



STATE OF
COLORADO

Ebert - DNR, Jared <jared.ebert@state.co.us>

Builder's Aggregate - M-1981-112

Leila Behnampour <lcb@vrlaw.com>

Fri, Apr 13, 2018 at 12:51 PM

To: "jared.ebert@state.co.us" <jared.ebert@state.co.us>

Cc: Stuart Corbridge <sbc@vrlaw.com>, "jminer149@hotmail.com" <jminer149@hotmail.com>

Jared,

I am submitting the attached valid well permit and substitute water supply water plan related to the Builder's Aggregate mine, Mine/Prospecting ID#: M-1981-112. Please confirm that you received this, and please let me know if you need anything else.

Thank you,

Leila

Leila C. Behnampour, Esq.

Vranesh and Raisch, LLP

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3 attachments



81256-F Well Permit (issued 8.23.17).pdf
174K



DEO SWSP Approval (8.18.17).pdf
1594K



SWSP Extension.pdf
102K



COLORADO
Division of Water Resources
Department of Natural Resources

Office of the State Engineer
1313 Sherman St, Room 821
Denver, CO 80203

February 26, 2018

Leila C. Behnampour, Esq.
Vranesh and Raisch, LLP
1720 14th St, Ste 200
Boulder CO 80302

Re: Extension of Builders Aggregate, Inc. Substitute Water Supply Plan
WDID 0102764, SWSP ID 3147, Gravel Pit Permit No. M-81-112
NW1/4 Section 31, T4N, R57W, 6th P.M., Morgan County
Water Division 1, Water Districts 3 & 4

Period of Approval: August 18, 2017 through March 31, 2019

Dear Ms. Behnampour:

This office has received a copy of the water order from Riverside Irrigation District and a revised version of Table 2 that extends through March 2019, showing that leased replacement supplies are sufficient to cover projected depletions for the period of April 2018 through March 2019. The submittal of these documents fulfills the requirements of condition of approval no. 1 to extend the subject SWSP through March 31, 2019. Any request for renewal of this SWSP should be submitted to this office with the statutory fee of \$257 no later than February 15, 2019. Should you have any questions, please contact me at this office.

Sincerely,

Sarah Brucker, P.E.
Water Resources Engineer

Cc: Andrea C. Taillacq, P.E., TZA Water Engineers (Ataillacq@tza4water.com)
Michael Hein, Assistant Division Engineer (Michael.Hein@state.co.us)
Evan Snyder, Water Commissioner, Water District 1 (Evan.Snyder@state.co.us)
Brent Schantz, River Operations Coordinator (Brent.Schantz@state.co.us)





COLORADO
Division of Water Resources
Department of Natural Resources

Office of the State Engineer
1313 Sherman St, Room 821
Denver, CO 80203

August 18, 2017

Andrea C. Taillacq, PE
TZA Water Engineers
12596 W. Bayaud Ave., Ste 330
Lakewood, CO 80228

Re: Builders Aggregate, Inc. Substitute Water Supply Plan
WDID 0102764, SWSP ID 3147, Gravel Pit Permit No. M-81-112
NW1/4 Section 31, T4N, R57W, 6th P.M., Morgan County
Water Division 1, Water Districts 3 & 4

Period of Approval: August 18, 2017 through March 31, 2018
or March 31, 2019, subject to condition of approval #1
Contact Information for Ms. Taillacq: 303-971-0030, Ataillacq@tza4water.com

Dear Ms. Taillacq:

We have reviewed your letter received June 15, 2017 and additional information provided on July 26, 2017, in which you request approval of a Substitute Water Supply Plan ("SWSP") on behalf of the Builder's Aggregate, Inc. ("BA" or "Applicant"), in accordance with § 37-90-137(11), C.R.S., along the South Platte River. The required fee of \$1,593 for the SWSP has been paid (receipt no. 3680272).

SWSP Operation

This SWSP submittal addresses the projected depletions from the BA Mine (0110923), located northwest of Fort Morgan on the south bank of the South Platte River in the NW1/4 of Section 31, T4N, R57W (see the attached Figures 1 & 2). BA uses a dredge to mine near the streambank, removing marketable materials and refilling parts of the pond with unmarketable aggregate. The area of exposed ground water will migrate as mining occurs on the property, but BA will maintain a maximum exposed surface area of 3.45 acres until the property is reclaimed. Although the mining pond has historically moved around within the mining boundary, and the bank separating the pond from the river was removed due to flooding in recent years, recent and historical aerial photos suggest that there has always been a surface water connection between the pond and the river, such that depletions to the river are instantaneous.

BA's depletions will be from exposing ground water as well as from water removed with mined material, and water removed from the tributary stream by the "first fill". The expected depletions from each category are described below.



Evaporation

The Applicant proposed to replace evaporation from exposed ground water at the site based upon evaporation atlases in NOAA Technical Report NWS 33 and the SEO monthly distribution factors for sites below 6,500 feet, as shown in attached Table 1. Gross annual evaporation at the gravel pit location is estimated to be 4.1 feet per year (49.2 inches). As shown in Table 2 (attached), there was no exposed ground water in April through June and therefore, the total evaporative depletions from the 3.45 acre area is 10.33 acre-feet through March 2018.

The Applicant has elected not to claim any historical consumptive use credit for native vegetation against the gross evaporation amount.

Mined Product

The applicant plans to mine approximately 3,000 cubic yards of material during the plan approval period. The material is washed and was assumed to have 4 percent moisture content by weight. This results in 0.04 acre-feet of water removed with the mined material, as shown in Table 2.

First Fill

The applicant has estimated a volume of first fill that results in a depletion to the stream when mined material is removed, waste material fills part of the hole created by removal of material and groundwater fills the rest of the hole. The applicant assumed a porosity of 0.407, corresponding to the characteristics of the desired materials that are not returned to the hole. The volume of water in the first fill is estimated as 1.1 acre-feet.

Replacement of Depletions During SWSP Approval

Replacement supplies are provided from excess credits generated under the Riverside Irrigation District augmentation plans. BA has arranged for a 1 year trade related to shares of the Riverside Irrigation Company owned by BA. A copy of the water order with Riverside was provided with the SWSP request. The water order lists recharge credits from case number 02CW86 (WDID 0102522), but the Applicant's engineer requested to use all excess recharge credits legally available through Riverside. Riverside's representative¹ confirmed their willingness to apply any legally available excess credits to meet BA's obligations. Riverside has access to recharge credits from several decrees in addition to 02CW86, but not all of the decrees allow the leasing of excess credits to others, and some of the decrees place limits on the length of time that a particular source may be leased. The following table describes Riverside's recharge decrees and if credits from that particular decree may be used for BA's replacement pursuant to this SWSP.

¹ Don Chapman phone call with Tracy Kosloff on August 8, 2017.

Decree	Decree Provisions Related to the Use of Recharge or Excess Credits
02CW86	Paragraph 25.1 states that excess recharge credits may only be leased to other entities for a one year period. Further, if recharge water is used by the entity in five separate years, the user is required to apply to the Court and obtain a decree authorizing the use of such recharge water for the use to continue. <i>This source may be used for up to five years.</i>
88CW239 a.k.a. Equus	Paragraph 5(i) on page 15 allows the lease, sale, or assignment of "surplus credits" not used by Applicants to any third party pursuant to an SWSP or augmentation plan. <i>This source is allowed as a replacement source in this SWSP and in future years.</i>
W-2919 (90CW010) a.k.a. Goodrich	Paragraph 32 of the W-2919 augmentation plan allows the use of excess recharge credits through approval by the State Engineer, but in the event the excess credits are used for three consecutive years or for a cumulative total of five years, the recipient must apply to Court and obtain a decree authorizing permanent use of the excess credits. <i>This source may be used for up to three consecutive years or five years total until a decree is entered allowing for additional use.</i>
90CW189 a.k.a. Headley	Paragraph 17 describes use of credits owned by Riverside as replacing depletions for existing wells or wells to be constructed pursuant to additional plans for augmentation or SWSPs by Riverside. There is no discussion of the use of excess credits by others. <i>The decree limits the use of recharge credits specifically to Riverside. This source may not be used as a replacement source.</i>
88CW264(A) a.k.a. National Hog Farm	Paragraph 7 limits the use of Riverside's portion as a replacement source within the 88CW264(B) augmentation plan, or to replace depletions from wells described in the 88CW264(A) decree, or to replace depletions from wells constructed pursuant to additional SWSPs or augmentation plans by Riverside. It continues to say that the recharge credits "will not be available for use by any other party except National Hog Farms, Inc. or its successor-in-interest". <i>The decree describes only specific uses of the recharge credits. This source may not be used as a replacement source.</i>
89CW027 a.k.a. Sublette	Paragraph 17 allows the lease, sale or assignment of excess augmentation credits to a third party through an SWSP or augmentation plan. <i>This source is allowed as a replacement source in this SWSP and in future years.</i>
86CW387, 88CW221 a.k.a. Vancil	Paragraph 11 of 86CW387 and paragraph 12 of 88CW221 contemplate using recharge to replace depletions from existing or future wells within three specific townships. <i>The decree describes a specific use of the recharge credits. This source may not be used as a replacement source.</i>

Table 3 shows a comparison of the monthly total depletions and replacement supplies. The one year trade provides a replacement supply only through March of 2018, and therefore, the SWSP is valid through the end of March 2018. If BA obtains a renewal of a similar lease for 2018, the SWSP approval may be extended through March 2019, with written approval from this office, a copy of the lease renewal and a revised version of Table 2 that extends through March 2019.

The accretion reaches described in Paragraph 20.1 of Riverside's decree in case no. 02CW86 are as follows:

- River Reach No. 1: Riverside Inlet Ditch headgate to the Fort Morgan Canal headgate
- River Reach No. 2: Fort Morgan Canal headgate to the Upper Platte and Beaver Canal headgate
- River Reach No. 3: Upper Platte and Beaver Canal headgate to the Lower Platte and Beaver Canal headgate
- River Reach No. 4: Lower Platte and Beaver Canal headgate to the North Sterling Canal headgate

The Applicant's depletions impact the South Platte River in Riverside's Reach 3. Replacement supplies must be provided to Reach 3 or above the next downstream calling water right. As of the accounting filed for June of 2017, Riverside does not project any augmentation accretions from the available sources to Reach 3. In months where accretions to Reach 3 cannot be leased to BA and the call is such that replacement must be provided to Reach 3, Riverside will need to coordinate with the water commissioner in order to bypass supplies from Reach 2 to Reach 3 and will need to pay transit loss on those accretions. If the call is downstream of Reach 3, Riverside may have excess credits that can be applied within Reach 4 without a need to apply transit losses.

Pre-1981 Exposed Area

The Applicant described that a portion of the potential mined area was exposed to evaporation prior to 1981 and was naturally filled during flood events. The Applicant's Figure 2 shows the pre-1981 exposed area that is within the currently mining permit boundary. This area totals 0.76 acres, and it is not clear if any of this area is currently exposed to evaporation, since the stream channel has undergone a number of changes in recent years. Pursuant to Section 37-90-137(11)(b), C.R.S., a gravel pit operator does not need to replace depletions that occur due to evaporation from ground water exposed prior to January 1, 1981.

BA is not claiming the pre-1981 area to offset any of the planned exposed groundwater during this SWSP approval period. In order to claim the pre-1981 exemption in future years, the Applicant will need to comply with the requirements described in the Guidelines for SWSPs for Sand and Gravel Pits, including providing a pre-1981 aerial photo, a topographical map showing the pre-1981 area, and a shapefile of the area. DWR does not allow pre-1981 areas to be re-allocated to different locations within the permit boundary.

Long-term Replacement

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. As described in the SWSP request, BA plans to operate at the site for another 20 years and then plans to reclaim the area with a complete backfill of the exposed area. In accordance with approach no. 1, you have indicated that a bond has been obtained for

\$11,750 through the DRMS. According to DRMS, the bond amount will be reevaluated to fully cover the exposed groundwater once the SWSP and well permit are issued for the operation.

Conditions of Approval

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

1. This SWSP is approved with the effective date of **August 18, 2017 and shall be valid through March 31, 2018** unless revoked or superseded by a decree. This plan will be extended until March 31, 2019 if the lease for replacement water is renewed through March, 2019 and a copy of the renewed lease and a revised version of Table 2 that extends through March 2019 is provided to this office, the Division Office, and the water commissioner by the end of March 2018. Additional SWSPs are required until a court decreed plan for augmentation is obtained for the proposed uses. If this plan is not decreed in water court by the SWSP expiration date, a renewal request must be submitted to this office with the statutory fee of \$257 no later than **February 15, 2018** (or February 15, 2019 if extended).
2. Approval of this SWSP is for the purposes stated herein: evaporation, water removed with mined product, and the first fill at BA's operation. A well permit must be issued for the gravel pit in accordance with Section § 37-90-137(2) and (11), C.R.S. prior to the exposure or use of groundwater. A well permit application has been submitted to this office (receipt no. 3680272) and this application is pending evaluation. Until a gravel pit well permit is approved, consumptive use and exposure of groundwater on this site is prohibited. The provisions of § 37-90-137(2), C.R.S. prohibits the issuance of a permit for a well to be located within 600 feet of any existing well, unless the State Engineer finds that circumstances so warrant after a hearing held in accordance with the procedural rules in 2CCR402-5. This hearing may be waived if you are able to obtain statements from the owners of all wells within 600 feet, verifying that they have no objection to your use of the proposed well. Should a new well permit be denied for reasons of 600 foot spacing, or any other legitimate reason, approval of this SWSP will be cancelled.
3. The total surface area of the groundwater exposed at the BA site must not exceed 3.45 acres, which results in gross evaporation depletions of 14.1 acre-feet per year. In future SWSP requests, the Applicant may elect to replace only the net evaporation of groundwater in order to reduce the stream obligation.
4. The total product mined at the BA site shall not exceed 3,000 cubic yards, which results in 1.34 acre-feet of depletions due to water lost with the mined product and the first fill.
5. Total consumption at the BA site must not exceed these aforementioned amounts unless an amendment is made to this SWSP.
6. The replacement water that is the subject of this SWSP cannot be sold or leased to any other entity. All replacement water must be concurrent with depletions in quantity, timing, and locations.
7. 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 mined product, ground water exposed to evaporation, replacements, and the amount of water used for each particular purpose. The applicant shall provide a report of these records to the division engineer (Div1Accounting@state.co.us) and the water commissioner (Evan.Snyder@state.co.us) on a monthly basis. The accounting must be submitted within 30 calendar days of the end of the

month for which the accounting is being made and conform to the Administration Protocol *"Augmentation Plan Accounting, Division One - South Platte River"* (attached).

The Applicant shall verify that the entity making replacements has included the Applicant on their accounting and submitted their accounting to the division office and the water commissioner; for this SWSP, that entity is the Riverside Irrigation District.

8. Conveyance loss for delivery of augmentation water to the point of depletion on the South Platte River is subject to assessment and modification as determined by the division engineer.
9. 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.
10. The name, mailing address, and phone number of the contact person who will be responsible for operation and accounting of this plan must be provided on the accounting forms to the division engineer and water commissioner.
11. **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.**

In accordance with approach nos. 1 and 3, you have indicated that a bond has been obtained for \$11,750 through the DRMS.

12. All releases of replacement water must be sufficient to cover all out of priority depletions and be made under the direction and/or approval of the water commissioner.
13. The approval of this SWSP does not relieve the Applicant and/or landowner of the requirement to obtain a Water Court decree approving a permanent plan for augmentation or mitigation to ensure the permanent replacement of all depletions, including long-term evaporation losses and lagged depletions after gravel mining operations have ceased. If reclamation of the mine site will produce a permanent water surface exposing groundwater to evaporation, an application for a plan for augmentation must be filed with the Division 1 Water Court at least three (3) years prior to the completion of mining to include, but not be limited to, long-term evaporation losses and lagged depletions. If a lined pond results after reclamation, replacement of lagged depletions shall continue until there is no longer an effect on stream flow.

14. The State Engineer may revoke this SWSP or add additional restrictions to its operation if at any time the State Engineer determines that injury to other vested water rights has occurred or will occur as a result of the operation of this SWSP. Should this SWSP expire without renewal or be revoked prior to adjudication of a permanent plan for augmentation, all use of water under this SWSP must cease immediately.
15. In accordance with amendments to Section §25-8-202-(7), C.R.S. and "Senate Bill 89-181 Rules and Regulations" adopted on February 4, 1992, the State Engineer shall determine if this SWSP 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.
16. The decision of the state engineer shall have no precedential or evidentiary force, shall not create any presumptions, shift the burden of proof, or serve as a defense in any water court case or any other legal action that may be initiated concerning the SWSP. This decision shall not bind the state engineer to act in a similar manner in any other applications involving other plans or in any proposed renewal of this plan, and shall not imply concurrence with any findings of fact or conclusions of law contained herein, or with the engineering methodologies used by the Applicant.

Should you have any comments or questions, please contact Michael Hein, Assistant Division Engineer in Greeley at (970) 352-8712 or Tracy Kosloff of this office.

Sincerely,



Jeff Deatherage, P.E.
Chief of Water Supply

Attachments: Table 1, Table 2, Table 3
Figure 1, Figure 2
April 30, 2010 DRMS Letter
Augmentation Plan Accounting Protocol

Cc: Michael Hein, Assistant Division Engineer (Michael.Hein@state.co.us)
Evan Snyder, Water Commissioner, Water District 1 (Evan.Snyder@state.co.us)
Brent Schantz, River Operations Coordinator (Brent.Schantz@state.co.us)
Don Chapman, Riverside Irrigation District (dc@rivid.org)
Jared Ebert, DRMS (Jared.Ebert@state.co.us)

Table 1 - Monthly Evaporation

Month	Monthly distribution of evaporation ¹	Monthly Free Water Surface Evaporation, in feet ²
January	3.0%	0.12
February	3.5%	0.14
March	5.5%	0.23
April	9.0%	0.37
May	12.0%	0.49
June	14.5%	0.59
July	15.0%	0.62
August	13.5%	0.55
September	10.0%	0.41
October	7.0%	0.29
November	4.0%	0.16
December	3.0%	0.12
Annual	100.0%	4.10

¹ Based on distributions provided in paragraph 11 of general guidelines for substitute water supply plans for sand and gravel pits.

² Based on CDSS digitized contour lines from NOAA Atlas 33 Gross evaporation.

Table 2 - Builder's Aggregate Projected 2017 Depletions

Constants		
Property	Value	Units
Density of mined product	2750	lb/yd ³
Density of granite	4640	lb/yd ³
Porosity	0.407	
Moisture content ¹	4%	
Density of water	62.40	lb/ft ³

Month	Exposed area, in acres	Volume of product mined, in cubic yards	Weight of mined product, in lbs	Volume of water removed with mined material, in acre-feet	Volume of water first fill, in acre-feet	Monthly Free Water Surface Evaporation, in feet ²	Evaporative Depletions, in acre-feet	First Fill Depletions, in acre-feet	Total monthly depletions
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
April	0	0	0	0.00	0.00	0.37	0.00	0.00	0.00
May	0	0	0	0.00	0.00	0.49	0.00	0.00	0.00
June	0	0	0	0.00	0.00	0.59	0.00	0.00	0.00
July	3.45	1000	2750000	0.04	0.37	0.62	2.14	0.41	2.55
August	3.45	1000	2750000	0.04	0.37	0.55	1.90	0.41	2.31
September	3.45	1000	2750000	0.04	0.37	0.41	1.41	0.41	1.82
October	3.45	0	0	0.00	0.00	0.29	1.00	0.00	1.00
November	3.45	0	0	0.00	0.00	0.16	0.55	0.00	0.55
December	3.45	0	0	0.00	0.00	0.12	0.41	0.00	0.41
January	3.45	0	0	0.00	0.00	0.12	0.41	0.00	0.41
February	3.45	0	0	0.00	0.00	0.14	0.48	0.00	0.48
March	3.45	0	0	0.00	0.00	0.23	0.79	0.00	0.79
Total	--	3000	8250000	0.12	1.10	4.09	9.11	1.22	10.33

¹ Hydraulic dredging operation sorts gravels in place and allows excess water and undersized materials to return to pond immediately during processing. Water removed only results from wetted surface area of mined materials. Modified from 2% to 4% to expedite processing of SWSP.

² Based on CDSS digitized contour lines from NOAA Atlas 33 Gross evaporation.

[4] = [3] x (density of product)

[5] = [4] x (moisture content 4%) ÷ (density of water) ÷ 43560 cu. ft./AF

[7] From Table 1

[8] = [2] x [7]

[9] = [5] + [6]

[10] = [8] + [9]

Table 3 - Builder's Aggregate Projected 2017 Net Impact to South Platte River

Month	Total monthly depletions	Total monthly replacements	Net impact
[1]	[2]	[3]	[4]
April	0.00	0.00	0.00
May	0.00	2.01	2.01
June	0.00	2.45	2.45
July	-2.55	2.56	0.01
August	-2.31	2.31	0.00
September	-1.82	1.82	0.00
October	-1.00	1.02	0.02
November	-0.55	0.56	0.01
December	-0.41	0.42	0.01
January	-0.41	0.42	0.01
February	-0.48	0.49	0.01
March	-0.79	0.81	0.02
Total	-10.33	14.87	4.54

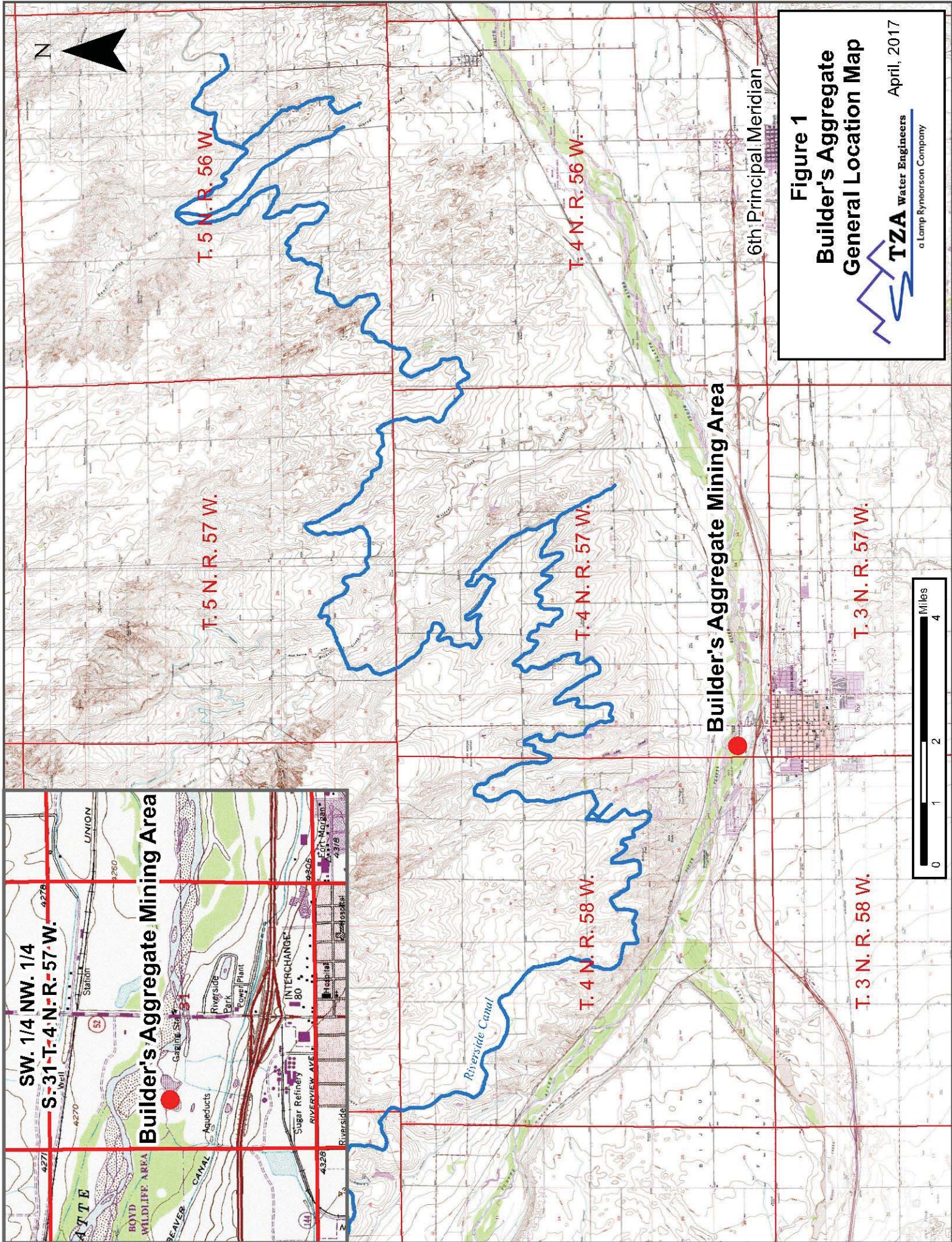
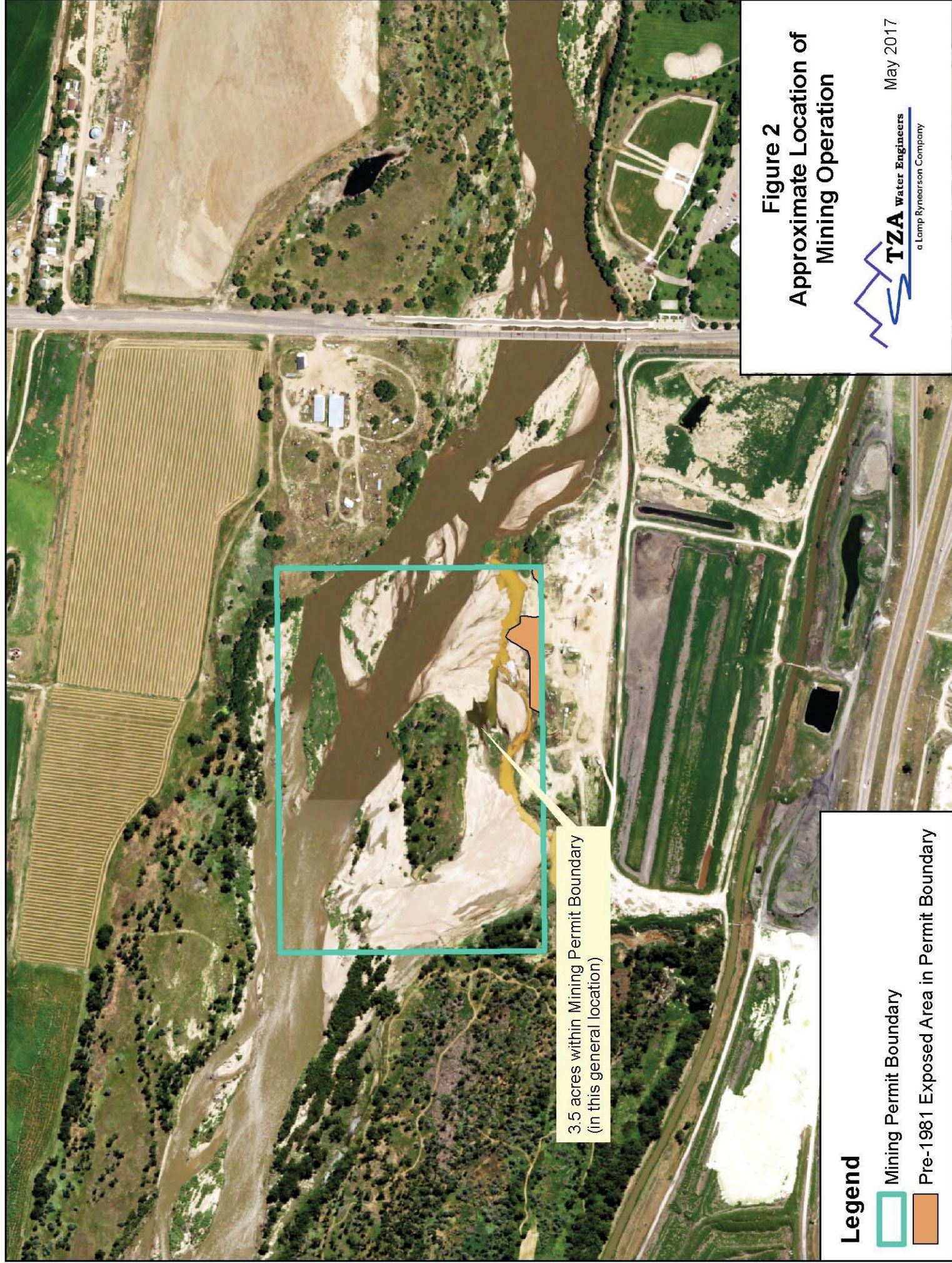



Figure 1
Builder's Aggregate
General Location Map



3.5 acres within Mining Permit Boundary
(in this general location)

Legend

 Mining Permit Boundary


 Pre-1981 Exposed Area in Permit Boundary

Figure 2
Approximate Location of
Mining Operation

April 30, 2010

Permittee Address

RE: Mining Operations with Exposed Ground water

To Whom It May Concern:

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

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

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

The Division has identified four approaches for operators:

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

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

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

cc: Permit Id Site Name

ADMINISTRATION PROTOCOL

Augmentation Plan Accounting

Division One – South Platte River

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

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

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

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

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

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

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

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

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

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

“Plan**WDID**_YYMMDD”

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

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

“0103333_040515.xls”

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

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

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

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



ORIGINAL PERMIT APPLICANT(S)

BUILDERS AGGREGATE COMPANY INC

APPROVED WELL LOCATION

Water Division: 1 Water District: 1
Designated Basin: N/A
Management District: N/A
County: MORGAN
Parcel Name: N/A

SW 1/4 NW 1/4 Section 31 Township 4.0 N Range 57.0 W Sixth P.M.

Well to be constructed on specified tract of land

PERMIT TO EXPOSE WATER IN A PIT

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT
CONDITIONS OF APPROVAL

- 1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of this permit does not ensure that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-90-137 (2) and (11) for the construction and operation of a well (gravel pit pond) in accordance with the temporary substitute water supply plan approved by the State Engineer on August 18, 2017, for the Builder's Aggregate Mine, Division of Reclamation, Mining & Safety Permit Number M-1981-112. The well (pond) shall not be operated unless it is included in a substitute water supply plan approved by the State Engineer or a plan for augmentation approved by the Water Court. The water supply plan for this pit is currently valid through March 31, 2018 and if it is not extended or if a court decree is not entered for a plan for augmentation, diversion of ground water from this well must cease immediately.
- 4) The annual amount of ground water to be appropriated shall not exceed 15.57 acre-feet with the total surface area of the proposed ground water pond limited to 3.5 acres, or the amounts covered under an approved substitute water supply plan or decreed plan for augmentation, whichever is less.
- 5) The use of ground water, in addition to evaporation, is limited to water removed with the mined material and water associated with the "first fill". No other use of water is allowed unless a permit therefor is approved.
- 6) The owner shall mark the well (gravel pit pond) in a conspicuous location with well permit number(s) and court case number(s) as appropriate. The owner shall take necessary means and precautions to preserve these markings.
- 7) Permanent records of the tonnage of mined product and the surface area of ground water exposure shall be maintained by the well owner (recorded at least monthly) and submitted to the Division Engineer upon request.
- 8) Pursuant to Rule 9.3.3 of the Water Well Construction Rules, ground water ponds and gravel pit wells are exempt from the minimum well construction and location standards except for contamination considerations as stated in the Rule. The owner shall take necessary means and precautions to prevent contaminants from entering the ground water pond or gravel pit well.
- 9) Pursuant to Rule 17.1.5 of the Water Well Construction Rules, the owner shall submit, after initiation of construction, site plan and cross section drawings showing the extent of intended excavation, the maximum depth of the pit or pond, the initial static water level, and the date of initial ground water exposure to the atmosphere.
- 10) The boundaries of the gravel pit pond shall be more than 600 feet from any existing well, completed in the same aquifer, that is not owned by the applicant.
- 11) This well is subject to administration by the Division Engineer in accordance with applicable decrees, statutes, rules, and regulations.

Note: The annual appropriation amount listed in condition of approval no. 4 is greater than the amount of depletions covered by the current SWSP, which is valid for a period of less than 1 year. The well owner must comply with all SWSP and augmentation plan limitations.

WELL PERMIT NUMBER 81256-F

RECEIPT NUMBER 3680272



Issued By SARAH BRUCKER

Date Issued: 8/23/2017

Expiration Date: 8/23/2018