



May 28, 2021

**RE: Recommendation to Approve a 112c Permit Amendment Application with an Objection
West Farm Pit, File M-2008-078
Amendment No. 2 (AM-02)**

Dear Party and/or Interested Person:

The Division of Reclamation, Mining and Safety (Division) hereby issues its recommendation for approval of the 112c permit amendment application (Application) for the West Farm Pit, File M-2008-078, submitted by Prowers Aggregate Operators, LLC (Applicant).

This recommendation is based on the Division's determination that the Application satisfied the requirements of Section 34-32.5-115(4) of the Colorado Land Reclamation Act for the Extraction of Construction Materials, 34-32.5-101 *et seq.*, C.R.S (Act). The Applicant addressed all adequacy issues which were identified by the Division during the adequacy review process to the Division's satisfaction. Therefore, on May 28, 2021, the Division determined the Application satisfied the requirements of C.R.S. 34-32.5-115(4) and issued its recommendation to approve the Application over objections. The Division's rationale for approval (Rationale) identifies the issues raised by the objecting party and groups them into the following three categories:

- 1) Adverse impacts to domestic water wells adjacent to the mining operation
- 2) Engineering evaluation to protect structures
- 3) Fugitive dust generated from the mining operation and from stockpiled material

The Division's Rationale provides a full and thorough analysis of the above mentioned broad categorical issues raised by the objecting party. A copy of the Division's Rationale is available for public review on the Division's website at <https://drms.colorado.gov>, by clicking on the "DRMS Weblink" link on the homepage, then entering M2008078 in the "Permit No" box.

The Division's recommendation to approve the amendment Application is to the Colorado Mined Land Reclamation Board (Board). The Application with objections will be considered by the Board during a formal hearing, scheduled for the June 23-24, 2021 Board meeting. This meeting will occur virtually (Zoom meeting) beginning at 9:00a.m. or as soon thereafter as the matter can be considered. During the hearing the Board will consider the application with an objection and may decide to approve, approve with conditions, or deny the application for the West Farm Pit Amendment No. 2. Pursuant to Rule 2.8.1(1) of the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials (Rules), any party who does not attend the Board hearing forfeits its party status and all associated rights and privileges.

A live audio broadcast of the formal Board hearing can be found at the Division's website at <https://drms.colorado.gov>. Please be aware that the audio stream service may be temporarily unavailable



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or limited due to technical difficulties and bandwidth limitation, and could result in loss of audio signals or in the impairment of the quality of the transmission.

All parties and interested persons who intend to participate in the Board hearing are strongly encouraged to attend the Pre-hearing Conference. Pursuant to Rule 2.7.3(4), any party who does not attend the Pre-hearing Conference forfeits its party status and all associated rights and privileges, unless such party provides a fully executed proxy authorization form to the Pre-hearing Conference Officer and the party's authorized representative is present. Additional copies of the official proxy authorization form may be obtained from the Division's website. The Pre-hearing Conference is scheduled to occur virtually (Zoom meeting) on June 9, 2021, beginning at 10:00 a.m., and terminating at or before 11:00 a.m. Jason Musick will preside as the Pre-hearing Conference Officer.

Sincerely,



Brock Bowles
Environmental Protection Specialist

Ec: Russ Means, DRMS at: Russ.Means@state.co.us
Michael Cunningham, DRMS at: Michaela.cunningham@state.co.us
Jason Musick, DRMS at Jason.Musick@state.co.us



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West Farm Pit, File M-2008-078
Amendment No. 2 (AM-02)**

Introduction

On May 28, 2021, the Division of Reclamation, Mining and Safety (Division) issued its recommendation to approve, over an objection, the permit amendment application for the West Farm Pit, File No. M-2008-078 (Application). This document is intended to explain the process by which the Division arrived at its recommendation to approve the Application over an objection, and respond to the issues raised by the objecting party. The Division reserves the right to further supplement, amend, modify, or clarify this document and recommendation with additional details as necessary.

Summary of the Review Process¹

Prowers Aggregate Operators, LLC (Permittee or PAO) filed the 112c amendment application with the Division on December 8, 2020. PAO proposes to adjust and expand the permit boundary to include additional mining, product storage and processing areas. The proposed expansion increases the permitted acreage from 282.6 acres to 1,310.64 acres. Sand and gravel will continue to be the primary commodities mine.

Mining will take place over a series of 9 phases. Phase 1 has been completed and Phase 2 is currently being mined under the terms of the current mining permit. Each phase of the mining process will be mined in the same manner. A slurry wall liner will be installed around each phase area prior to mining. The slurry wall liner will be keyed into the bedrock material and will extend upward through the entire height of the alluvial deposit effectively separating the mining areas from the surrounding alluvial aquifer. Once the slurry wall has been constructed, the water inside the slurry wall liner will be pumped to a series of sediment settling ponds before being discharged to the Arkansas River. The sand and gravel will then be mined and processed for shipment.

This amendment application does not change the post mining land use, which will remain developed water resource. All nine lined water storage reservoirs will remain post mining. The areas between the reservoirs will be used for access roads or reclaimed by topsoiling and seeding with the approved seed mix.

The Division calculated a financial warranty in the amount of \$8,310,769 is required to complete the reclamation.

¹ Herein, all references to the Act and Rules refer to the Colorado Land Reclamation Act for the Extraction of Construction Materials, 34-32.5-101 et seq., C.R.S. (Act), and to the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials, 2 C.C.R. 407-4 (the Rules or Rule). Copy of the Act and Rules are available through the Division's web site at <https://www.colorado.gov/drms>.



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Pursuant to Rule 1.4.1(9), the Applicant requested three extensions to the decision date from the original March 22, 2021 to May 31, 2021.

Notice of the filing occurred in accordance with the requirements of the Act and Rules. The Applicant published the required notice in the Lamar Ledger once a week for four consecutive weeks beginning on December 31, 2020 and ending on January 21, 2021. The public comment period closed on February 10, 2021. During the comment period, the Division received timely written comments from the following individuals:

- Brian and Karen Nunnery, received February 9, 2021
- City of Lamar, received February 9, 2021

The Division also received comments on the application from History Colorado and Colorado Parks and Wildlife. The agencies notified have not indicated any conflict of the proposed operation with laws or regulations of this state or the United States. The City of Lamar withdrew its objection in a letter dated March 12, 2021.

The Division forwarded copies of all objections and comments to the Applicant. The Division scheduled the application for a hearing before the Colorado Mined Land Reclamation Board (Board), to occur during the June 23-24, 2021 Board meeting, and for a Pre-hearing Conference on Wednesday June 9, 2021. The Division provided notice of the scheduled Board hearing and Pre-hearing Conference to all parties. As a result of timely objections, the Division does not make a decision on the Amendment Application on the decision date, but rather a recommendation to the Board.

During the review period the Division generated two adequacy review letters. The Permittee addressed all adequacy issues to the Division's satisfaction. The Division's two adequacy letters and the Permittees responses are publicly available on the Division's website. The Division hereby issues its recommendation for approval of the 112c permit amendment application for the West Farm Pit, File No. M-2008-078, submitted by Prowers Aggregates Operators, LLC.

Jurisdictional Issues Raised by Objecting Parties

The issues raised by the objecting party have been grouped into two categories: hydrologic balance and permanent man-made structures. Each category is bulleted below with the Objector's concerns copied in italic font. The Division's response follows the issue in standard font. A brief summary of non-jurisdictional topics has also been provided.

A. Hydrologic Balance

The water level in the Nunnerys' domestic water wells have dropped since PAO began its operation. As noted in Exhibit G to the Application, POA's mining operations likely will have adverse impacts on the ground water levels in the area adjacent to the operation. The adverse impacts will only increase as the operation expands. Protections to the Nunnerys' domestic water supplies, as well as other households in the immediate area, must be added as a condition to any permit issued to POA for the expansion. The protection should include the deepening of the wells

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at POA's cost or the provision of an adequate replacement source of water again at POA's expense.

Pursuant to C.R.S. 34-32.5-116(4)(h) and Rule 3.1.6(1) disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quality and quantity of water in surface and groundwater systems, both during and after the mining operation and during reclamation, shall be minimized.

The proposed operation has been designed to minimize potential impacts to groundwater systems. The site will be developed within a deposit of inert alluvial material. No acid-forming or toxic-producing materials have been identified on-site, and no designated chemicals will be used or stored on site.

PAO is proposing to mine sand and gravel from the alluvial deposits along the Arkansas River, east of Lamar, CO. Mining will take place in a series of 9 Phases over a period of 30 years. Phase 1 has been completed and Phase 2 is currently being mined under the terms of the current mining permit. Phase 8 will be mined after Phase 2 is completed, followed by Phases 3-7 and 9.

Each phase of the mining process will be mined in the same manner. A slurry wall liner will be installed around each phase area prior to mining. The slurry wall liner will be keyed into the bedrock material and extend upward through the entire height of the alluvial deposit. The depth to bedrock in the proposed mining areas range from 30-70 feet deep. The slurry wall liner will be constructed to meet the performance standards for permeability set by the State Engineer's Office (SEO). These SEO performance standards ensure the mining areas are separated from the surrounding alluvial aquifer. Once the slurry wall has been constructed and tested, the water inside the slurry wall liner will be pumped to a series of sediment settling ponds before being discharged. PAO has a current NPDES permit to discharge water from inside each slurry wall liner to the Arkansas River.

A water monitoring plan has been developed to collect the baseline data of the alluvial water levels before the installation of each slurry wall and to evaluate the effects of each slurry wall after installation. Eleven monitoring wells have been installed to date and a total of seventeen will be install over the life of the mine. Six months of ground water level data will be collected before the Phase 8 slurry wall is installed. All Phases of mining after Phase 8 (Phases 3-7 & 9) will have at least 15 months of ground water level data collected before each slurry wall installation. All monitoring wells will be monitored on a monthly basis and the data will be submitted to the Division in the Annual Report each year.

PAO submitted a ground water modeling report evaluating the potential hydrological impacts that each slurry wall will have on the alluvial water level. The anticipated impacts are a rise in the water table on the western side (up-gradient) and a decline in the water table on the eastern side (down-gradient) side of the mine. The north side of the mine will have slight rise in the water table. The south side of the mine will have a rise in water table on the western end and little to no effect on the eastern end. PAO has committed to update the ground water modeling as necessary as new water data is collected over the life of the mine.

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PAO has committed to install a perimeter drain for the areas that may be impacted by a rise in the alluvial water table. A perimeter drain will be installed if the water level deviates +/- 2 feet from the seasonal peak/low water level for 2 consecutive months for each monitoring well prior to slurry wall installation.

Specific to the objection raised related to potential impacts to domestic wells, no dewatering pumping is proposed for outside the slurry wall liner and therefore, no cone of depression is anticipated for areas adjacent to the slurry wall/permit boundary. As explained below, the Division has concluded the proposed activity will not adversely impact Mr. Nunnery's domestic wells.

To address Mr. Nunnery's concerns about mine operations possibly affecting his residential wells, Roy Cue (PAO) and J.C. York (J & T Consulting) met with Mr. Nunnery on April 23, 2021 to locate and measure the depth of water for the four wells in question. The location of the wells were recorded and then identified on the Colorado Division of Water Resources (DWR) well permit database (<https://maps.dnrgis.state.co.us/dwr/Index.html?viewer=dwrwellpermit>). PAO submitted the well logs to the Division in the Adequacy Review #2 response (April 28, 2021). The well logs show that all four wells are constructed in the Dakota formation/aquifer which begins approximately 200' below the ground surface. Mining at the West Farm Pit will take place in the alluvial aquifer, down to bedrock, with a maximum proposed depth of 70 feet.

The Nunnery domestic wells located in the Dakota formation/aquifer and the mining operation located in the alluvial aquifer are separated by approximately 130 feet of shale bedrock. The Division determined that there is no hydrological connection between the Dakota formation/aquifer and the alluvial aquifer based on the DWR well permit records.

PAO provided Mr. Nunnery with all the well information for reference in an email sent on April 27, 2021.

Based on the planned operation, water monitoring plan, water modeling report, the Division anticipates minimum impacts to the groundwater systems at the proposed site and surrounding area. As discussed above, the Division concludes the application sufficiently shows impacts to the water resources of the affected land and surrounding areas during active mining or post-mining periods will be minimized.

B. Permanent Man-made Structures

Nunnerys request that pursuant to Rule 6.3.12(b) that PAO conduct an appropriate engineering evaluation that demonstrates that such structures shall not be damaged by activities occurring at PAO's operation and that a copy of the evaluation be provided to the Nunnerys at no cost to them.

The Nunnery's listed two properties in their comment letter as being just south of the southern portion of PAO's operation: 9209 U.S. Highway 50 and 9800 U.S. Highway 50. The structures at

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the 9209 U.S. Highway 50 location are within 200 feet of the affected area and will be discussed in further detail below. The structures at the 9800 U.S. Highway 50 location are located more than 640 feet south of the affected area and are separated from the affected area by a set of railroad tracks and U.S. Highway 50. Pursuant to Rule 6.4.19 structure agreements are not required for structures that are located more than 200 feet from affected areas.

The structures at the 9209 U.S. Highway 50 consist of a large, single story, steel frame building and two semi-trailer storage units. The structures are approximately 170 feet south of the affected area. These structures fall within the 200 foot zone and require either a notarized agreement between the Applicant and structure owner or an engineering evaluation demonstrating that the structure will not be damaged by mining activities.

The structures at this location were evaluated as part of the Amendment 1 (AM-01) application in 2018 when PAO expanded the permit boundary to include the loadout area. The Nunnery's were notified of the AM-01 expansion by certified mail and were provided with a damage waiver agreement as required by Rule 6.4.19(a). The Applicant did not secure a damage waiver agreement for the Nunnery structures and provided an engineering analysis that demonstrated the structures would not be damaged by the mining operation as required by Rule 6.4.19(b). The structures on this property are adjacent to the loadout area which is an area used for staging material before being loaded onto train cars. The loadout area will not be mined or excavated below grade. The closest mining extraction to the Nunnery property for the AM-01 application was the South Mining Area, which was more than 2,000 feet away. POA submitted a stability demonstration showing that a 75 foot setback provided sufficient stability for County Road HH.5, which lies between the excavated pit and the Nunnery structures.

As part of the current AM-02 application, PAO is proposing to mine the Phase 8 area which will be the closest excavated pit to the Nunnery structures. The Phase 8 area is approximately 720 feet north of the Nunnery structures and is proposed to be mined an average 35 feet deep. POA submitted an updated stability demonstration showing that a 75 foot setback provided sufficient stability for County Road HH.5 which lies between the Phase 8 pit and the Nunnery structures. Although a new mined pit will be closer to the Nunnery structures, no new affected area was added next to their property in AM-02.

The Application includes an engineering stability analyses prepared and certified by a Colorado licensed professional engineer, which demonstrates permanent man-made structures within 200 feet of the affected lands shall not be damaged by activities occurring at the mining operation, in accordance with Rule 6.4.19(b). The Division determined off-site areas will be protected with appropriate factors of safety incorporated into the stability analysis, in accordance with the requirements of Rule 6.4.19 and C.R.S. 34-32.5-116(4)(i).

The stability analysis for both the AM-01 and AM-02 application are available on the Division's website at <https://drms.colorado.gov>, by clicking on the "DRMS Weblink" link on the homepage, then entering M2008078 in the "Permit No" box.

Non-Jurisdictional Issues

A. Fugitive Dust

*PAO's operation currently deposits a considerable amount of dust and particulates onto the Nunnerys' properties, particularly on the property located at 9209 U.S. Highway 50 which interferes with their furniture business. PAO piles large mounds of uncovered and unsprinkled sand and gravel just north of the railroad tracks which separates PAO's operation from 9209 U.S. Highway 50. Dust and particulates from the mounds create a mini-dust storm each time the wind blows, which is quite often in the Lamar area. The Nunnerys' displays of dining room, bedroom, living room furniture, and storage area receive a daily coating of dust and particulates that has to be removed on a near daily basis, which was never the case prior to when PAO beginning operations. Photographs are attached. Not only does the dust cause issues for the Nunnerys' business, it also creates a hazard for drivers on U.S. Highway 50 which is immediately to the *south of the 9209 property.*

The Act and the Rules that govern the extraction of construction materials do not address air quality issues, including fugitive dust. Fugitive dust issues, within the affected area and on U.S. Highway 50, are under the exclusive jurisdiction of the Air Pollution Control Division (APCD) of the Colorado Department of Public Health and Environment (CDPHE). The Division, therefore, is without statutory authority to address fugitive dust under a mining and reclamation permit and defers to APCD to monitor and regulate air pollution issues.

Rule 6.4.13 does require a statement to identify which other permits, licenses and approvals the operator holds or will seek in order to conduct the proposed mining and reclamation operation. PAO has made a statement in Exhibit M of the Amendment 2 application that they have obtained a CDPHE Air Pollution Emission Notice (APEN).

The Act and Rules do not authorize the Division to regulate dust or air pollution issues. However, the protection and preservation of stockpiled topsoil against erosion (wind) is addressed under the reclamation performance standards of Rule 3.1.9. Pursuant to Rule 3.1.9(1), if salvaged topsoil is not replaced on a backfill area within a time short enough to avoid deterioration of the topsoil, vegetative cover or other means shall be employed so that the topsoil is protected from erosion, remains free of any contamination by toxic or acid-forming material, and is in a useable condition for reclamation. The application commits to seeding stockpiled topsoil following initial removal with a temporary seed mix that will establish quickly and prevent topsoil loss due to wind and water erosion. Additional measures the operation will take to control dust on site includes watering mine roads to limit dust generated from mining vehicles, a standard practice for construction and mine sites. The Division determined that information submitted in the Application met the requirements of Rule 3.1.9(1).

Division's Recommendation

After conducting a comprehensive adequacy review of the application and all adequacy responses provided throughout the review process, the Division determined the Applicant sufficiently demonstrated

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the application meets the requirements of the Act and Rules. Therefore, pursuant to C.R.S. 34-32.5-115(4), the Board or Office shall not deny the permit.

On May 28, 2021, the Division determined the 112c permit amendment application (AM-02) for the West Farm Pit, File No. M-2008-078, satisfied the requirements of C.R.S. § 34-32.5-115(4), and issued its recommendation to approve the amendment application over the objection.