COLORADO
Division of Water Resources
Department of Natural Resources

September 10, 2025

Mr. Nathan D. Phelps, P.E.
Schnabel Engineering
600 S Airport Road, Building A, Suite A-205
Longmont, CO 80503

**Re: North River Pit Substitute Water Supply Plan**
**DRMS File No. M-1999-005**
**SE¼ Section 36, T23S, R55W and NE¼ Section 1, T24S, R55W, 6th P.M.**
**Water Division 2, Water District 17, Otero County**
**Plan ID 772, WDID 1707803**

**Approval Period: April 1, 2025 through March 31, 2026**
*Contact Information for Mr. Phelps: 720-534-0642; nphelps@schnabel-eng.com*

Dear Mr. Phelps:

We have reviewed your letter dated March 26, 2025 requesting approval of a substitute water supply plan ("SWSP") for a sand and gravel pit to be operated by All Rite Paving and Redi Mix, Inc. ("All Rite" or "Applicant"), on leased property in accordance with section 37-90-137(11), C.R.S. An Application Form for Transfer of Mineral Permit and Succession of Operators was submitted the the Division of Reclamation, Mining and Safety on July 3, 2025 to change the permittee for the North River Pit from All Rite Paving and Redi Mix, Inc.to Oldcastle SW Group, Inc. dba United Companies. The required renewal fee of $257 for the SWSP has been received and given receipt no. 10041590. The original SWSP for the North River Pit was approved on July 28, 1999 for the period through June 30, 2001 and it was most recently renewed in a letter dated October 28, 2024 for the period April 1, 2024 through March 31, 2025.

**SWSP Operation**

The North River Pit is located in the SE¼ of Section 36, Township 23 South, Range 55 West and in the NE¼ of Section 1, Township 24 South, Range 55 West of the 6th P.M. This SWSP seeks to replace depletions resulting from the mining operations at the North River Pit. According to the information provided, no mining is planned during the 2025-2026 plan period, thus the only depletions at this site during this SWSP period are evaporation from exposed groundwater. For this SWSP period, replacement water for the North River Pit's depletions will be provided by the Arkansas Groundwater and Reservoir Association ("AGRA") pursuant to a membership agreement. The gravel pit is permitted under Well Permit No. 52701-F (WDID 1706491) and this permit remains valid for this site.

In accordance with the letter dated April 30, 2010 from the Colorado Division of Reclamation, Mining, and Safety ("DRMS"), all sand and gravel mining operators must comply with the requirements of the Colorado Land Reclamation Act for the Extraction of Construction Materials and the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials for the protection of water resources. The April 30, 2010 letter from DRMS requires that you provide information to DRMS to demonstrate you can replace long term injurious stream depletions that result from mining-related exposure of groundwater. The DRMS letter identified four approaches to satisfy this requirement. In accordance with approach nos. 1 and 3, the DRMS currently holds a bond for $431,039 for this operation. DRMS recently estimated the reclamation liability at the site and found it to be $639,008. A new financial warranty in the amount of $639,008 will be required by DRMS as part of the pending permit transfer, or through a surety increase if the Applicant elects not to complete the permit transfer, to cover the cost of backfilling the site to assure that depletions from groundwater evaporation do not occur in the unforeseen event, or events, that would lead to the abandonment of the North River Pit.

**Depletions**

Since no mining is planned during this plan period, pond evaporation will be the only method by which water will be consumed at the site. The total water surface area for the two ponds at the site was measured from a 2021 aerial photograph (Figure 2, attached) and was found to be 7.36 acres, composed of 6.51 acres in the northern cell, and 0.85 acres in the southern cell. The evaporation from the 7.36 acres was calculated as 29.59 acre-feet/year, based on a net annual evaporation of 4.02 feet from the Lower Arkansas Water Management Association's ("LAWMA") decree in Case No. 02CW181. Based on the evaporation interpolated from the Evaporation Station Isolines in DWR's MapViewer tool (digitized from the FreeWater Surface Evaporation atlas in NOAA Technical Report NWS 33), gross evaporation at the site is 55.1 inches with estimated annual precipitation of 12 inches per year, resulting in net annual evaporation of 46.7 inches, or 3.89 feet. The use of the value decreed in Case No. 02CW181 is more conservative than the value estimated by DWR, and therefore acceptable for use in this SWSP. The Integrated Decision Support Alluvial Water Accounting System ("IDS AWAS") program, which uses the Glover method, was used with the alluvial aquifer boundary condition and the following parameters to estimate the timing of stream depletions: a transmissivity (T) of 142,000 gallons per day per foot; a specific yield (S) of 0.2; a distance from centroid of cell to the river (X) of 760 feet for the northern cell and 370 feet for the southern cell; and an aquifer width (W) of 5,455 feet.

According to the Glover analysis, 95% of depletions were modeled to accrue to the stream within the first eight months; therefore, an 8-month unit response function will be used to calculate lagged depletions for the purposes of this SWSP, as given in the table below. Since 95% of the depletions occurred within the first eight months for the northern cell and within the first five months for the southern cell, the last 5% of the lagging factors were wrapped into the preceding months.

**Unit Response Function**

| Pond Name | Month 1 | Month 2 | Month 3 | Month 4 | Month 5 | Month 6 | Month 7 | Month 8 |
|---|---|---|---|---|---|---|---|---|
| Northern Cell | 0.6185 | 0.2108 | 0.0569 | 0.0351 | 0.0276 | 0.0209 | 0.0170 | 0.0132 |
| Southern Cell | 0.8260 | 0.1183 | 0.0267 | 0.0163 | 0.0127 | NA | NA | NA |

The lagged stream depletions resulting from evaporation occurring during this plan period were calculated to total 28.53 acre-feet/year (see column 10 of the attached Table 1). The carry-over lagged depletions associated with evaporation from the exposed surface area during the previous plan year was calculated separately as 1.07 acre-feet (see column 11 of the attached Table 1) and then added to the lagged depletions for the current plan year. The resulting total stream depletion from past and projection evaporation associated with the gravel pit is estimated to equal 29.60 acre-feet during this plan period (see column 12 of attached Table 1).

**Replacements**

According to the Arkansas Groundwater and Reservoir Association Member Well Allocation provided in support of this SWSP request, United Companies has been extended an annual plan year allocation 29.60 acre-feet per year for the replacement of stream depletions associated with well operations tributary to the Arkansas River for the North River Pit. The monthly schedule of replacements is shown in column 13 of attached Table 1. The replacement deliveries will additionally need to account for transit losses as determined by the Water Commissioner and Division Engineer.

**Accounting**

The attached Table 2 is the monthly accounting form that will be used for determining water consumption and lagged stream depletions. The operator will report the monthly pit surface area to AGRA, which will then submit the monthly water accounting to the Division Engineer.

**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 April 1, 2025 through March 31, 2026 unless otherwise revoked or superseded by decree. Should an additional SWSP be requested, such renewal request must be submitted to this office and the Division 2 office (please copy Bethany.Arnold@state.co.us) with the statutory fee per gravel pit site (currently $257) by **February 1, 2026**.

2. The total surface area of the groundwater at the North River Pit site must not exceed 7.36 acres during the SWSP period, which will result in a net annual evaporative depletion of 29.59 acre-feet. No other use/consumption of groundwater is authorized under this SWSP.

3. Total consumption at the North River Pit site must not exceed the aforementioned amount unless a new SWSP application is submitted and approved for new uses and/or additional amounts.

4. No mining is proposed to occur at the site during the period of this SWSP. If the Applicant or their successor proposes to resume mining, the operator must first submit a request and obtain approval for a new SWSP that adequately addresses all stream depletions that result from the proposed mining activities.

5. 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. All replacement water must be concurrent with depletions in quantity, timing and location, except that releases aggregated at the discretion of the Division Engineer or the Augmentation Coordinator may occur in a later month than the depletions. Releases of water by AGRA pursuant to this SWSP shall be coordinated with the Division Engineer and the

Augmentation Coordinator. All releases of water by AGRA are subject to transit losses, which shall be assessed by the Water Commissioner and Division Engineer.

6. The Applicant or their successor must provide accounting of depletions and replacements on a monthly basis or other interval acceptable to the Division Engineer. The accounting must be submitted to the Division Engineer via the online submittal tool. Submission access was established under the previous SWSP approval; contact Bethany Arnold at Bethany.Arnold@state.co.us or Kassidy Davis at kassidy.davis@state.co.us with any questions. The Applicant or their successor must continue to submit accounting with the subject line "North River Pit SWSP 1707803". The accounting form(s) must be sufficient to demonstrate that the net effective replacement equals or exceeds the total depletion on a monthly basis. Accounting and reporting procedures are subject to approval and modification by the Division Engineer.

7. The Applicant or their successor must replace all out-of-priority depletions resulting from operation under this SWSP, including those lagged depletions that occur to the stream after the expiration date of this SWSP.

8. The accounting form submitted in the month of November each year (at the end of the administrative Water Year) must be submitted together with a plan drawing or aerial photograph to document the surface area of groundwater exposed within the pit site.

9. The approval of this SWSP does not relieve the Applicant or their successor 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 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 shall continue until there is no longer an effect on stream flow. Granting of this SWSP does not imply approval by this office of any such court application(s).

10. 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 and the Applicant or their successor shall obtain and present to this office an alternate source of replacement water.

11. In accordance with amendments to section 25-8-202(7), C.R.S. and "Senate Bill 89-181 Rules" adopted on February 4, 1992, the State Engineer shall determine whether or not the substitute supply is of a quality to meet the requirements of use to which the senior appropriation receiving the substituted supply has normally been put. As such, water quality data or analysis may be requested at any time to determine if the water quality is appropriate for the requirements of use of the senior appropriator.

12. The decision of the State Engineer shall have no precedential or evidentiary force, shall not create any presumptions, shift the burden of proof, or serve as a defense in any pending water court case or any other legal action that may be initiated concerning this 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 SWSP, please contact Lonnie Spady at 719-542-3368, Jeanette Myers in La Junta at 719-384-1000, or Ailis Thyne of the Denver office at 303-866-3581.

Sincerely,

Sarah Brucker, P.E.
Deputy State Engineer

Attachments: Tables 1 & 2
Figure 2
AGRA Member Allocation

cc: Division 2 SWSP Staff
Lonnie Spady, River Operations Coordinator
Jeanette Myers, District 17 Lead Water Commissioner
Kevin Salter, Kansas Division of Water Resources
Dale E. Book, Spronk Water Engineers
Kent Ricken, Arkansas Groundwater and Reservoir Association
Division of Reclamation, Mining and Safety