STATE OF COLORADO

Eschberger - DNR, Amy <amy.eschberger@state.co.us>

SWSP Approval for the Larimer Pit (WDID 0402525, Plan ID 2915)

Brucker - DNR, Sarah <sarah.brucker@state.co.us> Wed, Oct 27, 2021 at 5:32 PM
To: Jennifer Lindahl <jlindahl@bbawater.com>
Cc: Michael Hein <michael.hein@state.co.us>, Jean Lever <jean.lever@state.co.us>, Louis Flink <louis.flink@state.co.us>, Amy Eschberger - DNR <amy.eschberger@state.co.us>

Please find attached the Substitute Water Supply Plan Approval for the Larimer Pit (DRMS Permit No. M-1974-069, WDID 0402525, Plan ID 2915). Should you have any questions, please contact me at this office.

Sarah Brucker
Water Resources Engineer

COLORADO
Division of Water Resources
Department of Natural Resources

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Approval 2915.pdf
3341K

COLORADO
Division of Water Resources
Department of Natural Resources

October 27, 2021

Jennifer S. Lindahl, P.E.
BBA Water Consultants, Inc.
333 West Hampden Avenue, Suite 1050
Englewood, CO 80110

Re: Larimer Pits Substitute Water Supply Plan (Plan ID 2915, WDID 0402525)
DRMS Permit No. M-1974-069 (WDID 0403005)
Sections 15, 16 & 17, T5N, R69W, 6th P.M.
Water Division 1, Water District 4, Larimer County

Approval Period: August 1, 2021 through July 31, 2026 or six months prior to the completion of lining of Pit No. 21, whichever is sooner
Contact information for Ms. Lindahl: 303-806-8952; jlindahl@bbawater.com

Dear Ms. Lindahl:

We have reviewed your letter dated October 6, 2021 requesting renewal of the above-referenced substitute water supply plan ("SWSP") on behalf of Loveland Ready-Mix Concrete, Inc. ("LRM" or "Applicant"). This SWSP is requested in accordance with section 37-90-137(11), C.R.S., to cover depletions caused by an existing sand and gravel mining operation known as the Larimer Pits. The required fee of $257.00 for the renewal of this substitute water supply plan has been submitted (receipt no. 10015932).

SWSP Operation

The Larimer Pits site is located in portions of Section 15, 16, and 17, Township 5 North, Range 69 West, 6th P.M., Larimer County, as shown in the attached Figure 1. The original site consisted of 20 gravel pits. Pit Nos. 1, 3, 4, 5, 6, 9, and 11 are included in the plan for augmentation decreed in Division 1 water court case no. W-7412. Pit Nos. 2, 7, 8, 10, and 12 were completed prior to December 31, 1980, and therefore do not require replacement of evaporative depletions. Pit Nos. 16 and 17 have been lined and decreed for storage, and Pit No. 19 has been backfilled. Evaporation losses and depletions from mining and processing operations at Pit Nos. 13, 14, 15, 18, and 20 are included in the plan for augmentation decreed in Division 1 water court case no. 2000CW142. Depletions associated with past dewatering of Pit No. 20 and the "first fill" of the pit after cessation of dewatering were included in the previous SWSP for the Larimer Pits. Pit No. 20 was filled during free river conditions in December of 2019, and there are no remaining lagged dewatering depletions associated with Pit No. 20 requiring replacement. LRM began mining Pit No. 21, located in the SE¼ of the SE¼ of Section 16, Township 5 North, Range 69 West, 6th P.M., in January of 2020. Pit No. 21 was added to the mining permit under AM-03 in February of 2016. Pit No. 21 is located outside of the exterior boundary of DRMS Permit No. M-1974-069 AM-02 as shown in Exhibit A to the decree entered

in case no. 2000CW142, and therefore is not included in the decreed augmentation plan. Depletions associated with mining operations at Pit No. 21 will be replaced under this SWSP, using water released from storage in Loveland Ready Mix Pond Nos. 1 and 2 and/or excess fully consumable effluent leased from the City of Loveland.

Dewatering

Pit No. 21 is proposed to be continuously dewatered during this plan period, with all water being delivered into the unlined Pit No. 20 and allowed to accrue back to the stream system. Initial dewatering rates were 172 gallons per minute, but have decreased to approximately 100 gallons per minute and are expected to continue at or near this rate. The two pits are adjacent to one another, with Pit No. 20 located closer to the Big Thompson River than Pit No. 21. Therefore, the timing of dewatering depletions will approximately match the timing of dewatering accretions, with accretions returning to the stream slightly ahead of depletions. To determine the timing of stream depletions and river accretions resulting from the dewatering of Pit No. 21, the Alluvial Water Accounting System ("AWAS") model was used with the alluvial aquifer boundary condition option. The parameters used in the AWAS model are: the distance (X) from the gravel pit to the impacted stream; the width (W) of the aquifer on the side of the river where the gravel pit is located; the harmonic transmissivity (T) of the aquifer; and specific yield (S). The aquifer parameters used for lagging dewatering depletions and accretions from each pit are given in the table below.

Aquifer Parameters

Pit Name	X (ft)	W (ft)	T (gpd/ft)	S
Pit No. 20	1,071	2,105	34,264	0.2
Pit No. 21	1,499	2,070	35,014	0.2

As long as Pit No. 21 is continuously dewatered with all water delivered to Pit No. 20, the water returned to the stream system should be adequate to offset the depletions attributable to dewatering operations. Any evaporative depletions resulting from the delivery of water into Pit No. 20 will be replaced under the augmentation plan decreed in case no. 2000CW142. Lagged depletions to the stream will occur following the lining of Pit 21, as recharge through Pit 20 from the dewatering discharge is discontinued. There will be approximately 4.8 acre-feet of lagged depletions in excess of lagged accretions that will impact the river within the first eight months after dewatering ceases, as shown in the attached Table 1. You have proposed to submit a final SWSP request six months prior to the completion of mining and the lining of Pit No. 21 in order to replace the remaining lagged dewatering depletions based on actual recorded dewatering rates during mining. All dewatering activities must be metered with a totalizing flow meter that is recorded and reported on the submitted monthly accounting.

Depletions

Mining operations at Pit No. 21 will consume groundwater through water removed with the mined product, and water used for concrete production and dust control purposes. The same consumption rates decreed in case no. 2000CW142 of 30 gallons of water per cubic yard of concrete and 9.6 gallons of water per ton (four percent by weight) of aggregate sold will be utilized for this SWSP. All water pumped for dust control purposes is assumed to be 100% consumed. Total production at the Larimer Pits site during this SWSP period will not exceed the amounts decreed in case no. 2000CW142, and depletions resulting from mining uses at Pit Nos. 13, 14, 15, 18 and 20 will continue to be augmented under the conditions of the decree. The estimated monthly consumption

from mining uses at the site are summarized in the attached Table 2, and annual consumption will be limited to a total of 16.52 acre-feet per year. LRM requests that monthly production numbers and water consumption be allowed to exceed the estimated monthly values so long as the total annual consumption amount does not exceed 16.52 acre-feet, and replacements are made based on actual monthly consumptive use. Depletions associated with production operations at Pit No. 21 will be lagged to the Big Thompson River using lagging factors developed using the AWAS aquifer parameters identified for Pit No. 21 above. Depletions from Pit No. 21 are assumed to impact the Big Thompson River at a point perpendicular to the location of the pit, downstream of the Rist & Goss Ditch headgate and upstream of the Greeley and Loveland Canal headgate.

Replacements

All depletions from mining operations and depletions from dewatering operations that are unable to be offset by recharge through Pit No. 20 will be replaced through releases from Loveland Ready-Mix Pond Nos. 1 and 2 or through releases of reusable effluent leased by LRM from the City of Loveland.

LRM obtained a conditional storage right for Loveland Ready-Mix Pond No. 1 (WDID 0403714) and Pond No. 2 (WDID 0403715) for a combined total of 550 acre-feet in Division 1 Water Court case no. 1998CW431. Loveland Ready-Mix Pond Nos. 1 and 2 were awarded a priority date of November 13, 1998 and may be used for augmentation, exchange and substitute supply, recreation, fish propagation and wildlife habitat. The ponds may also be used to store LRM's additional Barnes Ditch credits changed in case no. 2000CW143 that are used to replace non-irrigation season depletions under the augmentation plan decreed in case no. 2000CW142. Pursuant to paragraph 4.4.b of the decree entered in case no. 2000CW143, the Barnes Ditch contract inches may be used for augmentation purposes to replace evaporation and other depletions resulting from gravel mining at the Larimer Pit, Baer Pit, and Marianna Butte Pit pursuant to an approved substitute water supply plan or a decreed augmentation plan. The Larimer Pits site is described in paragraph 4.4.b.i as including all lands within the exterior boundary of DRMS Permit No. M-1974-069 AM-02. This SWSP approves a change of place of use for the 120 Barnes Ditch inches that were changed in case no. 2000CW143, to allow this water to be used to replace depletions associated with Pit No. 21 to the extent that those inches are not otherwise required to replace depletions under case nos. 2000CW142 or 2000CW143. LRM currently has approximately 400 acre-feet of water in storage in Loveland Ready-Mix Pond Nos. 1 and 2, of which approximately 237 acre-feet was stored under its storage right and is not needed to replace depletions within case no. 2000CW142.

Loveland Ready-Mix Pond Nos. 1 and 2 are located within the Larimer Pits property boundary as shown in Figure 1, and deliver water to the Big Thompson River immediately upstream of the headgate of the Rist & Goss Ditch and approximately ½ mile upstream of the location where depletions from Pit No. 21 are assumed to impact the river. The Rist & Goss Ditch is not a sweeping structure and therefore will not prevent the delivery of replacement water to the point where depletions impact the river, and transit loss should be minimal. All releases from Loveland Ready-Mix Pond Nos. 1 and 2 for replacement of depletions associated with Pit No. 21 will be measured and reported. Credits from LRM's Barnes Ditch inches will be bypassed at the Barnes Ditch headgate and left in the Big Thompson River or diverted through Loveland Ready-Mix Pond Nos. 1 and 2 and returned to the Big Thompson River at the water commissioner's discretion on a monthly or more frequent basis.

LRM also has 200 acre-feet of fully consumable effluent available from the City of Loveland pursuant to a lease agreement dated January 13, 1998. The majority of this water is dedicated for use in LRM's plan for augmentation decreed in case no. 2009CW105, but approximately 38 acre-feet are estimated to be available for the replacement of depletions associated with Pit No. 21 during water years 2021 and 2022. The outfall of the City of Loveland's wastewater treatment plant is located in the NE¼ of the SW¼ of Section 19, Township 5 North, Range 68 West, 6th P.M., approximately 5 miles downstream of the location where depletions from Pit No. 21 are assumed to impact the river.

The existing accounting form for the Larimer Pits has been revised to track the amounts pumped for dewatering from Pit No. 21 and the recharge accruing from Pit No. 20, and to account for augmentation water released from Loveland Ready-Mix Pond Nos. 1 and 2.

Long Term Augmentation

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 the DRMS requires that you provide information to the DRMS to demonstrate that you can replace long term injurious stream depletions that result from mining-related exposure of groundwater. The DRMS letter identifies four approaches to satisfy this requirement, one of which is to 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 groundwater exposure.

The DRMS approved Amendment AM-03 to Permit No. M-1974-069 on February 24, 2016, to add the 32.78 acres known as Pit No. 21 to the permit boundary, with a planned clay liner for Pit No. 21 to comply with reclamation requirements. In accordance with the reclamation plan approved in Amendment AM-03, an increased bond was obtained for $546,800.00 through the DRMS to cover the cost of lining Pit No. 21.

Conditions of Approval

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

1. This SWSP shall be valid for the period of August 1, 2021 through July 31, 2026 or six months prior to the completion of lining of Pit No. 21, whichever is sooner, unless otherwise revoked or superseded by decree. If depletions associated with operation under this SWSP will extend beyond the plan's expiration date, a renewal request must be submitted to this office with the statutory fee (currently $257) prior to the expiration date but no later than **June 1, 2026**. If a renewal request is received after the expiration date of this plan, it may be considered a request for a new SWSP, in which case the $1,593 filing fee will apply.
2. Approval of this plan is for the purposes as stated herein, being dewatering, dust control, concrete production, and water removed with the mined product. Additional wells (gravel pits) and/or additional uses for the water that is the subject of this SWSP will be allowed only if a new SWSP is approved for those additional wells/uses.

3. No groundwater shall be exposed in Pit No. 21 during this plan period. Should groundwater be exposed in Pit No. 21 or another portion of the site not covered by a decreed augmentation plan, a new SWSP will need to be obtained to cover the resulting evaporative depletions.
4. Well permit no. 83736-F has been obtained for the current use of Pit No. 21 in accordance with section 37-90-137(2) and (11), C.R.S., in conjunction with this plan. The Larimer Pits site is also operated under permit no. 62009-F (Pit Nos. 13, 14, and 15) and permit no. 69035-F (Pit Nos. 18 and 20).
5. The annual amount of groundwater used for operational purposes at the Larimer Pits site under the augmentation plan decreed in case no. 2000CW142 and this SWSP shall not exceed 16.52 acre-feet, estimated as 4.42 acre-feet for dust suppression, 11.51 acre-feet for the production of 125,000 cubic yards of concrete, and 0.59 acre-feet lost with the removal of 20,000 tons of washed product.
6. All diversions shall be measured in a manner acceptable to the division engineer. The Applicant shall install and maintain measuring devices as required by the division engineer for operation of this SWSP.
7. The replacement water that is the subject of this plan cannot be sold or leased to any other entity. As a condition of subsequent renewals of this SWSP, the replacement water must be appurtenant to this site until a plan for augmentation is obtained for Pit No. 21 or all lagged depletions associated with Pit No. 21 have been replaced.
8. All releases of replacement water must be sufficient to cover all out-of-priority depletions in time, place, and amount and must be made under the direction and/or the approval of the water commissioner. Notice must be provided and approval made by the water commissioner at least 48 hours prior to the release of replacement water, or as required by the water commissioner.
9. If approved by the division engineer, the release of replacement water may be aggregated to maximize beneficial use. The water commissioner and/or the division engineer shall determine the rate and timing of any aggregated release.
10. Conveyance loss for delivery of augmentation water is subject to assessment and modification as determined by the water commissioner or division engineer.
11. Adequate accounting of depletions and replacements must be provided to the division engineer in Greeley (DNR_Div1Accounting@state.co.us) and the water commissioner (Jean Lever at Jean.Lever@state.co.us) on a monthly basis or other interval acceptable to both of them. Accounting and reporting procedures are subject to approval and modification by the division engineer. Accounting forms need to identify the WDID number for each well operating under this SWSP. NOTE: Monthly accounting, even during the winter non-irrigation season, is required.

    For the duration of this SWSP, it is acceptable for the accounting to be incorporated with the accounting submitted for case no. 2000CW142 and not reported separately.
12. 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.
13. Dewatering at this site will produce delayed depletions to the stream system. As long as Pit No. 21 is continuously dewatered with all water delivered to Pit No. 20, the water returned to the stream system via recharge is expected to be sufficient to offset the depletions, thus

dewatering is required to continue during the term of this plan. Once dewatering of Pit No. 21 ceases, the delayed depletions must be addressed. At least six months prior to completion of dewatering, a plan must be submitted that specifies how the post-pumping dewatering depletions will be replaced, in time, place and amount. All dewatering activities must be metered with a totalizing flow meter that is recorded and reported on the submitted monthly accounting.

14. The approval of this SWSP does not relieve the Applicant and/or landowner of the requirement to ensure the permanent replacement of all depletions, including long-term evaporation losses and/or lagged depletions after gravel mining operations have ceased. If a lined pond results after reclamation, as currently proposed, replacement of lagged depletions shall continue until there is no longer an effect on stream flow. 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.
15. To assure that depletions from groundwater evaporation do not occur in the unforeseen event, or events, which would lead to the abandonment of the pit, the Applicant has obtained a bond in the amount of $546,800.00 through the DRMS, which includes the cost of lining Pit No. 21.
16. The state engineer may revoke this SWSP or add additional restrictions to its operation if at any time the state engineer determines that injury to other vested water rights has or will occur as a result of the operation of this SWSP. Should this SWSP expire without renewal or be revoked prior to adjudication of a permanent plan for augmentation, all use of water at Pit No. 21 must cease immediately.
17. The Applicant must replace all lagged depletions resulting from operation under this SWSP, including those lagged depletions that occur to the stream after the expiration date of this SWSP. The Applicant must renew and maintain a valid SWSP until all lagged depletions resulting from operation under this SWSP have been fully replaced in time, location, and amount.
18. In accordance with amendments to section 25-8-202(7), C.R.S. and “Senate Bill 89-181 Rules and Regulations” adopted on February 4, 1992, the State Engineer shall determine if the substitute supply is of a quality to meet the 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.
19. 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 this SWSP. This decision shall not bind the state engineer to act in a similar manner in any other applications involving other SWSPs or in any proposed renewal of this SWSP, and shall not imply concurrence with any findings of fact or conclusions of law contained herein, or with the engineering methodologies used by the Applicant.

Should you have any questions regarding this approval, please contact Michael Hein in Greeley at 970-352-8712 or Sarah Brucker in Denver at 303-866-3581 ext. 8249.

Sincerely,

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

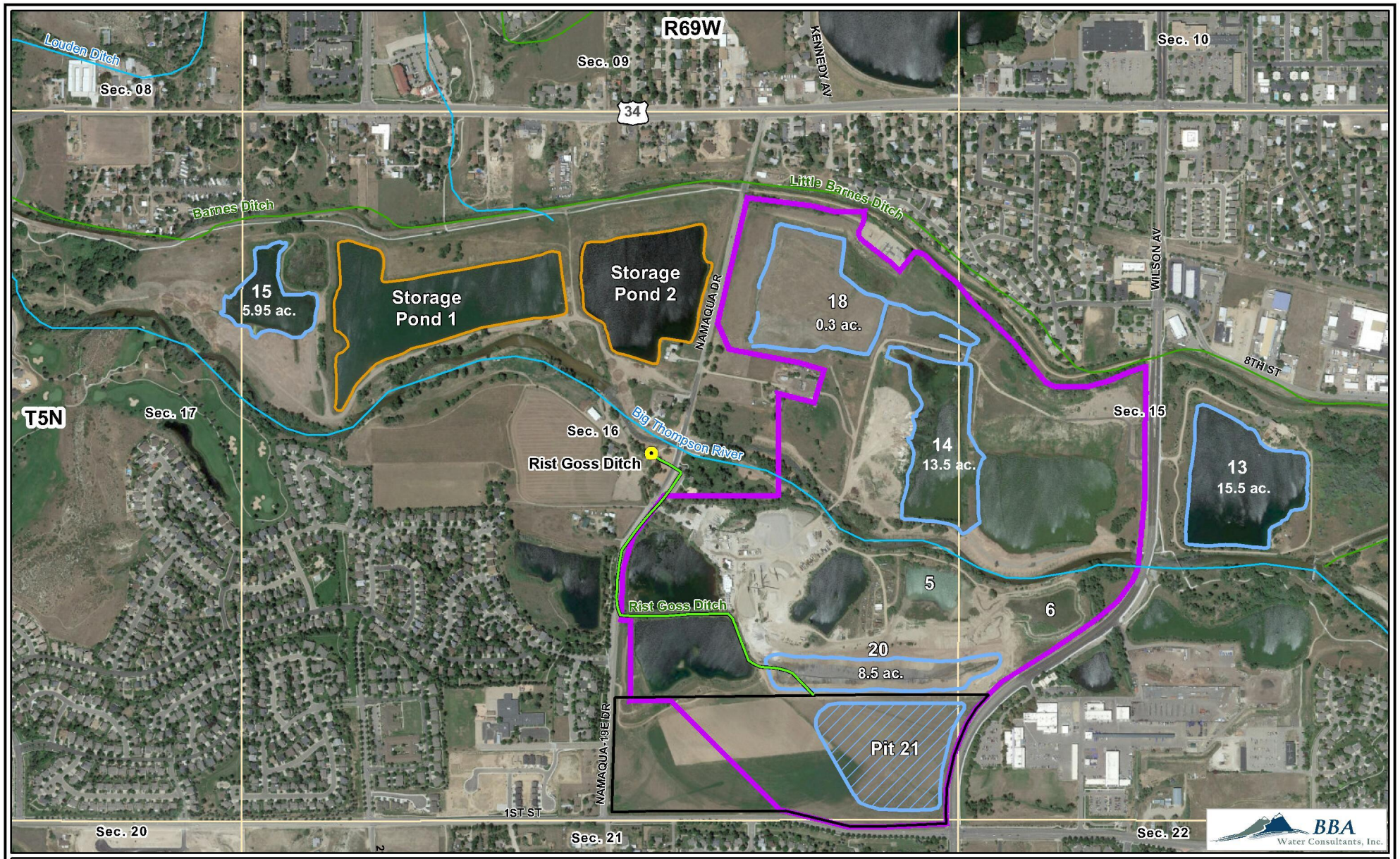
Attachments: Figure 1
Tables 1-3
Letter from DRMS dated April 30, 2010

Cc: Michael Hein, Lead Assistant Division Engineer, Michael.Hein@state.co.us
1809 56th Avenue, Greeley, CO 80634

Jean Lever, Water Commissioner, Water District 4, Jean.Lever@state.co.us

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

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



Legend

- Rist Goss Ditch
- Pit 21
- Additional Pit 21 Mining Area
- Current Post-1981 Exposed Surface Area (for 13,14, 15, 18, and 20)
- Loveland Ready-Mix Ponds 1 and 2
- Mining Permit Boundary

Figure 1
Loveland Ready-Mix Property
Larimer Pits Site

Date: 3/11/2020 | Job No. 9641.01
Aerial Photo Date: 7/17/2019 Google Earth | Data Source: CDSS, USGS, BLM

N
W E
S

1 inch = 1,001 feet

0 500 1,000
Feet

Overview Map

Table 1
Loveland Ready Mix Concrete
Summary of Pit 21 Pond Lagged Stream Impacts

Pit 21 Status	Month	[1] Pit 21 Dewatering Pumping (af)	[2] Lagged Pit 21 Dewatering Stream Impact (af)	[3] Pit 20 Recharge from Pit 21 Dewatering (af)	[4] Lagged Pit 20 Recharge Stream Impact (af)	[5] Net Stream Impact (af)
Pit 21 is Pumped into Pit 20		13.5	-13.5	13.5	13.5	0.0
Pit 21 is Lined	Month 1	0.0	-12.2	0.0	10.9	-1.4
	Month 2	0.0	-8.4	0.0	6.9	-1.5
	Month 3	0.0	-5.4	0.0	4.5	-0.9
	Month 4	0.0	-3.4	0.0	2.9	-0.5
	Month 5	0.0	-2.1	0.0	1.8	-0.3
	Month 6	0.0	-1.2	0.0	1.1	-0.2
	Month 7	0.0	-0.6	0.0	0.6	-0.1
	Month 8	0.0	-0.2	0.0	0.2	0.0
	Month 9	0.0	0.0	0.0	0.0	0.0
	Month 10	0.0	0.0	0.0	0.0	0.0
	Month 11	0.0	0.0	0.0	0.0	0.0
	Month 12	0.0	0.0	0.0	0.0	0.0
			-33.7		28.8	-4.8

Notes:

[1] Pit 21 is dewatered into Pit 20 until Month 1 of Pit 21 being lined. Dewatering rates are typically approximately 100 gpm.

[2] The impacts to the stream from dewatering of Pit 21 have been lagged assuming the groundwater parameters identified below.

[3] Dewatering from Pit 21 into Pit 20 is occuring at a fairly constant rate of 100 gpm through out the mining of Pit 21.

[4] Pit 20 has been first filled, and all water delivered from Pit 21 into Pit 20 is recharged to the stream.

[5] Equal to [2] + [4].

Positive values occur when recharge exceeds dewatering stream depletions and are a credit to the steram.

Negative values represent depletions to the stream.

Groundwater Parameters:

Pit 21: T = 35,014 gpd/ft, S = 0.2, X = 1,499 ft, W = 2,070 ft.

Pit 20: T = 34,264 gpd/ft, S = 0.2, X = 1,071 ft, W = 2,105 ft.

Table 2
Loveland Ready - Mix Concrete, Inc. - #M-74-069 Larimer Pits
Future Depletions Due to Production

Month	Concrete Production (1)		Washed Product Sales (2)		Dust Control (3)		Total Projected	
	Projected	Consumption	Projected	Consumption	Projected	Consumption	Water Consumption (4)	
	(Cu Yards)	(Gallons)	(Ton)	(Gallons)	(Gallons)	(Gallons)	(Gallons)	(Acre-Feet)
January	9,529	285,870	823	7,904	110,000	110,000	403,774	1.24
February	10,659	319,770	1,152	11,062	110,000	110,000	440,832	1.35
March	8,533	255,990	1,172	11,256	110,000	110,000	377,246	1.16
April	11,509	345,270	1,975	18,958	110,000	110,000	474,228	1.46
May	12,328	369,840	1,979	19,000	150,000	150,000	538,840	1.65
June	11,047	331,410	2,140	20,546	150,000	150,000	501,956	1.54
July	11,282	338,460	2,410	23,131	150,000	150,000	511,591	1.57
August	10,814	324,420	3,502	33,620	110,000	110,000	468,040	1.44
September	14,003	420,090	1,409	13,529	110,000	110,000	543,619	1.67
October	9,934	298,020	1,500	14,403	110,000	110,000	422,423	1.30
November	6,238	187,140	827	7,938	110,000	110,000	305,078	0.94
December	9,124	273,720	1,110	10,653	110,000	110,000	394,373	1.21
Annual	125,000	3,750,000	20,000	192,000	1,440,000	1,440,000	5,382,000	16.52

Notes: (1) Projected future concrete production.
Water consumption based on 30 gallons of water/cubic yard of concrete.
(2) Projected future washed aggregate production based on future mining estimates.
Water consumed in washed aggregate equals 9.6 gallons/ton (4%).
(3) Dust control uses assumed to be 100% consumptive.
(4) (1) + (2) + (3)
Washed product includes any mined material.
Monthly production values are estimates and may vary so long as annual consumption is not exceeded.

Source: Decreed in Case No. 00CW142 and including in current accounting.

Loveland Ready-Mix Concrete, Inc.

Projected Water Useage for 2009CW105 Augmentation Plan.

Estimates based on projected mining and production rates, and maximum exposed surface areas for the year. Actual mining and production rates may vary.
Dates that augmentation plan is in or out of priority may effect replacement credits.

CITY OF LOVELAND LEASE WATER ACCOUNTING FORM

Current Lease Obligations for 200 acre-ft Fully Consumable Effluent at Green/Croissant Sand and Gravel Pit and Bokelman Walters Pit

ESTIMATED RETURNS **2021 Water Year** Based on estimated mining, concrete production, and exposed water surfaces

All Values in Ac-Ft

	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	**Total**
2009CW105	13.99	10.95	8.57	7.46	7.55	9.61	11.81	15.14	18.84	20.49	19.65	17.17	**161.24**
	0.47	0.35	0.28	0.27	0.24	0.32	0.38	0.50	0.61	0.66	0.65	0.55	
Daily Obligations (ac-ft per day)	0.47	0.35	0.28	0.27	0.24	0.32	0.38	0.50	0.61	0.66	0.65	0.55	

ESTIMATED RETURNS **2022 Water Year** Based on estimated mining, concrete production, and exposed water surfaces

All Values in Ac-Ft

	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	**Total**
2009CW105	13.99	10.95	8.57	7.46	7.55	9.61	11.81	15.14	18.84	20.49	19.65	17.17	**161.24**
	0.47	0.35	0.28	0.27	0.24	0.32	0.38	0.50	0.61	0.66	0.65	0.55	
Daily Obligations (ac-ft per day)	0.47	0.35	0.28	0.27	0.24	0.32	0.38	0.50	0.61	0.66	0.65	0.55	

STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY
Department of Natural Resources

1313 Sherman St., Room 215
Denver, Colorado 80203
Phone: (303) 866-3567
FAX: (303) 832-8106

COLORADO DIVISION OF RECLAMATION MINING & SAFETY

April 30, 2010

Loveland Ready Mix Concrete, Inc.
P.O. Box 299
Loveland, CO 805390000

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:

M1984113	Baer Pit
M1988033	Mariana Butte Pit
M1974069	Larimer Pit
M2001022	Green/Croissant Property Sand and Gravel Mine
M2006080	Bokelman-Walters