



COLORADO
Division of Water Resources
Department of Natural Resources

May 13, 2024

Neelha Mudigonda / Craig Lis
Martin and Wood Water Consultants, Inc.
538 Commons Drive
Golden, CO 80401

**Re: St. Barbara Sand and Gravel Mine, Substitute Water Supply Plan
DRMS Permit No. M-2004-013
Section 1, T21S, R63W, and Section 6, T21S, R62W, 6th P.M.
Water Division 2, Water District 14
SWSP ID 4695, WDID 1407803**

Approval Period: January 1, 2023 - December 31, 2024

Contact for Ms. Mudigonda: 303-526-2600; nmudigonda@martinandwood.com

Dear Ms. Mudigonda:

We have received your letter dated December 9, 2022 requesting the renewal of a substitute water supply plan ("SWSP") in accordance with section 37-90-137(11) C.R.S., for a sand and gravel pit to be operated by the Applicant, Trans Colorado Concrete (a division of Pete Lien & Sons, Inc.). The mine is permitted with the Division of Reclamation, Mining, and Safety under File No. M-2004-013. The \$257 renewal fee has been received and given receipt no. 10025895.

SWSP OPERATION

The St. Barbara Sand and Gravel Mine is located in Section 1, Township 21 South, Range 63 West of the P.M. and Section 6, Township 21 South, Range 62 West of the 6th P.M. in Pueblo County. Mining at the St. Barbara Sand and Gravel Mine is projected to have a duration of approximately 25+ years. The site was not mined in 2023, and no mining will occur in 2024. The maximum exposed water surface area in the five ponds located on the property is currently at 9.76 acres, and is not expected to increase with the exception of a few weeks where water level fluctuations may cause the water surface area to increase to 10.5 acres.

There will be no mining for the entire plan period, with the water table fluctuation as described above occurring in the month of May.

In accordance with the letter dated April 30, 2010 (copy attached) from the Colorado Division of Reclamation, Mining, and Safety ("DRMS"), all sand and gravel mining operators must comply with the requirements of the Colorado Reclamation Act and the Mineral Rules and Regulations for the protection of water resources. The April 30, 2010 letter from DRMS requires that you provide information to DRMS to demonstrate



you can replace long term injurious stream depletions that result from mining related exposure of groundwater.

In accordance with approach nos. 1 and 3, you have indicated that a bond has been obtained through the Division of Reclamation, Mining, and Safety (“DRMS”) to assure that depletions from groundwater evaporation do not occur in the unforeseen event, or events, that would lead to the abandonment of the Pit. A new Financial Warranty Increase Acceptance reflecting the increase to \$549,479 was submitted to DRMS dated February 10, 2021.

DEPLETIONS

During the first and second years, the area of exposed water surface will be 9.76 acres with the exception of the month of May when the area will be 10.5 acres. Your attached Table 1B shows the site net evaporation calculations (69.16 acre-feet). No water will be consumed by site operations during this plan period.

Lagged depletions were calculated using a Glover analysis and the following parameters:

T =	100,000 gpd/ft
X =	2,030 ft
W =	7,875 feet
S =	0.2

Lagged depletions were estimated to be 33.30 acre-feet in 2023 and 31.37 acre-feet in 2024.

REPLACEMENTS

The proposed source of replacement water for this pit is a lease with the Board of Water Works of Pueblo, Colorado (“Board”) dated December 27, 2022 for an initial period of ten years commencing April 1, 2023 through March 31, 2033 to deliver 56 acre-feet annually of fully consumable water. The lease replaced a prior lease dated January 9, 2019. The lease water will be provided from the Board’s stored water at Clear Creek Reservoir, Turquoise Reservoir, Twin Lakes Reservoir, Pueblo Reservoir, from direct flow transmountain water, reusable return flows from transmountain water, or from any other reservoir or place from which the Board may legally deliver water.

CONDITIONS OF APPROVAL

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

1. This SWSP shall be valid for the period of January 1, 2023 through December 31, 2024, unless otherwise revoked, or superseded by decree. If a court decreed plan for augmentation is not obtained for the proposed uses by the SWSP expiration date, a renewal request must be submitted to this office with the statutory fee (currently \$257) by **November 1, 2024**. If a renewal request is received after the expiration date of this SWSP, it may be considered a request for a new SWSP, in which case a \$1,593 filing fee will apply.

2. The maximum amount of groundwater exposed under this SWSP shall not exceed the monthly amounts shown on Table 1B. Documentation of pond size may be required by the Division Engineer in the form of an aerial photo evaluation or survey by a Professional Land Surveyor during the plan year or years covered by subsequent renewals of this SWSP.
3. The maximum **annual** evaporative loss associated with this mining operation shall not exceed 34.58 acre-feet.
4. This SWSP does not authorize any operational loss associated with mining at the site.
5. Approval of this SWSP is for the purposes as stated herein. Any additional uses of water must first be approved by this office, which may require a new SWSP to be obtained.
6. Well permit no. 62251-F was issued for the St. Barbara sand and gravel mine and this permit remains valid for this site.
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 water supply plan, the replacement water must be appurtenant to this site until a plan for augmentation is obtained. Releases of replacement water must be sufficient to cover all out-of-priority depletions in time, place, and amount.
8. Conveyance loss for delivery of replacement water to the Arkansas River is subject to assessment and modification as determined by the Division Engineer.
9. The Applicant shall provide daily accounting (including, but not limited to evaporative losses, operational losses, stream depletions, and replacement water deliveries) on a monthly basis. The Submission access was established under the previous SWSP approval, please contact Kassidy Davis at kassidy.davis@state.co.us with any questions related to accounting submission under this SWSP approval. Accounting must be submitted within 10 days after the end of the month for which the accounting applies. Please indicate which of the five scenarios considered in this SWSP is being implemented in the month for which you are reporting. Accounting and reporting procedures are subject to approval and modification by the Division Engineer.
10. The name, mailing address, and phone number of the contact person who is responsible for operation and accounting of this plan must be provided on the accounting forms.
11. The approval of this SWSP does not relieve the Applicant and/or the 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 sand and 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 2 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 from mining and dewatering shall continue until there is no longer an effect on stream flow.

12. The State Engineer may revoke this SWSP or add additional restrictions to its operation at any time the State Engineer determines that injury to other vested water rights has or will occur as a result of this plan. Should this SWSP expire without renewal or be revoked prior to adjudication of a permanent plan for augmentation all use of water at the pit must cease immediately.
13. 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 substitute supply of replacement water is of a quality to meet requirements of use to which the senior appropriation receiving the substitute supply has normally been put. As such, water quality data or analyses may be requested at any time to determine if the requirement of use of the senior appropriator is met.
14. 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 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.

Please contact Melissa A. van der Poel in Denver at (303) 866-3581, or Steve Stratman in Pueblo at (719) 250-1657, if you have any questions concerning this approval.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sarah Brucker".

Sarah Brucker, P.E.
Assistant State Engineer

Attachments: Table 1B
DRMS Letter

ec: Division 2 SWSP Review team
Steve Stratman, District 14 Water Commissioner
Division of Reclamation, Mining, and Safety

Table 1B
Estimated Evaporation and Operational Losses for 2023-2024
St. Barbara Sand and Gravel Mine Under Scenario B (No Mining)

Year	Month	Percent of Annual Gross Evaporation (percent)	Gross Evaporation (inches)	Normal Precipitation (inches)	Effective Precipitation (inches)	Net Evaporation (inches)	Net Evaporation (feet)	Exposed Water Surface Areas (acres)	Net Evaporation For Exposed Water Surface Areas (acre-feet)	Potential Sand Production		Potential Dust Suppression (gallons)	Potential Dust Suppression (acre-feet)	Total Operational Water Losses (acre-feet)	Total Evaporation And Operational Water Losses (acre-feet)	Total Lagged Depletions (acre-feet)	PBWWV Replacements To Arkansas River Including 1% Transit (acre-feet)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Amount (tons)	Water Loss (acre-feet)	(11)	(12)	(13)	(14)	(15)	(16)
2023	Jan	3.0	1.50	0.32	0.22	1.28	0.11	9.76	1.07	0	0.00	0	0.00	0.00	1.07	-2.44	2.46
	Feb	3.5	1.75	0.31	0.22	1.53	0.13	9.76	1.27	0	0.00	0	0.00	0.00	1.27	-2.23	2.25
	Mar	5.5	2.75	0.78	0.55	2.20	0.18	9.76	1.76	0	0.00	0	0.00	0.00	1.76	-2.26	2.28
	Apr	9.0	4.50	0.88	0.52	3.88	0.32	9.76	3.12	0	0.00	0	0.00	0.00	3.12	-2.49	2.51
	May	12.0	6.00	1.25	0.38	5.12	0.43	10.50	4.52	0	0.00	0	0.00	0.00	4.52	-2.76	2.79
	Jun	14.5	7.25	1.25	0.38	6.37	0.53	9.76	5.17	0	0.00	0	0.00	0.00	5.17	-3.03	3.06
	Jul	15.0	7.50	2.09	1.46	6.04	0.50	9.76	4.88	0	0.00	0	0.00	0.00	4.88	-3.22	3.25
	Aug	13.5	6.75	1.99	1.39	5.36	0.45	9.76	4.39	0	0.00	0	0.00	0.00	4.39	-3.25	3.28
	Sep	10.0	5.00	0.90	0.53	4.37	0.36	9.76	3.51	0	0.00	0	0.00	0.00	3.51	-3.30	3.33
	Oct	7.0	3.50	0.57	0.40	3.10	0.26	9.76	2.54	0	0.00	0	0.00	0.00	2.54	-3.22	3.25
	Nov	4.0	2.00	0.43	0.30	1.70	0.14	9.76	1.37	0	0.00	0	0.00	0.00	1.37	-2.78	2.81
	Dec	3.0	1.50	0.42	0.29	1.21	0.10	9.76	0.98	0	0.00	0	0.00	0.00	0.98	-2.32	2.34
2023 Total:		100.0	50.00	11.19	7.84	42.16	3.51	-	34.58	0	0.00	0	0.00	0.00	34.58	-33.30	33.63
2024	Jan	3.0	1.50	0.32	0.22	1.28	0.11	9.76	1.07	0	0.00	0	0.00	0.00	1.07	-2.04	2.06
	Feb	3.5	1.75	0.31	0.22	1.53	0.13	9.76	1.27	0	0.00	0	0.00	0.00	1.27	-1.93	1.95
	Mar	5.5	2.75	0.78	0.55	2.20	0.18	9.76	1.76	0	0.00	0	0.00	0.00	1.76	-2.01	2.03
	Apr	9.0	4.50	0.88	0.52	3.88	0.32	9.76	3.12	0	0.00	0	0.00	0.00	3.12	-2.28	2.30
	May	12.0	6.00	1.25	0.38	5.12	0.43	10.50	4.52	0	0.00	0	0.00	0.00	4.52	-2.58	2.61
	Jun	14.5	7.25	1.25	0.38	6.37	0.53	9.76	5.17	0	0.00	0	0.00	0.00	5.17	-2.87	2.90
	Jul	15.0	7.50	2.09	1.46	6.04	0.50	9.76	4.88	0	0.00	0	0.00	0.00	4.88	-3.07	3.10
	Aug	13.5	6.75	1.99	1.39	5.36	0.45	9.76	4.39	0	0.00	0	0.00	0.00	4.39	-3.11	3.14
	Sep	10.0	5.00	0.90	0.53	4.37	0.36	9.76	3.51	0	0.00	0	0.00	0.00	3.51	-3.17	3.20
	Oct	7.0	3.50	0.57	0.40	3.10	0.26	9.76	2.54	0	0.00	0	0.00	0.00	2.54	-3.10	3.13
	Nov	4.0	2.00	0.43	0.30	1.70	0.14	9.76	1.37	0	0.00	0	0.00	0.00	1.37	-2.68	2.71
	Dec	3.0	1.50	0.42	0.29	1.21	0.10	9.76	0.98	0	0.00	0	0.00	0.00	0.98	-2.22	2.24
2024 Total:		100.0	50.00	11.19	7.84	42.16	3.51	-	34.58	0	0.00	0	0.00	0.00	34.58	-31.06	31.37

Notes:

- (1) From SEO 05/11/99 for elevations under 6,500 feet
- (2) Percent of annual gross evaporation multiplied by 50-inches
- (3) Average precipitation from NOAA Climate Station Pueblo Memorial Airport (ID: 6740)
- (4) col (3) x 70%
- (5) col (2) - col (4)
- (6) col (5) / 12 inches per 1 foot
- (7) Based on average water surface area from Danielle Vlebers provided on 10/14/2022.
- (8) col (7) x col (6)
- (9) Based on estimates from operator
- (10) Water Loss = (Production, col 9) * 2000 lbs/ton * (4%)/(62.4 lbs/cu ft)/43560 cu ft/acre-foot)
- (11) Based on estimates from operator
- (12) Conversion to acre-feet. (1 acre-foot = 325,851 gallons)
- (13) col (10) + col (12)
- (14) Total Losses = col (8) + col (13)
- (15) Based on Stream Depletion Model
- (16) Col (15) + 1% transit loss

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