



STATE OF  
COLORADO

Gibson - DNR, Amber <amber.gibson@state.co.us>

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## Ghost River M2024-029 Adequacy Review #2

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**Gibson - DNR, Amber** <amber.gibson@state.co.us>

Tue, Nov 26, 2024 at 12:36 PM

To: PFM Consulting <pfmconsultingcompany@gmail.com>

Cc: PowerHouse Excavation & Construction <phexcavationco@gmail.com>, lynesie pye-steele <lynesie1205@hotmail.com>

One more follow up question:

I still need the dimensions for the gravel area in the residential portion, so that I can include that task in the reclamation estimate. You stated in your last responses that the gravel in the gravel area will be replaced at a depth of 3 inches, but I need an area estimate for the Gravel Area so that I can calculate the volume that needs to be placed.

Thank you,

**Amber M. Gibson**

**Environmental Protection Specialist I**



**COLORADO**  
Division of Reclamation,  
Mining and Safety  
Department of Natural Resources

**P 720.836.0967 | F 303.832.8106 |**  
**[amber.gibson@state.co.us](mailto:amber.gibson@state.co.us)**

Mailing: DRMS Room 215, 1001 E 62nd Ave, Denver, CO 80216

Physical: 1313 Sherman Street, Room 215, Denver, CO 80203

<https://drms.colorado.gov/>

[Quoted text hidden]



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## Ghost River M2024-029 Adequacy Review #2

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**PFM Consulting** <pfmconsultingcompany@gmail.com>

Tue, Nov 26, 2024 at 1:34 PM

To: "Gibson - DNR, Amber" <amber.gibson@state.co.us>

Cc: PowerHouse Excavation & Construction <phexcavationco@gmail.com>, lynesie pye-steele <lynsie1205@hotmail.com>

Amber,

The road is a ROA that is owned by the local jurisdiction. In this case, I would assume it is Huerfano County.

As for the haul road, it is 30' x 1700' and may shift slightly to align better with any residential structures. Again, this is all for conceptual purposes only.

Any ground that is not surfaced with gravel or structures would be reclaimed in the same fashion as the rest of the site and use the same seed mix.

I'll get you an updated map as quickly as possible.

Thanks,

**Jodi Schreiber, Owner**

**PFM Consulting LLC**

**719-529-0916**

[pfmconsultingcompany@gmail.com](mailto:pfmconsultingcompany@gmail.com)

[PFM Consulting Website](#)

***"Success is stumbling from failure to failure with no loss of enthusiasm."***

**-Winston Churchill**

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## Ghost River M2024-029 Adequacy Review #2

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**PFM Consulting** <pfmconsultingcompany@gmail.com>

Tue, Nov 26, 2024 at 1:43 PM

To: "Gibson - DNR, Amber" <amber.gibson@state.co.us>

Cc: PowerHouse Excavation & Construction <phexcavationco@gmail.com>, lynesie pye-steele <lynsie1205@hotmail.com>

Amber,

The gravel area, not including the road, is 2.1 acres.

Thanks,

**Jodi Schreiber, Owner**

**PFM Consulting LLC**

**719-529-0916**

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[PFM Consulting Website](#)

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## Ghost River M2024-029 Adequacy Review #2

Gibson - DNR, Amber &lt;amber.gibson@state.co.us&gt;

Tue, Nov 26, 2024 at 2:10 PM

To: PFM Consulting &lt;pfmconsultingcompany@gmail.com&gt;

Cc: PowerHouse Excavation &amp; Construction &lt;phexcavationco@gmail.com&gt;, lynesie pye-steele &lt;lynesie1205@hotmail.com&gt;

Thanks Jodi. I just realized the originally submitted reclamation plan already answered the depth that the topsoil would be replaced, but when we clarified after the first round of adequacy questions it changed. Now it has both. Just to clarify in the record, we're going with the six inch depth of topsoil replacement, not three, correct? reclamation use. Throughout mining, slopes will be maintained at a 3H:1V minimum, except for the active mine face. Waste rock and overburden will be placed on the pit floor as quantity allows. Three inches of topsoil will be replaced on affected surfaces. If necessary, surfaces will be roughened prior to seeding. All materials used for backfilling will be generated from onsite sources. Onsite topsoil will be adequate for reclamation purposes. No importation of materials

Page 8 of 20

for reclamation purposes will be necessary. Topsoil will be replaced at a depth of 6 inches during reclamation.

No trees, shrubs, or bushy-type vegetation will be planted in the rangeland area of the site. Only the appropriate grasses selected by the NRCS will be used. The operator will use the seed mix from the original permit application below. The seed will be broadcast at the rates below. The operator commits to seeding the topsoil piles if they are not used for greater than 180 days and that if the topsoil stockpiles are to be relocated, a Technical Revision will be sent to request that relocation. Expected times of planting would be spring or fall of any year.

Amber M. Gibson  
Environmental Protection Specialist I



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## Ghost River M2024-029 Adequacy Review #2

Gibson - DNR, Amber <amber.gibson@state.co.us>

Tue, Nov 26, 2024 at 2:28 PM

To: PFM Consulting <pfmconsultingcompany@gmail.com>

Cc: PowerHouse Excavation & Construction <phexcavationco@gmail.com>, lynesie pye-steele <lynesie1205@hotmail.com>

Hi Jodi,

When you input the new seed amounts into the Reclamation exhibit, I noticed that the information for the fertilizer rates and mulching was removed, but mulching is still included in your cost estimate. Was this removed by mistake?

Western Wheatgrass- Arriba	32 pls @ 100%, % of mix 50% 16 pls/ac 10 acres =	160 lbs req'd.
Blue Grama	6 pls @ 100%, % of mix 20% 1.2 pls/ac 10 acres =	12 lbs req'd.
Galleta	8 pls @ 100%, % of mix 20% 1.6 pls/ac 10 acres =	16 lbs req'd.
Sand Dropseed	1 pls @ 100%, % of mix 5% 0.1 pls/ac 10 acres =	1 lbs req'd.
Winter Fat	1 pls @ 100%, % of mix 5% 0.1 pls/ac 10 acres =	1 lbs req'd.

40# available N & P is the

recommended and will be applied with a commercial spreader.

*Certified noxious weed free straw or grass*

*hay will be applied at the rate of 4,000#/A.*

180 days and that if the topsoil stockpiles are to be relocated, a Technical Revision will be sent to request that relocation. Expected times of planting would be spring or fall of any year.

Western Wheatgrass-Arriba – 16 pls x 14.6 acres = 233.6 pounds

Blue Grama – 1.2 pls x 14.6 acres = 17.52 pounds

Galleta – 1.6 pls x 14.6 acres = 23.36 pounds

Sand Dropseed – 0.1 pls x 14.6 acres = 1.46 pounds

Winter Fat – 0.1 pls x 14.6 acres = 1.46 pounds

All mining structures and stormwater diversion structures, will be reclaimed following all mining operations. All buildings are portable. The interior haul road will remain upon reclamation. Upon commencement of reclamation, the area will be monitored for noxious

Amber M. Gibson  
Environmental Protection Specialist I



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Cc: PowerHouse Excavation & Construction <phexcavationco@gmail.com>, lynesie pye-steele <lynesie1205@hotmail.com>

Yes, that is correct. Please see the updated narrative.

Thanks,

**Jodi Schreiber, Owner**

**PFM Consulting LLC**

**719-529-0916**

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[PFM Consulting Website](#)

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**-Winston Churchill**

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**DRMS Permit Narrative 11.21.2024.pdf**

759K

Ghost River Gravel Pit

Construction Material

Regular 112 Operation

Reclamation Permit Application Package

Colorado Division of Reclamation, Mining and  
Safety

May 2024

## 6.4.1 Exhibit A

### Legal Description

The Ghost River Gravel Pit is located 37.825628°, -104.749247°. The pit will be accessed through Huerfano County Road 110 approximately 4 miles east of I-25 in Huerfano County. The site is approximately 21.6 acres and is described by the following legal description:

Location: Huerfano County, CO

SE  $\frac{1}{4}$  of NW  $\frac{1}{4}$  and NE  $\frac{1}{4}$  of SW  $\frac{1}{4}$  of S35 T25S R66W

Entrance: 37.825628°, -104.749247°



## 6.4.2 Exhibit B

### Index Map

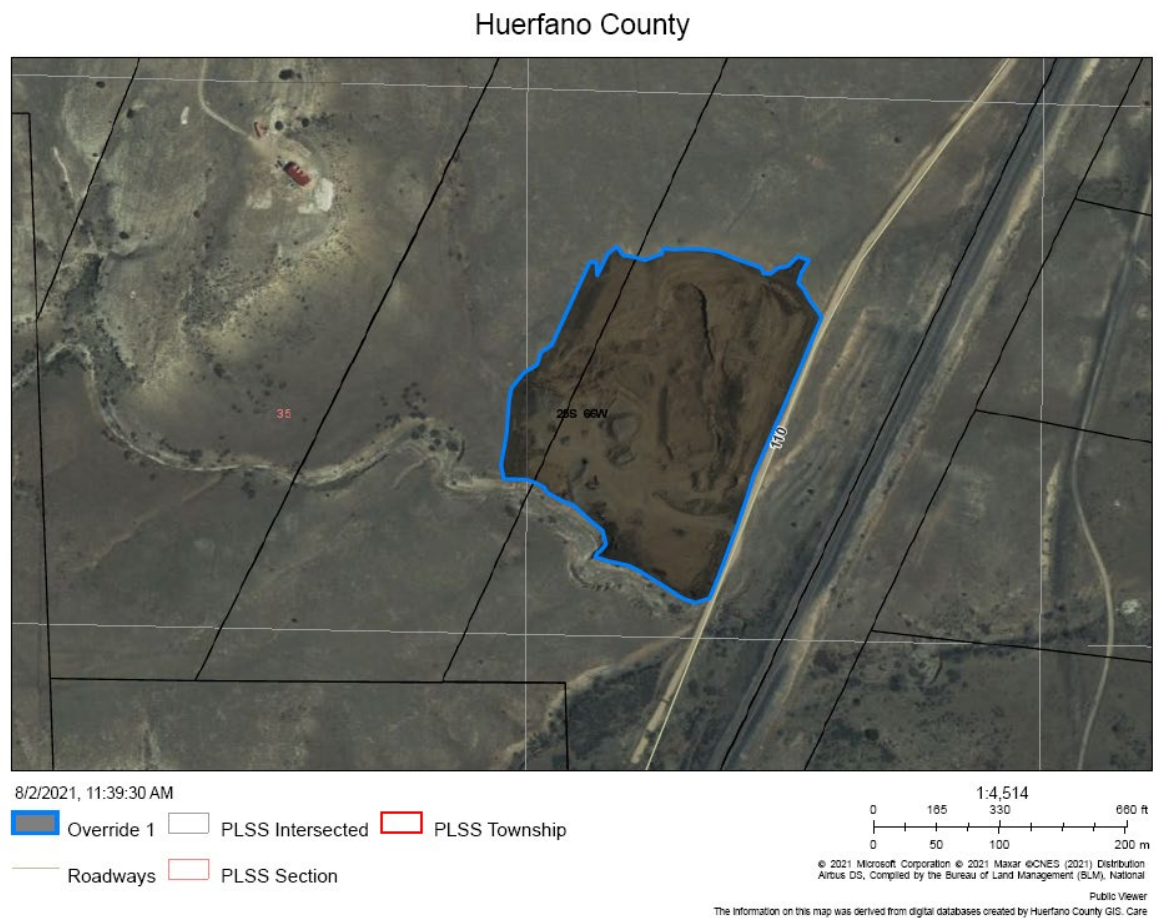
### 6.4.3 Exhibit C

## Pre-Mining and Mining Plan Map of Affected Lands

## 6.4.4 Exhibit D

### Mining Plan

The Ghost River Gravel Pit (M2003-002) was a construction aggregate site of 9.9 acres. The previous mining disturbed the following based upon DRMS' calculations on 8/2/2021 and encompassed approximately 11.8 acres. This is also outlined in the Exhibit C Existing Conditions Map to show the previously mined area, and the proposed new permit boundary.





A portion of the stockpiles are located outside the proposed pit boundary and are noted in the map above.

The operator understands that anything outside the proposed permit boundary will not be disturbed by their operation and reclamation of this property will be the sole responsibility of the Division of Reclamation, Mining and Safety. The delineation of this line will be done using T-Posts so that it is clear which areas are not the responsibility of the operator.

This application package will re-permit the site with a new operator, P B & S Gravel LLC. In addition, 11.7 acres will be added to the permit to incorporate areas to the north of the previous permit boundary. Access to the site will be from Huerfano County Road 110 at the southeast corner of the site.

The site consists of the Manvel-Minnequa loams, 1 to 5 percent slopes, Kim fine sandy loam, 3 to 9 percent slopes, Penrose-Minnequa complex, 4 to 25 percent slopes and Penrose-Rock outcrop complex, 4 to 25 percent slopes. It is anticipated that shale will be found immediately beneath the material to be mined. The target gravel source is located beneath limited topsoil 6 inches and overburden of an additional 18 inches - 8 feet. The target material is anticipated to be located between 2-10' deep and run 10-18' in thickness. Topsoil and overburden will be saved for reclamation of the mine site. The primary commodities of this site

are landscape aggregate, gravel and road base. Incidental materials not used for construction material will be used to reconstruct the pit floor and lessen the pit slopes.

The life of the proposed operation is difficult to quantify due to the changing economic conditions in the construction industry and aggregate quality. Extraction will be limited to 70,000 tons per year. At this rate, the life of the mine would be approximately 3-5 years depending on local economic conditions, with each of the two phases taking an estimated 2-3 years to mine out. Phase I will be completed prior to moving into Phase II. Phase I reclamation will occur concurrently to mining operations, so that when mining is finished, all slopes will be graded to a 3H:1V slope, except for the highwall which will then migrate into Phase II. Processing and storage will remain in the reclaimed floor of Phase I while mining occurs in Phase II. As such, Phase I, 10 acres, will be reclaimed except for topsoil and seeding while Phase II is being actively mined. This will constitute the maximum disturbance; Phase I, 10 acres, being used for processing and storage while Phase II, 11.6 acres, is being actively mined. The total maximum disturbance will be 10 acres that will require topsoil and seeding only, and 11.6 acres that will require grading to 3H:1V of the highwall at a length of no greater than 500', topsoil and seeding.

Mining will proceed to the north of the processing area. Extracted material will be moved to the processing area that is anticipated to be in the central portion of the pit. Earthmoving will be accomplished using front end loaders. Aggregate will be processed and sized using a crusher and screens. Mining will stay at least 25 feet from the San Isabel Power Pole located within the permit boundary. All equipment will be portable. The highwall will be no greater than 500' in length. All highwalls will be inside the permit boundary and away from the perimeter of the affected area against the permit boundary. No highwall will occur along the permit boundary and the operator ensures that all side slopes will not be mined at a slope greater than a 3H:1V.

All plant growth material and topsoil will be salvaged and stockpiled for reclamation use. These stockpiles will be located at the perimeter of the site and posted as reclamation topsoil. Waste rock and overburden will be stockpiled and used to rebuild the pit floor and slopes during reclamation. Established stockpiles will be stored onsite and seeded with the approved seed mix to reduce the chance of erosion. These stockpiles will be located separate from the landscape aggregate and gravel stockpiles.



Overburden perimeter stormwater berms will be constructed as excavation and reclamation progresses. These berms will serve to control erosion and keep sedimentation from reaching any drainage. Water for dust suppression will be purchased from a local source, such as Corey Transport, and hauled onsite.

There will be no storage of fuel or lubricants onsite. Fuel will be hauled onsite as needed by vendor trucks.

Mining will develop a gravel pit to a maximum depth of 20 feet. No groundwater is expected to be encountered during excavation and mining; therefore, no impact to the hydrologic balance is anticipated. No acid or toxic producing materials will be exposed during mining. No explosives will be used in conjunction with mining or reclamation. The interior haul road will remain following reclamation, per the landowner's request. The ranch road connecting the property to Huerfano County Road 110 will remain following reclamation, per the landowner's request. The current haul road is approximately 30 feet wide. There will be additional area left between the top of the pit slopes on the east and the west side of the haul road.

This is a privately owned site and does not require the State Historic Preservation Office requirements for a cultural or historic study. If the operator encounters any structure of note, the State Historic Preservation Office will be notified.

## 6.4.5 Exhibit E

### Reclamation Plan

Reclamation of the site will be of two types, residential and rangeland. Reclamation to residential will occur first on the southern-most 7.0-acre portion of the site. Reclamation back to rangeland will occur for the remaining portions of the site. The land has historically been rangeland and is located within an HOA and will be returned to such uses following mining operations.

Slopes will be returned to a 3H:1V slope or flatter when mining has concluded, thus allowing for reclamation to immediately follow mining as the site progresses. As topsoil, waste rock and overburden are removed from the working face, they will be stockpiled for future reclamation use. Throughout mining, slopes will be maintained at a 3H:1V minimum, except for the active mine face. Waste rock and overburden will be placed on the pit floor as quantity allows. Six inches of topsoil will be replaced on affected surfaces. If necessary, surfaces will be roughened prior to seeding. All materials used for backfilling will be generated from onsite sources. Onsite topsoil will be adequate for reclamation purposes. No importation of materials

for reclamation purposes will be necessary. Topsoil will be replaced at a depth of 6 inches during reclamation.

No trees, shrubs, or bushy-type vegetation will be planted in the rangeland area of the site. Only the appropriate grasses selected by the NRCS will be used. The operator will use the seed mix from the original permit application below. The seed will be broadcast at the rates below. The operator commits to seeding the topsoil piles if they are not used for greater than 180 days and that if the topsoil stockpiles are to be relocated, a Technical Revision will be sent to request that relocation. Expected times of planting would be spring or fall of any year.

Western Wheatgrass-Arriba – 16 pls x 14.6 acres = 233.6 pounds

Blue Grama – 1.2 pls x 14.6 acres = 17.52 pounds

Galleta – 1.6 pls x 14.6 acres = 23.36 pounds

Sand Dropseed – 0.1 pls x 14.6 acres = 1.46 pounds

Winter Fat – 0.1 pls x 14.6 acres = 1.46 pounds

All mining structures and stormwater diversion structures, will be reclaimed following all mining operations. All buildings are portable. The interior haul road will remain upon reclamation. Upon commencement of reclamation, the area will be monitored for noxious weeds. The 30-foot-wide access road to the site from County Road 110 will remain following reclamation for use by the residential portion of the site. No material will be imported to be used for backfill during reclamation. The structures that will be constructed following reclamation are for conceptual purposes only on the Reclamation Map and can not be used for construction purposes. The home is estimated to be 3500 square feet, the garage is estimated to be 2000 square feet, the barn is estimated at 4000 square feet. All gravel around these structures will be obtained from the site itself and any exposed areas will be reseeded with the seed mix for the entire side listed above. This is estimated to be 4 acres.

## 6.4.6 Exhibit F

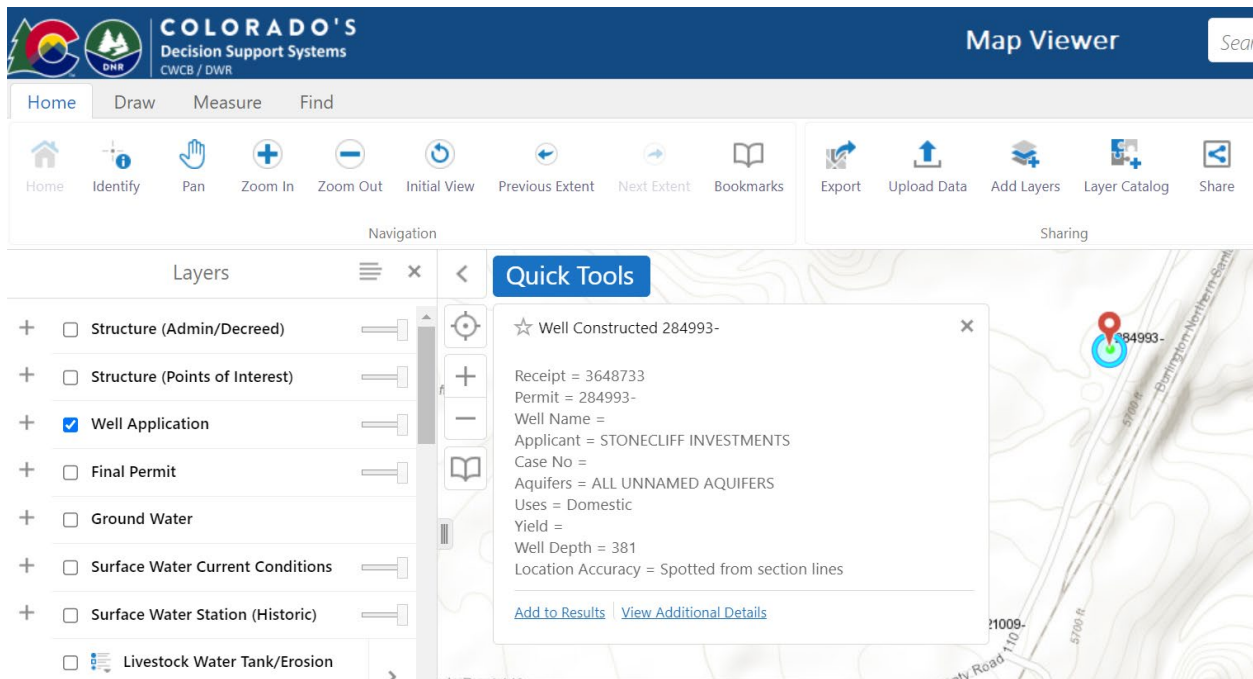
### Reclamation Plan Map



## 6.4.7 Exhibit G

### Water Information

Mining is expected to have no impact on the prevailing hydrologic balance. Groundwater will not be exposed, and stormwater will not leave the site. The site will not discharge stormwater or process water drainage. Water depth is anticipated to be greater than the 20 feet mining depth, as noted below with a nearby depth recorded at 381 feet.



Runoff occurs as overland flow to natural drainage ravines in the vicinity. Stormwater best management practices such as waddles, straw bales, and perimeter berms will be placed to effectively manage stormwater. Historic flow will be maintained during mining. No stormwater will be impounded for greater than 72 hours.

Consumptive use of water may occur as dust suppression on the haul road and affected areas. The operator will purchase the necessary volume of water from an appropriate supplier and transport to the site for use. It is anticipated that the site could use up to 10,000 gallons per day.

The permittee will complete a stormwater management plan. Diversionary berms and impoundments will be constructed as recommended by the Water Quality Division.

## 6.4.8 Exhibit H

### Wildlife Information

The property is used for rangeland and in an HOA. The site will be returned to both residential and rangeland during reclamation. Colorado Parks and Wildlife was contacted for comment during the previous permit application process. The letter states that this project will not have any negative impacts to wildlife. It is attached for review.

Forage and cover for wildlife is very limited due to the arid climate. Small animals, including rabbits, foxes, etc. are found in the surrounding environment. The site is within range for white tail deer, antelope, prairie dog, various snakes, various lizards, and ring-necked pheasant. Impacts to wildlife will be mitigated through a weed management plan and reseeding all mined areas with a diverse and native rangeland seed mix.

Please see the updated statement from the Department of Wildlife. As for the other justifications for not negatively impacting wildlife, the additional acreage does not constitute a larger mining operation, increase in traffic, etc. from the last permitted operation. In fact, this site will be mined in two phases, which are smaller than the original permitted mine. Additionally, mining operations are controlled by the local demand for the product and not by the size of the permit boundary. If there is a local need for aggregate, the site will be used to that capacity. Since the site is in the same location with the same economic conditions and aggregate demand as the previous operation, the operator anticipates no increase in impact that could be extrapolated from the additional acreage in this permit package.

## 6.4.9 Exhibit I

### Soils Information

A Custom Soil Resource Report for Huerfano County, specific to this site, is attached for review. The site is made up of Midway clay loam and Midway-Chicosa complex, as well as Manzanst silty clay loam and Manzanola silty clay loam.

The Midway series consists of shallow, well drained soils that formed in residuum and slope alluvium from calcareous platy, clayey shale. Midway soils are on ridge crests, mesas, plains, and hills in shale bedrock uplands. Slopes range from 0 to 40 percent. Mean annual precipitation is about 13 inches and mean annual air temperature is about 50 degrees F.

The Chicosa series consists of very deep, somewhat excessively drained soils that formed in coarse alluvium on terraces, fans and fan remnants. Slopes range from 1 to 25 percent. Mean annual precipitation is about 14 inches and the mean annual temperature is about 50 degrees F.

Topsoil is found at a depth of 3-6 inches onsite, with overburden accounting for approximately 6 inches onsite. Mineable aggregate is then found up to a depth of approximately 20 feet.

## 6.4.10 Exhibit J

### Vegetation Information

The Ghost River Pit is characterized by grazing land. Native vegetation includes blue grama, western wheatgrass, blue grama, galleta, cactus, yucca, and sagebrush.

There are two small trees onsite currently, with the rest of the acreage being covered by low shrubs and grasses. The Applicant believes that the carrying capacity for the rangeland area would be approximately 3 small grazing livestock per acre, such as goats.

## 6.4.11 Exhibit K

### Climate

Climate data was pulled from the U.S Climate Data website for the Huerfano County, Colorado area.

Huerfano County Monthly Climate Averages						
🏠 12 Month Climate Scroll 🏠						
°F °C						
Month	January	February	March	April	May	June
Avg. Temperatures	Hi 34°F Lo 14°F	Hi 35°F Lo 15°F	Hi 45°F Lo 24°F	Hi 53°F Lo 29°F	Hi 63°F Lo 36°F	Hi 76°F Lo 48°F
Avg. Wind Speed	7 mph	8 mph	8 mph	9 mph	8 mph	7 mph
Avg. Precipitation	1.6 in	2.6 in	3.1 in	4 in	5.4 in	4.9 in
Average Humidity	76%	74%	60%	52%	48%	44%
Avg. Cloud Cover	26%	28%	24%	23%	21%	15%
Pressure Average	30.1 in	30.1 in	30.0 in	29.9 in	29.9 in	29.9 in
Average Dry Days	11	9	11	12	15	23
Avg. Precip. Days	7	5	5	5	8	7
Avg. Snow Days	14	14	16	13	9	0
Average Fog Days	1	2	0	0	0	0
Average UV Index	2	2	2	3	4	5
Avg. Hours of Sun	285	248	285	272	295	314

## Huerfano County Monthly Climate Averages

🏠 12 Month Climate Scroll 🏠

°F ☒ °C

Month	July	August	September	October	November	December
Avg. Temperatures	Hi 78°F Lo 51°F	Hi 76°F Lo 49°F	Hi 70°F Lo 45°F	Hi 57°F Lo 33°F	Hi 45°F Lo 24°F	Hi 34°F Lo 18°F
Avg. Wind Speed	5 mph	5 mph	6 mph	7 mph	8 mph	8 mph
Avg. Precipitation	9.8 in	8.2 in	3.4 in	2.2 in	1.4 in	1.5 in
Average Humidity	56%	54%	52%	51%	56%	70%
Avg. Cloud Cover	23%	18%	16%	15%	15%	25%
Pressure Average	30.0 in	30.0 in	30.0 in	30.0 in	30.1 in	30.1 in
Average Dry Days	19	22	23	22	20	13
Avg. Precip. Days	12	9	5	3	2	6
Avg. Snow Days	0	0	1	6	8	12
Average Fog Days	0	0	0	0	0	1
Average UV Index	5	5	4	2	2	1
Avg. Hours of Sun	303	325	313	319	311	281

## 6.4.12 Exhibit L

### Reclamation Costs

Reclamation cost estimates were calculated on a per acre basis and applied to maximum active mining area of 21.6 acres.

Direct Tasks	Unit	Quantity	Cost	Total Cost
<b>Grading Highwalls</b>				
3H:1V Pushdown Dozer	Hours	35		\$7700.00
<b>Placing Topsoil/Fines</b>				
Bull Dozer	Hours	6	\$145.00	\$870.00
Loader	Hours	6	\$145.00	\$870.00
<b>Seeding</b>				
Broadcasting	Hours	3	\$300.00	\$900.00
Seed Mix	Acre	1	\$1200.00	\$1200.00
Mulch	Acre	1	\$187.50	\$187.50
Tracking seed/mulch				
Dozer	Hours	0.33	\$154.00	\$50.82
Area Reclaimed	Acre	14.7		\$34,375.00
<b>Mobilization Fee</b>	Hours	1	\$100	\$100
<b>Indirect Tasks</b>				
Liability Insurance			0.0155	\$635.00
Performance Bond			0.015	\$615.00
Profit			0.1	\$4,099.00
Job Superintendent	Hours	20	\$88.00	\$1,760.00
Miscellaneous Indirect			0.0925	\$920.00
<b>Total Bond</b>				\$51,945.00

## 6.4.13 Exhibit M

### Other Permits and Licenses

- Huerfano County Special Use Permit.

## 6.4.14 Exhibit N

### Source of Legal Right to Enter

Please see enclosed the agreement between the landowner and the permittee.

## 6.4.15 Exhibit O

### Owner of Record of Affected Land

### Surface Area and Substance to be Mined

See enclosed deed.

## 6.4.16 Exhibit P

### Municipalities Within Two Miles

There are no towns within two miles of the proposed mining operation.

## 6.4.17 Exhibit Q

### Proof of Mailing Notices to Board of County Commissioners and Soil Conservation District



## 6.4.18 Exhibit R

### Proof of Filing with County Clerk and Recorder

## 6.4.14 Exhibit S

### Permanent Man-made Structures

Huerfano County Road 110 and a San Isabel Power Association Power Pole are within 200 feet of the site. Structure agreements for both are enclosed for review.



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Updated and attached.

**Jodi Schreiber, Owner**

**PFM Consulting LLC**

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## 6.4.1 Exhibit A

### Legal Description

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Location: Huerfano County, CO

SE  $\frac{1}{4}$  of NW  $\frac{1}{4}$  and NE  $\frac{1}{4}$  of SW  $\frac{1}{4}$  of S35 T25S R66W

Entrance: 37.825628°, -104.749247°

## 6.4.2 Exhibit B

### Index Map

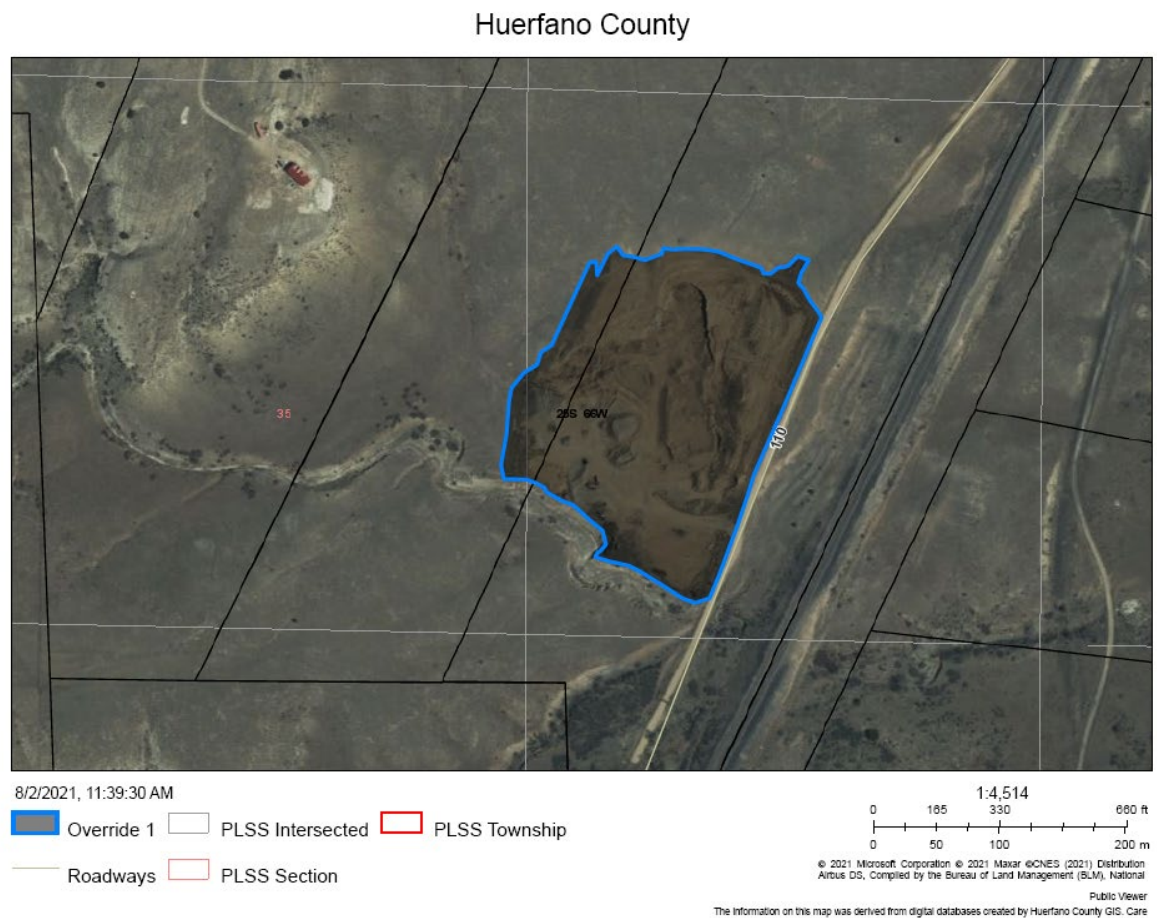
### 6.4.3 Exhibit C

## Pre-Mining and Mining Plan Map of Affected Lands

## 6.4.4 Exhibit D

### Mining Plan

The Ghost River Gravel Pit (M2003-002) was a construction aggregate site of 9.9 acres. The previous mining disturbed the following based upon DRMS' calculations on 8/2/2021 and encompassed approximately 11.8 acres. This is also outlined in the Exhibit C Existing Conditions Map to show the previously mined area, and the proposed new permit boundary.







A portion of the stockpiles are located outside the proposed pit boundary and are noted in the map above.

The operator understands that anything outside the proposed permit boundary will not be disturbed by their operation and reclamation of this property will be the sole responsibility of the Division of Reclamation, Mining and Safety. The delineation of this line will be done using T-Posts so that it is clear which areas are not the responsibility of the operator.

This application package will re-permit the site with a new operator, P B & S Gravel LLC. In addition, 11.7 acres will be added to the permit to incorporate areas to the north of the previous permit boundary. Access to the site will be from Huerfano County Road 110 at the southeast corner of the site.

The site consists of the Manvel-Minnequa loams, 1 to 5 percent slopes, Kim fine sandy loam, 3 to 9 percent slopes, Penrose-Minnequa complex, 4 to 25 percent slopes and Penrose-Rock outcrop complex, 4 to 25 percent slopes. It is anticipated that shale will be found immediately beneath the material to be mined. The target gravel source is located beneath limited topsoil 6 inches and overburden of an additional 18 inches - 8 feet. The target material is anticipated to be located between 2-10' deep and run 10-18' in thickness. Topsoil and overburden will be saved for reclamation of the mine site. The primary commodities of this site

are landscape aggregate, gravel and road base. Incidental materials not used for construction material will be used to reconstruct the pit floor and lessen the pit slopes.

The life of the proposed operation is difficult to quantify due to the changing economic conditions in the construction industry and aggregate quality. Extraction will be limited to 70,000 tons per year. At this rate, the life of the mine would be approximately 3-5 years depending on local economic conditions, with each of the two phases taking an estimated 2-3 years to mine out. Phase I will be completed prior to moving into Phase II. Phase I reclamation will occur concurrently to mining operations, so that when mining is finished, all slopes will be graded to a 3H:1V slope, except for the highwall which will then migrate into Phase II. Processing and storage will remain in the reclaimed floor of Phase I while mining occurs in Phase II. As such, Phase I, 10 acres, will be reclaimed except for topsoil and seeding while Phase II is being actively mined. This will constitute the maximum disturbance; Phase I, 10 acres, being used for processing and storage while Phase II, 11.6 acres, is being actively mined. The total maximum disturbance will be 10 acres that will require topsoil and seeding only, and 11.6 acres that will require grading to 3H:1V of the highwall at a length of no greater than 500', topsoil and seeding.

Mining will proceed to the north of the processing area. Extracted material will be moved to the processing area that is anticipated to be in the central portion of the pit. Earthmoving will be accomplished using front end loaders. Aggregate will be processed and sized using a crusher and screens. Mining will stay at least 25 feet from the San Isabel Power Pole located within the permit boundary. All equipment will be portable. The highwall will be no greater than 500' in length. All highwalls will be inside the permit boundary and away from the perimeter of the affected area against the permit boundary. No highwall will occur along the permit boundary and the operator ensures that all side slopes will not be mined at a slope greater than a 3H:1V.

All plant growth material and topsoil will be salvaged and stockpiled for reclamation use. These stockpiles will be located at the perimeter of the site and posted as reclamation topsoil. Waste rock and overburden will be stockpiled and used to rebuild the pit floor and slopes during reclamation. Established stockpiles will be stored onsite and seeded with the approved seed mix to reduce the chance of erosion. These stockpiles will be located separate from the landscape aggregate and gravel stockpiles.

Overburden perimeter stormwater berms will be constructed as excavation and reclamation progresses. These berms will serve to control erosion and keep sedimentation from reaching any drainage. Water for dust suppression will be purchased from a local source, such as Corey Transport, and hauled onsite.

There will be no storage of fuel or lubricants onsite. Fuel will be hauled onsite as needed by vendor trucks.

Mining will develop a gravel pit to a maximum depth of 20 feet. No groundwater is expected to be encountered during excavation and mining; therefore, no impact to the hydrologic balance is anticipated. No acid or toxic producing materials will be exposed during mining. No explosives will be used in conjunction with mining or reclamation. The interior haul road will remain following reclamation, per the landowner's request. The ranch road connecting the property to Huerfano County Road 110 will remain following reclamation, per the landowner's request. The current haul road is approximately 30 feet wide. There will be additional area left between the top of the pit slopes on the east and the west side of the haul road.

This is a privately owned site and does not require the State Historic Preservation Office requirements for a cultural or historic study. If the operator encounters any structure of note, the State Historic Preservation Office will be notified.

## 6.4.5 Exhibit E

### Reclamation Plan

Reclamation of the site will be of two types, residential and rangeland. Reclamation to residential will occur first on the southern-most 7.0-acre portion of the site. Reclamation back to rangeland will occur for the remaining portions of the site. The land has historically been rangeland and is located within an HOA and will be returned to such uses following mining operations.

Slopes will be returned to a 3H:1V slope or flatter when mining has concluded, thus allowing for reclamation to immediately follow mining as the site progresses. As topsoil, waste rock and overburden are removed from the working face, they will be stockpiled for future reclamation use. Throughout mining, slopes will be maintained at a 3H:1V minimum, except for the active mine face. Waste rock and overburden will be placed on the pit floor as quantity allows. Six inches of topsoil will be replaced on affected surfaces. If necessary, surfaces will be roughened prior to seeding. All materials used for backfilling will be generated from onsite sources. Onsite topsoil will be adequate for reclamation purposes. No importation of materials

for reclamation purposes will be necessary. Topsoil will be replaced at a depth of 6 inches during reclamation.

No trees, shrubs, or bushy-type vegetation will be planted in the rangeland area of the site. Only the appropriate grasses selected by the NRCS will be used. The operator will use the seed mix from the original permit application below. The seed will be broadcast at the rates below. The operator commits to seeding the topsoil piles if they are not used for greater than 180 days and that if the topsoil stockpiles are to be relocated, a Technical Revision will be sent to request that relocation. Expected times of planting would be spring or fall of any year.

Western Wheatgrass-Arriba – 16 pls x 14.6 acres = 233.6 pounds

Blue Grama – 1.2 pls x 14.6 acres = 17.52 pounds

Galleta – 1.6 pls x 14.6 acres = 23.36 pounds

Sand Dropseed – 0.1 pls x 14.6 acres = 1.46 pounds

Winter Fat – 0.1 pls x 14.6 acres = 1.46 pounds

Certified noxious weed free straw or grass hay will be applied at a rate of 4,000 pounds per acre.

All mining structures and stormwater diversion structures, will be reclaimed following all mining operations. All buildings are portable. The interior haul road will remain upon reclamation. Upon commencement of reclamation, the area will be monitored for noxious weeds. The 30-foot-wide access road to the site from County Road 110 will remain following reclamation for use by the residential portion of the site. No material will be imported to be used for backfill during reclamation. The structures that will be constructed following reclamation are for conceptual purposes only on the Reclamation Map and can not be used for construction purposes. The home is estimated to be 3500 square feet, the garage is estimated to be 2000 square feet, the barn is estimated at 4000 square feet. All gravel around these structures will be obtained from the site itself and any exposed areas will be reseeded with the seed mix for the entire side listed above. This is estimated to be 4 acres.

## 6.4.6 Exhibit F

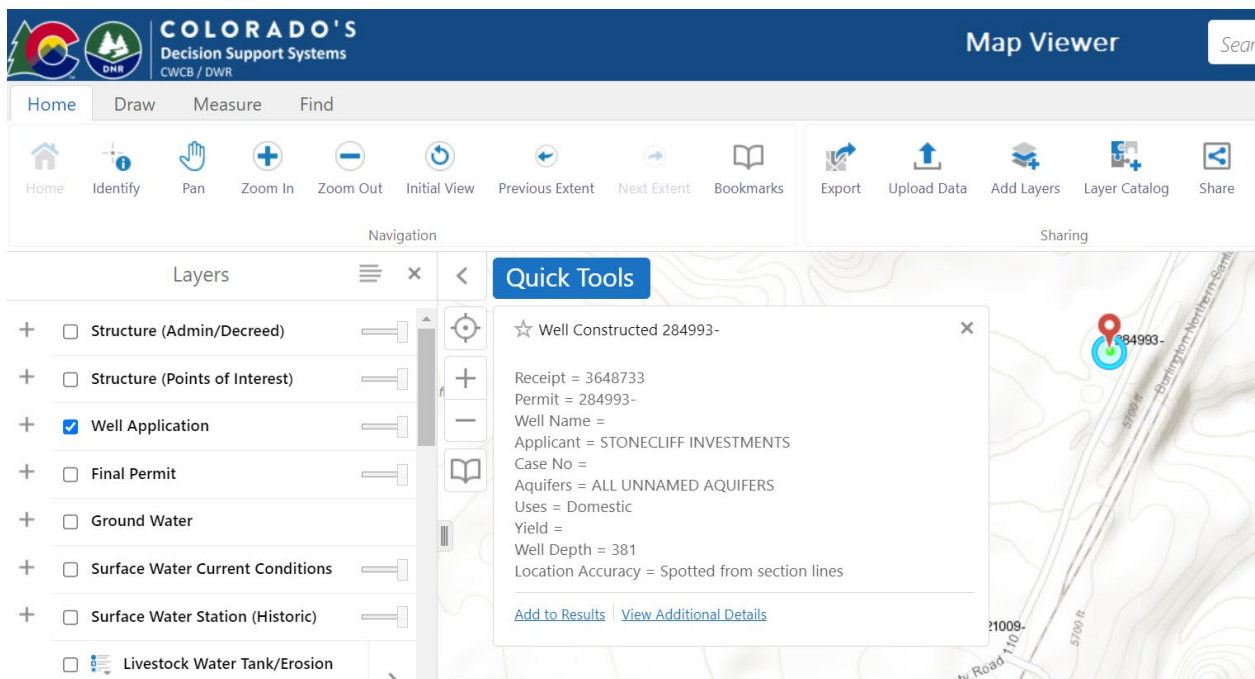
### Reclamation Plan Map



## 6.4.7 Exhibit G

### Water Information

Mining is expected to have no impact on the prevailing hydrologic balance. Groundwater will not be exposed, and stormwater will not leave the site. The site will not discharge stormwater or process water drainage. Water depth is anticipated to be greater than the 20 feet mining depth, as noted below with a nearby depth recorded at 381 feet.



Runoff occurs as overland flow to natural drainage ravines in the vicinity. Stormwater best management practices such as waddles, straw bales, and perimeter berms will be placed to effectively manage stormwater. Historic flow will be maintained during mining. No stormwater will be impounded for greater than 72 hours.

Consumptive use of water may occur as dust suppression on the haul road and affected areas. The operator will purchase the necessary volume of water from an appropriate supplier and transport to the site for use. It is anticipated that the site could use up to 10,000 gallons per day.

The permittee will complete a stormwater management plan. Diversionary berms and impoundments will be constructed as recommended by the Water Quality Division.

## 6.4.8 Exhibit H

### Wildlife Information

The property is used for rangeland and in an HOA. The site will be returned to both residential and rangeland during reclamation. Colorado Parks and Wildlife was contacted for comment during the previous permit application process. The letter states that this project will not have any negative impacts to wildlife. It is attached for review.

Forage and cover for wildlife is very limited due to the arid climate. Small animals, including rabbits, foxes, etc. are found in the surrounding environment. The site is within range for white tail deer, antelope, prairie dog, various snakes, various lizards, and ring-necked pheasant. Impacts to wildlife will be mitigated through a weed management plan and reseeding all mined areas with a diverse and native rangeland seed mix.

Please see the updated statement from the Department of Wildlife. As for the other justifications for not negatively impacting wildlife, the additional acreage does not constitute a larger mining operation, increase in traffic, etc. from the last permitted operation. In fact, this site will be mined in two phases, which are smaller than the original permitted mine. Additionally, mining operations are controlled by the local demand for the product and not by the size of the permit boundary. If there is a local need for aggregate, the site will be used to that capacity. Since the site is in the same location with the same economic conditions and aggregate demand as the previous operation, the operator anticipates no increase in impact that could be extrapolated from the additional acreage in this permit package.

## 6.4.9 Exhibit I

### Soils Information

A Custom Soil Resource Report for Huerfano County, specific to this site, is attached for review. The site is made up of Midway clay loam and Midway-Chicosa complex, as well as Manzanst silty clay loam and Manzanola silty clay loam.

The Midway series consists of shallow, well drained soils that formed in residuum and slope alluvium from calcareous platy, clayey shale. Midway soils are on ridge crests, mesas,

plains, and hills in shale bedrock uplands. Slopes range from 0 to 40 percent. Mean annual precipitation is about 13 inches and mean annual air temperature is about 50 degrees F.

The Chicosa series consists of very deep, somewhat excessively drained soils that formed in coarse alluvium on terraces, fans and fan remnants. Slopes range from 1 to 25 percent. Mean annual precipitation is about 14 inches and the mean annual temperature is about 50 degrees F.

Topsoil is found at a depth of 3-6 inches onsite, with overburden accounting for approximately 6 inches onsite. Mineable aggregate is then found up to a depth of approximately 20 feet.

## 6.4.10 Exhibit J

### Vegetation Information

The Ghost River Pit is characterized by grazing land. Native vegetation includes blue grama, western wheatgrass, blue grama, galleta, cactus, yucca, and sagebrush.

There are two small trees onsite currently, with the rest of the acreage being covered by low shrubs and grasses. The Applicant believes that the carrying capacity for the rangeland area would be approximately 3 small grazing livestock per acre, such as goats.



## 6.4.11 Exhibit K

### Climate

Climate data was pulled from the U.S Climate Data website for the Huerfano County, Colorado area.

Huerfano County Monthly Climate Averages						
🏠 12 Month Climate Scroll 🏠						
°F °C						
Month	January	February	March	April	May	June
Avg. Temperatures	Hi 34°F Lo 14°F	Hi 35°F Lo 15°F	Hi 45°F Lo 24°F	Hi 53°F Lo 29°F	Hi 63°F Lo 36°F	Hi 76°F Lo 48°F
Avg. Wind Speed	7 mph	8 mph	8 mph	9 mph	8 mph	7 mph
Avg. Precipitation	1.6 in	2.6 in	3.1 in	4 in	5.4 in	4.9 in
Average Humidity	76%	74%	60%	52%	48%	44%
Avg. Cloud Cover	26%	28%	24%	23%	21%	15%
Pressure Average	30.1 in	30.1 in	30.0 in	29.9 in	29.9 in	29.9 in
Average Dry Days	11	9	11	12	15	23
Avg. Precip. Days	7	5	5	5	8	7
Avg. Snow Days	14	14	16	13	9	0
Average Fog Days	1	2	0	0	0	0
Average UV Index	2	2	2	3	4	5
Avg. Hours of Sun	285	248	285	272	295	314

## Huerfano County Monthly Climate Averages

🏠 12 Month Climate Scroll 🏠

°F ☒ °C

Month	July	August	September	October	November	December
Avg. Temperatures	Hi 78°F Lo 51°F	Hi 76°F Lo 49°F	Hi 70°F Lo 45°F	Hi 57°F Lo 33°F	Hi 45°F Lo 24°F	Hi 34°F Lo 18°F
Avg. Wind Speed	5 mph	5 mph	6 mph	7 mph	8 mph	8 mph
Avg. Precipitation	9.8 in	8.2 in	3.4 in	2.2 in	1.4 in	1.5 in
Average Humidity	56%	54%	52%	51%	56%	70%
Avg. Cloud Cover	23%	18%	16%	15%	15%	25%
Pressure Average	30.0 in	30.0 in	30.0 in	30.0 in	30.1 in	30.1 in
Average Dry Days	19	22	23	22	20	13
Avg. Precip. Days	12	9	5	3	2	6
Avg. Snow Days	0	0	1	6	8	12
Average Fog Days	0	0	0	0	0	1
Average UV Index	5	5	4	2	2	1
Avg. Hours of Sun	303	325	313	319	311	281

## 6.4.12 Exhibit L

### Reclamation Costs

Reclamation cost estimates were calculated on a per acre basis and applied to maximum active mining area of 21.6 acres.

Direct Tasks	Unit	Quantity	Cost	Total Cost
<b>Grading Highwalls</b>				
3H:1V Pushdown Dozer	Hours	35		\$7700.00
<b>Placing Topsoil/Fines</b>				
Bull Dozer	Hours	6	\$145.00	\$870.00
Loader	Hours	6	\$145.00	\$870.00
<b>Seeding</b>				
Broadcasting	Hours	3	\$300.00	\$900.00
Seed Mix	Acre	1	\$1200.00	\$1200.00
Mulch	Acre	1	\$187.50	\$187.50
Tracking seed/mulch				
Dozer	Hours	0.33	\$154.00	\$50.82
Area Reclaimed	Acre	14.7		\$34,375.00
<b>Mobilization Fee</b>	Hours	1	\$100	\$100
<b>Indirect Tasks</b>				
Liability Insurance			0.0155	\$635.00
Performance Bond			0.015	\$615.00
Profit			0.1	\$4,099.00
Job Superintendent	Hours	20	\$88.00	\$1,760.00
Miscellaneous Indirect			0.0925	\$920.00
<b>Total Bond</b>				\$51,945.00

## 6.4.13 Exhibit M

### Other Permits and Licenses

- Huerfano County Special Use Permit.

## 6.4.14 Exhibit N

### Source of Legal Right to Enter

Please see enclosed the agreement between the landowner and the permittee.

## 6.4.15 Exhibit O

### Owner of Record of Affected Land

### Surface Area and Substance to be Mined

See enclosed deed.

## 6.4.16 Exhibit P

### Municipalities Within Two Miles

There are no towns within two miles of the proposed mining operation.

## 6.4.17 Exhibit Q

### Proof of Mailing Notices to Board of County Commissioners and Soil Conservation District

## 6.4.18 Exhibit R

### Proof of Filing with County Clerk and Recorder

## 6.4.14 Exhibit S

### Permanent Man-made Structures

Huerfano County Road 110 and a San Isabel Power Association Power Pole are within 200 feet of the site. Structure agreements for both are enclosed for review.



STATE OF  
COLORADO

Gibson - DNR, Amber <amber.gibson@state.co.us>

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## Ghost River Adequacy - Map

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**PFM Consulting** <pfmconsultingcompany@gmail.com>

Wed, Nov 27, 2024 at 10:43 AM

To: "Gibson - DNR, Amber" <amber.gibson@state.co.us>, lysie pye-steele <lysie1205@hotmail.com>, PowerHouse  
Excavation & Construction <phexcavationco@gmail.com>

Good morning, Amber.

Attached is the map with the corrections.

I spoke with Pat and Jordan and they agree with your bond calculations and would like to move forward with the bonding of just Phase I.

Please let me know if you have any questions or need any additional information.

Do you still need me to submit an extension request? If so, I can get that to you today for an extension to the end of next week as needed.

Thank you!

**Jodi Schreiber, Owner**

**PFM Consulting LLC**

**719-529-0916**

[pfmconsultingcompany@gmail.com](mailto:pfmconsultingcompany@gmail.com)

[PFM Consulting Website](#)

***"Success is stumbling from failure to failure with no loss of enthusiasm."***

**-Winston Churchill**



**Existing Conditions R2 (1).pdf**

546K



Ghost River Pit Legal

Existing Conditions

Exhibit C

11/27/24

Map By James Higgs

PB&S Sand and Gravel LLC

James Higgs

Legend

Permit Boundary (21.6 Acres)

Existing Fence Line

40' Existing Contours

Property Boundaries

San Isabel Electric Lines

Previously Disturbed

N

DICKEY  
CHRIS A &  
BARBARA A

VILLARD SEAN M

Scale

220'-0"

Rokich  
Gibson D  
Trustee of the

110

er: Huerfano County

HACKMAN DAVID C & PATRICIA A

LINE ROY D II & JENNIFER C

SNEAD JILL A

Land Owner: Huerfano County

Land Owner: Patrick Steele & Jordan Power

Permit Boundary - 21.6 Acres

San Isabel Electric

Rail Road (Outside 200')

Huerfano

5680

5640

BRAUNSCHNEIDER JAMES A & SUZANNE

HERRLE JEFFREY S & KAREN A

Unknown Spring

Westworks Land Management LLC

Waits Randy and Kathleen

Spring

Approx. Pit Entrance  
37.825628°-104.749247°