Braun

Braun Environmental, Inc.

355 S. Teller St., Suite 200, Lakewood, Colorado 80226 Office: 303-697-0950 Fax: 303-697-2140

November 24, 2023 SENT VIA EMAIL

Elliott Russell
Colorado Division of Reclamation, Mining and Safety (DRMS)
1313 Sherman, Room 215
Denver Colorado 80203

RE: Response to October 13 Adequacy Review, Glen Johnson No 1 Permit M-1982-044

Dear Mr. Russell;

Attached, find responses to your comments, along with a revised Exhibits B, E and E1 maps, along with a slope analysis report, a USCS produced soil report, a table showing the survey coordinates for the permit corners and a receipt from CDOT for notice. Mr. Pester will send you a receipt from the County Clerk and Recorder on Monday when they are open again. Thank you for extending the period to reply for ten additional days to November 27, 2023. I was out of state on some other projects and it just happed that the day I received you letter, I was packing for a trip.

Let me know as quickly as you can if there is anything else you want, as I would like to get this finished up for Craig yet this year.

Sincerely,
BRAUN ENVIRONMENTAL, INC.

C. A. Braun, P.E., CPG, REC
enc.
CAB/rl

Responses to Division of Mining Reclamation and Safety (DRMS) Adequacy Review of Letter Dated

October 13, 2023

By C. A. Braun

General Application Procedures

Comment 1 . . . submit proof of publication of a public notice in a newspaper of general circulation in the locality of the proposed mining operation.

Response: Proof was sent by Braun via an email dated October 10, 2023 to an address that Braun had on file. It was resent on October 14, 2023 to an updated address.

Comment 2 . . . submit proof that the public notice was provided to all owners of record of surface and mineral rights of the affected land and to the owners of record of all land surface within 200 feet of the boundary of the affected land. Proof of notice may be return receipts of a certified mailing or by proof of personal service.

Response: Proof was sent by Braun via an email dated October 10, 2023 to an address that Braun had on file. It was resent on October 14, 2023. Per your reminder, a notice was sent to the Colorado State Highway and the receipt is attached.

Comment 3 The Division received a comment letters from the U.S. Army Corps of Engineers, History Colorado, Colorado Parks and Wildlife, and Division of Water Resources regarding the application. The letters are attached for your review. Please acknowledge and address any comments noted in the letters and make changes to the application as necessary.

Response: USCE -Since no discharge of dredged or fill material into waters of the United States is anticipated, the project is compliant with their regulations. Division of Water Resources – Since no groundwater is anticipated to be intercepted, and storm water runoff will not be increased from historical amounts and any additional runoff, since the regulations were put in place, will be retained within the limits of the permit area, no further permits or contact with that office is necessary. CPW recommends that DRMS laws and regulations be followed and that no trenches are left open that might trap wildlife. The operator is in general agreement, thus no changes to the application are necessary.

Exhibit B – Site Description (Rule 6.3.2)

Comment 4 Within Exhibit B, you have provided specific details on the Upson-Edloe Complex and Brikert Loam soil units but then stated the entire permit area consists of the Catamont-Guffy Complex and provided limited details. In accordance with Rule 6.3.2(a), please provide further details regarding the characteristics of the Catamont-Guffy Complex unit. The Division recommends providing the soil unit print out for the Catamont-Guffy Complex which can be obtained online from USDA Natural Resource Conservation Service's Web Soil Survey.

Response: You are exactly correct. The discussion of the first described units was prepared by Dennis Davidson an expert with the U.S Department of Agriculture, in November of 1981. Since this permit is an amendment of that original permit, the description by a Federal official who is an expert on soils, cannot be ignored, thus was included. It seems that sometime after 1981 the name of the unit was changed to Catamount-Guffey complex. As a result in the amended permit, it seemed reasonable to update the name and add some geologic description of what personnel observed in the field. That was thoroughly discussed in the last paragraph of Exhibit B (a). We have been working in the general area of the permit since well before 1981 and have found that no physical changes to the Pikes Peak Granite or its resulting soils over that time, so it appears that both the old and new descriptions should also be equivalent. As ordered, a printout of the current USDA report was obtained and is included. For historical reasons, if you should be interested in looking at an original copy of that original Teller County Report, we would be happy to share it with you.

Comment 5 Within Exhibit B, you have stated there are no structures within 200 feet of the permit area. Upon review of the Exhibit E maps, the eastern parcel boundary is located within approximately 60 feet of the proposed permit boundary and the southern parcel boundary is located within approximately 120 feet of the proposed permit boundary. Please verify there are no a fence lines along these boundaries. In the event a fence exists, please update Exhibit B and Exhibit E as required by Rule 6.3.2(b) and Rule 6.3.5(2)(b). In the event you are not the sole owner of these structures, please update Exhibit L as required by Rule 6.3.12.

Response: There is barbed wire fencing along the eastern and southern property boundaries which is owned and maintained by Mr. Pester. Both exhibits have been updated.

Exhibit C Mining Plan (Rule 6.3.3)

Comment 6 Within the Mining and Reclamation Plans, you have indicated there is limited to no further topsoil available to be salvaged and based on the age of the original operation, most of the original topsoil was not salvaged. Please provide an estimate of the volume of topsoil that is currently stockpiled on-site (as observed along portions of the eastern and southern permit boundaries).

Response: There permit area contains two low ridges along the east side of the pit where it appears that poor quality granitic soil has been dozed and stockpiled. The total volume of these two piles is estimated to be about 1,500 cubic yards, and is sufficient to provide cover to a little less than one acre. The south area, which was observed by the inspector contains material of unknown origin. The surface of that material is currently supporting limited vegetation, but the quality and composition of the underlying portions are not visible and are unknown. The engineer does not currently consider this material to be classifiable as stockpiled soil and instead it might be some marketable product that was awaiting sales. If in the future, it is determined that it is not for marker, and that it might be suitable as growth media that can be beneficially used on the site, the Engineer might recommend that it be retained for that use.

Comment 7 Within Exhibit C, you have stated that precipitation has been, and will continue to be retained, on-site and will infiltrate into the permeable subsurface. Upon review of the existing and proposed final reclamation topography contours provided on the Exhibit E and E-1 Map, there appears to be a low spot in the north-northeast portion of the permit area which could allow storm water to leave the disturbance area. Please describe the measures that will be taken to ensure storm water is retained on-site and off-site sedimentation is prevented.

Response: Thank you for reminding us of this inadvertent drafting error. The design includes a shallow temporary holding pond area having a depth of three feet located at the northeast corner of the leveled area. Based on historical data, approximately 5 acres of surface was disturbed previous to the development of regulations regarding storm water runoff. As a result, sufficient storage is now required to retain the runoff generated from the subsequent 4.9 acres of disturbance that occurred after regulations were adopted. The 10-year 24 hour storm event is shown to produce 2.47 inches of total precipitation, and the SCS Runoff Curve Value (CN) for disturbed ground is 52. Using these values, the calculated runoff generated from the 4.9 acres is 22,700 cubic feet of water, and the pond volume is designed to contain 30,000 cubic feet with a holding capacity of one hundred and thirty percent of this calculated runoff volume. The shallow design will allow the storm surge to be contained, and the porous granite bottom will allow rapid drainage.

Comment 8 Within Exhibit C, you have stated explosives have been used as needed in the past and are anticipated to be used in the future. Upon review of the permit files, the Division has not previously approved the site for blasting. Please submit a Blasting Plan in accordance with Rule 6.3.3(p) and demonstrate that offsite areas will not be adversely affected by blasting.

- Response: To our knowledge, only on rare occasions have explosives been used at this site, thus there has never been any need for a blasting permit or plan. If any blasting is to be done in the future, it will also be on the same intermittent basis, and the work will be performed by an outside blasting contractor that will hold proper licenses and credentials, with work performed to that contractor's specifications. This, a blasting plan is not appropriate or necessary for this site.

Exhibit D Reclamation Plan (Rule 6.3.4)

Comment 9 Within Exhibit D, you have proposed to modify the approved maximum reclamation slope gradient of 3H:1V by leaving existing mined slopes in the western and northwestern portion of the site at their current gradient, which ranges from 1.1H:1 to 2.5H:1V. This modification will allow a larger flat area to be achieved in the central portion of the permit for the intended new proposed post-mining land use. You state that these slopes have been determined to be stable. In accordance with Rule 6.5(2) and (3), please provide an engineering stability analysis for these proposed final reclamation slopes and demonstrate off-site areas will be protected from a possible slope failure through appropriate geotechnical and stability analyses with appropriate factors of safety incorporated into the analysis. Please refer to Table 1 for the recommended minimum factors of safety for slope stability analyses within Mined Land Reclamation Board Policy 30.0 – Factors of Safety for Slope Stability/Geotechnical Analyses (enclosed).

Response: A Slope Stability Analysis has had been performed and is attached.

Comment 10 In addition to the analyses discussed above, please provide information on how loose material will be removed from slopes prior to final reclamation to ensure the final slope is competent. Additionally, please discuss if the final slope will need to contain safety catchment bench(es) to prevent any unraveling material from reaching the post-mining level area that will be used for the storage of agricultural equipment, buildings, and enclosures.

Response: Detailed inspection of the site found that the massive granite has no major fracturing or faulting and produces dominantly grus, generally made up of fragments with a small particle size of less than 4 inches. This is typified on the north face of the pit. The internal angle of friction for these angular particles can be up to 48 degrees, which exceeds the maximum slope angles that are anticipated to remain at the end of the permit. Detailed review of the current pit shows this mechanism to be the dominant erosive process in that area with 1:1.5 (H:V) slopes, and as such, current movement tends to be more by creep than by rock fall. The north center to west edge of the pit currently contains some remnant particles having greater dimensions and the potential to travel down the face as a fall. These rocks must have been left inadvertently by the previous operator, and per good workmanlike practice, it is up to the current operator to provide a safe environment when work is occurring on the site. The operator will carefully inspect the working area and will remove any hazards that he might find prior to personnel entering. This ongoing housekeeping will keep the pit safe for the persons working there while the site is in operation, and this same diligence practiced during the life of the permit will result in safe slopes for post-mining activities.

Construction of "benches" are considered unnecessary at this site, and their installation would distract from the potential beauty of the west pit wall as a backdrop for the leveled area. As the slopes have been modeled to be stable, the only materials that are anticipated to move will be small particles released by natural weathering processes. These materials require no berm and are to be handled as in normal standard practice for any other mountain property and local roadway. It is advisable that an appropriate spacing be preserved between the base of any hillside slope, and that sufficient space be left to allow the use of small powered equipment to travel between any built structure and the base of the slope for maintenance. This distance is generally considered to be 8 to 10 feet. It is recommended that the owners of this property, as it applies to all mountain properties and mountain roads, periodically inspect their property and keep up on maintenance.

Comment 1 The reclamation seed mixture you have provided within Exhibit D contains smooth brome and crested wheatgrass. Based on the aggressive nature of these introduced species, these are typically no longer recommended for mine reclamation seed mixtures. Please provide alternative species to replace these two species within the proposed reclamation seed mixture. Based on the list you provided in Exhibit D of *Reclamation Species Suitable for the Cripple Creek Area*, slender wheatgrass or pubescent wheatgrass and mountain brome may be an appropriate alternative species to smooth brome and crested wheatgrass. If needed, the Division recommends you contact the Teller-Park Conservation District for assistance with a recommended reclamation seed mixture.

Response: The current recommended reclamation mix is consistent with the species that have been listed by multiple agencies in the past, and there are no current bans on using them. This

property owner has a background in agriculture, knows and specifically wants to plant these species on his land, since he has relied on them in the past for both pasture grass and hay. Both species make good livestock feed and their yields are generally greater per acre in this area than for other grasses. Notice that many of the areas to the east of the permit have a well-established covers of both of these species and those species have been welcomed by those agricultural operators.

The goal of reclamation is to establish a healthy root base as quickly as possible, thus preferable species are the ones that establish themselves the fastest and can quickly leave the highest residual carbon in soil. In contrast, DRMS is now recommending that other species be substituted that will increase the time required to achieve reclamation goals, potentially extend the period where the surface is subject to erosion, and likely increase reclamation costs. It has been our experience that once a suitable vegetative cover is achieved, alternate species can easily be introduced later if desired by the landowner. At this time, the landowner specifically wants these two species included in the mix for his agriculture operation.

Comment 12 Within Exhibit D, you have stated that mulching is not recommended for this site and will not be used as part of reclamation. Upon review of the approved reclamation plan, straw mulch was recommended on reclaimed slopes at a rate of 4,000 lbs/acre. Please provide a technical justification for the downgrade in the reclamation plan and provide information on how the areas which received topsoil will be stabilized until revegetation occurs.

Response: As in comment 11, DRMS has changed its recommendations regarding grass species, and similarly the Engineer recommends changes in mulching practice. Review of the original plan, produced a conclusion that very little thought had been given regarding whether mulching might actually even be beneficial for reclamation of this site. Typically, we find that mulching is useful for more fine grained soils than in the grus located at this site. Straw is best utilized if it can be crimped into the soil, usually by disking. Coarse grained granular soils contain a deficiency of fines for the mulch to adhere to, do not disk well, and contain insufficient surface moisture at the mulch-rock interface. These issues result in poor adhesion and little moisture retention which is necessary to establish initial plant growth. Lastly, since the Divide area experiences such high winds on a regular basis, if the straw cannot be bound to the soil surface, it can blow away onto neighboring properties with the potential of creating additional conflicts between neighbors. It is recommended that instead of using straw, that the three essential rules to successful reclamation be followed. The first is to select the proper species that will grow rapidly and thrive in the given environment. The second is to make sure that the planted seed is covered to limit consumption by wildlife, and to maximize amount of seed available for germination. The third is to follow the standard practices used by the agricultural community and plant at the proper time. If DRMS has other information or ideas that might result in straw being more advantageous at this site, they are welcome them.

.

Comment 13 In accordance with Rule 6.2.1(2)(d), the Division requests that at least one map provide the latitude/longitude coordinates of each permit boundary corners. This information will be utilized in the review of the permit application, assist the Division in conducting future inspections of the operation, and provide a more thorough permit file. In lieu of updating one of the maps, you may also provide a simple table with the requested coordinates, however please link the numbered boundary corners (Cor 1 – Cor 27) to their respective coordinates on the table.

Response: A table showing coordinates of the permit boundary corners is attached as Colorado State Plane COS83 (HARM)sft, per Rule 6.2.1(2)(d).

Comment 14 As required by Rule 6.3.5(2)(c) and (d), please update the Exhibit E Map to outline and label all major surface features to be used in connection with the proposed operation and indicate the direction that construction material extraction will process.

Response: There are no existing surface features that will be used in connection with mining and as the currently disturbed area nearly exactly matches the future disturbed area, there is little alternative but to mine downward. The words "Mining will be Downward" have been added to Exhibit E map.

Comment 15 In accordance with Rule 6.3.5(2)(b), please update the Exhibit E-1 Map to show the area where topsoil and seeding will occur versus the area where vegetation will not be established.

Response: At this time, sufficient material exists on the site to place a topsoil to cover less than one acre of the total 9.9 acres that will be disturbed. The design calls for the north, and center to northwest portion of the pit to remain as decorative exposed rock. On the west and southwest sides of the pit, the walls are partially covered with grass and pine trees, and as can be seen on Exhibit Map E-1 are approximately currently in the same configuration as they will be when reclamation is completed. The south face has some material located along it which may or may not be suitable for growth media. At this time it is not possible to accurately determine where the existing stockpiled soil might be best put to use. Based on current information, it will most likely best be used either near its present location along the east side of the pit, or distributed along the southeastern edge on the level bottom. The notation has been added to Exhibit E-1.

Comment 16 Following a conversation between you and the Division and then between the Colorado Dept. of Transportation (CDOT) and the Division, the Division has become aware that you have applied for a required CDOT access permit for accessing the operation by an existing access road to Highway 24 from the southern of the permit boundary. Please update Exhibit F by listing that a CDOT access permit is required.

Response: Discussions with Colorado Dept. of Transportation (CDOT) have been terminated regarding any upgrades or modifications of the access. CDOT has completed it maintenance for the year including repair to paving, and signage and the owner is satisfied with the current access. Thus, no changes to the historical access are contemplated in the near future, and no new permits are going in process.

Comment 17 Any changes or additions to the application on file with the Division, must also be reflected in the public review copy. Please submit proof that the public review copy has been updated with a copy of the response to this adequacy letter.

Response: Changes will be filed with will the Teller County Clerk and Recorder and proof forwarded to DRMS.

Glen Johnson Site 1

Colorado 110 Limited Impact Mining Permit
The operation will extract less than 70,000 tons of material per year

Exhibits
(in accordance with Rule 6.3)

July 29, 2023
Rev 1 November 24, 2023

EXHIBIT A- LEGAL DESCRIPTION

(6.3.1)

The affected land is located in Teller County, Colorado on patented fee lands shown below.

Located in SE ¼ SE ¼ Section 33, and SW ¼ SW ¼ Section 34, T.12S, R.69W, 6th P.M.

Coordinates: 38° 57' 30" N Latitude and 105° 6' 10" W

TOTAL AREA CONTAINED WITHIN PERMIT 9.9 ACRES

EXHIBIT B- SITE DESCRIPTION

(6.3.2)

(a) The affected land - Prepared by USDA Soil Conservation Service

Upson-Edloe Complex, 5 to 65% slopes.

The moderately sloping to very steep soils are on mountain slopes at elevations between 8,500 to 10,500 feet. The average annual precipitation is about 18 to 22 inches and the annual air temperature is about 38 degrees Fahrenheit. The Catamount soil makes up about 45% of the mapping unit and the Edloe soil is about 35%. The Catamount soil has a larger volume of coarse fragments in the profile than the Edloe soil. About 20 percent of the unit is Juliet sandy loam Pierian gravel sandy loam and Rock outcrop. Most of the Edloe soils are on north-facing slopes. Catamount soil is shallow and excessively well drained. If formed as a residuum of Pikes Peak granite. Typically, the surface layer is brown gravelly sandy loam about 34 inches thick. The underlying layer is light brown very gravelly sandy loam about 9 inches thick. Gruss (highly weathered granite) is at a depth of about 13 inches. Permeability is rapid to very rapid. Effective rooting depth his 10 to 20 inches. Available water capacity is low. Surface runoff is slow to medium and erosion is high. The Edloe soil is moderately deep and well drained. It formed as a residuum of weathered Pikes Peak granite. Typically the surface layer is light grey gravely sandy loam about 5 inches thick. The underlying layer is pink to brown gravelly sandy clay loam about 6 inches thick. The subsoil is light brown or light reddish brown, gravelly sandy clay loam about 16 inches thick. The subsurface is brown gravelly sandy clay loam about 7 inches thick. Granite bedrock is at a depth of 34 inches. The Edloe soil has a moderate permeability. Effective rooting is 20 to 40 inches. Available water capacity is moderate. Surface runoff is slow to medium and erosion hazard is slight to moderate.

Brikert loam 2% to 8% slopes

This is a deep well drained soil formed in alluvium fan material derived from granite. Elevations are about 8,500 to 10,000 feet. The average annual precipitation is 15 to 22 inches and average annual air temperature is about 40 degrees Fehrenheit. Typically the surface layer is very dark greyish brown loam about 9 inches thick. The subsoil is brown heavy clay loam or clay about 37 inches thick. The substratum is brown clay loam in the upper part and brown sandy clay loam in the lower part to a depth of 60 inches. The Brinkert soil has a moderately slow permeability. Effective rooting depth is 60 inches or more. Available water capacity is high. Surface runoff is medium and erosion hazard is slight to moderate.

Current review of the latest USDA soil map shows that the entire permit area is located on Catamont (now Catamont-Guffy Complex) with slopes ranging from 15 to 40 percent. Field mapping has found that some of the topographic surfaces near the Permit area in actuality have slopes of greater than 70 percent. The soil within and adjacent to the permit area is referred to as gruss, a soil that consists mostly of semi-rounded fragments

of eroded Precambrian Pikes Peak granite. In the more level valley bottoms that are less subject to erosion, the mineral constituents of the granite can break down to make productive soils. The economic use of the area, prior to mining was limited to stock gazing, and as more people have immigrated to Colorado, additional uses now include home sites, recreation, and businesses. .

(b) The permit area has been a gravel pit for over 60 years and at least 20 years prior to Colorado enacting the current reclamation laws. Thus, the pit itself is a historic relic. There are no current historic buildings or permanent structures on the site, and no structures within 200 feet of the permit area except barbed wire fencing located along the east and south boundaries. The fence is owned and maintained by the owner of the permit..

(c) The permit area is located on the top of a mountain in which the center has been partially cut away. There are no streams, springs, lakes, stock water ponds, ditches, or reservoirs, within the permit area, and none nearby that would receive any increased drainage caused directly by mining from within the affected area. There is no regularly defined aquifer in the general area, and subsurface waters are limited to and directed by cracks and fractures within the granite.

(d) The operation has historically had no significant impact on wildlife over its last 60 years of operation, and future operation is expected to have no greater impact. The use by larger foraging animals in the general area is anticipated to remain generally unchanged from routes used prior, and will cause little to no change to animals that burrow or roost in the immediate area. Wildlife anticipated to be in the general area includes species of large mammals: mule deer, elk; small mammals: rodents, raccoon, cottontail rabbit, skunk, fox, coyote and ground squirrels; and various resident and seasonal birds including songbirds, raptors and other birds: mountain chickadee, junco, raven, mountain jays, hawks, flicker, magpie, humming birds, and owls. The permit is not a 110(d).

EXHIBIT C- MINING PLAN

(6.3.3)

(1)(a) The mine is currently in production and is produced on an as needed basis. The projected closure for the site is December 31, 2045. As it relates to the life of mine, and under provisions of Section 34-32.5-103(11)(b), C.R.S, if construction material reserves are shown by the operator to remain in the operation and the operator plans to, or does, temporarily cease production for one hundred eighty days or more, if such operator files a notice with the board stating the reasons for nonproduction, a plan for the resumption of production, and the measures taken to comply with reclamation and other necessary activities as established by the board to maintain the operation in a nonproducing state. The requirement of a notice of temporary cessation shall not apply to operators who resume operating within one year and have included in their permit applications a statement that the affected lands are to be used for less than one hundred eighty days per year. This mine is anticipated to operate less than 180 days per year.

(1)(b) The original thicknesses of the "A and B Horizon" soils likely originally ranged from 0 inches to about 12 inches across the permit area, and whatever topsoil that once existed was likely removed prior to the establishment of reclamation practices as defined in the regulations originating with the Surface and Mining Control Act of 1977. At the current time, there is no soil cover over the majority of the permit area. In the future, if any soils are found, care will be taken to stockpile them so that they can be available for use in future reclamation. All long-term soil stockpiles will be stored safely away from traffic, with their surface graded and seeded with a reclamation grass mix to help preserve the physical characteristics of the material and to minimize any erosion.

(1)(c) The site was specifically chosen since it had no overburden or waste rock. Thus, there is no waste rock, nor any waste stockpiles, and none are anticipated in the future. No waste rock piles are shown on Figure E.

(1)(d) The deposit is many thousands of feet thick, but it is anticipated that the maximum mining depth will be not more than 30 feet below the bottom of the existing pit.

(1)(e) As this is a gravel-aggregate operation, mining consists of removing rock. The rock has historically been ripped using a large dozer or excavator, and blasted as necessary, with the rock then being loaded into trucks for export using a loader. Current and future methods will be similar. Ancillary items on site might include an on-site scale and scale house, and onsite mobile office if needed, along with equipment necessary to conduct operations. All will be mobile so they can be moved as the mining of the pit proceeds. The existing access road from Highway 24 will be used to access the permit area.

(1)(f) The Exhibit Map E shows the area that has been disturbed within the permit boundary, along with the access road that leads from the permit area south to Highway 24. The area contained within the permit area is 9.9 acres, and the pit is roughly circular having a radius of a little over 150 feet. The current pit and immediately surrounding area is shown overlain on a 2-foot topographic contour map. There are no permanent impoundments nor waste rock stockpiles.

(1)(g) There are no roads within the permit area, thus no roads to improve. Access is from an existing road leading from the south end of the permit area to Highway 24. The road is a private access road used by the landowner and by the permit owner to access his property and the permit area. Maintenance of the road is the responsibility of the landowner since it is not within the permit boundary.

(1)(h) Historically no water has been used at this operation beyond drinking water for people working on the site. It is anticipated that these people can bring their own water from their homes or can procure it from the local Safeway store. It is not anticipated that any additional significant use of water will occur in the future.

(1)(i-j) The nearest water well is located approximately 500 feet to the southeast and has a collar elevation similar to the elevation of the current bottom of the pit. The well was drilled to a depth of 320 feet and the driller reported static water at 48 feet below the surface. Thus, the anticipated depth to static water should be at approximately the same depth below the current pit bottom within the permit area. The nearest intermittent stream is located greater than 300 feet distant northwest beyond the permit area and beyond the remaining part of the mountain. As discussed above, most precipitation has been and will continue to be retained within the permit area, where it infiltrates into the permeable subsurface. Since there is no groundwater to be encountered, and no discharge to surface waters, there is no conflict with current Colorado water laws.

(1)k-l) The operation is located in granite rocks that are similar to those located on the top of Pikes Peak, and neither the rocks on top of Pikes Peak, nor rock at the permit area have been found to be acid generating. Per standard good workmanlike practice, and as has occurred previously on the site, refuse generated by the project will be properly disposed of. Since there is no groundwater to be encountered, and no discharge to surface waters, there is no conflict with current Colorado water laws.

(1)(m) Processing of the material, as defined in Rule 1 of Mineral Rules and Regulations is interpreted to include in this case only excavating of the material, loading it in trucks and

transporting it across the permit area. There are no permanent structures to be located on the site, nor are any chemicals to be used.

(1)(n) Rock, and only rock, has been or are anticipated to be removed. Depending on the requirements of the user, the rock can be crushed and sized. Historically, any crushing or screening has been done on an as-needed basis and has incorporated the use of portable equipment. The same is to occur in the future.

(1)(o) Explosives have been used as needed in the past, and are anticipated to be used on an as needed basis in the future. Explosives have been used historically in Teller County for mining for over a century with no reported adverse effects. Mining is regularly conducted using explosives at the large open pit mine located east of Cripple Creek and North of Victor. This operation regularly sets off blasts consisting of several tons of explosives with no negative effects on these adjacent properties or nearby towns. The towns of both Victor and Cripple Creek are located within one-half mile from these regular occurring blasts.

U.S. Bureau of Mines set the established safe zone acceleration of 2.0 inches per second per second, as the level of vibration below which damage to a residential structure in a reasonable state of repair is unlikely to occur. Any work at the site would make sure that it adheres to these standards and would be conducted and monitored as necessary by competent trained individuals.

(2) Neither milling nor tailings are part of the process, thus no discussion is necessary.

EXHIBIT D- RECLAMATION PLAN

(6.3.4)

Reclamation of the disturbed area will occur following completion of the operation. Earlier reclamation might occur in areas that might have reached completion depth and are no longer needed for mining or access. The area is currently zoned as agricultural, and the final use will be to maximize level the area available for the storage of equipment, and agricultural related buildings and enclosures. Since the area is experiencing an influx of new people and development, the leveled area might later become an attractive site for commercial and/or residential purposes.

(a) Both historically and currently, no overburden is removed from the site, thus no overburden will be replaced.

(b) Regulations suggest that reclaimed hillside slopes not exceed 1 to 3 (V:H). However, the native hillsides in the vicinity of the permit area naturally exceed this slope and are stable. The final use of the area will require as much level surface as possible. The western and northwestern granite walls of the pit have been previously cut to slopes ranging from 1 to 2.5 (V:H) to 1 to 1.1 (V:H) and have been determined to be stable. Current pit slopes along the eastern portion of the pit range from 1 to 2 (V:H) to 1 to 3 (V:H). Natural hillside slopes located immediately to the west range from 1 to 1 (V:H) to 1 to 2.0 (V:H) and are stable. The granite rock has sustained these natural slopes over millions of years and will continue to sustain both the natural and created slopes.

The western and north-western area of the mined area will be finished to incorporate those steep slopes so as to create a picturesque backdrop for the site. The eastern and southern edge of the pit will be graded with more gentle slopes ranging from 1 to 2 (V:H) to 1 to 3 (V:H). At the time of reclamation, any topsoil that has been collected will be used as cover and as seed bed to support grasses. As very little grass originally existed at this site, there has been very little topsoil available. Therefore, certain areas will be selected on the south and east sides where the limited topsoil will be used to landscape and beautify the permit area prior to conversion to final use.

The bottom of the pit is to be leveled, graded, and finished using the natural pit material. This material will make an excellent finished working surface. The access road will remain the access to the property after mining has ceased.

(c)(i) The site has been a mine since prior to the requirement of permitting for a mine in Colorado, and was originally operated without current reclamation rules. The top of the mountain where mining started likely contained little original soil, and what little soil existed consisted mainly of gruss, which was hauled away as a component of other products used from the site. The original pit size was mapped in 1993 and was shown to be just over 6 acres. Subsequent to 1993, it appears that no significant amounts of soil were found during expansion. Therefore, there is either

no, or very little soil or plant growth medium available on the site. Upon reclamation, whatever soil or growth media is found, is to be used within selected limited areas, and is to be placed at a thickness ranging from 6 to 12 inches.

(c) (ii) It is anticipated that placement of the limited soils and seeding will be performed at the conclusion of mining. Only the edges of the mined out pit will be considered for the placement of soils and seeding, and since the gravel-surfaced level bottom area will be put to beneficial use, and any grass planted in that area would be a nuisance and could produce potential fire hazards for vehicles having catalytic converters.

Seed bed preparation, is to be performed by moving material from soil stockpiles to the point of placement and then seeded using the approved seed mixture. The seed will hand broadcasted as appropriate and will be covered by hand raking or by harrow methods. Experience shows that covering of the seed results in a higher number of sprouts per pound of seed sowed. The seed mix recommended will be sowed at a rate of not less than 10 pounds per acre, or per supplier's recommendations. Reclamation mats or netting might be used to assist vegetation if deemed necessary by the engineer. Seed will be applied in early spring or late fall to maximize the germination rate and to increase the success of the revegetation. A list of typical species that have been shown to grow in the area includes the grasses, forbes and shrubs shown below. The use of fertilizers is not anticipated to be necessary to obtain reclamation objectives.

(c)(iii-iv) The local soil conservation district is selling what they term a "Teller-Park Dryland Pasture and Stabilization Mix" that contains three species of Wheatgrasses, Meadow Brome, Ryegrass, and an Orchard grass. This mix of grasses is listed in Exhibit D. Their goal is to produce a shotgun approach for reclamation, and the seed mix that contains members of these species will likely be suitable with just a few species dominating the final vegetative cover. The listed mixture is the current recommended mix, and in the future, that mixture might be modified if the soil conservation district believes that another species might be more beneficial. If they find that one or more of the grasses have performed well in previous reclamation programs in the area, it might be recommended that a particular grass over others be used. It also might be that DRMS has experience with other mines in the area that have the same hillside slopes, rock types, and exposures, and can provide additional input based on their experience. The common goal of both the regulators, the engineer, and property owner is to establish the best suitable vegetative cover in the least amount of time.

RECLAMATION SPECIES SUITABLE FOR CRIPPLE CREEK AREA

Grasses	
Parry's oatgrass	*Danthonia paryi*
Slender wheatgrass	*Elymus trachycaulus ssp. Trachycaulus*
Pubescent wheatgrass	*Thinopyrum intermedium*
Crested wheatgrass	*Agropyron cristatum*
Ryegrass	*Poaceae lolium*
Sheep fescue	*Festuca ovina*
Orchardgrass	*Dactylis glomerata L.*
Timothy	*Phleum pretense*
Mountain brome	*Bromus marginatus*
Smooth brome	*Bromus inermis*
Wild ryegrass	*Elymus canadensis*
Canada bluegrass	*Poa compressa*
Idaho fescue	*Festuca idahoenis*
Forbes	
Rocky Mountain penstemon	*Penstemon strictus*
Cider milkvetch	*Astragalus cicer*
Sainfoin	*Onobrychis viciaefolia*
Yarrow	*Achillea millefolium*
Fringer sagwort	*Artemsia frigida*
Lewis Flax	*Linum lewisii*
Shrubs	
Shrubby cinquefoil	*Potentilla fruiticosa*
Squaw current	*Ribes cereum*

SPECIFIC RECOMMENDED SEED MIX FOR SITE

Seeding rates generally range up to 10 pounds of seed per acre are applicable for various species. In contrast, Canadian bluegrass has the smallest seed diameter of those for the listed grass species, thus the lowest application rate of about 4 to 5 pounds per acre for planting that single species. When multiple grasses are sown, the application rate is reduced into the range of 1.5 to 2 pounds of seed per acre per species. This application rate typically allows 5 to 6 different species of grasses to be mixed. At a recommended seed rate of 10 pounds per acres, the calculated weight of pure live seed in the mixture is as follows:

Wildrye - 2 pounds per acre
Intermediate wheatgrass - 2 pounds per acre
Smooth brome – 2 pounds per acre
Slender wheat - 1 pound per acre
Crested wheat - 1 pound per acre
Perennial ryegrass – 1 pound per acre
Orchardgrass – 1 pound per acre

(c)(v) Mulching is not recommended for this site and will not be used as part of reclamation.

(c)(vi) There will be no trees or shrubs beyond that contained in the standard seed mix, planted as part of the reclamation.

(d) The site contains no ponds, streams, and no permanent buildings and none are anticipated through the life of the project.

(e) There are no waste rock dumps, tailing impoundments, underground mine openings, ditches, sediment control facilities, buildings and other features on the site.

(2) RECLAMATION COST ESTIMATE

Reclamation costs are calculated using local contractors and prices. The bottom of the pit is to be graded approximately to the contours shown on Exhibit E-1, and the western and northwestern portion of the pit walls will be left approximately at as is as backdrop landscaping for the site. At the time of reclamation, the amount of topsoil on site will be evaluated and areas of the south and eastern edges of the pit will have soil installed, the total area being re-soiled being dependent on the amount of soil or growth media available. The assumptions for costing include that work will be performed using an excavator 312 Caterpillar or equivalent, a Caterpillar Model 212 grader, or equivalent, a wheel-loader sized at 2 cubic yards or greater, 12-yard dump truck, and a 4-Trax with harrow for covering seed. Other equivalent manufacturer's equipment can be substituted. Cost includes fuel, lubricants, operator wages and benefits, and equipment depreciation. It is assumed that the equipment and contractor are located within 20 miles of project area.

<u>Grade level area (4.5 acres)</u>

Produce finish grade on pit bottom (4.5 acres) - Dozer 4 hrs at $175/hr	$ 700
Shape and finish west - north pit walls (3.3 acres) – Excavator 8 hrs at $175/hr	$ 1,400
Dozer – 4 hrs at $175/hr)	$ 700
Shape and finish east - south pit walls (2.1 acres) - Dozer – 12 hrs at $175/hr)	$ 2,100
Plant grass on east-south pit walls (2 acres) at $2,500/acre	$ 2,500

Removal of refuse and debris	$ 500
Mob/Demob	$ 1,500
SUBTOTAL	$9,400
Contingency (23.5%)	$ 2,209
TOTAL COST (Rounded to nearest $100)	**$11,600**

EXHIBIT E - MAPS

Mining Plan Map E

Reclamation Plan Map E-1

EXHIBIT F
LIST OF OTHER PERMITS & LICENSES REQUIRED

1) MSHA Safety (Personal)
2) Conditional Use Permit Teller County
3) State Historical Preservation Office. No historical buildings within permit area - Will work with office at time of closure to retain historic mining appearance
4) Colorado Department of Public Health and Environment (CDPHE) - Storm Water Runoff Permit - No permit required

EXHIBIT G
SOURCE OF LEGAL RIGHT TO ENTER

The permit area is owned by Craig and Laurie Pester, 116 Homestead Drive, Woodland Park, Colorado 80863

Deed Attached

754606
10/03/2022 12:26 PM Total Pages: 6
Doc Fee: $80.00,Total Fees: $118.00
Krystal Brown, Clerk and Recorder, Teller County, CO

Order No.: 310-F15571-22

FNTC
Doc Fee: $80.00

GENERAL WARRANTY DEED

THIS DEED, Made this 13th day of September, 2022, between

Jerald Glen Johnston,

grantor, and

Craig S. Pester and Laurie E. Pester, as joint tenants

whose legal address is 116 Homestead Dr., Woodland Park CO 80863

grantees:

WITNESS, That the grantor, for and in consideration of the sum of **Eight Hundred Thousand And No/100 Dollars ($800,000.00)**, the receipt and sufficiency of which is hereby acknowledged, has granted, bargained, sold and conveyed, and by these presents does grant, bargain, sell, convey and confirm, unto the grantees, their heirs and assigns forever, all the real property together with improvements, if any, situate, lying and being in the County of TELLER, State of COLORADO, described as follows:

SEE EXHIBITS
A, B, C

also known by street and number as Vacant Land, CO

TOGETHER with all and singular the hereditaments and appurtenances thereunto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof, and all the estate, right, title, interest, claim and demand whatsoever of the grantor, either in law or equity, of, in and to the above bargained premises, with the hereditaments and appurtenances.

TO HAVE AND TO HOLD the said premises above bargained and described, with the appurtenances, unto the grantees, their heirs and assigns forever. And the grantor, for themselves, their heirs and personal representatives, does covenant, grant, bargain and agree to and with the grantees, their heirs and assigns, that at the time of the ensealing and delivery of these presents, they are well seized of the premises above conveyed, has good, sure, perfect, absolute and indefeasible estate of inheritance, in law, in fee simple, and has good right, full power and lawful authority to grant, bargain, sell and convey the same in manner and form as aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, taxes, assessments, encumbrances and restrictions of whatever kind or nature soever, except for taxes for the current year, a lien but not yet due and payable, subject to statutory exceptions as defined in CRS 38-30-113, revised.

The grantor shall and will WARRANT AND FOREVER DEFEND the above bargained premises in the quiet and peaceable possession of the grantees, their heirs and assigns, against all and every person or persons lawfully claiming the whole or any part thereof.

The singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

IN WITNESS WHEREOF, the grantor has executed this deed on the date set forth above.

GRANTOR:

Jerald Glen Johnston

STATE OF COLORADO
COUNTY OF Teller

EXHIBIT "A" (Pester New Parcel)

Legal Description

A TRACT OF LAND LOCATED IN THE SOUTHEAST ONE-QUARTER (SE1/4) OF SECTION 33, BEING A PORTION OF THAT TRACT OF LAND AS RECORDED UNDER RECEPTION NO. 173512 OF THE RECORDS OF THE TELLER COUNTY CLERK AND RECORDER, AND A PORTION OF THE SOUTHWEST ONE-QUARTER (SW1/4) OF SECTION 34 AS DESCRIBED IN DEED RECORDED IN DRAWER 20, CARD 457 UNDER RECEPTION NO. 248439 OF SAID COUNTY RECORDS, ALL IN TOWNSHIP 12 SOUTH, RANGE 69 WEST OF THE 6th P.M., TELLER COUNTY, COLORADO, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A REBAR AND YELLOW CAP STAMPED "LS 1 094" AT THE NORTHWEST CORNER OF THAT TRACT OF LAND AS RECORDED IN SAID DRAWER 20 AT CARD 457 UNDER RECEPTION NO. 248439, SAID POINT ALSO BEING THE SOUTHWEST CORNER OF LOT 1, WOODLAND WEST, FILING NO. 1 AS RECORDED IN PLAT BOOK H AT PAGES 3-6, UNDER RECEPTION NO. 256162 OF SAID COUNTY RECORDS, FROM WHICH A 2-1/2" BRASS CAP BY THE U.S. GENERAL LAND OFFICE SURVEY AT THE SOUTHEAST CORNER OF SAID SECTION 33 BEARS S03°22'24"E, A DISTANCE OF 242 1.65 FEET AND IS THE BASIS OF BEARINGS USED HEREIN;

THENCE S61°03'26"E (S61°02' 15"E PER THAT DEED RECORDED UNDER RECEPTION NO. 581296 OF SAID COUNTY RECORDS) ALONG THAT LINE COMMON TO SAID TRACT OF LAND AND SAID WOODLAND WEST, FILING NO. 1, A DISTANCE OF 353.69 FEET (353.72 FEET OF RECORD) TO A REBAR AND 1-1/2" ALUMINUM CAP STAMPED "AAH LS 1094" AT THE COMMON CORNER OF SAID TRACT OF LAND, LOT 1 AND LOT 2 OF SAID WOODLAND WEST, FILING NO. 1;

THENCE S03°22'49"E ALONG THAT LINE COMMON TO THAT TRACT AS RECORDED UNDER SAID RECEPTION NO. 248439 AND SAID RECEPTION NO. 581296, A DISTANCE OF 1728.22 FEET TO THE SOUTHERLY CORNER THEREOF, SAID POINT ALSO BEING A POINT ON THE NORTHERLY LINE OF THAT TRACT OF LAND AS RECORDED IN DRAWER 20 AT CARD 180, UNDER RECEPTION NO. 248109 OF SAID COUNTY RECORDS;

THENCE S75°49'48"W ALONG THAT LINE COMMON TO SAID RECEPTION NO. 248439 AND SAID NORTHERLY LINE, A DISTANCE OF 249.88 FEET TO THE NORTHWEST CORNER THEREOF;

THENCE S03°09'11"W ALONG THAT LINE COMMON TO SAID RECEPTION NO. 248439 AND SAID RECEPTION NO. 248109 A DISTANCE OF 155.16 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY NO. 24, BEING THE NORTHWEST CORNER OF PROJECT CODE NO. 430 REV. AS MONUMENTED BY A 3-1/4" ALUMINUM CAP STAMPED "POINT NUMBER 4044 PLS 28276", COLORADO DEPARTMENT OF TRANSPORTATION RIGHT OF WAY PLANS, PROJECT NO. CXFC 43-0024-21, UNIT 4, AS DESCRIBED IN DEED RECORDED UNDER RECEPTION NO. 516268 OF SAID COUNTY RECORDS, ALSO BEING THE NORTHEAST CORNER OF PARCEL NO. 429 AS MONUMENTED BY SAID 3-1/4" ALUMINUM CAP OF SAID COLORADO DEPARTMENT OF TRANSPORTATION PLANS AS DESCRIBED IN DEED RECORDED UNDER RECEPTION NO. 518726 OF SAID COUNTY RECORDS.

THENCE S85°00'24"W (S84°45'51"W OF RECORD) ALONG THAT LINE COMMON TO SAID RECEPTION NO. 248439 AND SAID NORTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 35.89 FEET TO THE WESTERLY LINE OF SAID SECTION 34, SAID POINT ALSO BEING A POINT ON THE EASTERLY LINE OF SECTION SAID 33, A POINT ON THE EASTERLY LINE OF SAID RECEPTION NO. 173518, THE NORTHWEST CORNER OF SAID PARCEL NO. 429 AND THE NORTHEAST CORNER OF PARCEL NO. 428 REV. OF SAID COLORADO DEPARTMENT OF TRANSPORTATION RIGHT OF WAY PLANS AS RECORDED UNDER SAID RECEPTION NO. 518726 OF SAID COUNTY RECORDS.

THENCE ALONG THAT LINE COMMON TO SAID RECEPTION NO. 173512 AND SAID RIGHT-OF-WAY LINE THE FOLLOWING NINE (9) COURSES;

1.) THENCE S85°04'56"W(N85°06'49E OF RECORD), A DISTANCE OF 217.80 FEET (217.71 OF RECORD);

EXHIBIT "A"
Legal Description

2.) THENCE N65°53'37"W (S65°55'58"E OF RECORD), A DISTANCE OF 220.33 FEET (220.41 FEET OF RECORD);

3.) THENCE S89°44' 14"W (N89°44'46"E OF RECORD), A DISTANCE OF 405.92 FEET (405.96 FEET OF RECORD);

4.) THENCE N40°19' 14"W (S40°13'04"E OF RECORD), A DISTANCE OF 52.15 FEET (51.99 FEET OF RECORD);

5.) THENCE N68°09'33"W (S68°14'38"E OF RECORD), A DISTANCE OF 57.67 FEET (57.69 FEET OF RECORD);

6.) THENCE S81°01'40"W (N80°56'35"E OF RECORD), A DISTANCE OF 52.14 FEET (52.16 FEET OF RECORD);

7.) THENCE S65°34'39"W (N65°39'32"E OF RECORD), A DISTANCE OF 70.48 FEET (70.51 FEET OF RECORD);

8.) THENCE N84°45'04"W (S84°44'26"E OF RECORD), A DISTANCE OF 147.68 FEET (147.65 FEET OF RECORD);

9.) THENCE N72°58'55"W (S72°58'52"E OF RECORD), A DISTANCE OF 137.13 FEET;

THENCE N03°25'51"W A DISTANCE OF 2177.19 FEET TO A POINT ON THE NORTHERLY LINE OF SAID RECEPTION NO. 173512, SAID POINT ALSO BEING ON THE EAST- WEST CENTER LINE OF SAID SECTION 33 AND A POINT ON THE SOUTHERLY LINE OF THAT TRACT OF LAND AS DESCRIBED IN DEED RECORDED UNDER RECEPTION NO. 702871 OF SAID COUNTY RECORDS;

THENCE S89°58'54"E ALONG THAT LINE COMMON TO SAID RECEPTION NO. 173512, SAID EAST-WEST CENTER LINE, SAID RECEPTION NO. 702871 AND THAT TRACT OF LAND AS DESCRIBED IN DEED RECORDED UNDER RECEPTION NO. 702870, A DISTANCE OF 1298.56 FEET TO THE EAST ONE QUARTER CORNER OF SAID SECTION 33, AS MONUMENTED BY A GRANITE STONE, SAID POINT ALSO BEING AN ANGLE POINT ON THE WESTERLY LINE OF SAID LOT 1 AND THE MOST SOUTHERLY CORNER OF LOT 116 WOODLAND WEST, FILING NO. 5 AS RECORDED UNDER RECEPTION NO. 324455 OF SAID COUNTY RECORDS;

THENCE S03°22'24"E ALONG THAT LINE COMMON TO SAID SECTION 33, SAID SECTION 34, THE EASTERLY LINE OF SAID RECEPTION NO. 173512 AND THE WESTERLY LINE OF SAID LOT 1, A DISTANCE OF 204.68 FEET TO THE POINT OF BEGINNING,

COUNTY OF TELLER, STATE OF COLORADO.

EXHIBIT H
TOWNS WITHIN A TWO MILE RADIUS

The following towns are within a two-mile radius of the permit area:

There no town within a two-mile radius of the permit area.

EXHIBIT I
PROOF OF FILING WITH COUNTY CLERK

Memorandum

To: Teller County Clerk and Recorders Office
101 W. Bennett Avenue
Cripple Creek, Colorado 80813

From: Craig Pester
Glen Johnson Site 1
116 Homestead Drive
Woodland Park, 80863

Date: _____, 2023

RE: Colorado Division of Reclamation, Mining and Safety (DORMS) - Limited Impact Operation (110(2)) Application for Public Review

Craig Pester has filed an amended mining and reclamation permit application with the Colorado Division of Reclamation, Mining and Safety (DORMS). Pursuant to the requirements of the Colorado Mined Land Reclamation Act, please place the attached copy of the application somewhere in your office and available for public review if so requested. The document is **NOT TO BE FILED** or recorded and may be disposed of after November 15, 2023. Please call me at (402) 499-0344 if you have any questions regarding this matter.

Sincerely,

Craig Pester

EXHIBIT J

PROOF OF MAILING OF NOTICES TO BOARD OF COUNTY COMMISSIONERS AND SOIL CONSERVATION DISTRICT

NOTICE OF FILING APPLICATION
FOR COLORADO MINED LAND RECLAMATION PERMIT
FOR CONSTRUCTION MATERIALS LIMITED IMPACT (110) OPERATION
NOTICE TO THE BOARD OF COUNTY COMMISSIONERS
Teller COUNTY

Craig Pester, (the "Applicant/Operator") has applied for a Construction Materials Limited Impact (110) Reclamation permit from the Colorado Mined Land Reclamation Board (the "Board") to conduct the extraction of construction materials in Teller County. The attached information is being provided to notify you of the location and nature of the proposed operation. The entire application is on file with the Division of Reclamation, Mining, and Safety (the "Division") and the local county clerk and recorder.

The applicant/operator proposes to reclaim the affected land to Agricultural use. Pursuant to Section 34-32.5-116(4)(m), C.R.S., the Board may confer with the local Board of County Commissioners before approving of the post-mining land use. Accordingly, the Board would appreciate your comments on the proposed operation. Please note that, in order to preserve your right to a hearing before the Board on this application, you must submit written comments on the application within ten (10) days after the date of the applicant's newspaper publication.

If you would like to discuss the proposed post-mining land use, or any other issue regarding this application, please contact the Division of Reclamation, Mining, and Safety, 1313 Sherman Street, Room 215, Denver, Colorado 80203, (303) 866-3567.

NOTE TO APPLICANT/OPERATOR: You MUST attach a copy of the application form to this notice. If this is a notice of a change to a previously filed application you must either attach a copy of the changes, or attach a complete and accurate description of the change.

COLORADO MINED LAND RECLAMATION PERMIT
FOR **CONSTRUCTION MATERIALS LIMITED IMPACT (110) OPERATION**
NOTICE TO THE BOARD OF SUPERVISORS
OF THE LOCAL CONSERVATION DISTRICT
Teller DISTRICT

Craig Pester, (the "Applicant/Operator") has applied for a Construction Materials Limited Impact (110) Reclamation permit from the Colorado Mined Land Reclamation Board (the "Board") to conduct the extraction of construction materials in County. The attached information is being provided to notify you of the location and nature of the proposed operation. The entire application is on file with the Division of Reclamation, Mining, and Safety (the "Division") and the local county clerk and recorder.

The applicant/operator proposes to reclaim the affected land to Agricultural use. Pursuant to Section 34-32.5-16(4)(m), C.R.S., the Board may confer with the local Conservation Districts before approving of the post-mining land use. Accordingly, the Board would appreciate your comments on the proposed operation. Please note that, in order to preserve your right to a hearing before the Board on this application, you must submit written comments on the application within ten (10) days after the date of the applicant's newspaper publication.

If you would like to discuss the proposed post-mining land use, or any other issue regarding this application, please contact the Division of Reclamation, Mining, and Safety, 1313 Sherman Street, Room 215, Denver, Colorado 80203,
(303) 866-3567.

EXHIBIT L - MAN-MADE STRUCTURES

The permit area contains no permanent man-made structures within the permit area, nor any fences that are not associated with the project, nor power lines or other utilities located on, or within 200 feet, of the permit area. There are no recognized geologic hazards in the area nor does the site contain any impoundments, high angle unstable slopes, high or unstable embankments, highwalls, or potentially unstable waste rock piles pile within the affected area. Therefore, no geologic hazards have been identified that require engineering evaluation.

Permit Boundary

Undisturbed Area

Disturbed Previous to 1982

Mining will be Downward

Cor 12
S83°20'W 281 ft
Cor 13
S71°38'W 146 ft
Cor 14
N37°39'W 98 ft
Cor 11
N32°41'W 48 ft
N68°37'W 16 ft
Cor 10
Cor 9
N45°13'W 52 ft
Cor 8
N58°42'W 149 ft
Cor 7
N20°27'W 30 ft
Cor 6
N79°36'E 46 ft
Cor 5
N33°33'W 38 ft
Cor 4
N33°33'W 105 ft
Cor 3
N7°24'E 273 ft
Cor 2
N84°39'E 179 ft
Cor 1
S4°8'E 447 ft
To SE corner S 33

Cor 15
S2°0'E 41 ft
Cor 16
S27°4'E 22 ft
Cor 17
S1°54'E 40 ft
Cor 18
S11°45'W 69 ft
Cor 19
S17°35'W 52 ft
Cor 20
S17°34'E 28 ft
Cor 21
S20°58'W 126 ft
Cor 22
S16°50'E 30 ft
Cor 23
S35°22'E 64 ft
Cor 24
S74°42'E 83 ft
Cor 25
S77°4'E 58 ft
Cor 26
S84°19'E 63 ft
Cor 27
S85°54'E 297 ft

Creek

Barbed Wire Fence

Craig and Laurie Pester
Jake Allen

Craig and Laurie Pester
Fredi Beck

Access Road

Craig and Laurie Pester
Highway 24--Colorado

Highway 24

Highway 24 Colorado

Sec 33 T12S R69W
Sec 34 T12S R69W
Sec 4 T13S R69W
Sec 3 T13S R69W

Exhibit Map E
Showing Existing Site with Improvements
Glen Johnson Site #1

Owner Address:
Craig Pester
116 Homestead Drive
Woodland Park, Colorado 80863

Owner Phone Number:
402-4990344

Property Description:
A parcel located in the SE1/4 SE1/4 Sec 33 and in the SW1/4 SW1/4 Sec 34 T12S R69W, 6th PM

Notes:
Mineral extraction will proceed downward
No manmade structures within 200 feet

EXPLANATION

Permit Boundary(bearings & distances)

Area of Disturbance 1993

Property Boundries

Craig Pester — Surface and Mineral Owner

Historic Mapped Pits, Adits and Shafts

Undisturbed areas shown by hatching

Permit corners marked with capped No 4 Rebar set one foot above surface

True North
Magnetic North
9°

Feet
0 30 60
SCALE 1"=60'

Contour Interval = 2 feet

ENGINEER'S CERTIFICATION

This report was prepared by the Engineer who's signature appears below under the engineer's direct supervision).

SIGNATURE:

No. 22601

DATE: July 28, 2023

COLORADO REGISTERED PROFESSIONAL ENGINEER

Exhibit Map E

braun

BRAUN ENVIRONMENTAL, INC.
355 South Teller Street Ste 200
Lakewood, COLORADO 80228
PHONE (303) 988-7697

Glen Johnson Site #1
Woodland Park, Colorado

Date: July 18, 2023 | Drawn by: Staff

Rev: 11/24/23 | Checked by: C.A. Braun

Permit Boundary

Stormwater Retentian Area

2% Grade

Limited Topsoil will likely be placed in this Area depending on need

Barbed Wire Fence

Craig and Laurie Pester

Jake Allen

Craig and Laurie Pester

Fredi Beck

Craig and Laurie Pester

Highway 24

Cor 1 — S85°54'E 297 ft — Cor 2
Cor 2 — N84°39'E 179 ft — Cor 1
Cor 2 — N7°24'E 273 ft — Cor 3
Cor 3 — N33°33'W 105 ft — Cor 4
Cor 4 — N33°33'W 38 ft — Cor 5
Cor 5 — N79°36'E 46 ft
Cor 6 — N20°27'W 30 ft — Cor 7
Cor 7 — N58°42'W 149 ft — Cor 8
Cor 8 — N45°13'W 52 ft — Cor 9
Cor 9 — N68°37'W 16 ft
Cor 9 — Cor 10
Cor 10 — N32°41'W 48 ft — Cor 11
Cor 11 — N37°39'W 98 ft — Cor 12
Cor 12 — S83°20'W 281 ft — Cor 13
Cor 13 — S71°38'W 146 ft — Cor 14
Cor 14 — Cor 15
Cor 15 — S2°0'E 41 ft — Cor 16
Cor 16 — S27°4'E 22 ft — Cor 17
Cor 17 — S1°54'E 40 ft — Cor 18
Cor 18 — S11°45'W 69 ft — Cor 19
Cor 19 — S17°35'W 52 ft — Cor 20
Cor 20 — S17°34'E 28 ft — Cor 21
Cor 21 — S20°58'W 126 ft — Cor 22
Cor 22 — S16°50'E 30 ft — Cor 23
Cor 23 — S35°22'E 64 ft — Cor 24
Cor 24 — S74°42'E 83 ft — Cor 25
Cor 25 — S77°4'E 58 ft — Cor 26
Cor 26 — S84°19'E 63 ft — Cor 27

Sec 33 T12S R69W | Sec 34 T12S R69W
Sec 4 T13S R69W | Sec 3 T13S R69W

RECLAMATION NOTES:

Special Note: All areas anticipated to require reclamation within permit boundary are shown on maps

Reclamation Objectives - Reclamation of the disturbed areas will occur following completion of the mining operation with the focus on maximizing the amount of level area available for future agricultural use, the use to include equipment storage and agriculture related buildings. The area is currently zoned as Agricultural. The existing west and north pit faces with steep faces will be preserved approximately as is for a asthetic backdrop for the reclaimed property. The south and east pit faces will be reclaimed to slopes of 1 to 2 (V:H) to 1 to 3 V:LH) for the majority of areas. Since no soils were saved from mining done prior to 1982, an inventory will be taken of available soil at the time of reclamation and available soils will be placed in selected areas. The slope of those areas to be covered with soil and seeded, will have approximately 1 to 3 slopes and be covered with six inches of soil or growth media.

Reclamation Details - At time of closure, the level area will be about 4.5 acres, the steep faced north and west pit edges will total about 3.3 acres, and the east and south pit edges will total about 2.1 acres. The level area will have a slope of about 2 percent to the north. The west and north faces will have slopes ranging from 1 to 1.4 (V-H) to 1 to 1.7 (V-H) and the south and east faces will have slopes ranging from 1 to 2.5 (V-H) to 1 to 3 (V-H). It is anticipated that sufficient soils or growth media can be generated to cover 1 acre, and these areas will be sloped at 1 to 3 (V-H), and covered with 6 inches. The actual area covered will be determined by the amount of soils or growth media actually found.

Vegetative Details - Areas to be reclaimed will be graded and top soil or growth media added where available and appropriate. Soil or growth media will be smoothed and leveled prior to seeding. As the areas are steep, the rangeland seed mixture chosen by engineer and approved by DRMS, will be hand broadcasted and either covered by hand raking or using a harrow methods. The seed mix will be sowed at a rate of no less than 10 pounds per acre, or per supplier's recommendations. the rock in the area is granite, reclamation mats or netting would not significantly assist vegetation growth. Seeding is to be done in early spring or late fall to maximize the germination rate and to increase the chances of a successful revegetation. Use of fertilizers is not anticipated to be necessary to obtain reclamation objectives. Monitoring of the site will occur until reclamation objectives have been met.

Exhibit Map E–1
Site Reclamation Map
Glen Johnson Site #1

Owner Address:	Owner Phone Number:
Craig Pester 116 Homestead Drive Woodland Park, Colorado 80863	402–4990344

Property Description:
A parcel located in the SE1/4 SE1/4 Sec 33, and in the SW1/4 SW1/4 Sec 34 T12S R69W, 6th PM

Exhibit Map E

braun
BRAUN ENVIRONMENTAL, INC.
355 South Teller Street Ste 200
Lakewood, COLORADO 80228
PHONE (303) 988–7697

Glen Johnson Site #1
Woodland Park, Colorado

Date: July 18, 2023	Drawn by: Staff
Rev: 11/24/23	Checked by: C.A. Braun

EXPLANATION

- Permit Boundary(bearings & distances)
- Area of Disturbance 1993
- Property Boundries
- Craig Pester — Surface and Mineral Owner
- Historic Mapped Pits, Adits and Shafts

Permit corners marked with capped No 4 Rebar set one foot above surface

True North
Magnetic North
9°

Feet
0 30 60
SCALE 1"=60'

Contour Interval = 5 feet

ENGINEER'S CERTIFICATION

This report was prepared by the Engineer who's signature appears below under the engineer's direct supervision).

SIGNATURE: C.A. Braun

No. 22601

DATE: July 28, 2023

SLOPE STABILITY EXHIBIT

The underlying rock unit in the permit area has been mapped as Pikes Peak Granite and this unit naturally supports near-vertical cliffs having heights of greater than one hundred feet. These cliffs have been free standing and intact for a millenniums, and the rock in the current pit within the permit area exhibits these same characteristics. Portions of the pit wall have been in their similar state for decades and no rock failures have ever been reported to have occurred. Thus the stability of Pikes Peak granite in the permit area has been proven in practice.

Braun engineers have carefully inspected the site focusing particularly on the exposed pit walls and their relation to nearby geologic features just beyond those walls. The investigation was particularly focused at areas in which these zones might be parallel to a cut face. No significant inhomogeneity's in the petrology, nor any faults and fractured zones were discovered that would result in significant reduced rock strengths for rock unit. The relationship between faults and rupture is represented by the following equation:

$$\text{Factor of Safety (FS)} = \frac{\text{shearing strength available along sliding surface}}{\text{shearing stresses along sliding surface.}}$$

As these features have not been found to be present within the permit area, no further analysis is necessary, and failure by this mechanism can be discounted.

The second mechanism is failure by loading. There are no known horizontal stresses acting in the area of the permit, so the principle stress to the rock in the pit face is vertical and is produced by gravity. Pikes Peak granite has published unconfined compressive strength ranging from a low of 15,000 to a high of 35,000 psi. Its tensile strength is 1,000 to 4,000 psi, and shear strength is approximately twice the tensile strength at 2,000 to 4, 000 psi. For modeling purposes, the worst case possible will be assumed that the rock has the lowest published compressive strength of 15, 000 psi and shear strength of 2,000 psi. The modeling will further assume a vertical face instead of the actual final slope of 1:1.5, (vertical to horizontal) which adds a further factor of safety.

Stress Transformation Equations (STE) are used to determine equilibrium conditions for a unit plane stress element and to calculate maximum shear stress in that element. In the equations, σ is stress and τ represents strain and subscripts x and y represent coordinate directions, in this case x equating to vertical and y to horizontal The equations have a graphical equivalent represented by Mohr's circle:

$$\sigma_{x1} = -(\sigma_x + \sigma_y)/2 = (\sigma_x - \sigma_y)/2 * 2\cos 2\theta + \tau_{xy} \sin 2\theta$$

$$\tau_{x1\,y1} = -(\sigma_x + \sigma_y)/\sin 2\theta + \tau_{xy} * \cos 2\theta$$

The first analyzed element is located at the extreme top of the pit and has a vertical compressive stress of zero psi, with the resulting horizontal stress and shear also being zero. Thus, no failure is predicted at that location. Elements are then modeled for increasing depth along the vertical face with increased loading occurring via normal lithostatic pressure of 170 pounds per square foot per vertical foot (1.1 psi per foot) of cover. As vertical loading increase, unconstrained rock failure will eventually occur via sheer. The equations predict that it will occur at an angle of 41 degrees to the principle vertical compressive σ_{x1}stress, and will be 3,700 psi. Calculating back to the load required on that element which would cause failure, this lithostatic pressure is predicted to occur at a depth of 3,400 feet below ground surface. Using a safety for this model of 2.0 with respect to loading failure, the shear stress would be reached at a pit depth of 1,700 feet. Since the actual pit depth is anticipated for this permit is to only be about 70 feet, the resulting safety factor (SF), is 50. An actual slope of 1:1.5, (vertical to horizontal) will begin adding σ_y confining stresses and result in an even higher factor of safety than reported for this model. Thus the slopes will be safe as a final condition.

C. A. Braun, P.E.

P.E.# 22601

Date: November 24, 2023

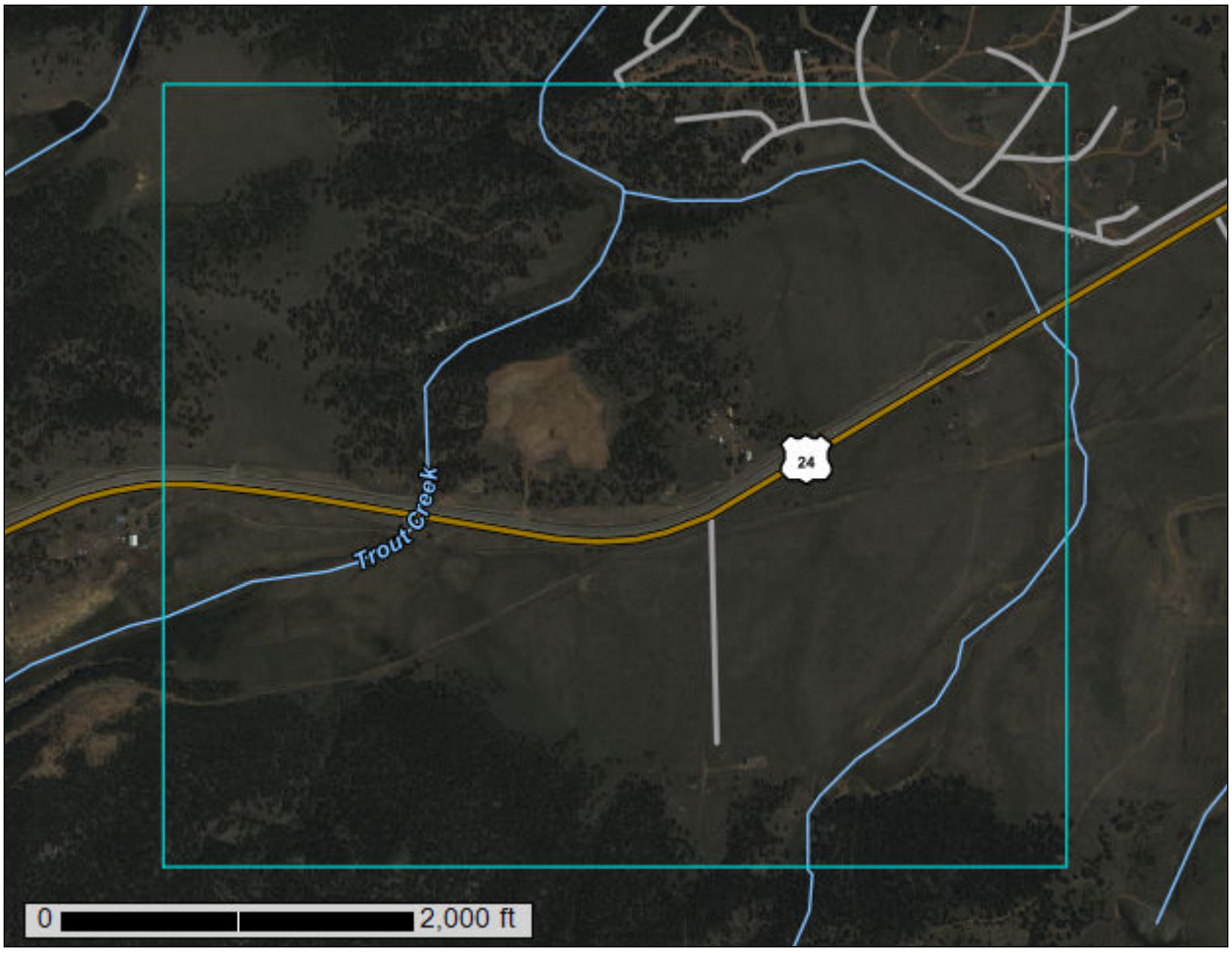
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Teller-Park Area, Colorado, Parts of Park and Teller Counties



November 24, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

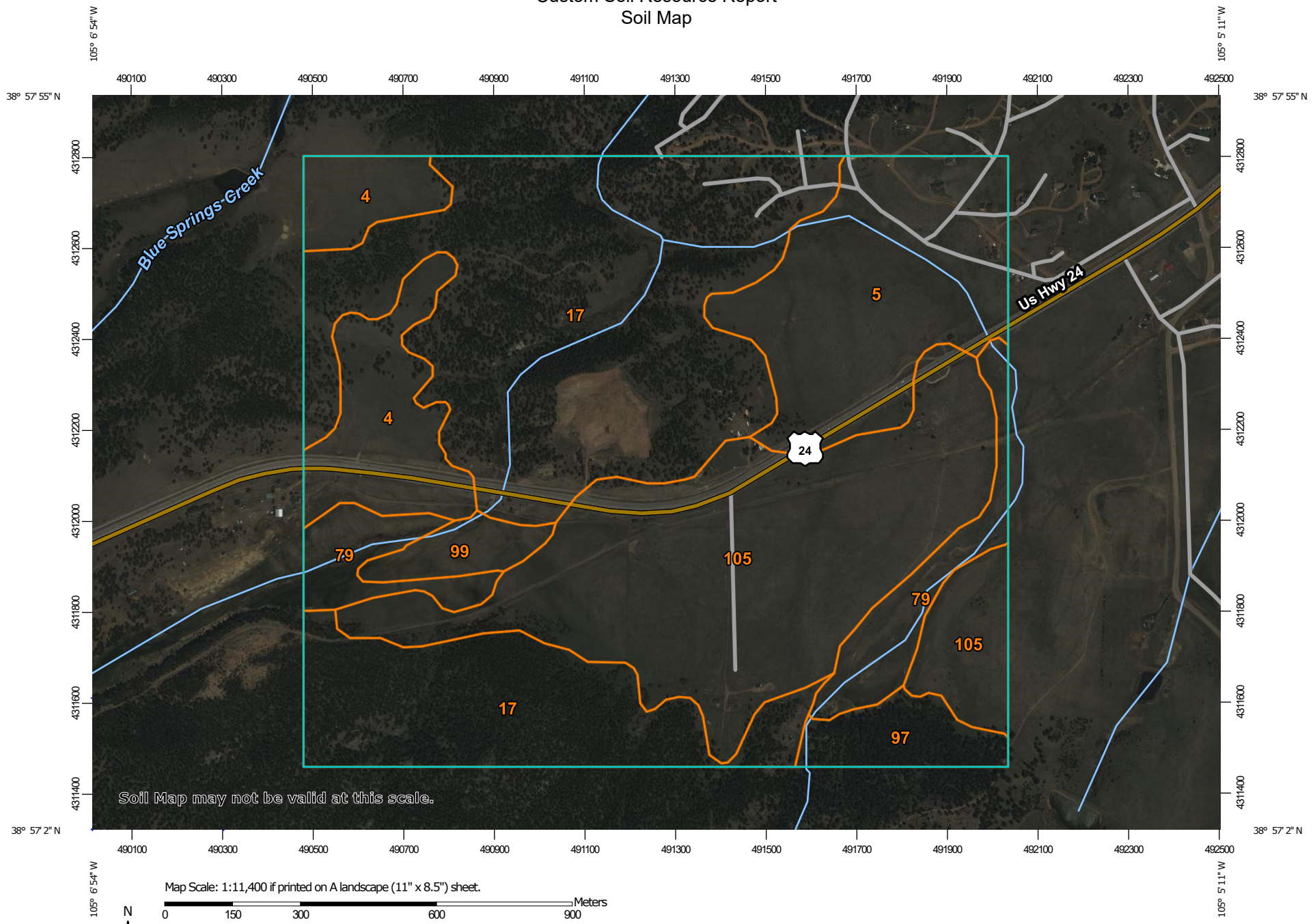
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Teller-Park Area, Colorado, Parts of Park and Teller Counties
Survey Area Data: Version 15, Aug 24, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 18, 2020—May 21, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4	Altman gravelly loam, 8 to 40 percent slopes	43.0	8.3%
5	Altman-Cowd association, 8 to 25 percent slopes	69.2	13.3%
17	Catamount-Guffey complex, 15 to 40 percent slopes	211.4	40.8%
79	Platdon loam, frequently flooded, 0 to 3 percent slopes	31.6	6.1%
97	Seitz very gravelly loam, 20 to 50 percent slopes	14.0	2.7%
99	Spinney mucky peat, 0 to 1 percent slopes	9.3	1.8%
105	Tellura-Seitz complex, 10 to 30 percent slopes	139.9	27.0%
Totals for Area of Interest		**518.4**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit

descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Teller-Park Area, Colorado, Parts of Park and Teller Counties

4—Altman gravelly loam, 8 to 40 percent slopes

Map Unit Setting

National map unit symbol: k0y2
Elevation: 9,000 to 9,400 feet
Mean annual precipitation: 15 to 23 inches
Mean annual air temperature: 37 to 40 degrees F
Frost-free period: 50 to 80 days
Farmland classification: Not prime farmland

Map Unit Composition

Altman and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Altman

Setting

Landform: Terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

Ap - 0 to 7 inches: gravelly loam
A - 7 to 12 inches: gravelly loam
AB - 12 to 15 inches: gravelly sandy clay loam
Bt1 - 15 to 29 inches: clay
Bt2 - 29 to 41 inches: clay
BC - 41 to 51 inches: clay
C - 51 to 60 inches: clay loam

Properties and qualities

Slope: 8 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: R048AY222CO - Loamy Park
Hydric soil rating: No

Minor Components

Adderton
Percent of map unit: 5 percent
Landform: Flood plains
Ecological site: R048AY222CO - Loamy Park
Hydric soil rating: No

Platdon, frequently flooded
Percent of map unit: 3 percent
Landform: Flood plains
Ecological site: R048BY241CO - Mountain Meadow
Hydric soil rating: Yes

Tellura
Percent of map unit: 2 percent
Landform: Mountains
Ecological site: R048AY377CO - Skeletal Loam
Hydric soil rating: No

5—Altman-Cowd association, 8 to 25 percent slopes

Map Unit Setting
National map unit symbol: k10c
Elevation: 9,000 to 9,400 feet
Mean annual precipitation: 15 to 23 inches
Mean annual air temperature: 37 to 40 degrees F
Frost-free period: 50 to 80 days
Farmland classification: Not prime farmland

Map Unit Composition
Altman and similar soils: 50 percent
Cowd and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Altman

Setting
Landform: Terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile
Ap - 0 to 7 inches: gravelly loam
A - 7 to 12 inches: gravelly loam
AB - 12 to 15 inches: gravelly sandy clay loam
Bt1 - 15 to 29 inches: clay
Bt2 - 29 to 41 inches: clay

BC - 41 to 51 inches: clay
C - 51 to 60 inches: clay loam

Properties and qualities

Slope: 8 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: R048AY222CO - Loamy Park
Hydric soil rating: No

Description of Cowd

Setting

Landform: Terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
E - 2 to 9 inches: loam
Bt/E - 9 to 12 inches: clay
Bt/E - 12 to 14 inches: loam
Bt1 - 14 to 20 inches: clay
Bt2 - 20 to 31 inches: clay
Bt3 - 31 to 40 inches: clay
BC - 40 to 50 inches: clay loam
C - 50 to 60 inches: clay loam

Properties and qualities

Slope: 8 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: C
Ecological site: F048AY924CO - Douglas Fir/Gambel Oak
Other vegetative classification: Douglas-fir/boxleaf myrtle (PSME/PAMY) (C1211)
Hydric soil rating: No

Minor Components

Adderton
Percent of map unit: 3 percent
Landform: Flood plains
Ecological site: R048AY222CO - Loamy Park
Hydric soil rating: No

Platdon, frequently flooded
Percent of map unit: 3 percent
Landform: Flood plains
Ecological site: R048BY241CO - Mountain Meadow
Hydric soil rating: Yes

Seitz
Percent of map unit: 2 percent
Landform: Mountains
Hydric soil rating: No

Tellura
Percent of map unit: 2 percent
Landform: Mountains
Ecological site: R048AY377CO - Skeletal Loam
Hydric soil rating: No

17—Catamount-Guffey complex, 15 to 40 percent slopes

Map Unit Setting
National map unit symbol: k0yv
Elevation: 8,500 to 10,900 feet
Mean annual precipitation: 14 to 23 inches
Mean annual air temperature: 37 to 40 degrees F
Frost-free period: 50 to 80 days
Farmland classification: Not prime farmland

Map Unit Composition
Catamount and similar soils: 60 percent
Guffey and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Catamount

Setting
Landform: Mountains

Landform position (three-dimensional): Mountaintop, mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Slope alluvium derived from granite over residuum weathered from granite

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 3 inches: gravelly sandy loam
Bw - 3 to 9 inches: very gravelly sandy loam
C - 9 to 13 inches: extremely gravelly loamy coarse sand
Cr - 13 to 60 inches: bedrock

Properties and qualities

Slope: 15 to 40 percent
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Somewhat excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 0.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: F048AY924CO - Douglas Fir/Gambel Oak
Other vegetative classification: Douglas-fir/kinnikinnick-common juniper (PSME/ARUV-JUCO6) (C1219), Douglas-fir/boxleaf myrtle (PSME/PAMY) (C1211)
Hydric soil rating: No

Description of Guffey

Setting

Landform: Mountains
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium over residuum weathered from granite

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
E1 - 1 to 8 inches: very gravelly coarse sandy loam
E2 - 8 to 13 inches: very gravelly coarse sandy loam
Bt - 13 to 27 inches: very gravelly clay loam
Cr - 27 to 60 inches: bedrock

Properties and qualities

Slope: 15 to 40 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: F048AY924CO - Douglas Fir/Gambel Oak
Other vegetative classification: Douglas-fir/kinnikinnick-common juniper (PSME/ARUV-JUCO6) (C1219)
Hydric soil rating: No

Minor Components

Ivywild

Percent of map unit: 5 percent
Landform: Mountains
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop

Percent of map unit: 3 percent
Landform: Knobs, hills
Landform position (three-dimensional): Nose slope, crest
Hydric soil rating: No

Adderton

Percent of map unit: 2 percent
Landform: Flood plains
Ecological site: R048AY222CO - Loamy Park
Hydric soil rating: No

79—Platdon loam, frequently flooded, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: k0zr
Elevation: 8,200 to 10,000 feet
Mean annual precipitation: 10 to 23 inches
Mean annual air temperature: 35 to 40 degrees F
Frost-free period: 50 to 80 days
Farmland classification: Not prime farmland

Map Unit Composition

Platdon, frequently flooded, and similar soils: 90 percent
Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Platdon, Frequently Flooded

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

A - 0 to 8 inches: loam
Ag - 8 to 18 inches: loam
Cg1 - 18 to 30 inches: very gravelly sandy clay loam
2Cg2 - 30 to 60 inches: extremely gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 25 to 35 inches to strongly contrasting textural stratification
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 0 to 10 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Ecological site: R048BY241CO - Mountain Meadow
Hydric soil rating: Yes

Minor Components

Adderton

Percent of map unit: 5 percent
Landform: Flood plains
Ecological site: R048AY222CO - Loamy Park
Hydric soil rating: No

Spinney

Percent of map unit: 3 percent
Landform: Flood plains
Ecological site: R048BY241CO - Mountain Meadow
Hydric soil rating: Yes

Platdon, poorly drained

Percent of map unit: 2 percent
Landform: Flood-plain steps
Landform position (three-dimensional): Tread
Ecological site: R048BY268CO - Dry Flood Plain Step
Hydric soil rating: No

97—Seitz very gravelly loam, 20 to 50 percent slopes

Map Unit Setting

National map unit symbol: k0z0
Elevation: 8,500 to 11,000 feet
Mean annual precipitation: 14 to 23 inches
Mean annual air temperature: 37 to 40 degrees F
Frost-free period: 50 to 80 days
Farmland classification: Not prime farmland

Map Unit Composition

Seitz and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Seitz

Setting

Landform: Mountains
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium and/or slope alluvium derived from trachyte and volcanic breccia and/or slope alluvium derived from volcanic breccia

Typical profile

Oi - 0 to 3 inches: slightly decomposed plant material
E - 3 to 9 inches: very gravelly loam
E/Bt - 9 to 12 inches: very gravelly loam
E/Bt - 12 to 14 inches: very gravelly clay loam
Bt - 14 to 24 inches: very gravelly clay loam
BC - 24 to 28 inches: extremely gravelly clay loam
C - 28 to 60 inches: extremely gravelly sandy clay loam

Properties and qualities

Slope: 20 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: C
Ecological site: F048AY924CO - Douglas Fir/Gambel Oak
Other vegetative classification: Subalpine fir - Engelmann spruce/common juniper (ABLA-PIEN/JUCO6) (C0309), Douglas-fir/boxleaf myrtle (PSME/PAMY) (C1211)
Hydric soil rating: No

Minor Components

Ivywild
Percent of map unit: 5 percent
Landform: Mountains
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Bushpark
Percent of map unit: 5 percent
Landform: Mountains
Ecological site: R048AY230CO - Shallow Loam
Hydric soil rating: No

99—Spinney mucky peat, 0 to 1 percent slopes

Map Unit Setting
National map unit symbol: k10m
Elevation: 8,000 to 10,200 feet
Mean annual precipitation: 10 to 23 inches
Mean annual air temperature: 35 to 40 degrees F
Frost-free period: 50 to 80 days
Farmland classification: Not prime farmland

Map Unit Composition
Spinney and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Spinney

Setting
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile
Oe - 0 to 10 inches: mucky peat
A - 10 to 18 inches: loam
Ag - 18 to 26 inches: very gravelly sandy clay loam
Cg1 - 26 to 32 inches: gravelly sandy clay loam

Cg2 - 32 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 0 to 10 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B/D
Ecological site: R048BY241CO - Mountain Meadow
Hydric soil rating: Yes

Minor Components

Adderton

Percent of map unit: 5 percent
Landform: Flood plains
Ecological site: R048AY222CO - Loamy Park
Hydric soil rating: No

Platdon, frequently flooded

Percent of map unit: 5 percent
Landform: Flood plains
Ecological site: R048BY241CO - Mountain Meadow
Hydric soil rating: Yes

105—Tellura-Seitz complex, 10 to 30 percent slopes

Map Unit Setting

National map unit symbol: k0z4
Elevation: 8,500 to 9,400 feet
Mean annual precipitation: 14 to 23 inches
Mean annual air temperature: 37 to 40 degrees F
Frost-free period: 50 to 80 days
Farmland classification: Not prime farmland

Map Unit Composition

Tellura and similar soils: 70 percent
Seitz and similar soils: 20 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tellura

Setting

Landform: Mountains
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium and/or slope alluvium derived from volcanic breccia

Typical profile

A - 0 to 8 inches: gravelly loam
Bt1 - 8 to 11 inches: very gravelly clay loam
Bt2 - 11 to 20 inches: very gravelly clay
BC - 20 to 36 inches: very gravelly clay loam
C - 36 to 60 inches: extremely gravelly loam

Properties and qualities

Slope: 10 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: R048AY377CO - Skeletal Loam
Hydric soil rating: No

Description of Seitz

Setting

Landform: Mountains
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium and/or slope alluvium derived from volcanic breccia

Typical profile

Oi - 0 to 3 inches: slightly decomposed plant material
E - 3 to 9 inches: very gravelly loam
E/Bt - 9 to 12 inches: very gravelly loam
E/Bt - 12 to 14 inches: very gravelly clay loam
Bt - 14 to 24 inches: very gravelly clay loam
BC - 24 to 28 inches: extremely gravelly clay loam
C - 28 to 60 inches: extremely gravelly sandy clay loam

Properties and qualities

Slope: 10 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained

Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: F048AY924CO - Douglas Fir/Gambel Oak
Other vegetative classification: Douglas-fir/kinnikinnick-common juniper (PSME/ARUV-JUCO6) (C1219), Douglas-fir/boxleaf myrtle (PSME/PAMY) (C1211)
Hydric soil rating: No

Minor Components

Ivywild

Percent of map unit: 3 percent
Landform: Mountains
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Bushpark

Percent of map unit: 3 percent
Landform: Mountains
Ecological site: R048AY230CO - Shallow Loam
Hydric soil rating: No

Quander

Percent of map unit: 2 percent
Landform: Mountains
Ecological site: R048AY377CO - Skeletal Loam
Hydric soil rating: No

Adderton

Percent of map unit: 2 percent
Landform: Flood plains
Ecological site: R048AY222CO - Loamy Park
Hydric soil rating: No

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Glen Johnson No 1 110 Permit
Coordinates of Corners for Permit Area
Colorado State Plane COC83 (HARM)sft

Corner No	Northing	Easting
1	1409890	3113252
2	1409907	3113431
3	1410177	3113466
4	1410282	3113459
5	1410314	3113437
6	1410322	3113482
7	1410350	3113472
8	1410428	3113344
9	1410464	3113307
10	1410458	3113292
11	1410499	3113267
12	1410576	3113207
13	1410544	3112927
14	1410498	3112789
15	1410413	3112752
16	1410372	3112754
17	1410353	3112764
18	1410313	3112765
19	1410245	3112751
20	1410195	3112735
21	1410169	3112743
22	1410051	3112698
23	1409978	3112720
24	1409926	3112757
25	1409904	3112837
26	1409917	3112894
27	1409911	3112956

BEI

Found in Inbox

MC

From: Michelle...
To: Craig Pester
Elliott Russell -...
October 20, 2023...

Craig,

I received and read the Public Notice attached to the below email (dated October 19, 2023) regarding the expansion.

Looks like your gravel pit expansion project is moving right along, I have no objections at this time.

STATE OF COLORADO

Russell - DNR, Elliott <elliott.russell@state.co.us>

Responses to DRMS Adequacy Review Dated October 13, 2023

Art Braun <braunenv@msn.com> Sat, Nov 25, 2023 at 3:51 PM
To: elliott.russell@state.co.us
Cc: CRAIG PESTER <cprepair72@aol.com>

Elliott,

Attached are the responses to your adequacy review dated October 1, 2023. Thanks for the extra time you allowed until November 27, 2023, to allow me to get back in town to respond.

Art Braun

2 attachments

231124 Response to Elliott Comments.ltr.pdf
28K

Response Package to October 13 Adequacy Letter.pdf
3897K