



## **MEMORANDUM**

**June 30, 2021**

**TO: Dave Doran – UBSC GWMD**

**CC: Lisa Thompson -Trout Raley**

**SUBJECT: Review of Ellicott Sand and Gravel LLC Mine Permit Application**

### Introduction

On July 8, 2020 Trout Raley, on behalf of the Upper Black Squirrel Creek Groundwater Management District ("the District"), submitted comments on the Ellicott Sand & Gravel ("ES&G") application for Special Use and Mineral Extraction Permits for a proposed sand and gravel mining operation in eastern El Paso County. These comments were forwarded to ES&G, and ES&G responded to the District's comments in an August 28, 2020 letter. This memorandum presents my review of ES&G's responses.

### Comments

1. The application material still does not include adequate information or data regarding the occurrence of groundwater in the alluvial aquifer that is also the source of the material to be mined. Intercepting groundwater in UBS alluvial aquifer during mining would require a well permit and replacement plan. The application material indicates that the economic sand resource is 70 feet thick and that depth to groundwater exceeds 70 feet across the area to be mined. The applicant further states that the conclusion that depth to water is greater than 70 feet is based on a review of 24 wells. The names and locations for these 24 wells are provided in a table in Exhibit II in the August 28, 2020 letter. The table does not include depth to water data. In addition, only six of the 24 wells are screened in the UBS alluvial aquifer. The remaining 18 wells are bedrock wells and are not appropriate for determining depth to water in the overlying alluvial aquifer. The only depth to water data provided are static water levels measured in three domestic wells installed in the early 1970s: permit nos. 6969-F, 6971-FP and 9642-FP. The depth to groundwater in these wells, at the time of construction, is less than 50 feet which contradicts the conclusion the depth to water is greater than 70 ft across the site. The applicant states that mining will not occur below 10 feet above the water table in the UBS alluvial aquifer. It is difficult to see how this can be accomplished if there is no current depth to water data across the area to be mined. A water table map based on current depth to water data should be constructed for the site to determine the depth to the water table across the area to be mined and to determine direction of groundwater flow.

2. The applicant should provide a reference for the statement that an estimated 9000 af/yr is recharged to the alluvial aquifer.
3. Post mining reclamation will result in numerous pits that extend up to 70 feet below the surrounding landscape. The pits will receive and store water. The applicant indicates that captured storm water will be released within 72 hours and if not, the applicant will file for a replacement plan to replace evaporative losses. How will this effect "prevailing hydrologic conditions"? How will the applicant demonstrate compliance with these requirements?